EVALUATION OF TURKMENISTAN’S NATIONAL NUTRITION PROGRAMME FOR 2013-2017 AS IT RELATES TO CHILDREN AND MOTHERS AND UNICEF’S CONTRIBUTION TO ITS DEVELOPMENT, IMPLEMENTATION AND MONITORING

Final Evaluation Report

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Prepared by:
Tamar Gotsadze, MD., PhD
This Report has been commissioned by UNICEF. The contents of this report are the sole responsibility of the independent expert and can in no way be taken to reflect the views of UNICEF.
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Sincere and heartfelt gratitude are extended to the team of Government and UNICEF reviewers, without whose participation, dedication and diligence, the evaluation could not have been successfully completed.

Questions or comments about the report can be addressed to the Evaluation Consultant at the following email address: tgotsadze@gmail.com

Tamar Gotsadze, MD., PhD
Public Health, Health Systems and Evaluation Specialist
# Acronyms

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<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tr>
<td>AARR</td>
<td>Average Annual Reduction Rate</td>
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<td>ANC</td>
<td>Antenatal Care</td>
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<td>BF</td>
<td>Breast Feeding</td>
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<td>BFHI</td>
<td>Baby Friendly Hospital Initiative</td>
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<td>CO</td>
<td>Country Office</td>
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<td>Early Childhood Development</td>
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<td>Food and Agriculture Organization</td>
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<td>Food Fortification Initiative</td>
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<td>Focus Group Discussion</td>
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<td>FORTIMAS</td>
<td>Fortification Monitoring and Surveillance System</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>GGE</td>
<td>General Government Expenditure</td>
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<td>Gross National Income</td>
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<td>HDI</td>
<td>Human Development Index</td>
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<td>HRBA</td>
<td>Human Rights Based Approach</td>
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<td>HSBC</td>
<td>Health Behaviour in School-aged Children</td>
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<td>ICBMS</td>
<td>International Code of Breast Milk Substitutes</td>
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<td>ICC</td>
<td>Intersectoral Coordination Committee</td>
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<td>IDD</td>
<td>Iodine Deficiency Disorders</td>
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<td>IDI</td>
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<td>IYCF</td>
<td>Infant and Young Child Feeding</td>
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<td>KAN</td>
<td>Kazakh Academy of Nutrition</td>
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<td>Key Informants</td>
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<td>Monitoring and Evaluation</td>
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<td>Maternal and Child Health</td>
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<td>MICS</td>
<td>Multiple Indicator Cluster Survey</td>
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<td>MMR</td>
<td>Maternal Mortality Ratio</td>
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<td>MoHMI</td>
<td>Ministry of Health and Medical Industry</td>
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<td>MoRES</td>
<td>Monitoring of Results for Equity Systems</td>
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<td>NCD</td>
<td>Non-Communicable Diseases</td>
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<td>NNP</td>
<td>National Nutrition Programme</td>
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<td>NTD</td>
<td>Neural Tube Defects</td>
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<td>Acronym</td>
<td>Full Form</td>
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<tr>
<td>OECD</td>
<td>Organization for Economic Co-operation and Development</td>
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<td>PHC</td>
<td>Primary Health Care</td>
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<td>Public Health and Nutrition Centre</td>
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<td>Sustainable Development Goal</td>
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<td>Sanitary Epidemiological Service</td>
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<td>SME</td>
<td>Small and Medium-sized Enterprise</td>
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<td>THE</td>
<td>Total Health Expenditure</td>
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<td>TOC</td>
<td>Theory of change</td>
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<td>TOR</td>
<td>Terms of Reference</td>
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<td>TWG</td>
<td>Technical Working Group</td>
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<td>UMIC</td>
<td>Upper-Middle Income Country</td>
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<td>UNPD</td>
<td>UN Population Division</td>
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<td>UNDP</td>
<td>UN Development Programme</td>
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<td>United Nations Evaluation Group</td>
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<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
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<td>USI</td>
<td>Universal Salt Iodization</td>
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<td>VAD</td>
<td>Vitamin A deficiency</td>
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<td>WHA</td>
<td>World Health Assembly</td>
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EXECUTIVE SUMMARY

EVALUATION PURPOSE AND OBJECTIVES: Some key nutrition programmes and policies have been initiated in Turkmenistan over the past decades. In 2013, the Government of Turkmenistan endorsed the National Nutrition Programme for 2013-2017 (NNP). The NNP is coming to an end. Meanwhile, the Government has already started developing the next generation of a nutrition programme that will cover the period of 2018-2025. Therefore, this evaluation is timely as its findings and recommendations informs and provides valuable insights into the development of the next programme as well as to the process of integration of nationalized SDG2 targets and indicators, concerning children and women. The evaluation had four objectives: i) to generate lessons learned, evidence and learning to guide effective action towards the achievement of SDG2 in Turkmenistan and development of the next generation of the nutrition programme of the country, ii) to help define UNICEF’s role in supporting the country’s efforts in the nutrition-related SDG implementation process in the country during the next five years, and iii) to promote results-based management and evidence-based policy development and iv) assess UNICEF’s role and contribution to NNP implementation.

The evaluation was planned to cover the period 2010-2016 as per the original Terms of Reference (ToR), however, the absence of baseline data for some key indicators required the evaluation to extend the period of analysis to 2006-2017 in order to be able to examine the changes in outcome and impact indicators using the 2006 MICS data. As requested by the ToR, the evaluation is targeted at the national level only. It examined both the Government’s role and responsibilities to develop and implement the NNP, including governance, management, resource allocations and capacity development, service delivery, quality assurance, surveillance and monitoring over the interventions under the NNP framework; and UNICEF’s role in supporting the scale up of direct nutrition interventions, as well as mainstreaming nutrition in non-nutrition sectors.

Intended users of the evaluation findings and recommendations primarily are the Ministry of Health and Medical Industry (MOHMI), WHO and UNICEF, which will use the results during the design of the new NNP. Secondary users of the evaluation results are the Ministry of Finance and Economy as the responsible body for SDG implementation, coordination and monitoring, Ministry of Agriculture and Water Economy, Ministry of Education, local governments, line ministries and members of Parliament that need to be informed and engaged. International and national civil society organizations, academic and private entities and sister UN agencies are expected to use the results of the evaluation to gain more knowledge and to improve their advocacy and practical actions in development of the next nutrition programme.

EVALUATION METHODOLOGY: The evaluation examined the relevance, effectiveness, efficiency, impact, and sustainability of the NNP and UNICEF’s contribution towards main objectives of NNP, in line with the OECD DAC evaluation approach. These criteria were selected as a) the standard international criteria for development evaluation, as reflected in OECD/DAC Manual, b) appropriately geared to the purpose and objectives of the evaluation, as set out above, and c) appropriate for the learning emphasis of the study. In accordance with UN policies, gender mainstreaming was assessed as a crosscutting issue. The evaluation was carried out in three phases by an international consultant between June and November 2017 and applied a mixed-method approach to maximize validity and reliability. The data collection methodology included primary and secondary sources of information collected through site visits and observations, face-to-face in-depth interviews, Focus Group

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1 The DAC Principles for the Evaluation of Development Assistance, OECD
2 Ethical review clearance was received
3 IDIs with various key stakeholders and individuals (11 key informants in total representing ministries, relevant public institutions and Intersectoral Coordination Committee members) were an important source of evidence for many of the evaluation questions.
4 In total 55 documents, such as programmatic documents, ICC meeting minutes, legislative and normative documents, etc., were reviewed.
5 The desk review also studied secondary quantitative data (research and study reports) available around the themes of evaluation. Specifically, the desk review analyzed available administrative data, MICS and TransMonEE databases and other research and studies.
Discussions, desk-based research and review of existing reports, documents and available secondary data.

**EVALUATION LIMITATIONS:** The evaluation was constrained by several limitations. One limitation was that programme related documents lacked well documented progress of NNP implementation and attained results. The NNP’s monitoring and evaluation framework, although having been developed with UNICEF’s assistance, was not attached to the approved package of programme documents and has not been used for tracking the progress. The NNP budget was not assessed due to the absence of information. The evaluation was focused only on the national level and therefore the findings of the evaluation may not fully grasp the insights from implementation at the subnational level. When it comes to quantitative data on impact- and outcome-level results, they come mostly from the 2006 Turkmenistan MICS, 2015-16 Turkmenistan MICS and the 2011/2012 nutrition surveys. MICS surveys are usually conducted every 3-5 years, but there was no other information available covering the period that marked the beginning of the implementation of NNP. Thus, for baselines for many nutrition indicators among children, 2006 MICS had to be taken as a basis as the most reliable and representative information. Moreover, the progress assessed during the evaluation should be treated with caution, as it represents progress only up to 2015. Another limitation was that the programme evaluation was constrained by the documentation that was retrieved through inquiry. It is indeed possible that some programme interventions were missed because of the lower than expected response rate to requests for documentation and statistical data. And finally, despite the best efforts to reach out to all key stakeholders, not all of them made available themselves for in-depth interviews.

**EVALUATION FINDINGS:** The NNP demonstrates high relevance to expanding access to adequate child nutrition and quality food and health services and is aligned to global nutrition priorities. The Programme is consistent with the needs and interests of the vulnerable and most-at-risk groups and population in general but is silent on the strategies for reaching out of and targeting these groups with nutrition-related services. UNICEF’s contributions were relevant to existing delivery structures, in line with UNICEF’s mandate and programme principles and exhibits its relevance to Government’s priorities.

**Effectiveness:** The Government-approved version of the NNP lacks clear formulation of underlying theory of change (ToC) and measurable targeted results, which limited the evaluation to draw sound conclusions. For the evaluation purpose, the ToC was retroactively constructed and selected result indicators that allowed making the following conclusions:

*Result area 1: Improved collaboration at all levels for the implementation of the NNP.* Inter-sectorial coordination mechanism and collaboration were institutionalized at national and sub-national levels among various public agencies/departments and development partners, with strong sustained leadership predetermining effective implementation of the NNP.

*Result area 2: Increased accessibility and affordability of the nutrition services and appropriate nutrition for children and their mothers.* The NNP improved access and affordability of health and nutrition services, particularly for pregnant women and children. This was achieved by the development of supporting legislation in the field of maternal and child health and nutrition and with technical support from development partners, such as UNICEF, UNFPA and WHO. Nevertheless, attainment of better results was restricted by the system-level challenges observed at the Primary Health Care (PHC) level.

To address anemia, an important public health issue, the Government strictly followed mandatory FF legislation and managed to ensure that around 95 percent of the population’s flour needs, fortified with iron and folic acid, were met. Nevertheless, the judgment on the effectiveness of flour fortification is limited due to the absence of data on incidence of neural tube defects not preventable by folic acid and most recent data on iron deficiency anemia. Micronutrient supplementation is not yet the common practice in Turkmenistan. All locally produced and imported edible salt is iodized and strictly controlled by the government authorities. Almost all households use iodized salt, though sub-regional
differences yet continue to exist.

On the demand side, the Government promotes broad public communication work on healthy nutrition in the society and fosters healthy eating habits in every individual and promotes physical education, sports and healthy lifestyle using print media and TV. Healthy life style- and nutrition-related issues are integrated in the school programme, but analysis of the programme revealed that nutrition is not adequately covered. The National Programme for the Support and Development of Sports and Physical Education promotes physical education, sports and healthy lifestyle and the active engagement of citizens in physical education and mass sports. Physical activity is featured daily in child care and school settings. Newly built schools are well equipped with specially organized spaces for physical activities and allotment of hours for sports, but old school buildings have structural limitations. Albeit, the Government efforts to promote healthy nutrition and physical activity has not yet translated into desired behavior change among children and adolescents.

The Government of Turkmenistan introduced several policy measures to ensure food security, accessibility and affordability of nutrition services and appropriate nutrition for children and their mothers. Free access to health and nutrition services is offered to pregnant women and children. Nutrition of preschool children is subsidized by the government and marketing of unhealthy food at schools is regulated. National food based dietary guidelines have been introduced. The nutritional norms have been revisited and enacted in public canteens and adherence to established dietary norms is closely monitored by SES. Underlying causes of inequality is addressed through cash benefits, which contribute to the improved access to quality food products5.

**Result area 3: Strict control of food quality and safety, support for food production in line with healthy nutrition requirements, environmental and physiological standards.** The NNP was effective in establishment of an enabling legislative and regulatory framework. The national regulatory framework is consistently updated in accordance with international standards. Establishment of the Centre of Public Health and Nutrition in 2016 was one of the main achievements of the NNP in ensuring food product quality and safety. Regular internal and external quality monitoring of imported and locally produced food staff is institutionalized. Continuous attention is paid to the capacity enhancement in food product quality and safety control. Regulation of salt, sugar and trans-fats use in daily diets is gradually obtaining higher attention of the Government. All bakery products, produced in the public sector, comply with the new standard on the content of salt and sugar, issued by the Government. The measures to reduce the content of trans-fatty acids in food products are underway, but this work is still in progress and requires continued support in coming years.

**Result area 4: Scientific research of vital aspects of healthy nutrition in the country’s natural climatic environment and implementation of the findings in practice; training of specialists.** Turkmenistan is taking promising steps towards enhancement of evidence-based policy making and planning. The Government has developed a road map, which identifies strengthening of the monitoring system of salt iodization, including biomonitoring and improving a system of quality control as one of the priorities, and initiated its implementation. The country is involved in a number of international research studies, such as WHO STEPS, HSBC, MICS, etc. In addition, with UNICEF’s support, Turkmenistan plans to introduce a cost-effective approach for the collection of population-level monitoring and surveillance data to track the implementation and impact of the (national) flour fortification programme FORTIMAS (Fortification Monitoring and Surveillance System) methodology as a potential approach to track wheat flour fortification programme in a systematic manner over time.

Nevertheless, the current level of efforts research and M&E calls for further enhancement of the evidence generation and its utilization during policy making, planning and implementation. The country lacks most recent data on anemia, actual food consumption patterns and caloric characteristics of consumed food products, impact evaluation of supply and demand-side activities

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5 The impact of the cash and non-cash benefit programmes for families with children in Turkmenistan: Results from an exploratory survey in two regions and the capital of Turkmenistan, UNICEF, 2014
promoted by NNP, etc. Further strengthening of evidence generation and promotion of evidence based decision making at national and sub-national levels should be prioritized in the next NNP.

UNICEF played a primary role in promotion of nutrition related issues on the government’s top policy agenda and supported implementation. Nutrition-related issues were given a priority in UNICEF’s previous and present Country Programme of Cooperation document. Support provided in nutrition was relevant and largely contributed to the effectiveness of the NNP. The use of its core roles, such as policy dialogue and advocacy, knowledge generation, child rights monitoring and capacity development, has led to system-level and eventually impact-level changes for children and women.

EFFICIENCY: Allocation of financial resources for the implementation of NNP and use of efficient use of resources is difficult to track, due to the input-based financing practiced in the country. Effective application of the inter-sectoral coordination mechanism allowed the government to efficiently use available resources by addressing nutrition-related issues in other sector specific programmes and legislation. Selected best examples are: i) inclusion of nutrition into the school curriculum, ii) funding of meals at pre-school and promotion of physical activity by revision of the school building standards in education system; iii) addressing healthy nutrition in the national programme of “Support and Development of Sports and Physical Education”, iv) the Interagency action plan for conducting extensive educational work on healthy nutrition in the community and v) developing healthy food habits for every citizen of the society.

Turkmenistan expands access to food through fostering public-private partnerships. In line with food security commitments, Turkmenistan supports formation of private sector in agriculture and food production sector through removal of market entry barriers and liberalization of taxes. The Government was also successful in leveraging funding from developmental partners to address emerging needs in technical assistance, knowledge exchange and monitoring and evaluation.

IMPACT: Turkmenistan’s progress towards global nutrition targets to improve maternal, infant and young child nutrition is slow and requires acceleration of actions. Turkmenistan’s progress towards World Health Assembly (WHA) goals is slow. Out of 6 main indicators, three indicators (stunting, breastfeeding and wasting) are on course, whereas two indicators (low birth weight and overweight) remain to be off course due to the low progress observed requiring acceleration of actions, and anemia cannot be assessed due to absence of the most recent data. It is assumed that the equity gaps in nutrition remain among children coming from urban and rural areas as well as children in migrant, socially vulnerable and poor families. In terms of child nutrition indicators, the largest regional differences are found in the prevalence of stunting and overweight. Notable differences in the prevalence of underweight or wasted children by mother’s education, area of residence or regions are not observed.

SUSTAINABILITY: The NNP shows rigorous sustainability prospects. The Government demonstrates high political commitment towards nutrition related issues by establishment of a conducive policy, legislative and regulatory framework and promotion of inter-sectoral coordination and collaboration. Sustainable public funding of flour fortification is another proof of government’s political will to ensure sustained access of population to fortified flour. Full reliance on local salt production and assurance of salt iodization quality is another factor guaranteeing continued consumption of iodized salt by households and prevention of goiter among population. Inclusion of the nutrition-related counselling in the package of health services delivered at PHC level and in maternity wards, albeit with some observed weaknesses; continued provision of free of charge balanced nutrition at pre-school; inclusion of nutrition and healthy lifestyles in school programme; introduction of regulations that ban sale of unhealthy food and drinks in schools and at shops nearby schools along with the use of different communication channels, affect population’s health behaviors and influence health outcomes.
Government’s continued support to food security is commendable, though sustainability of the food security may be undermined by forecasted climate change and scarcity of water resources, which in turn may have serious adverse consequences for the agricultural sector and food security. To mitigate negative impact on food security, consumption patterns and access, in June 2012, the Government adopted the National Climate Change Strategy that covers climate change mitigation and adaptation issues.

Inequities between the best-off and most marginalized groups is likely to increase in forthcoming years due to Government’s decision to revisit subsidies. In addition, prices on various goods, food products and services are likely to increase following the devaluation of the national currency. Although price controls have, so far, successfully restrained inflation, the pass-through effects of the national currency devaluation and lower state subsidies will likely bring about marginally higher prices for food, construction materials, services and public utilities⁶, which may adversely affect the most marginalized groups of the society.

**COHERENCE & COORDINATION:** Turkmenistan demonstrates strong coordination of health- and nutrition-related interventions among development partners through a well-established coordination mechanism. Key development partners are represented on the Intersectoral Coordination Committee (ICC) and actively participate in discussions of the NNP implementation progress, challenges and planning of corrective measures. Development partners' policies are coherent with government policy and direct their engagement and support around nutrition related issues. UN health team meetings allow regular discussions, development of plans and division of roles and responsibilities between WHO, UNFPA and UNICEF. There are numerous examples of effective coordination between development partners detailed in the main report.

**LESSONS LEARNED:**
Based on evaluation findings three key lessons can be drawn: i) Maintaining strong and stable leadership is the essential element to ensure integrated and well-coordinated comprehensive service delivery by NNP; ii) Complementary nutrition related activities between sectoral programmes maximize effectiveness; and iii) Strong monitoring and evaluation system along with well documented results is essential to track NNP performance.

**RECOMMENDATIONS:**

**It is recommended that new NNP meets following key requirements:** The Government is advised to formulate a clear theory of change, support adoption of a multi-sectoral, preferably a whole-of-government approach to the development of the new NNP; include a wide range of universal and targeted actions based on most recent evidence; incorporate specific goals, objectives and expected outcomes; provide a detailed implementation plan, including the planned allocation of financial resources and funding sources, roles and responsibilities of all involved public and non-public structures and timelines. The accountability and results matrix of the new NNP should show how each of the results can be realized and how each sector should contribute to the implementation of the NNP for better nutritional outcomes. UNICEF is recommended to advocate with the government to consider recommendations provided by the evaluation and allow technical support for its implementation when needed.

**Elaborate adaptive response for food security challenges from climate change:** The Government should prioritize the needs of the most vulnerable in climate change adaptation efforts, particularly children, providing children, youth and their parents with climate change education, awareness raising and training; aligning and coordinating work on climate change adaptation, preparedness and disaster risk reduction at national and sub-national levels and protecting children and their families who could be forced to move because of climate change. UNICEF is recommended to accelerate the work on climate change adaptation, preparedness and disaster risk reduction at

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⁶ ADB Outlook, September 2015
national and sub-national levels; advocate and reaffirm the role of climate change education; support the Government in scaling-up of proven approaches to address the evolving needs of children due to the climate change.

**Prioritize nutrition specific interventions in the new NNP:** Government is strongly advised to accelerate several nutrition-specific interventions across the lifecycle and include them in the new NNP. Specifically, priority should be given to introducing promising evidence-based interventions: i) in the preconception period by addressing micronutrient deficiencies and emerging issues of overweight and obesity in adolescents through community and school-based education platforms; ii) promotion of optimal maternal nutrition during pregnancy through interventions that include balanced energy protein, calcium, and multiple micronutrient supplementation as well as disease and obesity prevention; iii) promotion of infant and young child feeding by continuous advancement of breastfeeding, improvement the effectiveness of complementary feeding strategies; iv) Improvement of infant and child nutrition through micronutrient supplementation, disease prevention and treatment as well as deworming and obesity prevention. The government must ensure that these services are included in the basic health service package, adequately funded and human resource capacity built for the provision of quality nutrition services. UNICEF should advocate for the inclusion of micronutrient supplementation in the basic health package starting from pre-conception and ensure full financial coverage of these services; provide technical assistance to the government in strengthening of supplementation interventions and support the Government efforts for the health human resource capacity building.

**Continue inclusion of nutrition sensitive interventions in related national programmes of other sectors:** Nutrition-sensitive programmes should: i) incorporate specific nutrition goals and actions in addition to their own goals into the design of the sectoral programmes; ii) directly address factors that influence undernutrition, like food security, access to health services, or ensuring safe and hygienic environments; iii) improve targeting of key audiences including the poor, timing, and duration of exposure to interventions; and iv) use conditions to stimulate demand for programme services, while ensuring good service quality. UNICEF is advised to accelerate advocacy efforts for inclusion of nutrition-sensitive interventions in related national programmes. Provide technical advice on the evidence based effective nutrition sensitive interventions to be incorporated by different sectoral programmes. Work closely with health and social sectors to ensure that nutrition-sensitive interventions are well presented in sectoral programmes and are coherent with the overall nutrition policy. Encourage resourcing in the areas of school feeding, nutrition, and food security in addition to promoting best practices for connecting family farmers to markets.

**Strengthen consumer protection by further improving the quality and safety of food products:** Although an adequate food quality and safety monitoring system is in place, further enhancement of the system is required to address newly emerging standards, such as compliance with salt, sugar and the trans-fatty acids content in food products. Where appropriate, government, in close collaboration with other stakeholders, should: adopt and strengthen comprehensive measures to cover the control of food quality and safety with a view to protecting the health of consumers and producers and ensuring sound production, good manufacturing and fair-trade practices. Where measures exist, they should be regularly reviewed and updated, as appropriate, for better producer and consumer protection; enforced food regulations covering the fortification of foods with micronutrients; enhanced measures to protect the consumers from unsafe, low quality, adulterated, misbranded or contaminated foods through revisiting food labeling standards and requirements and ensure that labels are clear and easy to understand, and develop the human resources required for designing, implementing and monitoring food quality control systems. UNICEF is recommended to continue its ongoing support in capacity development to further enhance food quality and safety; provide support in raising capacity of the National Nutrition and Public Health Centre as a nutrition learning hub to share experience, evidence and provision of technical assistance to support country scale up.

**Implement comprehensive programmes that promote intake of healthy foods and reduce the intake of unhealthy foods and sugar-sweetened beverages by the population, including**
children and adolescents: – The Government is advised to ensure that appropriate and context-specific nutrition information and guidelines for adults, children and adolescents are developed and disseminated in a simple, understandable and accessible manner to all groups in society; implement an effective tax on sugar-sweetened beverages; develop nutrient-profiles to identify unhealthy foods and beverages; implement interpretive front-of-pack labelling, supported by public education of both adults and children for nutrition literacy. UNICEF should advocate with the Ministry of Education for the integration of nutrition information and guidelines into the national primary, secondary and higher education programmes as well as consider provision of technical assistance for the development of nutrition information and guidelines.

Implement comprehensive programmes, directed towards reduction of obesity rates, that promote physical activity and reduce sedentary behaviour in children and adolescents: The Government should intensify provision of guidance to children and adolescents, their parents, caregivers, teachers and health professionals on healthy body size, physical activity, sleeping behaviours and appropriate use of screen based entertainment; put an additional focus on appropriate nutrition in guidance and advice for both future mothers and fathers before conception and during pregnancy and ensure that adequate facilities are available on school premises and in public spaces for physical activity during recreational time for all children, including those with disabilities. UNICEF is recommended to advocate with the Ministry of Education on the inclusion of physical activities into the national primary, secondary and higher education programmes.

Plan for the development and implementation of an effective communication strategy and for a periodic evaluation of its impact on the behavior change of population: The Government is advised to improve effectiveness of its communication efforts through better elaboration of communication support strategy, improved integration of messages across channels, development of guidelines for adapting messages for specific target groups (ethnic minorities, urban and rural); ensure funding for a periodic assessment of effectiveness of communication strategy to gauge population's information level and consequent behaviour change. UNICEF, along with other development partners, is advised to provide technical assistance for the design of effective communication strategy and support the Government in the periodic assessment of behaviour change among population with emphasis on the most vulnerable groups.

Introduce a coordinated, integrated system for monitoring and surveillance of food, nutrition status and nutrition determinants with regular collection, analysis and presentation of data to inform decision-making and improving the quality: The Government is advised to introduce a coordinated, integrated system for monitoring and surveillance of food, nutrition status and nutrition determinants. Specifically: develop a theoretical framework for the selection and prioritization of indicators; integrate the surveillance system into postgraduate and continuous professional development training systems; build analytical capacities at national and sub-national levels and promote evidence-based policy making. UNICEF can be instrumental in providing the technical assistance to the government for establishment of an integrated monitoring and surveillance system and support in institutionalization of evidence-based policy making.
LIST OF FIGURES

Figure 1: Population, 2015 ........................................................................................................... 3
Figure 2: Indicative Theory of Change ......................................................................................... 5
Figure 3: Number of certified and recertified hospitals per year .............................................. 13
Figure 4: Early initiation of breastfeeding ................................................................................. 14
Figure 5: Exclusive breastfeeding and continuation of breastfeeding ...................................... 15
Figure 6: Bottle feeding, MICS, 2015/2016 .............................................................................. 16
Figure 7: Flour import in Turkmenistan, 2015 ......................................................................... 17
Figure 8: Percentage of children and women who receive supplementation ................................ 19
Figure 9: Hours dedicated to nutrition related issues in the curriculum ..................................... 20
Figure 10: Spending pattern of child allowance/child birth grant ............................................. 23
Figure 11: Legislative and regulatory documents revised according to international food safety standards, 2012-2017 ................................................................. 24
Figure 12: Causes of maternal death ......................................................................................... 30
Figure 13: U5MR trend and causes, 2015 ................................................................................ 31
Figure 14: Child nutrition .......................................................................................................... 35
Figure 15: Anemia prevalence .................................................................................................... 35
Figure 16: Prevalence of vitamin A deficiency in 6-59 month old children ............................... 36
Figure 17: Enabling policy and legal environment .................................................................... 38
Figure 18: Road map to Universal Salt Iodization ..................................................................... 44
Figure 19: Exclusive breastfeeding rates in ECA region ............................................................ 46
Figure 20: Evolution of BF legislation in Turkmenistan ............................................................ 46
Figure 21: Essential nutrition practices and interventions during the life cycle ......................... 51
Figure 22: Proposed nutrition specific interventions across the life cycle ................................. 54

LIST OF TABLES

Table 1: UNICEF contribution for effective realization of NNP .................................................. 2
Table 2: Evaluation criteria ........................................................................................................ 6
Table 3: Health system financing in Turkmenistan ................................................................... 21
Table 4: Quality control of fortified food products ..................................................................... 24
Table 5: Country progress towards World Health Assembly Global Targets 2025 to improve maternal, infant, and young child nutrition ......................................................... 36
Table 6: Flour fortification by flour type .................................................................................... 39
REPORT STRUCTURE

This report presents the findings of an independent Evaluation commissioned by the UNICEF Turkmenistan Country Office (CO) and conducted between June and November 2017 by an international consultant. The evaluation report highlights evaluation findings, lessons learned and provides recommendations. The report is structured as follows:

**Chapter 1.** Describes evaluation object, briefly presents country background; addresses conceptual issues related to nutrition.

**Chapter 2.** Explains purpose, objectives, the scope of the evaluation and the audience. It also defines evaluation criteria, framework, data collection and analysis methods and limitations.

**Chapter 3.** Details the findings of the evaluation in relation to five OECD evaluation criteria and additional criteria on “coordination and coherence”. Each section (one for each of the six criteria) begins with a brief introduction of the key evaluation questions answered in the section to ensure that the reader understands the context for the findings, followed by a detailed discussion of the evaluation findings.

**Chapter 4.** Stipulates lessons learned based on the evaluation findings.

**Chapter 5:** Provides conclusions based on the evaluation findings and formulates recommendations for the Government and UNICEF.

These chapters are supported by Annexes, which include a list of documents reviewed, list of people interviewed, detailed evaluation methodology and tools, evaluation framework, results framework, etc. Finally, annexes also include the original Terms of Reference (TOR) of the assignment.
CHAPTER 1: BACKGROUND

1.1 EVALUATION OBJECT: NATIONAL NUTRITION PROGRAMME 2013-2017

Some key nutrition programmes and policies have been initiated in Turkmenistan over the past decades. In 2013, the Government of Turkmenistan endorsed the National Nutrition Programme for 2013-2017 (NNP). The National Programme has been developed to improve and enhance the efforts aimed at healthy nutrition and intended to make new achievements in health care in the future.

The overall expected outcome of the NNP for the period from January 2013 to December 2017 is improved public health with increased average life expectancy due to healthy nutrition and life styles.

The NNP expects to achieve the following results:
- Improved collaboration at all levels for the implementation of the NNP;
- Increased accessibility and affordability of the nutrition services and appropriate nutrition for children and their mothers;
- Strict control of food quality and safety, support for food production in line with healthy nutrition requirements, environmental and physiological standards; and
- Scientific research of vital aspects of healthy nutrition in the country's natural climatic environment and implementation the findings in practice; training of specialists.

Main Programme objectives include:
- Broad advocacy for healthy nutrition in the society and fostering of healthy eating habits in individual behaviors;
- Based on international recommendations and recommendations from the World Health Organization – adoption of the best development practices of healthy nutrition rules and diets, which will be the basis for non-communicable disease prevention, and improvement of reporting and methodological obligations;
- Strict control of food quality and safety, support for food production in line with healthy nutrition requirements, environmental and physiological standards;
- Scientific research of vital aspects of healthy nutrition in the country's natural climatic environment and implementation of the findings in practice; training of specialists.

The target group of the evaluation are children, particularly children under 5 and as relevant, women, particularly pregnant women and mothers of newborns. Apart from children and women, the various ministries and public agencies benefited from activities implemented under the NNP. The information on the planned and executed budget for implementation of the NNP was not provided by the government for evaluation purposes.

The Programme implementation activities are carried out in accordance with the programme plan for 2013-2017 and is implemented with participation of various ministries and agencies. The MoHMI is entrusted with coordination of activities of different ministries and agencies. Implementation of the Programme involves international organizations, such as the World Health Organization (WHO), UN Children’s Fund (UNICEF), UN Development Programme (UNDP), UN Office of High Commissioner for Refugees (UNHCR), and International Organization for Migration (IOM). The NNP has been implemented with participation of various ministries and agencies, such as Ministries of Trade and External Affairs, Agriculture and Water Recourses, Finance and Economy.

Other stakeholders of the programme include representatives of milling and salt industry, local staff of the SES (Sanitary Epidemiological Service) and policlinics as the main implementers of the NNP.
and a primary source of information. Stakeholders’ roles and responsibilities in NNP implementation are detailed in Annex 8. The NNP objectives supported by UNICEF are schematically presented in the Table 1 below.

<table>
<thead>
<tr>
<th>NNP RESULT AREA</th>
<th>UNICEF CONTRIBUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved collaboration at all levels for the implementation of the NNP</td>
<td>UNICEF is an active member of the ICC, attends quarterly meetings, takes part in the discussion of implementation progress and challenges, as well as shares international practices and strategies for effective planning of corrective measures</td>
</tr>
<tr>
<td>Increased accessibility and affordability of nutrition services and appropriate nutrition for children and their mothers</td>
<td>- Supported development of the new Law of Turkmenistan “On promotion and support of breast feeding”</td>
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<td></td>
<td>- Supported the MoHMI in organization of a high level Strategic Meeting on Nutrition in the framework of the International Health Forum in Ashgabat</td>
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<tr>
<td></td>
<td>- Round tables on development of law enforcement action plan, indicators and monitoring mechanisms by the multisector working group (in progress)</td>
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<tr>
<td></td>
<td>- KAP study on parenting skills for child health, nutrition and development</td>
</tr>
<tr>
<td></td>
<td>- Development of series of child and family rubrics on ECD within the health TV programme – materials developed and submitted to the Information Center of the MoHMI</td>
</tr>
<tr>
<td></td>
<td>- Breastfeeding, immunization weeks, etc.</td>
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<tr>
<td></td>
<td>- Promotion of early childhood development;</td>
</tr>
<tr>
<td></td>
<td>- Enhancement of patronage nursing system</td>
</tr>
<tr>
<td></td>
<td>- Training of PHC staff, with emphasis on Patronage Nurses;</td>
</tr>
<tr>
<td></td>
<td>- Public procurement of premix through UNICEF Supply Division</td>
</tr>
<tr>
<td>Strict control of food quality and safety, support for food production in line with the healthy nutrition requirements, environmental and physiological standards</td>
<td>- Provision of technical support in strengthening food safety and quality control:</td>
</tr>
<tr>
<td></td>
<td>- Design of the national biomonitoring survey on universal salt iodization and laboratory preparations (planned)</td>
</tr>
<tr>
<td></td>
<td>- Data collection on USI biomonitoring survey (planned)</td>
</tr>
<tr>
<td></td>
<td>- Strengthening M&amp;E systems in FF through application of FORTIMAS approach (in progress)</td>
</tr>
<tr>
<td>Scientific research of vital aspects of healthy nutrition in the country’s natural climatic environment and application of findings in practice; training of specialists</td>
<td>- MICS 2015/2016, Nutrition Survey (2012)</td>
</tr>
<tr>
<td></td>
<td>- Early Child Development study</td>
</tr>
<tr>
<td></td>
<td>- Training of MoHMI Statistical Department in application of Lot Quality Sampling (LQS) methodology</td>
</tr>
<tr>
<td></td>
<td>- Technical assistance for introduction of FORTIMAS</td>
</tr>
</tbody>
</table>

1.2 COUNTRY CONTEXT

Turkmenistan is the second-largest country in Central Asia in size. Turkmenistan borders Afghanistan, Iran, Kazakhstan and Uzbekistan by land and Azerbaijan by sea. The country has an estimated population of 5.4 million in 2015, according to the UNPD projections\(^8\) (Figure 1). Children younger than age 18 comprise about a third of the population, with under-5 children totaling to about 0.5 million. Half of the people live in urban areas\(^9\). Nearly 85 per cent of the population are Turkmen; other ethnicities\(^10\) include Uzbek (5%), Russian (4%) and small minorities.

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\(^9\) UNDP projections, 2015

\(^10\) [http://worldpopulationreview.com/](http://worldpopulationreview.com/)
The country has experienced very high economic growth in recent years, largely because of its sizeable hydrocarbon resources, and was ranked the third-highest in the world in this regard in 2011. Since 2012, it has been classified as an upper-Middle Income Country (UMIC) by the World Bank.

Since independence, the Government of Turkmenistan has been working to improve the standard of living for its people through social and economic reform and sustainable development. Central to these efforts is a commitment to safeguard the interests of children. The Government has committed to raise living standards of people while strengthening national capacities to respond to a fast-changing global environment. Rapid economic growth translates into a large fiscal space that provides more opportunities for increased deployment of public resources to accelerate social development and improve health, education and protection of children in Turkmenistan.

Despite substantial economic progress, the country’s human development has not kept to the pace. Turkmenistan’s human development trends since 2005 have been higher than those of other medium-human-development countries, but remain well below the regional average for Europe and Central Asia, which is 0.751. Turkmenistan’s global HDI rank is 111 out of 187 countries and placing it near the top of the country list in the medium human development category. GNI per capita was reported to be US$14,027 in 2015, with the mean years of education standing at 10.8.

Nevertheless, nutrition of population and especially of women and children under five remained as a public health issue in Turkmenistan. Four percent of infants were born with low birth weight; only 11 percent of children were exclusively breastfed, 19 percent of children under five were stunted and 7.2 percent wasted in 2006; 57 percent of reproductive age women had anemia. Geographical inequalities in nutritional status was a common issue. To address nutrition related problems the Government adapted the comprehensive National Nutritional Programme for years 2013-2017.

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14 www.worldbank.org/indicator accessed in October, 2017
15 Human Development Report, 2016, UNDP
16 MICS 2006
17 Ibid
18 National nutrition study with a focus on anemia and vitamin A deficiency in Turkmenistan, UNICEF, 2012
CHAPTER 2: EVALUATION PURPOSE, OBJECTIVES, SCOPE AND METHODOLOGY

2.1 EVALUATION PURPOSE, OBJECTIVES AND SCOPE

**Evaluation purpose:** The current NNP for 2013-2017 is coming to an end at the end of 2017. Meanwhile, the Government has already started developing the next generation of a nutrition programme that will cover the period of 2018-2022. Therefore, this evaluation is timely as its findings and recommendations inform and provide valuable insights into the development of the programme, as well as to the process of integration of nationalized SDG2 targets and indicators, concerning children and women.

On the other hand, evaluating UNICEF’s contribution can help understand if/how UNICEF’s support to system-level changes has led to advances in the behaviors of key duty-bearers, as well as the nutritional status of children and women. The evaluation can eventually help UNICEF to better define and determine its strategic engagement, as well as the mode and level of support for the next nutrition programme. The findings and recommendations generated by the evaluation will be used, inter alia, to influence strategic direction and partnerships/advocacy, as well as programme strategies (nutrition-specific, across sectors, and cross-cutting) to achieve the results and targets outlined in the Country Programme Document.

**Evaluation objectives:** There were four objectives: i) to generate lessons learned, evidence and learning to guide effective action towards the achievement of SDG2 in Turkmenistan and development of the next generation of the nutrition programme of the country, ii) to help define UNICEF’s role in supporting the country’s efforts in the nutrition-related SDG implementation process in the country during the next five years, and iii) to promote results-based management and evidence-based policy development and iv) assess UNICEF’s role and contribution to NNP implementation.

In response to stated objectives, the evaluation generated learning on effective approaches – including use of upstream policy work, multi-sectoral engagement, governance, coordination and partnerships, and key interventions required to reduce malnutrition, as well as stunting in various contexts. Findings and recommendations are primarily addressed to policy makers and programme managers in the Government and UNICEF. The report also presents a broader review of progress in improved nutritional status of women and children under 5 and will look at specific UNICEF’s contribution to system level changes and reduction of bottlenecks in effective delivery of nutrition interventions.

**Scope of the evaluation:** The evaluation was supposed to cover the period 2010-2016 as per the original Terms of Reference (ToR), however, the absence of baseline data required the evaluation to extend this period to 2006 - 2017 to examine the changes in some outcome and impact indicators using the 2006 and 2015/2016 MICS data. As requested by the ToR, the evaluation is targeted at national level only and examined both the Government’s role and responsibilities to develop and implement the NNP including governance, management, resource allocations and capacity development, service delivery, quality assurance, surveillance and monitoring over the interventions under the NNP framework; and UNICEF’s role in supporting the scale up of direct nutrition interventions, as well as mainstreaming nutrition in non-nutrition sectors, including education, water, sanitation and hygiene, health, Early Child Development (ECD), and child /social protection.

**Target group:** The target group of the evaluation are children, particularly children under 5 and as relevant, women, particularly pregnant women and mothers of newborns.
**Intended users of the evaluation report:** Intended users of the evaluation findings and recommendations are:

- **Primary:** The Ministry of Health and Medical Industry (MoHMI), WHO and UNICEF, will use the results of the Evaluation as the main developers and implementers of the NNP.
- **Secondary:** Ministry of Finance and Economy as the responsible body for SDG implementation coordination and monitoring, Ministry of Agriculture and Water Sources, local governments, line ministries and MPs need to be informed and engaged. International and national civil society organizations, academic and private entities and sister UN agencies are expected to use the results of the evaluation to gain more knowledge and improve their advocacy and practical actions in development of the next nutrition programme.

### 2.2 CONCEPTUAL FRAMEWORK

The evaluation adopts a theory-based approach, as appropriate for complex evaluation objects. The approved version of the NNP lacks underlying theory of change and measurable results targets. A logical model to support the design of the NNP was developed with UNICEF’s technical support, which was not included in the final Government approved NNP document but informed its development process. Accordingly, and in attempt to extract the logic of the evaluation object, the draft indicative TOC developed by the evaluation team guided the evaluation (Figure 2).

The analysis of the NNP design, key components and planned interventions defines the logical path underlying the programme design, which is schematically presented on the

![Figure 2: Indicative Theory of Change](image-url)

Establishment of sound enabling environment across all four programme result areas provides the space to act and is acknowledged by the NNP as a fundamental enabler for the achievement of the programme goal. Presence of the enabling environment alone without adequate financial, institutional and human resource capacity in place cannot guarantee attainment of planned results. Furthermore, availability of only conducive environment and sufficient capacities without evidence based planning and implementation falls short to the achievement of desired impact. Using this underlying theory of change, this section of the report will attempt to document achievements of the NNP by each programme result area.
2.3 EVALUATION METHODOLOGY

Evaluation Criteria: Evaluation criteria, used during the evaluation (Error! Reference source not found.) were selected as a) the standard international criteria for development of the evaluation, as reflected in OECD/DAC Manual, b) appropriately geared to the purpose and objectives of the evaluation, as set out above, and c) appropriate for the learning emphasis of the study. In accordance with UN policies, gender mainstreaming will be assessed as a crosscutting issue. According to the TOR, the evaluation examined the relevance, effectiveness, efficiency, impact, and sustainability of the National Nutrition Programme and UNICEF’s contribution towards main objectives of NNP (Error! Reference source not found.). For this purpose, the evaluation will utilize OECD DAC evaluation approach19.

<table>
<thead>
<tr>
<th>CRITERION</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevance</td>
<td>Relevance is understood as the extent to which the project was relevant at time of conceptualization, and relevant and suited to the current priorities and policies of the health sector and to the current population.</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>Effectiveness will be measured as the extent to which the CAH model has been effective in attaining its primary objective: to integrate and anchor the CAH model into the existing public health care system thus ensuring its sustainability and continuity.</td>
</tr>
<tr>
<td>Efficiency</td>
<td>Efficiency is understood as the extent to which the extent to which the project has been administered efficiently in terms of how well inputs and activities were converted into results (outputs).</td>
</tr>
<tr>
<td>Impact</td>
<td>Impact is defined as positive and/or negative, primary and secondary long-term effects/impact on target group of beneficiaries produced during project implementation, directly or indirectly, intended or unintended.</td>
</tr>
<tr>
<td>Sustainability</td>
<td>Sustainability is understood as the extent to which the benefits from the intervention are likely to continue, after the end of the project and the extent to which measures have been put in place with a view to ensuring the medium to long-term ownership of rights holders and commitment by duty-bearers and their national and international development partners.</td>
</tr>
</tbody>
</table>

For achieving the evaluation objectives, an Evaluation framework (EF) (Annex 3) has been developed. The EF structures questions as indicators, which were measured or assessed during the evaluation.

19 The DAC Principles for the Evaluation of Development Assistance, OECD
It also identifies the sources of information, methods the evaluation will apply, the range of documents it will review and key informants to interview for each question.

Equity has been a primary focus of the evaluation: impacts, system changes were examined not only in relation to marginalized groups, but also in relation to whether equity gaps in nutrition status have grown or decreased between the most and least marginalized children. Gender equality and human rights considerations were mainstreamed in the evaluation.

Data collection methodology, tools and data sources: The data collection methodology comprised a mix of site visits and observations, face-to-face in-depth interviews, focus group discussions, desk-based research and review of existing reports, documents and available secondary data.

The evaluation consulted all documents obtained from UNICEF Turkmenistan, Implementing and Development Partners (DP), all relevant ministries and other governmental entities, albeit access to government reports on NNP implementation was restricted. In total, 55 documents, such as programmatic documents, ICC meeting minutes, legislative and normative documents, etc., were reviewed. The desk review also studied secondary quantitative data (research and study reports) available around the themes of evaluation. Specifically, the desk review analyzed available administrative data, MICS and TransMonEE databases and other research and studies.

IDIs with various key stakeholders and individuals were an important source of evidence for many of the evaluation questions. IDI’s aided the evaluation to: a) understand the range of contextual and operational challenges of nutrition programme and its opportunities; b) continue analysis started by desk review of nutrition programmes identified for deeper analysis; c) generate findings and lessons learned; d) explore the implementation of different strategies/interventions; and e) identify different results/pathways of contributions. The key respondents were identified during the desk review. Prior to visiting key informants IDI interview topic guides were developed based on the Evaluation Framework to help ensure systematic coverage of questions and issues. The interview topics were selected around the evaluation questions but grouped and targeted according to the organization and/or individual interviewed.

Considering the country context, the evaluation managed to interview only 11 Key Informants (KI) (Annex 2) representing different ministries, government institutions, non-public sector, service providers and reviewed 55 documents (Annex 1).

Focus Group Discussions (FGD) methodology was used as another method for data collection for obtaining several perspectives from providers and beneficiaries (right holders and duty bearers) about the improvements in nutrition service access and quality. FGDs were conducted only in one district, located closer to Ashgabat, as originally UNICEF planned the evaluation to focus only at the national level.

Three types of FDGs will be carried out: i) direct beneficiaries – pregnant women and mothers of children 0-59-month-old, ii) Patronage Nurses/Home Visiting Nurses and physicians at primary health care facilities. Four Focus Group Discussions (total 32 participants) were carried out with service providers (family physicians and nurses), pregnant women and mothers of children under five-year-old. Participants for the FGDs were randomly selected from the list of registered families with children 0-59 months old and pregnant women from PHC facility registers. Participants from PHC facilities were recruited from the facility staff roster. Each FGD targeted eight participants and lasted about an hour and half. FGD guides were for each type of FGD participants. In the absence of a country Ethical Review Board, proposed evaluation/data collection protocols were reviewed by an external Ethical Review Board, the clearance of which is in the annexed to the report (Annex 7).

Triangulation of findings: Both quantitative and qualitative data were studied to assess evaluation domains and criteria. All data collected during the evaluation were analyzed using NVivo 10™
software\textsuperscript{20}. For the analysis of the secondary qualitative data, the evaluation used re-calculated nutrition data (based on the WHO growth standards) from the 2006 Turkmenistan MICS and examining confidence intervals when assessing progress between the two-time periods (MICS 2006 and 2015). To ensure robustness of evaluation findings, the qualitative and quantitative data were triangulated across key informants, compared with available documentary evidence before drawing conclusions and formulating recommendations.

**Lessons learned:** To document lessons learned and good practices along with evidence of outcomes, based on the findings the evaluation draw conclusions, provides recommendations, and addresses broader questions on lessons learned, as shown in the text box on the right.

- What worked well and did not work well? Or what could have been done differently, if there is a possibility to start the programme over?
- What are the key lessons learned from partners’ support and the conclusion of this support?
- To what extent could UNICEF and the government utilise these lessons and experiences to inform its policy/programmes going forward?
- What are some key recommendations that can be utilized by other countries in the region?
- What are innovation and good practices?

**Stakeholder participation and ethical issue:** In order to develop ownership and ensure the involvement and interest of the stakeholders for sustainable changes and future developments, the evaluation was conducted in a participatory way, involving policy makers, service providers and partners’ staff, beneficiaries and their partners, and other people directly or indirectly involved in the NNP implementation at all phases of the evaluation. The ET ensured impartiality and independence at all stages of the evaluation process, which contributed to the credibility of evaluation and the avoidance of bias in findings, analyses and conclusions. The evaluation at all phases was guided by the UNEG ethical guidelines for evaluation\textsuperscript{21}.

As planned, the draft inception and final reports of the evaluation underwent multiple reviews of the advisory body, comprising of the MoHMI and UNICEF, as well as UNICEF’s Regional Evaluation Review Facility.

**Evaluation limitations:** The evaluation was comprehensive and examined multiple data sources to ascertain the extent, to which essential inputs were included in the programme and evidence based approaches used to address challenges in nutrition.

- One limitation is that the review of programme related documents, lacked well documented progress of NNP implementation and attained results. Despite the evaluation team efforts to obtain documents justifying the implementation progress, in the absence of needed documents, the evaluation had mostly to rely on the qualitative data obtained through stakeholder interviews. It is indeed possible that some programme interventions were missed because of the lower than expected response rate to requests for documentation and statistical data.
- Absence of the NNP budget restricted robust assessment of NNP efficiency\textsuperscript{22}. Considering the input based financing practiced in the country, where sectoral ministries receive funding based on key budget codes, such as payroll, goods, communal services and investments, it was impossible to estimate financial resources spent for nutrition related interventions within the frame of the evaluation. Thus, the evaluation was not able to assess efficiency of government resource use.

\textsuperscript{20} NVivo is a qualitative data analysis (QDA) computer software package produced by QSR International. It has been designed for qualitative researchers working with very rich text-based and/or multimedia information, where deep levels of analysis on small or large volumes of data are required. The software allows users to classify, sort and arrange information; examine relationships in the data; and combine analysis with linking, shaping, searching and modeling.


\textsuperscript{22} The government failed to provide required financial information at the inception phase, but the evaluation team along with UNICEF CO hoped to obtain this information during the data collection phase.
- The monitoring and evaluation framework for the national programme implementation although was developed with UNICEF’s assistance, it has not been attached to the package of Programme documents being approved and used for tracking the progress due to official requirements to the national program’s format. Thus, the evaluation had to reconstruct the TOC, use all available secondary data and define indicators to measure outcomes and impact.

- When it comes to quantitative data on impact- and outcome-level results, they come mostly from the 2006 Turkmenistan MICS, 2015-16 Turkmenistan MICS and the 2011/2012 nutrition surveys. MICS surveys are usually conducted every 3-5 years, but there was not one to cover the period that marked the beginning of the implementation of NNP. Thus, for baselines for many nutrition indicators among children 2006 MICS had to be taken as a basis as the most reliable and representative survey. The progress assessed during the evaluation should be treated with caution, as it represents progress only up to 2015.

- The desk review was limited to available documents and filed-based qualitative data collection was requested to focus only on the national level (as stipulated in the ToR), thus, the findings of the evaluation may not grasp the insights from the subnational level. Despite evaluation team’s efforts to collect qualitative data through FGDs from more than one district, the government authorization was provided only for one district. Despite the best efforts to reach out all key stakeholders using ‘snow-ball” approach, not all of them made available themselves for in-depth interviews.
CHAPTER 3: EVALUATION FINDINGS

This chapter describes findings from the evaluation and is broken down into the following evaluation areas: relevance, efficiency, effectiveness, impact, sustainability, coordination and coherence. The guiding questions, included in the Terms of Reference (Annex 6) and refined during the inception phase are provided at the beginning of each section and referenced throughout the text.

3.1 RELEVANCE

This section of the report examines the relevance of UNICEF’s interventions and Government policies, programmes, strategies, interventions and approaches applied to address the eminent challenges in maternal and child nutrition in Turkmenistan, summarizes information derived from the desk review and collected from key informants’ interviews and FGDs. The evaluation findings presented below are structured in a way to provide answers to the questions outlined for the given criterion in the Evaluation Framework (Annex 3) and the text box on the right.

Relevance is understood as the alignment importance or significance of the programmatic interventions and approaches in addressing key challenges and the needs of right holders/primary beneficiaries and right bearers.

Evaluation questions
- Was the NNP relevant to expanding access to adequate child nutrition and quality food and health services?
- Were the government and UNICEF interventions in nutrition relevant to existing service delivery structure in Turkmenistan?
- Were the needs of the most marginalized groups addressed?
- What is the value of the government programme in nutrition in relation to global priorities?
- Was UNICEF’s planned engagement in implementation and monitoring of the NNP relevant?

NNP was relevant to expanding access to adequate maternal and child nutrition and quality food and health services. NNP was a logical continuation of programmatic interventions, such as Universal Salt Iodization (USI), Flour Fortification (FF), Breastfeeding and Baby Friendly Hospital Initiative etc., introduced in mid-nineties and attempted to compile already ongoing activities into one National Programme to allow more a comprehensive approach towards mitigation of nutrition related challenges in the country and ensure comprehensive coverage of interventions through multi-sectoral approach. NNP was informed by experience as well as by consultations with representatives from multiple sectors of the food and nutrition system and stands out as having taken an inter-sector approach that included broader sectoral interests. It acknowledges the double burden of malnutrition, which includes both undernourishment and overweight and results in long-term ill-health and disability conditions, poor health and education attainments and, consequently, decreased social and economic gains; as well as need for further actions to address nutrition-related public health issues in the country. In this regard, the NNP Implementation Plan 2013-2017, largely focused on improving access to quality food supplies and quality nutrition services as well as promoting healthy nutrition practices among all population with emphasis on pregnant women and children.

Government’s policies and programmes along with UNICEF’s interventions were relevant to existing delivery structure. The NNP heavily relied on and utilized capacitates of the public sector in implementation of planned activities along with enhancement of the public associations\(^23\) involved in food production. UNICEF’s interventions planned in support of effective NNP implementation were in line with the government priorities and targeted at existing service delivery systems.

The NNP addressed the needs of some vulnerable groups. The programme among interventions directed towards general population, prioritized interventions targeted at pregnant women, young children and children in schools, though lacked explicit formulation of strategies for reaching them out in the programme document and action plan. There are no interventions explicitly targeted at other vulnerable and disadvantaged groups of populations.

The government programme in nutrition is aligned to global priorities. Based on international

\(^23\) Government Quasi-NGOs
recommendations and recommendations from the World Health Organization (WHO) it promotes adoption of the best development practices of healthy nutrition rules and diets and improvement of reporting and methodological obligations.

UNICEF’s planned engagement in implementation and monitoring of the NPP was highly relevant. The UNICEF’s planned engagement exhibits its relevance to the needs of the Government in effective implementation of NNP as well as to UNICEF mandate, programme principles and strategies. Details on UNICEF’s support will be explained in the following sections.

SUMMARY OF RELEVANCE: The NNP demonstrates high relevance to expanding access to adequate child nutrition and quality food and health services and is aligned to global nutrition priorities. The Programme is consistent with the needs, interests and circumstances of the vulnerable and most at risk groups and population in general, but is silent on the strategies for reaching out of these groups. Government’s policies and programmes along with UNICEF’s interventions related to nutrition were relevant to existing delivery structure and exhibits its relevance to Government’s priorities. UNICEF’s support thought out in support of NNP implementation and M&E is relevant to UNICEF’s mandate, programme principles and strategies.

3.2 EFFECTIVENESS

This section of the report focuses on the evaluation of Government policy effectiveness by examining the nutrition related programs’ contribution towards achieving the intended results; its effectiveness in facilitation of sectoral reforms; improvements in food security and quality, service quality and targeting; and the behavioral change of beneficiaries. Findings are presented to provide answers to the questions outlined for the given criterion in the Evaluation Framework (Annex 3) and the text box on the right.

**Effectiveness** is measured as the ECD/ECE Programs’ contribution to the achievement of intended results.

**Evaluation questions**
- To what extent were system level changes achieved? Did these catalyze equity-focused results for children?
- What was the underlying theory of change that led to increased access? Was it valid?
- Were contextual factors (political, social, economic, cultural) considered in the design/implementation of the nutrition interventions?
- Were efforts made to establish an enabling environment (necessary and appropriate policies, legislation, budgets) for the expansion of nutrition programmes?
- Did public and private service delivery systems reach the most marginalized groups?
- Extent to which supply side bottlenecks were addressed? (existing coverage, range and quality of services provided, readiness and availability of resources);
- What were the main constraints on demand?
- Which interventions of NNP were most and least effective?
- Did the intervention results contribute to reducing the underlying causes of inequality and discrimination?
- What was the role of UNICEF in ensuring the effectiveness of the NPP?
- Were there any unintended positive and/or negative results and whether the negative results could have been foreseen and managed?
Results Area 1: Improved collaboration at all levels for the implementation of the NNP.

Effective coordination mechanism institutionalized and strong sustained leadership predetermined effective implementation of the NNP.

The evaluation was restricted to examine improvements attained in collaboration at all levels for the NNP implementation due to the absence of the baseline data, but the status at the time of the evaluation are detailed below.

The implementation of NNP has been governed by the Intersectoral Coordination Committee (ICC) established under the Ministry of Health and Medical Industry (MoHMI) and represented by various ministries, government entities/departments, academic and research institutions, quasi government organizations and development partners (see text box on the right).

Based on the overall NNP implementation plan, each respective ministry has elaborated sector specific implementation plans. With the participation of relevant ministries, departments and public organizations, an "Interagency action plan for conducting extensive educational work on healthy nutrition in the community and developing healthy food habits for every citizen of the society" was developed, approved and implemented.

All issues related to the implementation of the NNP and challenges are discussed quarterly at ICC meetings and corrective measures planned. Similar intersectoral nutrition coordination mechanism is put in place at regional levels using the decentralized structure. The key informants interviewed anonymously acknowledged effectiveness of the given coordination mechanism. Notably, the NNP managed to maintain strong and stable leadership that can be considered as one of the contributing factor of success. One of the examples of the coordination mechanism’s effectiveness is the ICC’s decision to introduce legislation that regulates lower sugar and salt content in the publicly produced bakery products.

Result Area 2: Increased accessibility and affordability of the nutrition services and appropriate nutrition for children and their mothers

Supporting legislation have been developed in the field of maternal and child health and nutrition. Mother and child health and nutrition has always been one of the top priorities of the Government of Turkmenistan. The MoHMI is committed to accelerating progress on newborn, child, adolescent and maternal health and wellbeing through implementation of the State Health Programme “Saglyk”. The National Strategy and Action Plan on Maternal, Newborn, Child and Adolescent Health in Turkmenistan for 2015-2019 also sets number of long-term goals in maternal

Members of ICC

1. Ministry of Health and Medical Industry, including State Sanitary and Epidemiological Service
2. Scientific and Clinical Centre of Mother and Child Health
3. “Health” Information Centre of the MOHMI
4. Turkmen State Medical University
5. Ministry of Trade and Foreign Economic Relations
6. State Association of Food Industries
7. National Institute for Sports and Tourism
8. State Fishery Committee
9. Union of Industrialists and Entrepreneurs
10. Ministry of Education
11. Ministry of Agriculture and Water Economy
12. State Veterinary Service
13. Ministry of Finance and Economy
14. Khakimlik of Ashgabat city
15. State Concern “Turkmenchemistry”, Salt Plant “Guvlyduz”
16. State Committee of Television and Radio Broadcasting and Cinematography
17. National Red Crescent Society of Turkmenistan
18. State Standards Service “Turkmenstandartlary”
19. WHO
20. UNICEF
21. Academy of Sciences

Quotes: from ICC members

“Quarterly MCC meetings are organized by MoHMI, where each ministry reports on the sector specific implementation progress…”
“Quarterly MCC meetings are the platform where we can discuss achievements, problems and take decision how to proceed.”
“MCCs are also established at regional level…”
and newborn health and nutrition along with provisions of the NNP. The National strategy for the implementation in 2014-2020 of the tasks defined in the Ashgabat Declaration on the Prevention and Control of Noncommunicable Diseases also addresses the health, nutrition and physical activity among population, including women and children.

In 2009, Turkmenistan adopted the national Law on Protection and Promotion of Breastfeeding and Requirements for Infant Feeding Products. Since then, there were several attempts to harmonize the law with the international principles and requirements in response to the CRC comments received in 2015 (Figure 20). The same year UNICEF and MoHMI organized a high level strategic meeting on nutrition, an International Health Forum, in Ashgabat, where UNICEF Headquarters presented recommendations for the improvement of the Law on “Protection and Promotion of Breastfeeding and Baby Foods” in line with the CRC Committee recommendations. A consistent continuation of the policy in correct and rational infant feeding is the Law of Turkmenistan “On the promotion and support of breastfeeding” adopted in 2016, which aims at providing optimal nutrition, growth and development of children, prevention of diseases and improvement of the health of infants and young children by improving their nutrition. At present, MoHMI, with the technical support from UNICEF, is in the process of finalization the by-law on the Law implementation and enforcement mechanisms to strengthen the monitoring and control of International Code of Breast Milk Substitutes (ICBMS) and BFHI planned to be approved by end of 2017.

The order on “Infant and Young Child Feeding” (IYCF) is approved end of July 2017. The order promotes establishment of BF Technical Working Group (TWG) under the ICC and mandates approval of the National Programme and Action Plan for IYCF in Turkmenistan for 2017-2021; defines policies that health facilities should apply in support and for the protection of BF; introduces certification and recertification requirements and assessment criteria of maternities and PHC facilities based on the principles of BFHI; outlines standards list of equipment for breastfeeding rooms as well as endorses IYCF guidelines.

Continued application of these principles in practice since early 1999, resulted in 87 percent of maternity hospitals/wards in the country being certified as “Baby friendly hospitals” (BFH). The BFHI certification progress reached the pick during 2003 – 2006 and slowed down afterwards, as large majority of hospitals were already certified and had to undergo the re-certification process every five years (Figure 3).

Figure 3: Number of certified and recertified hospitals per year

If in the first two years the certification of hospitals was held by external parties, soon the national capacity was developed at the National Breastfeeding Center and the certification process was carried out by national experts. The largest number of hospitals being recertified is recorded in 2008, since then the process gradually phased out and from 2011 completely abandoned. The last BFHI monitoring visit was held in 2013. This trend is explained by closure of the National BF Center and absence of designated structure responsible for the function.

Early initiation of breastfeeding, avoiding use of baby formula and bottles with nipples, mother and child staying in the same room and breastfeeding on-demand is practiced by almost all maternity hospitals.

24 Source: National MCH Clinical Center
73 percent of babies are breastfed for the first time within one hour of birth. There are no differences in the percentage of children breastfed within one hour by background characteristics except for regions. The percentage of children who are breastfed for the first time within one hour of birth in Ahal velayat (47 percent) is much lower than national average and in other regions (Early initiation of breastfeeding, avoiding use of baby formula and bottles with nipples, mother and child staying in the same room and breastfeeding on-demand is practiced by almost all maternity hospitals.

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25 MICS 2015/2016
26 Ibid
There has been a tangible progress in increasing breastfeeding rates since 2006 (Figure 5). The exclusive breastfeeding rate among children under 6 months of age improved from 11% in 2006 to 59% in 2015. Albeit this improvement is commendable, it should be treated with caution, as it represents progress only up to 2015.

**Figure 5: Exclusive Breastfeeding and continuation of Breastfeeding**

At the age 0-1 months, the proportion of children exclusively breastfed is 83 percent while at age 4-5 months the percentage decreases to 37 percent at which point breastfeeding is increasingly being supplemented with plain water and milk/formula. Only about 15 percent of children are receiving breast milk at age 2 years.

Exclusive breastfeeding is in principle supported. The Social Security Law assigns maternal protection through maternity benefits and article 247 of the Labour Code stipulates that women who have children under one and a half years are granted additional breaks for breastfeeding a baby, besides a general lunch break. Physicians and nurses showed good theoretical knowledge on breast feeding, but information, education and communication with women are inefficient which explains the sharp decline in exclusive breastfeeding after the one month from birth. During conversations with mothers, evaluation found that not all of them know all positive effects of exclusive breastfeeding until 6 months, therefore they start to give an additional nutrition earlier.

**Almost all children are weighed at birth In Turkmenistan.** Almost all children (99 percent) are weighed at birth and approximately 3 percent of infants are estimated to weigh less than 2,500 grams at birth in 2015 (4% in 2006). Babies born in Ashgabat (9.1 percent) and Dashoguz velayat and in poor households are more than three-fold as likely to be born underweight (less than 2,500 gm) than babies born in Ahal velayat (2.3 percent).
New WHO breastfeeding approaches were introduced in the practice of all health facilities with the support of UNICEF, UNFPA, WHO, and USAID. Preparation of pregnant women on lactation issues is promoted by implementation of the revised antenatal care (ANC) protocol at the primary health care (PHC) level developed with UNFPA technical support. Consequently around 1,800 physicians and nurses have been trained in application of the new ANC protocol. Pregnant women and young mothers receive counselling and education in the “school of mothers” at PHC facilities during regular visits and on demand. Young mother education is also promoted in maternity hospitals/departments as reported by FGD participants and observed during the site visit. A training programme on the rational feeding of young child based on WHO recommendations has been developed for capacity building of primary health care providers with UNICEF’s support. Furthermore, methodical guidelines on “nutrition of different age groups of the population” was introduced for family doctors and approved in 2013. Effort to incorporate nutrition counselling into antenatal visits have made progress.

The effectiveness of all these efforts is undermined by the system level challenges at the Primary Health Care (PHC) level. The assessment of the Maternal and Child Health (MCH) home visiting at the PHC level revealed unequal distribution of health professionals across regions and high staff workload, that restricts delivery of the quality care. The study also highlights sub-optimal compliance with care protocols, shortage of required equipment, lack communication skills and adequate knowledge. According to the information provided by the representatives of MoHMI, initial steps for resolution of these shortcomings have been already taken.

Table 1: Breastfeeding in Turkmenistan, UNICEF, 2012

<table>
<thead>
<tr>
<th>Region</th>
<th>Breastfed under 2 years (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashgabat</td>
<td>65%</td>
</tr>
<tr>
<td>Ahal</td>
<td>31%</td>
</tr>
<tr>
<td>Balkan</td>
<td>15%</td>
</tr>
<tr>
<td>Dashoguz</td>
<td>16%</td>
</tr>
<tr>
<td>Lebap</td>
<td>15%</td>
</tr>
<tr>
<td>Mary</td>
<td>15%</td>
</tr>
<tr>
<td>Poorest</td>
<td>10%</td>
</tr>
<tr>
<td>Richest</td>
<td>44%</td>
</tr>
</tbody>
</table>

Although end users expressed satisfaction with the service quality they receive, the study revealed that some critical tasks are not consistently performed (e.g., babies are not always weighed, advise on child development, contraception etc.)


Figure 6: Bottle feeding, MICS, 2015/2016

<table>
<thead>
<tr>
<th>Region</th>
<th>Bottle feeding (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashgabat</td>
<td>31%</td>
</tr>
<tr>
<td>Ahal</td>
<td>31%</td>
</tr>
<tr>
<td>Balkan</td>
<td>16%</td>
</tr>
<tr>
<td>Dashoguz</td>
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<td>Lebap</td>
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<tr>
<td>Poorest</td>
<td>10%</td>
</tr>
<tr>
<td>Richest</td>
<td>44%</td>
</tr>
</tbody>
</table>

The system level challenges negatively affected attainment of desired results in child nutrition. Overall, 22 percent of children under 24 months are fed using a bottle with a nipple (Figure 6). Most children in Ashgabat city (65 percent) are fed using a bottle with a nipple, while such feeding practice is notably less common in other regions. Bottle-feeding is almost twice more common in urban than in rural areas (31 and 17 percent respectively) 34. Percentages increase with the level of mother’s education and wealth index. Turkmenistan shows a poor result also in the rate of continued breastfeeding at 2 years, over 60% of children are not continuously breastfed when they reach the age of 2, in contrast to World Health Organization (WHO) recommendations 35.

Almost all older (18-23-month-old) children (98 percent) achieve the minimum dietary diversity compared to younger (6-8-month-old) children (44 percent). Overall, only 77 percent of children under

33 PHC MCH home visiting assessment in Turkmenistan, UNICEF, 2012
34 MICS 2015/2016
35 The WHO recommendations on infant and child feeding can be found at: http://who.int/topics/breastfeeding/en/
Turkmenistan adopted mandatory flour fortification (FF) legislation. Addressing the micronutrient deficiencies is a key priority to the Government of Turkmenistan and an important contribution to improvement of public health, especially women’s and children’s health, and to achievement of the Sustainable Development Goals (SDGs). To address public health issues due to anemia, Turkmenistan has mandatory FF legislation since 1996. In 2006, the President issued a Resolution mandating flour fortification with both iron and folic acid. As recommended by WHO, UNICEF and other international organizations, in Turkmenistan, flour fortification with micronutrients is mandatory for all premium and first grade flour produced in the country. Quantity and composition of micronutrients added to the enriched food have been determined with involvement of international UNICEF experts. The NNP put additional emphasis in enhancement of the FF regulatory framework by the development of technical standard. New internal and external monitoring guidelines have been developed and are in use by all flour mills across the country. Total government owned 25 mills producing supreme grade, 1st and 2nd grade wheat flour. Iron and Folic Acid fortified premium and first grade bread flour production Instructions were approved and applied for producers. Furthermore, guidelines for internal FF monitoring were issued and institutionalized.

Figure 7: Flour Import in Turkmenistan, 2015

As a result, around 100% of premium and first grade flour produced in the country is fortified with iron and folic acid, which reportedly cover about 95 percent of the population’s flour needs. According to 2015 data, remaining 5 percent is imported flour, mostly from Kazakhstan (60%) and Russia (38%). Albeit regulatory requirement for the imported flour fortification has not yet been effected, 21% of flour imported from Kazakhstan is fortified and meets national fortification standards.

The flour mill quality control, process control and data collection systems are considered to be at the optimal level and comparable to mills in other countries with strong fortification and food control systems. The consumption of the nationally produced fortified flour as bread would provide an adequate intake of iron and folic acid. This indicates that the health of the population of the country is benefiting from the adequate intake of iron and folic acid.

Despite the implementation of flour fortification with folic acid since 2006, the incidence of neural tube defects (NTDs) in Turkmenistan shows an increasing trend. According to MoHMI statistical data,

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36 MICS 2015/2016
37 Resolution of the President of Turkmenistan “Regarding Salt Iodination and Flour Fortification with Iron”, 1996
38 Key informant interview
39 Key informant interview
41 Tracking the Effective Coverage of the National Flour Fortification Programme: Pilot Implementation of Turkmenistan FORTIMAS System, Draft Consultancy report, December, 2017
NTDs increased by 40% between 2012 – 2016\textsuperscript{42} possibly explained by improved diagnosis and registration. Albeit this figure includes genetic, syndromic, and chromosomal causes of NTDs not preventable by folic acid, in the absence of a more detailed analysis the given trend should not be left unattended. Therefore, based on the recommendations proposed during the FORTIMAS workshop in 2016, the Statistics and Information Department of MOHMI modified its vital health statistics reporting system in 2017, and now requires that all maternity hospitals in country report the: i) counts of all cases of neural tube defects (NTDs) (i.e., anencephaly and spina bifida) identified when newborns are delivered (live or still-birth); ii) Counts of all cases of elective terminations of pregnancies due to antenatal detection of NTDs (also referred to as elective termination of pregnancy for fetal anomaly; and iii) Counts of all births (live or still born, including NTD cases\textsuperscript{43}.

The findings based on the above data reported from January through September 2017 indicate a NTD prevalence of 2.6 per 10,000 births. Such prevalence data are not yet available for the period prior to the start of national flour fortification, or during the implementation of the NNP. However, based on experiences of countries, such as the United States and Oman, where folic acid has been added to fortified flour since 1996, if the data reported by MOHMI is accurate, it may be concluded that there has been a substantial reduction in NTDs in Turkmenistan due to the effective coverage of adequately fortified wheat flour\textsuperscript{44}.

All locally produced and imported edible salt are iodized and strictly controlled by the government authorities. In 2004, Turkmenistan was certified as country, which achieved universal Salt Iodization (USI). Challenges related to Iodine Deficiency Disorders (IDD) in Turkmenistan have been addressed by national Government’s stewardship, continued public funding and strong oversight of the mandatory production and supplies of properly iodized salt from the single salt factory Guvlyduz, which sources the KIO3 from a nearby national source. The food control officials report full compliance in the supply channels to the iodized salt standards. The Government strictly controls to ensure all imported salt iodized. There is a system of certification of imported salt. Quality of salt iodized in country monitored at all levels, starting at the plant, through transportation, storing and to selling points. Sanitary Epidemiologic Services (SES) reports indicate, that all salt supplies in retail markets, catering, large kitchens, and food companies are iodized and meet national standards\textsuperscript{45}. The system of internal monthly reporting is practiced.

According to the 2015-16 Turkmenistan Multiple Indicator Cluster Survey (MICS)\textsuperscript{46} results, in almost all households (100 percent), salt used for cooking was tested for iodine content by using salt test kits and testing for the presence of potassium iodide or potassium iodate content. In 97 percent of households, salt was found to contain 15 parts per million (ppm) or more of iodine. Use of iodized salt was lowest in Ashgabat city (92 percent) and highest in Dashoguz velayat (100 percent). There are no differences in consumption of iodized salt by area of residence (urban, rural) and wealth index.

Micronutrient supplementation is not a common practice in Turkmenistan. The country lacks the latest data on micronutrient supplementation, however the most recent available Nutritional Survey data from 2011 (baseline before NNP) suggests, that micronutrient supplementation is not a common practice in Turkmenistan (Figure 8). Non-pregnant women used micronutrients relatively seldom. In the month prior to the survey, only 2.3% of women took iron drugs; 0.8% took folic acid;

\textsuperscript{42} 4.5 per 10,000 live births in 2012 and 6.3 per 10,000 live births in 2016, Source MoHMI, obtained on request.
\textsuperscript{43} Tracking the Effective Coverage of the National Flour Fortification Programme: Pilot Implementation of the Turkmenistan FORTIMAS System, Draft Consultancy report, December, 2017
\textsuperscript{44} Ibid 32
\textsuperscript{45} Establishing sustainable system of monitoring of the IDD elimination in Turkmenistan, Proposal for USAID funded USI/IDD Programme, UNICEF, 2016
\textsuperscript{46} Turkmenistan Multiple Indicator Cluster Survey, 2015-2016
0.7% took vitamin A and 4.1% took multivitamins. The lack of latest data limits the evaluation to examine progress achieved in this area.

**Figure 8:** Percentage of children and women who receive supplementation

<table>
<thead>
<tr>
<th></th>
<th>Children</th>
<th>Women pregnant</th>
<th>Women who took supplements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron supplements</td>
<td>1.7%</td>
<td>13.4%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Folic acid</td>
<td>0.6%</td>
<td>8.4%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Vitamin A</td>
<td>0.7%</td>
<td>2.5%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Multivitamins</td>
<td>7.5%</td>
<td>8.4%</td>
<td>4.1%</td>
</tr>
</tbody>
</table>

Figures were higher among pregnant women, at 13.4%, 8.4%, 2.5% and 8.4% respectively, although in general they remained low (Figure 8). Children also rarely took micronutrient supplements. Percentage of children who took these supplements in the month prior to the survey was 1.7%, 0.6%, 0.7% and 7.5% respectively. 44.4% of women had heard that wheat flour was fortified with micronutrients; and 39.4% of respondents stated that they usually used fortified wheat flour in the households. In 50.5% of surveyed households, labels on the wheat flour packs had information confirming its fortification, and the results of the tests for iron content in the flour samples confirmed that 100% of the collected samples contained fortified flour. Households mostly used wheat flour of premium (68.5%) and extra (31.5%) quality. To examine effectiveness of the health sector’s efforts in introduction of micronutrient supplements at the Primary Health Care on the consumption of supplemented micronutrients, more recent data is required.

On the demand side, the Government promotes broad public advocacy/information/education/communication work on healthy nutrition in the society and fosters healthy eating habits in every individual. With the participation of relevant ministries, departments and public organizations, an "Interagency action plan for conducting extensive educational work on healthy nutrition in the community and developing healthy food habits for every citizen of the society" was developed, approved and implemented. The media play an important role in promotion of the breast feeding, healthy nutrition and healthy lifestyle. Health authorities entrust the media with essential health information, which is then relayed to the public in readily accessible formats through a several state media channels (TV and printed media). Various meetings and events/talk shows about importance of healthy eating habits to promote normal body development and prevent overweight/obesity are regularly aired on TV. The mass media helps health workers expand their audience reach, which is crucial considering the fact, that face-to-face channels of communication often require too many human resources and reach only a small number of people in large, underserved rural areas. The mass media provides an important link between the rural residents and vital health information.

UNICEF supported the government in the development of a series of child and family rubrics for the health TV programme on early childhood development based on the results of the Knowledge Attitude and Practice study on parenting skills for child health, nutrition and development. UNICEF made funding available for printing of a recipe book for parents on complementary feeding based on local products and home meals. Every year in the first week of September “National Breastfeeding Week” is celebrated in the country. UNICEF regularly supports and uses this event for promotion of infant and young child feeding among population, service providers and decision-makers.

Healthy life style and nutrition related issues are integrated in the school programme. The life skills education is supported at schools from first to ninth grade through introduction of “Life skills education” programme, which was developed under the leadership of the Ministry of Education and...
Science in collaboration with MoHMI and UNFPA. The curriculum covers issues related to healthy nutrition, water, sanitation and hygiene, physical activity, conflict resolution etc.

**Figure 9: Hours dedicated to nutrition related issues in the Curriculum**

While this is a commendable approach for the promotion of healthy lifestyle and nutrition, the analysis of the programme revealed, that nutrition related issues are not adequately covered. Measurement of hours dedicated to nutrition related issues in the curriculum of each grade shows that nutrition is covered only in the first, second and fifth grades only (Figure 9).

Promotion of physical activity to fight against overweight and obesity and prevent non-communicable diseases is attracting more attention in the country. The National Programme for the Support and Development of Sports and Physical Education in Turkmenistan 2011-2020 was approved by the President in May 2012. Its main objectives include the promotion of physical education, sports and healthy lifestyle and the active engagement of citizens in physical education and mass sports. The Ministry of Health and Medical Industry is collaborating with the State Committee of Sports, other ministries, the municipalities of the regions and Ashgabat, and social organizations to ensure the active participation of the country’s youth in the activities held.

A large range of continuous educational and informational activities are being conducted that relate to taking care of one’s own health and the health of other people, playing sports a source of physical and spiritual development, eliminating bad habits, such as drug addiction, smoking, etc., and preparing young talents for participation in mass sports events. Special informational programmes are broadcast on TV to promote physical education, sports and healthy lifestyle. These programmes underline the importance of being involved in one or more types of sport and recreational activities from childhood throughout life, as well as of developing family sports and creating the habit in family members of daily participation in such activities. The number of mass sports and recreational activities available has increased and large events have been held to raise awareness about them and encourage public engagement. Physical activity is featured daily in child care and school settings. The role of physical activity is highlighted in the school programme on “Life skills”. Newly built schools are well equipped with specially organized spaces for physical activities and allotment of hours for sports, but old school buildings have structural limitations.

The Government efforts to promote healthy nutrition and physical activity did not translate into desired behavior change among children and adolescents. The study on school aged child behavior reports that every fourth child does not consume breakfast. With age, the number of those “not having breakfast” is increasing. Consumption of fruit and vegetables once or more times per day has been reported by 49 percent of respondents. About half of children consume sweets every day or even more often, several times a day. With age this indicator is increasing. Consumption of sweets is higher among girls. About 25 percent of children consume soft drinks every day several times per day, especially in Ashgabat. About 19 percent of adolescents consume chips, biscuits or sunflower seeds.

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47 Authors calculation of hours dedicated to nutrition related issues based on the National Programme
48 Strengthening the response to noncommunicable diseases in Turkmenistan, WHO, 2013
49 Report on key findings from the Health Behavior in School-aged Children (HBSC) random sampling survey among secondary school students of Turkmenistan, UNFPA, 2015

**Quote:** from Key Informant from MoE

“All newly built schools have special facilities for engagement of children in sports and physical activities… But promotion of sports in old schools is challenging due to the restriction of space that could be used …"
seeds every day or more often. About 10 percent of adolescents consume non-healthy foods (shaurma, hamburgers, hotdogs, etc.) every day or more often.

About 35 percent of the surveyed children have reported on their daily physical activity. With age, physical activity is declining. One in every 6 children watch TV for 2 hours or more during the day. With age, time spent on watching TV is steadily increasing, though not much difference in gender is noted in all age groups. About 7 percent of respondents have reported that they watch TV every day for 5 hours or more. About 18 percent have stated that they are playing for 2 hours on the computer or game device, more often these are boys and residents of Ashgabat. Nearly 2 percent of children play games for 5 hours or more, which indicates a certain psychological addiction. Ten percent of children spend 2 or more hours per day at the computer. With age, the percentage of children is increasing, similarly the number of computers in households is increasing. Residents of Ashgabat use computers ten times more50.

These findings call for an emergent need in more aggressive promotion of balanced/healthy nutrition and physical activity among children and adolescent. In autumn of 2017 Turkmenistan will host 5th Asian Indoor and Martial Arts Games, which can serve as a powerful instrument for the promotion of physical activity among children, adolescents and general population.

To ensure food security, accessibility and affordability of the nutrition services and appropriate nutrition for children and their mothers, the Government of Turkmenistan introduced number of policy measures:

The Government is committed to ensure free access to health and nutrition services for pregnant women and children. The state budget is a principle source of health financing in Turkmenistan. The country spends 2 percent of its Gross Domestic Product (GDP) on health, which is lowest level among all the countries in the region (Table 3).

Table 3: Health System Financing in Turkmenistan

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Health Expenditure (THE) % Gross Domestic Product (GDP)</th>
<th>General Government Health Expenditure (GGHE) % of Total Health Expenditure</th>
<th>General Government Health Expenditure (GGHE) as % of Total Health Expenditure</th>
<th>Social Security Funds as % of General Government Health Expenditure (GGHE)</th>
<th>Out of Pocket Expenditure (OOPS) as % of Total Health Expenditure (THE)</th>
<th>Total Health Expenditure (THE) per Capita in US$</th>
<th>General Government Health Expenditure (GGHE) per Capita in US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>2</td>
<td>62</td>
<td>9</td>
<td>7</td>
<td>38</td>
<td>87</td>
<td>54</td>
</tr>
<tr>
<td>2011</td>
<td>2</td>
<td>64</td>
<td>9</td>
<td>7</td>
<td>36</td>
<td>113</td>
<td>73</td>
</tr>
<tr>
<td>2012</td>
<td>2</td>
<td>65</td>
<td>9</td>
<td>7</td>
<td>35</td>
<td>133</td>
<td>87</td>
</tr>
<tr>
<td>2013</td>
<td>2</td>
<td>67</td>
<td>9</td>
<td>7</td>
<td>33</td>
<td>166</td>
<td>112</td>
</tr>
<tr>
<td>2014</td>
<td>2</td>
<td>65</td>
<td>9</td>
<td>7</td>
<td>35</td>
<td>187</td>
<td>122</td>
</tr>
</tbody>
</table>

Source: Health system financing country profile: Turkmenistan, 2014, WHO

Nine percent of General Government Expenditure (GGE) is allocated to health and the share of public funding in the Total Health Expenditure (THE) remained at 65% for the last couple of years. Out of pocket expenditure is estimated at 35% for the last five years. The per capita increased since 2010 (US$ 87) and reached US$ 187 in 201451.

Pregnant women are eligible for free supplementation during antenatal period and counselling on nutrition during pregnancy, breastfeeding and healthy lifestyle. However, the use of micronutrient supplements, either iron plus folic acid or a multi-micronutrient supplement, benefits non-pregnant

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50 Ibid
51 Health system financing country profile: Turkmenistan, 2014, WHO
women by helping to bring her to replete status before pregnancy at which time her vitamin and mineral requirements dramatically increase. Neural tube defects that are linked to folic acid deficiency occurs during the first weeks following conception and, therefore, are unlikely to be affected by supplements begun after a woman’s first antenatal visit. Children are eligible to any health service needed including nutrition supplementation.

Whilst pregnant women and children have access to free health and nutrition services, financial barriers to access needed services is faced by the population, particularly young mothers and women of reproductive age, who are requested to provide co-payment for services in an amount of 50% of total service cost. While actual amount of co-payment is affordable for majority of the women in Turkmenistan, it could potentially affect economically disadvantaged.

**Nutrition of preschool children is subsidized by the government and marketing of unhealthy food at schools is regulated.** Attention is given to healthy nutrition in preschool institutions. MoHMI with Ministry of Education revised diets for preschool and school children and approved by the joint Decree. Meals, including hot meals, are provided free of charge in preschool facilities. Sales of unhealthy food products in education institutions and/or near the schools (retail food shops in proximity of 50 meters to schools) is regulated by the special regulation issued by the Ministry of Trade to discourage school children from over-consuming sugary drinks, snacks and fast food. With UNICEF’s support the country in certification of Child Friendly Schools.

**Access to balanced/healthy nutrition is ensured in the public sector.** The nutritional norms have been revisited and enacted in public canteens. Adherence to established dietary norms is closely monitored by SES.

**Underlying causes of inequality is addressed through cash benefits, which proved to contribute to the improved access to quality food products.** Originally to encourage people to consume fortified flower and salt and ensure access of vulnerable groups the government financed delivery of fortified food package (flower and salt) to all residents of the country until the market was fully penetrated by fortified products. After economic recession, the decision has been made to abolish food benefits. Whilst salt was no longer distributed free of charge to the general population, food benefit was maintained only for the most vulnerable groups and price on salt was set at symbolic level 1 Manat (approximately US$ 0.30 at the exchange rate of August 2017) to ensure affordability. Legislation on social insurance was last updated in 2007 and among other benefits offers maternal cash benefit, birth grant and child care allowance for children up to 18 years old.
According to the impact of the cash and non-cash benefit study[^52], 60 percent of child birth grant and child allowance recipients put the money in the family budget from which all household expenses are being made. Four out of ten cash benefit recipients use the money for specific expenses, mostly food products (84% of benefit is spent on food), toiletries and toys (Figure 10).

**Figure 10: Spending Pattern of Child Allowance/Child Birth Grant**

Some professionals and decision-makers describe the range of government service provision for children and families as being comprehensive so that all needs of children and families are met. They do, however, recognize the need to ensure that population in general and parents know about these services and there is a need to share information more widely.

**Result Area 3: Strict control of food quality and safety, support for food production in line with the healthy nutrition requirements, environmental and physiological standards**

**National Regulatory framework is consistently updated according to international standards.**

National standards, sanitary norms and regulations for food product safety (imported or locally produced) along with guidelines for food safety monitoring are reviewed in line of scientific achievements and Codex of Alimentarius standards and requirement. During the evaluation period, the country reviewed and adopted number of laws and regulations (Figure 11).

[^52]: The impact of the cash and non-cash benefit programmes for families with children in Turkmenistan: Results from an exploratory survey in two regions and the capital of Turkmenistan, UNICEF, 2014

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- **Maternity benefit**: 100% of earnings is paid for 56 days before and 56 days after the expected date of childbirth (72 days after for a difficult childbirth; 96 days after for multiple births).
- **Birth grant**: A lump sum is paid for the first four children, regardless of whether parents are employed or not. 157.30 new manat is paid for each of the first two children; 302.50 new manat for the third child; and 605 new manat for the fourth child.
- **Child care allowance**: 78 new manat a month is paid for children below the age of? 18 months. Benefits are adjusted periodically according to changes in the national average wage.
To improve and harmonize Turkmenistan's food regulatory framework with the Codex Alimentarius standards and enforce the implementation of the Food Safety and Quality Act of Turkmenistan on the introduction of HACCP (a system for analyzing risks and critical control points) in food production, with the technical support of the World Health Organization (WHO) training seminars were held. These seminars were attended by representatives of all relevant ministries, departments and individual entrepreneurs.

Establishment of the Center of Public Health and Nutrition in 2016, was one of the main achievements of the NNP in ensuring food product quality and safety. Assurance of food safety is a priority direction of the NNP. In this regard, the Government heavily invested (around US$75 million) in the establishment of the new Public Health and Nutrition Centre under the Ministry of Health and Medical Industry, which combines ten different laboratories including three nutritional laboratories allowing monitoring of the food product quality. The Centre is equipped with modern food laboratory equipment and works closely with producers, Ministry of agriculture, Ministry of Trade. It services as a central laboratory of the State Sanitary Service (SES) with its three nutrition laboratories.

With the technical support from UNICEF, the center has been heavily supported by Kazakh Academy of Nutrition (KAN), which availed invaluable technical guidance to the center, facilitated knowledge exchange and among other partners contributed to the human resource capacity building of the Center in the field of international food quality assurance. Apart from KAN, the centre collaborates closely with Nutrition Institute of Moscow and with professionals from other countries.

<table>
<thead>
<tr>
<th>Year</th>
<th>Legislative and regulatory documents revised according international food safety standards, 2012-2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>• Law on Food Safety and Quality&lt;br&gt;• Law on Consumer Protection&lt;br&gt;• Decree on Hygienic standards of maximum permissible amounts of chemicals released from the materials in contact with food;&lt;br&gt;• Decree on Radiation safety standards;&lt;br&gt;• Methodical instructions “Sanitary-epidemiological assessment of product shelf life and food storage conditions”;&lt;br&gt;Order on state registration of food products, materials for food packaging</td>
</tr>
<tr>
<td>2014</td>
<td>Decree on “Food product certification standards”</td>
</tr>
<tr>
<td>2015</td>
<td>• Law on Food Safety and Quality&lt;br&gt;• Guidelines on «Qualitative and Quantitative determination of genetically modified organisms (GMO) of vegetable origin in foodstuffs and food raw materials&lt;br&gt;Order on state registration of food products, materials for food packaging</td>
</tr>
</tbody>
</table>

Table 4: Quality control of Fortified Food Products

<table>
<thead>
<tr>
<th>Product</th>
<th>Average number of test per year</th>
<th>Share of test meeting national standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salt iodization</td>
<td>4,300</td>
<td>98.7%</td>
</tr>
<tr>
<td>Flour fortification</td>
<td>12,565</td>
<td>100%</td>
</tr>
</tbody>
</table>


At present, with regional SES branches, the center regularly monitors concentration of iodine in salt and the quality of fortified wheat flour at the production, sale and consumption levels (Table 4). The center has been granted ISO 17025 certification and at present is in the process of preparing for International Lab accreditation. The center has well-constructed system of internal and external quality control for nutrition laboratory diagnostics, thus ensuring the quality of laboratory services and test results. Apart from food product quality control, the center is also actively involved in the monitoring of healthy feeding practices among population.

Internal monitoring (as referred in government documents) is carried out at production site using spot testing and colorimetric method. External Monitoring (as referred in government documents) is the principal control mechanism during production, storage and realization of wheat flour enriched with...
folic acid and iron. External Monitoring allows to assess whether folic acid-fortified and iron-fortified flour quality meets relevant standards. Ongoing external monitoring is carried out by SES in accordance with the Instructions on Folic Acid and Iron fortified flour. SES monitors food quality using laboratory tests at all domestic flour mills; warehouses and retail facilities, regardless of ownership form; canteens and warehouses at schools and child care centers; canteens and warehouses at sanatoria and hospitals; canteens and warehouses at seasonal children's recreational institutions and households. Monitoring results are duly reported and reviewed monthly.

The NNP also supported enhancement of the national registration and certification system of imported food products. To ensure food safety, the system ensures coordinated action of the MoHMI and Border Sanitary Control Department and Ministry of Agriculture at borders and certificates for the imported food products are issued within 3 working days.

Regulating utilization of salt, sugar and trans-fats in daily diets is obtaining higher attention of the Government. The regulations on the content of salt and sugar in bakery products has been revised and all bakery products, produced in public sector, are obliged to comply with the new regulation. As per key informants, effective application of state standards for salt and sugar reduction in bakery products may require investments in modernization of technology and respective budgetary spending. The Government also puts efforts to promote healthy diets by introducing measures to reduce the content of trans-fatty acids in food products, but this work is yet in progress.

Result Area 4: Scientific research of vital aspects of healthy nutrition in the country’s natural climatic environment and implementation the findings in practices; training of specialists.

One of the key moments to ensure a healthy diet is to carry out systematic studies of nutrition, the nutritional value of food and other activities inherent in government programmes and legislation of Turkmenistan. In this context, Turkmenistan has successfully cooperated with international organizations such as WHO, UNICEF, the International Organization – Food Fortification Initiative (FFI), the Global Network of Iodine and the Kazakh Academy of Nutrition and others.

In close cooperation with UNICEF and the Food Fortification Initiative (FFI/IFP), issues of enriching vegetable oil with vitamin A in Turkmenistan are being studied. Together with WHO / Europe, research is being conducted to determine the availability and consumption of trans fats and sodium by the population.

The reliable iodine measurements are crucial for sustainability of USI/IDD by reporting the status of IDD elimination every 3 years as per World Health Assembly calls to member states. To strengthen the monitoring system for production, distribution and transportation of iodized salt, order №61 was issued by the MoHMI on May 6, 2012 “On permanent implementation of laboratory control and monitoring of the quality of iodized salt”. In 2013, with the participation of international experts, a nationally representative survey was conducted. In 2015, Turkmenistan has developed a road map, which identifies strengthening of monitoring system of the salt iodization, including biomonitoring and improving a system of quality control as one of the priorities and initiated its implementation. In this endeavor, the government largely relies on UNICEF’s support.

Turkmenistan has demonstrated great commitment to strengthening NCD surveillance by pioneering, as one of the first countries of the WHO European Region, the WHO STEPS approach to obtain internationally comparable core data on the established NCD risk factors in 2013. The STEPS survey is a key element in establishing an improved NCD surveillance system that will allow the collection of
standardized data on the main behavioral and metabolic risk factors for this group of diseases. It will furnish the necessary data for monitoring the implementation status of national strategies and programmes, determining further planning needs, and improving the availability of data for international reporting on progress in the management of chronic NCDs. The analysis of STEP survey has been completed but was not shared with the evaluation team.

With UNICEF’s and other development partner support the country carries out MICS surveys once in every five years. The most recent MICS survey was implemented in 2015/2016. Findings of this survey largely informed the evaluation. In 2016, Turkmenistan participated in WHO Collaborative Cross-national “The Health Behaviour in School-aged Children” (HBSC) Study. The study assesses health behaviour, health, well-being and social contexts of school-aged children.

With UNICEF support, Turkmenistan plans to introduce a cost-effective approach for the collection of population level monitoring and surveillance data to track the implementation and impact of the (national) flour fortification programme FORTIMAS (Fortification Monitoring and Surveillance System) methodology as a potential approach to track the wheat flour fortification programme in a systematic manner over time. A 3-day workshop was convened in 2016 to present and discuss the FORTIMAS methodology for monitoring and surveillance. FORTIMAS is proposed to be piloted in Rukhabat Etrap of Ashgabat city. It is anticipated that the data collection methodology would be expanded to additional sentinel sites in other provinces (velayats) of Turkmenistan over time. It is expected that a Turkmenistan FORTIMAS Office will be established within the Public Health and Nutrition Centre (PHNC) of the Ministry of Health and Medical Industry of Turkmenistan to oversee and manage the implementation of the FORTIMAS System.

Nevertheless, the country lacks most recent data on anemia, actual food consumption patterns and caloric characteristics of consumed food products, impact evaluation of demand side activities promoted by NNP, etc.

**Role of UNICEF in ensuring the effectiveness of the NPP: UNICEF played a primary role in promotion of nutrition related issues on the government’s top policy agenda and supported implementation.** Nutrition related issues were given a priority in UNICEF’s previous and present Country Programme of Cooperation (see text box on the right). Support provided in nutrition were relevant and largely contributed to the effectiveness of the NNP. Using its core roles such as policy dialogue and advocacy, knowledge generation, child rights monitoring and capacity development, have led to system-level and eventually impact-level changes for children and women. UNICEF ensured support to the government across all four components of the NNP (Error! Reference source not found. page 2).

Progress was made in both coverage and quality for universal salt iodization, flour fortification young child health, nutrition, development and well-being by using a mix of different core roles. UNICEF is

more focused on M&E, evidence-based policy development and capacity building areas through provision of international technical assistance, knowledge exchange and staff capacity building.

There were no unintended positive and/or negative results revealed during the evaluation.
This section of the evaluation report examines efficiency of UNICEF interventions and the government strategies, interventions and resources to achieve programmes’ outcomes and outputs. Findings are presented to provide answers to the questions outlined for the given criterion in the EF (Annex 3) and the text box on the right.

**Allocation of financial resources for the implementation of NNP and use of resources in Government nutrition initiatives is difficult to track.** Considering the input based financing practiced in the country, where sectoral ministries receive funding based on key budget codes such as payroll, goods, communal services and investments, it is impossible to estimate financial resources spent for nutrition related interventions within the frame of the evaluation. Thus, the evaluation was not able to assess efficiency of government resource use.

To justify efficiency of investments in National Center of Public Health and Nutrition the Government acknowledges a need to resolve issues of staff shortages and minimize staff capacity deficiencies, which will allow to maximize effectiveness and efficiency of food laboratories. While it is understood that the center started to operate only one year ago if human capacity building initiatives are not accelerated, return on investment will remain low.

**The Government facilitated synergies and avoided duplications with interventions promoted by the government.** Effective application of the intersectoral coordination mechanism allowed the government to efficiently use available resources by addressing nutrition related issues in other sector specific programmes and legislation. Selected best examples are Inclusion of nutrition into the school programme of “Life skills education”, funding of meals at pre-school and promotion of physical activity by revision of the school building standards in Educations system. Protection and support of breastfeeding, rational nutrition of the young children and pregnant women is integrated in the Early Child Development and School Readiness National Programme (2010-2015) of the Ministry of Health and Ministry of Education. Nutrition is also addressed in the nation programme of “Support and Development of Sports and Physical Education”. The national strategy for the implementation of tasks defined in the Ashgabat Declaration prevention and control of non-communicable diseases in Turkmenistan addresses issues related to nutrition, physical activity and healthy lifestyles. The Interagency action plan for conducting extensive educational work on healthy nutrition in the community and developing healthy food habits for every citizen of the society has been enforced.

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54 The national strategy for the implementation in 2014-2020 of tasks defined in the Ashgabat Declaration prevention and control of non-communicable diseases in Turkmenistan
Turkmenistan expands access to food through public private partnership. In line with food security commitments, Turkmenistan supports formation of private sector in agriculture and food production sector through removal of market entry barriers. The National Programme for Socioeconomic Development 2011-2030, which was adopted in May 2010, emphasizes the goals of diversifying economic activity and strengthening competitiveness within the context of further market and institutional reforms. It envisages a stronger role for the agricultural sector. Agriculture plays an important role in the economy both for reasons of food security and as a source of income. It provides employment for nearly half of the domestic labour force.\(^{55}\)

The promotion of private entrepreneurship in the national economy has so far focused on small and medium-sized enterprises (SMEs), and the Government has adopted a Law on State Support to SMEs. The Government introduced structural reforms related to accounting and financial reporting standards and removal of administrative barriers for access of SMEs to State loans for private investment projects and engagement in foreign trade transactions; reduction in the number of economic activities that need a license; and streamlining of procedures for allocation of land to be used as enterprise sites. Introduction of conducive market entry rules, allowed expansion of fruits, vegetables and fish production in the country.

The Government is successful to leverage funding from developmental partners to address emerging needs in technical assistance, knowledge exchange and monitoring and evaluation. A close collaboration and coordination of public sector with development partners facilitated through membership of development partners in ICC allowed the government to leverage funding from UNICEF, WHO and UNFPA, albeit low level of partner funding was observed. Evaluation attempts to obtain funding allocated by development partners in support to effective NNP implementation was constrained by inability of development partners to furnish exact funding figures albeit the best example of funding leverage could be named MICS, where Government leveraged co-funding from UNICEF and other partners.

The evaluation was restricted to examine efficiency of UNICEF spending due to the limited financial information extracted from current information system, ability of the system to disaggregate data by main cost centers and absence of data from comparators (Government and Development Partners).

\(^{55}\) Promoting Green Innovation Policy assessment and recommendations, Turkmenistan, UNECE, 2013
In this section of the Report, the evaluation assesses the overall impact on improvement of children’s lives by examining selected impact level indicators, identified by the evaluation consultant based on the reconstructed TOC. It also studies reach of general population, women and children with health and nutrition services and looks at changes in equality. Some of the impact level results achieved by the country and detailed below has to be interpreted with caution, as latest available data represents results by end of 2015.

The effective implementation of NNP most likely contributed to better health outcomes. Turkmenistan shows some progress with regards to women’s health. Estimated Maternal Mortality Ratio (MMR) has improved from 74 per 100,000 live births in 1990 to 42.2 in 201556. The main causes of maternal mortality include direct obstetric complications such as hemorrhage and sepsis, along with embolism and hypertension. Unspecified direct and indirect causes comprise 31 percent of all maternal deaths, indicating incomplete reporting and frequent misclassification57 (Figure 12). In 2009, 98.4 percent of pregnant women were registered with medical institutions, while a similar number (99.8 percent) received qualified medical care during childbirth58.

Figure 12: Causes of maternal death59

Children in Turkmenistan are less likely to die before their fifth birthday (U5MR) than they were twenty years ago, albeit it’s still high for an upper middle-income country and CEE/CIS regional average (Figure 13). In 2015 under-five mortality rate (USMR) was 51 per 1,000 live births, infant mortality rate 44 per 1,000 live births and neonatal mortality 23 per 1,000 live births60. Main causes of under-five mortality are conditions in the neonatal period (44%), pneumonia (14%), diarrhoea (8%), injuries (6%)61. Prematurity is responsible for 16% of under five deaths, intra-partum related events (asphyxia) for 11%, congenital malformations for 6%. Therefore, more than 60% of neonatal death are related to full term pregnancies (Figure 13).

In Turkmenistan, almost all children (99 percent) are weighed at birth62 and approximately 3 percent of infants are estimated to weigh less than 2,500 grams at birth compared to 4 percent in 200663. All

57 Committee on the Elimination of All Forms of Discrimination Against Women, Combined Third and Fourth Periodic Reports, op.cit.
61 MICS 2015-2016
62 MICS 2006
medical institutions in Turkmenistan that are providing prenatal and postnatal care are technically equipped for weighing infants. Babies born in the Ashgabat city (9.1 percent) and Dashoguz velayat and in poor households are more than three-fold as likely to be born underweight (less than 2,500 gm) than babies born in Ahal velayat (2.3 percent)\textsuperscript{64}.

Figure 13: U5MR trend and causes, 2015

![U5MR trend and causes, 2015](image)

Malnutrition, and as a sign of it, stunting in early childhood - known also as growth faltering - is a major child rights and global development (especially when stunting is severe), and loss of productivity and national income.

Turkmenistan demonstrates the progress in reduction of stunting (from 19% in 2006 to 11% in 2015)\textsuperscript{65}. Positive trend is also observed in the rate of wasting, which declined from 7 to 2 percent in the period of 2006-2015\textsuperscript{66}.

Children's nutritional status reflects their overall health. When children have access to an adequate food supply, are not exposed to repeated illness, and are well cared for, they reach their growth potential and are considered well nourished.

\textit{A decade of taking progress for maternal, newborn and child survival Report, WHO, 2015}

\textsuperscript{64} MICS 2015-2016

\textsuperscript{65} 2006 and 2015/16 MICS

\textsuperscript{66} Ibid
Notable differences in the prevalence of underweighted or wasted children by gender, mother’s education, area of residence or regions are not observed. Albeit positive achievements, the pace of improvement appears to be slow, as stunting rates are below of average stunting rates of CEE/CIS countries and countries of similar economic status.

Increase of overweight and obesity rates among children under five years indicates the multidimensional burden of all forms of malnutrition that is facing many countries, including Turkmenistan. Overweight rate increased slightly from 4.5% to 5.9% between 2006 and 2015, with the higher prevalence among male children (6%), children of 36-47 months old and Ahal Velayat (14.4%).

Around 3 percent of children under the age of five in Turkmenistan are underweight and 1 percent are classified as severely underweight.\(^7\)

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\(^7\) MICS 2015-2016
Figure 14). Overall, Turkmenistan has substantially improved the Hunger Index, which declined from 17.5 in 2005 to 12.9 in 2015\(^68\) (http://ghi.ifpri.org/trends accessed July 19, 2017)
Figure 14).
There has been a tangible progress in increasing breastfeeding rates lately (Error! Reference source not found.). The exclusive breastfeeding rate among children under 6 months of age improved from 11% in 2006 to 59% in 2015\textsuperscript{71}. Exclusive breastfeeding rates are higher among male children (61%) and rural areas (61.5%). The government efforts in promoting USI, resulted in substantial increase of iodized salt consumption by households. According to the MICS, if in 2006 only 86.5% of households consumed properly iodized salt, in 2015 the share of these households increased up to 96.7\textsuperscript{72}. In rural areas, almost 98% of households consume iodized salt.

Figure 15: Anemia Prevalence

The country lacks the latest data on micronutrient supplementation, however the most recent available Nutritional Survey data from 2011 (baseline before NN P) suggests, that micronutrient supplementation is not a common practice in Turkmenistan. As indicated by the 2012 Nutrition Surveillance data, 44\% among children aged 6-59 months suffer from anemia\textsuperscript{72} (Figure 15).

Anemia prevalence among pregnant women and among non-pregnant women of reproductive age is 53 and 57 percent respectively, and 38 percent is registered among men. As per the WHO standards, anemia of more than 40\% represents a moderate to significant public health issue. Significant geographic disparities also were found, with the highest

\textsuperscript{69} MICS 2006, MICS 2015/16, \textsuperscript{70} UNICEF, WHO, World Bank Group joint nutrition estimates, May 2017 \textsuperscript{71} MICS 2006, MICS 2015/16, \textsuperscript{72} MICS 2015/2016
\textsuperscript{72} National nutrition study with a focus on anemia and vitamin A deficiency in Turkmenistan, UNICEF, 2012
rates of women’s anemia in Balkan, Dashoguz and Mary velayats (all above 72 percent) and the lowest in Ahal velayat. Nearly 40 percent of all child deaths (age 6 to 24 months) have been attributed to maternal anemia, Low Birth Weight, underweight status and related causes. These findings triggered the development of the NNP 2013-2017 and enforcement of the flour fortification programme by allocation of about US$ 0.5 million annually from the Government’s budget.

In terms of Vitamin A deficiency (VAD), which is one of the most important causes of preventable childhood blindness, disease and premature death, the first national study on this issue, conducted in late 2011, found more than half of children (50.1 percent) were deficient (Figure 16). Some 7.2 percent were suffering from severe deficiency. Again, disparities in prevalence rates were wide: The highest levels of VAD in children were in Dashoguz (71 percent) and Balkan velayats (67.6 percent), while the lowest was in Ahal velayat (37 percent). VAD was lower in children of native ethnicity (48.6%) than in children of other ethnicities (58.6%). No significant differences were found in VAD prevalence in children related to frequency of consumption of various food products. According to World Health Organization criteria, these levels of VAD indicate a serious public health issue in the country and require urgent evidence-based actions. Notably, the country lacks the most recent data that can allow to track the progress or failure of the NNP on anemia and VAD rates.

In conclusion, Turkmenistan’s progress towards WHA goals is slow. As of 2015, out of 6 main indicators, three indicators (stunting, breastfeeding and wasting) are on course, whereas two indicators (low birth weight and overweight) remain to be off course due to the low progress observed and requires acceleration of actions and anemia cannot be assessed due to the absence of the most recent data (Table 5).

Table 5: Country progress towards World Health Assembly Global Targets 2025 to improve maternal, infant, and young child nutrition

<table>
<thead>
<tr>
<th>WHA indicator and target</th>
<th>Baseline 2006</th>
<th>Status 2015</th>
<th>Target for 2025</th>
<th>Required average annual rate of change at global level</th>
<th>Country Progress towards WHA target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stunting: 40% reduction in the number of children under 5 who are stunted</td>
<td>19% (2006)</td>
<td>11%</td>
<td>40%</td>
<td>3.6% average annual rate of reduction (AARR)</td>
<td>ON COURSE</td>
</tr>
<tr>
<td>Anemia: 50% reduction of anemia in women of reproductive age</td>
<td>57% (2011)</td>
<td>n.a</td>
<td>-</td>
<td>-</td>
<td>Impossible to assess progress due to the lack of most recent data</td>
</tr>
<tr>
<td>Low birth weight: 30% reduction in low birth weight</td>
<td>4.2% (2006)</td>
<td>3%</td>
<td>30%</td>
<td>2.74% AARR76</td>
<td>OFF COURSE, LOW PROGRESS</td>
</tr>
</tbody>
</table>

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74 UNICEF Turkmenistan. Proposing a Comprehensive Approach to Early Childhood Nutrition, op.cit.
75 National nutrition study with a focus on anemia and vitamin A deficiency in Turkmenistan, UNICEF, 2012
76 Average Annual Reduction Rate
### Evaluation of National Nutrition Programme in Turkmenistan

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Target</th>
<th>Current</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Under-5 overweight:</strong></td>
<td>4.57%</td>
<td>6%</td>
<td><strong>OFF COURSE, LOW PROGRESS</strong></td>
</tr>
<tr>
<td>No increase in childhood overweight</td>
<td>&lt;7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Exclusive breastfeeding:</strong></td>
<td>11%</td>
<td>59%</td>
<td><strong>ON COURSE</strong></td>
</tr>
<tr>
<td>Increase the rate of exclusive breastfeeding in the first 6 months up to at least 50%</td>
<td>Up to at least 50%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Wasting:</strong></td>
<td>7.27%</td>
<td>4%</td>
<td><strong>ON COURSE</strong></td>
</tr>
<tr>
<td>Reduce and maintain childhood wasting to less than 5%</td>
<td>&lt;5%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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77 Recalculated MICS 2006 data
78 Recalculated MICS 2006 data
3.5 SUSTAINABILITY

This section of the evaluation report examines the prospects of ECD/ECE service sustainability. Namely, assesses what are enabling factors contributing to sustainability and whether nutrition strategies will be more widely replicated or adapted to achieve equality objectives and better quality of services. Findings are presented to provide answers to the questions outlined for the given criterion in the EF (Annex 3) and text box on the right.

The NNP shows sustainability prospects. Key sustainability enabling factors are:

The Government demonstrates high political commitment towards nutrition related issues. Maternal and Child Health and nutrition is on top of the Government’s health agenda. Mother and child health and nutrition has always been one of the top priorities of the Government of Turkmenistan (Figure 17). MoHMD is committed to accelerating progress on newborn, child, adolescent and maternal health and wellbeing through implementation of the State Health Programme “Saglyk”. Turkmenistan nationalized Sustainable Development Goals, including SDG 2, which will be translated in actionable new Nutrition Programme. In 2015, the ICC decided to start development of the new National Nutrition Programme 2018-2025, which will be informed by the findings of the current NNP evaluation.

Figure 17: Enabling policy and legal environment


The national strategy (2014-2020) on implementation of tasks defined in the Ashgabat Declaration prevention and control of non-communicable diseases in Turkmenistan, aims to increase life expectancy of population by reducing morbidity and mortality, disability, the prevalence of non-communicable diseases related to nutrition, obesity among children and adolescents, the spread of poisoning and eradication of micronutrient shortages, as well as the poisoning of food.

The draft law on “Infant and Young Child Feeding” (IYCF) promotes establishment of BF Technical Working Group (TWG) under the MCC and mandates approval of the National Programme and Action Plan for IYCF in Turkmenistan for 2017-2021; defines policies that health facilities should apply in support and for the protection of BF; introduces certification and recertification requirements and
Sustainable public funding of flour fortification is prerequisite of sustainability. The Government of Turkmenistan demonstrates continued commitment to fund the FF programme. Since 2008, the government fully funds the flour fortification. The premix is procured by the government through UNICEF Supply Division. Annually, public funding in an amount US$ 0.5 million is allocated from the state budget for premix procurement.

The Government of Turkmenistan (Ministry of Agriculture) has maintained a record of premix purchases together with the quantity of flour produced. The flour mills produce Premium Grade flour, 1st Grade flour, 2nd Grade flour and semolina. The 2nd Grade flour and Semolina flour are not included in the fortification programme. The following table shows the average percentage of each grade of flour produced annually since the fortification programme started in 2008.

Table 6: Flour Fortification by flour type

<table>
<thead>
<tr>
<th>Flour Type</th>
<th>Percentage of total production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premium Grade</td>
<td>17.5%</td>
</tr>
<tr>
<td>First Grade</td>
<td>76.2%</td>
</tr>
<tr>
<td>Second Grade</td>
<td>5.0%</td>
</tr>
<tr>
<td>Semolina</td>
<td>1.3%</td>
</tr>
<tr>
<td>Total</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: Review of flour fortification programme in Turkmenistan, 2017

The addition rates for the fortification premix have been set at 190 grams per ton of premium grade flour and 150 grams per ton of first grade flour. Based on the scanned document provided by the SES the weighted average of premix addition since the programme started is 159.5 grams per ton of flour.

At present, the decision on flour fortification with additional microelements is under development. MOHMI has further plans to improve impact monitoring of FF programme.

Full reliance on local salt production and salt iodization is another factor guaranteeing USI sustainability. Strong national Government’s stewardship, continued public funding and solid oversight of the mandatory production and supplies of appropriately iodized salt from the single salt factory Guvlyduz, which sources the KIO3 from a nearby national source, gives prospects for USI sustainability.

Government's continued support to food security is commendable, though it may face several challenges. Food security serves as an indicator of any country’s ability to ensure supply, affordability, and safety of food for its population. The National Programme for Socioeconomic Development 2011-2030, which was adopted in 2010, emphasizes the goals of diversifying economic activity and strengthening competitiveness within the context of further market and institutional reforms. It envisages a stronger role for the agricultural sector and domestically processed goods, a greater reliance on renewable energy sources and the development and increased use of environmentally sound technologies. A new version of the Law on “Food security” was adopted in 2016. This Law determines the main directions of state policy in the field of ensuring the food security of Turkmenistan which is component of economic safety of the state and establishes the legal basis of realization by citizens of the right to healthy and good nutrition. Turkmenistan has recently been

79 Quentin Johnson, Review of flour fortification programme in Turkmenistan, November 2017, (draft not published)
awarded a special prize by the Food and Agriculture Organization (FAO) of the United Nations for its achievements in the field of food security.

Sustainability of the food security in Turkmenistan may be undermined by the global climate change. Turkmenistan’s main vulnerabilities to forecasted climate change are water resources, agriculture and food security. The country faces an increased scarcity of water, which will be accentuated by the projected growth in population and overall economic development. Its water resources are already limited due to its climate and geographical position. This increased scarcity, in turn, will have serious adverse consequences for the agricultural sector, which is wholly dependent on irrigation as there’s so little rain. Furthermore, rising temperatures and longer spells of drought also raise the issue of the drought-resistance of the domestic crop varieties.

Other climate change risks pertain to the impact on human health, on the coastal area along the Caspian Sea and the potential disasters from more frequent extreme weather events. The climate-related risks to these sectors are amplified by human-made factors. Farmers tend to employ traditional surface irrigation technologies that use water inefficiently and that greatly exceed international agrotechnical standards for irrigation. Given the excessive volumes of water used, more than 60 per cent of agricultural land is now salinized. There also appears to be a widespread lack of sustainable farming practices such as crop rotation and good management of pastures used for livestock. The irrigation infrastructure and other parts of the water-sector infrastructure are in poor condition, reflecting a lack of adequate maintenance and renewal measures. This, in turn, has meant considerable losses of water channeled through the irrigation network to agricultural land.

Consequently, these factors will influence production, sustainable diets and sustainable consumption. Changes are going to affect the availability of food and not only the availability, whether it’s there or not in the markets, but also access. Food prices are going to change, typically for the poorest, which will have a much more substantial impact on consumption. To mitigate negative impact on food security, consumption patterns and access, in June 2012, the Government adopted a National Climate Change Strategy that covers mitigation and adaption issues.

Inequities between best-off and most marginalized groups likely to increase in forthcoming years. Since 1993, people in Turkmenistan have enjoyed free access to natural gas (which is the most abundant resource of the country), water and electricity. With current global decline in natural gas prices and consequent sharp reductions in government export revenues, Turkmenistan is most likely to revisit subsidies completely. Under some estimates, the subsidies consume more than 22 percent of GDP in Turkmenistan. A representative of the Regional Directorate of the Ministry of Finance and Economy was cited saying that “The time has come to move to market relations. Now we must all learn to pay.” In addition, prices on various goods, food products and services are likely to increase following the devaluation of Turkmenistan’s currency. Although price controls have, so far, successfully restrained inflation, the pass-through effects of the national currency devaluation and lower state subsidies for electricity, fuel and public transportation will likely bring about marginally higher prices for food, construction materials, services and public utilities, which will adversely affect the most marginalized groups of the society.

The government intends to accelerate the transition process... The decrease in subsidies began in September 2013, when the government reduced the monthly free electricity supply per person from 35 kWh to 25 kWh. Since then, officials have been considering the completion of other subsidies.

Source: Inozpress.kg

80 Promoting Green Innovation Policy assessment and recommendations, Turkmenistan, UNECE, 2013
81 Ibid
82 Inozpress.kg, accessed on August 19, 2017
83 ADB Outlook, September 2015
This section of the report examines the synergies and possible duplications among interventions and strategies promoted by the government and other development partners. Findings are presented to provide answers to the questions outlined for the given criterion in the EF (Annex 3) and the text box on the right.

Turkmenistan demonstrates strong coordination of health and nutrition related interventions among development partners through well-established coordination mechanism. Key development partners are represented on ICC. UNICEF, UNFPA and WHO regularly attend ICC meetings and take part in discussions of the challenges faced during the NNP implementation, share international knowledge which guides government to take corrective actions, as well as identify potential areas of support according to their mandate and policy. In addition, UN development partners run regular “UN Health Team” meetings, where issues are discussed, plans developed, and roles and responsibilities divided between WHO, UNFPA and UNICEF.

Policies of the development partners are coherent with government policy and direct their engagement and support to the country around nutrition related issues. UNICEF and the Government of Turkmenistan sign two-year plan of action (revolving work plan) biannually, which spells out interventions that would be supported by UNICEF for the reporting period. The latter enables the Government Agencies and ministries to coordinate upcoming interventions.

There are many good examples of coordination and coherence among development partners. For example:

- **Advocacy**: WHO raised the priority accorded to NCDs through its advocacy efforts, which resulted in the development of NCD strategy 2011-2020. UNICEF’s advocacy efforts were mostly directed towards maternal and child health and nutrition, breastfeeding promotion, etc.

- **Technical support and knowledge sharing**: WHO supported feeding of pregnant women and breastfeeding mothers guidelines have been developed and institutionalized into the system with UNICEF’s technical and financial support. UNFPA assisted the country in the revision of antenatal care guidelines.

- **Human resource capacity building**: Human resource and institutional capacity building was one of the most important policy directions of all development partners. If WHO and UNICEF supported national capacity building through knowledge sharing and study tours to other countries, UNFPA and UNICEF were more active in human resource capacity building. UNFPA provided financial and technical support in health workforce training in revised antenatal care protocols. UNICEF was instrumental in training of PHC health providers in child growth monitoring, early childhood development, breastfeeding etc.

- **Monitoring of health and nutrition status and nutrition determinants was another area of fruitful cooperation between development partners.** In 2012, MoHMI, WHO, UNFPA, UNICEF and USAID agreed to work jointly to assess the quality of antenatal and post-partum care at PHC level. WHO developed tools for assessing and monitoring the quality of care for mothers and newborn babies for hospital and primary health care levels. A team of international experts were solicited by UNICEF, whereas filed data collection was financially supported by USAID and UNFPA.

To further enrich the knowledge of the quality of services at PHC, in 2012 UNICEF financed the MCH home visiting system assessment and based on the findings proposed universal/progressive
model of home visiting, which offers more effective addressing of health, nutrition and developmental needs of children and families.

In 2015 UNFPA in close collaboration with MoHMI carried out the Health Behavior in School-Aged Children (HBSC) study using a methodology approved by the World Health Organization (WHO), which enables to carry out a comparative analysis of findings with the data received in other countries. It is believed, that findings of the survey will inform future NNP 2018-2025. In addition, it is anticipated that the results of the STEPS survey, supported by WHO, will further enrich the new NNP.
CHAPTER 4: LESSONS LEARNED AND BEST PRACTICES

4.1 LESSONS LEARNED

This chapter of the report discusses lessons learned from this evaluation formulated based on the findings of the desk review and the field data collection through the discussions with stakeholders, service providers and beneficiaries.

Lesson 1: Maintaining strong and stable leadership is the essential element to ensure integrated and well-coordinated comprehensive service delivery by NNP

The evaluation results indicate that the maintenance of strong and stable leadership of NNP is an essential element to ensure integrated and well-coordinated service delivery. The NNP implementation is elevated to a senior level with the MoHMI leadership, which ensures effective coordination of ICC and NNP interventions. ICC draws on development partners and technical institutes/actors in a careful and strategic manner for specific planning, capacity building, and technical support activities.

Lesson 2: Complementary activities between sector specific programmes strengthen the overall efforts towards a larger development gain in area of nutrition.

As it is rarely possible to capture all aspects of a development challenge in one programme, Turkmenistan ensured that activities from different sector specific programmes are complementary. While these activities contribute to their own programmatic goals they seek to strengthen the overall efforts towards a larger development gain in area of nutrition.

In the case of development partners support to the NNP implementation, efforts were made to maximize contributions towards policy development, institutional and human capacity building and enhancement of monitoring of different nutrition related aspects. Partners’ efforts were covered through different programmatic areas, but all aimed to capitalize on achievements.

Lesson 3: Strong Monitoring and evaluation system along with well documentation of results is essential to track NNP performance

The evaluation’s overall findings on monitoring to strengthen NNP performance is that there are several challenges that could prove to be substantial roadblocks to ensuring that the programme performance is on track. Firstly, the NNP lacked M&E strategy to measure impact, outcome and output indicators, that limited implementing partners to assess the progress achieved during the implementation. Secondly, mechanisms for triangulated nutrition information that captures data from all relevant sectors (for use in improved programme implementation and early warning) are inadequately integrated. Thirdly, record keeping for monitoring purposes appears weak within NNP system. Information on implementation results, challenges and corrective measure are not routinely documented and it was hard to get or unavailable for the evaluation purposes.
4.2 BEST PRACTICES

This sub-section of the report presents two best practices cases, USI and improvement of Exclusive Breastfeeding, in Turkmenistan.

4.2.1 LONG STANDING AND RENEWED COMMITMENT TOWARDS UNIVERSAL SALT IODIZATION

Salt iodization have a longstanding history in Turkmenistan. In the former USSR, the iodization of salt was governed for a long time by a 1956 ordinance from the Ministry of Health in Moscow that defined the administrative divisions with a high burden of goiter to which iodized salt should be supplied. A tremendous increase took place in the production of iodized salt. Consequently, population surveys undertaken during 1965-1969 demonstrated that endemic goiter had virtually been eliminated and that new cretinism cases were no longer observed. As a result, the Ministry of Health declared that the problem had been overcome and it abandoned its central oversight and monitoring. The end of oversight by the Ministry of Health did not cause the salt industry to abandon the practice of iodizing salt, however. The Ministry of Food Industry issued directions on annual production quota, including iodized salt. But with the passage of time, the aging technologies and QA methods in the salt enterprises became increasingly less capable to meet the industry’s iodization standards and in combination with the poor paper packaging and the long railway supply lines, the quality of iodized salt in retail outlets started to decline. The deterioration of the Soviet economy during the 1980s also affected the production volumes of iodized salt. In November 1991, at an international symposium organized by ICCIDD, UNICEF and WHO in Tashkent, Uzbekistan, reputed scientists from 10 Soviet Republics presented evidence dating from the 1980s that IDD had re-occurred in various regions and population groups across the USSR.

Figure 18: Road Map to Universal Salt Iodization
Since 1994, universal salt iodization has been recommended by the World Health Organization (WHO) and the United Nations Children’s Fund (UNICEF) as a safe and cost-effective strategy to ensure sufficient dietary iodine intake\textsuperscript{84}. The Government of Turkmenistan continued compulsory iodization of the salt supply for the food processing industries as well as the households. To ensure that all households consume iodized salt, the Presidential Decree “On Supply of Salt to the Population of Turkmenistan free of charge” has been issued in 1994 (Figure 18). According to this decree each Turkmenistan citizen received 400 g of salt every month free of charge through the network of community shops. In parallel, first IDD survey with support of UNICEF and ICCIDD confirmed existence of mild and moderate iodine deficiency in Turkmenistan and served as a baseline data for further surveys. Based on these data political decision on IDD elimination has been taken.

In June 1994, Turkmenistan Government hosted ministerial level ECO/UNICEF/WHO meeting on iodine deficiency disorders (IDD). Consensus recommendations called for urgent efforts to ensure universal salt iodization (USI) and IDD elimination. In response to these recommendations, President Decree № 2626 “On salt iodization and flour fortification with iron” has been adopted in 1996 that set for requirement that all edible salt shall be iodized. Following the Presidential decree, MoHMI and other government agencies approved the use of potassium iodate (KIO\textsubscript{3}) for salt iodization. Local production of potassium iodate on Khazar Chemical Plant has been recovered. UNICEF provided “Guvlyduz” salt plant with necessary iodization equipment to launch production of iodized salt as well as supported to strengthen laboratory capacity of national institutions in monitoring of iodised salt quality and in biological monitoring and human resource capacity building. Government of Turkmenistan invested in construction of a new factory for iodization and packaging of edible salt in 2000. All these actions contributed to wards improvement of salt iodization\textsuperscript{85}. Apart from production of iodized salt, MoHMI issues a resolution\textsuperscript{86} on constant laboratory control and monitoring of iodized salt quality and with UNICEF’s support equips all provincial SES laboratories with necessary equipment.

To avoid price increase on iodized salt, President adopted a Decree “on Exemption of salt plant “Guvlyduz” from taxes”\textsuperscript{87} as well as extended action of Presidential decree “on free supply of Turkmenistan population with electricity, natural gas, water and edible salt” up to 2020. By exemption of salt producer from all taxes and duties Turkmenistan government ensured continuous production of iodized salt and its free distribution to population. In 2003, on high level International Meeting for the Sustained Elimination of Iodine Deficiency Disorders in Beijing country announced reaching USI and is close to elimination of iodine deficiency among its population based on the results of National IDD Survey supported by UNICEF. In 2004, the Government of Turkmenistan prepared official report on the “Achievement of Elimination of Iodine Deficiency in Turkmenistan through Universal Salt Iodisation”. Consequently, in 2004, based on external review of progress toward optimum iodine nutrition jointly carried out by WHO, ICCIDD and UNICEF, Turkmenistan has been certified as country, which achieved universal Salt iodization (2004). The major reasons for this accomplishment were the conscientious quality assurance practices in the salt factory and the due diligence in salt industry regulation.

A combination of sustained commitment from the government, the salt industry and international donors has resulted in remarkable advances in household salt iodization in the past 20 years. As per MICS data from 2015 in 97 percent of households, salt was found to contain 15 parts per million (ppm) or more of iodine. Use of iodized salt was lowest in Ashgabat city and Lebap velayat (92 percent and 93 percent respectively) and highest in Dashoguz velayat (100 percent). There are no differences in consumption of iodized salt by area of residence (urban, rural) and wealth index.

\textsuperscript{84} UNICEF-WHO Joint Committee on Health Policy. World summit for children-mid-decade goal: iodine deficiency disorders (IDD).


\textsuperscript{86} Demographic Health Survey (DHS) in 2000, performed with the support of UNICEF and USAID, showed that 78% of salt samples had iodine content of at least 15 mg/kg.

\textsuperscript{87} MoHMI Resolution № 61 (6.05.2002) on “Constant laboratory control and monitoring of iodized salt quality”.

\textsuperscript{88} Presidential Decree № 6351 (22.08.2003) “On Exemption of salt plant “Guvlyduz” from taxes”
### 4.2.2 BREASTFEEDING PROMOTION

Turkmenistan shows the highest rates of exclusive breastfeeding in CEE/CIS region and demonstrates rapid increase in the breastfeeding rates compared to other countries in the region.

Exclusive breastfeeding increased from 11 percent 2006 to 59 percent in 2015 in Turkmenistan (Figure 19). Country’s success for the last decade can be explained by strong political commitment and leadership, which aimed progress towards increasing the prevalence of exclusive breastfeeding of children under age 6 months. Increased awareness of the evidence along with advocacy efforts of development partners, led to intensified political attention. Albeit the process was arduous at times, Turkmenistan managed to introduce BF promoting policies and legislation (Figure 20).

#### Figure 19: Exclusive Breastfeeding rates in CEE/CIS

<table>
<thead>
<tr>
<th>Country</th>
<th>Year 2006</th>
<th>Year 2015</th>
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<tbody>
<tr>
<td>Turkmenistan</td>
<td>11%</td>
<td>59%</td>
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<tr>
<td>Georgia</td>
<td>39%</td>
<td>55%</td>
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<td>Kyrgyzstan</td>
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<td>Uzbekistan</td>
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#### Figure 20: Evolution of BF legislation in Turkmenistan

- Review of the national legislation in the light of CRC principles helped to identify normative gaps and inconsistencies.
- Recommendations on the alignment of national legal provisions with international standards shared with the Mejlis of Turkmenistan
- The Breastfeeding Promotion Law (adopted in 2009) amended – still Suboptimal legislation
- The National Nutrition Programme for 2013-2017
- New Law of Turkmenistan “On promotion and support of breast feeding” endorsed addressing the all previous country specific comments / recommendations of the CRC committee
- The Law implementation and enforcement mechanisms to strength the monitoring and control of ICBMS and BFHI at market and health facilities developed by MOHMI with UNICEF support, to be endorsed by end of year.
- The draft law on “Infant and Young Child Feeding” (IYCF) is ready for approval

Policy adoption alone is insufficient if not followed by effective policy and programme implementation to lead to improvements. Turkmenistan ensures that not only appropriate policies and legislation is in place but that these are implemented and enforced. This includes support for development and implementation of national infant and young child feeding policies, development and implementation of programme plans to operationalize policies, development and enforcement of appropriate legislation (such as the Breastfeeding law, International Code of Marketing of Breast Milk Substitutes and maternity protection legislation). The evolution of BF legislation in Turkmenistan is schematically presented on Figure 20.

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89 Improving Child Nutrition-The achievable imperative for global progress, UNICEF, 2013
At health system level, key nutrition interventions are integrated across the life cycle as depicted on the . Support is also provided for institutionalization of such principles as the Ten Steps to Successful Breastfeeding and BFHI. 87 percent of maternity hospitals/wards in the country are certified as “Baby friendly hospitals”. New MoH Order #220 on Infant and Young Children Feeding, approved on 20.07.2017, will further promote institutionalization of the Baby Friendly Health facilities expanding the certification process from in-patient to outpatient clinics. Breastfeeding counselling is an integral part of services provided during the antenatal and well-child facility based visits at PHC level, as well as during the home visits by patronage nurses.

The BF and BFHI issues are integrated into undergraduate, postgraduate and continuous professional development curricula contributing towards production of new generation of doctors and nurses with adequate BF and BFHI knowledge and upgrading of the knowledge of already practicing health professionals.

Communication and advocacy activities on breastfeeding are also a key component of National Nutrition Programme. Regular TV programmes and printed media pay attention to the promotion of breastfeeding. World Breastfeeding Week is an annual advocacy event celebrated in the country with support from UNICEF, WHO and other partners.

And finally, general economic growth leading to poverty reduction and political stability should be mentioned as contributing factor for the improvement of BF rates in the country.
5.1 CONCLUSIONS

RELEVANCE: The NNP demonstrates high relevance to expansion of access to adequate child nutrition and quality food and health services and is aligned to global nutrition priorities. The Programme is consistent with the needs, interests and circumstances of the vulnerable and most at risk groups and population in general, but is silent on the strategies for reaching out of these groups. Government’s policies and programmes along with UNICEF’s interventions related to nutrition were relevant to existing delivery structure and exhibits its relevance to Government’s priorities. UNICEF’s support though out in support of NNP implementation and M&E is relevant to UNICEF’s mandate, programme principles and strategies.

EFFECTIVENESS: The government approved version of NNP lacks clear formulation of underlying theory of change and measurable results targets that limited evaluation to draw conclusions. The reconstructed TOC by the evaluation and selected result indicators, allows to make the following conclusions:

Result area 1: Improved collaboration at all levels for the implementation of the NNP. Inter-sectorial coordination mechanism institutionalized at national and sub-national levels along with strong sustained leadership and sound collaboration and coordination of NNP implementation among various public agencies/ departments and development partners, predetermined effective implementation of the NNP.

Result area 2: Increased accessibility and affordability of the nutrition services and appropriate nutrition for children and their mothers. NNP improved access of population to and affordability of health and nutrition services, particularly for pregnant women and children. This was achieved by the development of supporting legislation in the field of maternal and child health and nutrition and with technical support from development partners. Nevertheless, attainment of better results, was restricted by the system level changes observed at PHC level, albeit initial steps for resolution of these shortcomings have been already taken by MoHMI.

To address anemia, an important public health issue, the Government strictly followed mandatory FF legislation and managed to ensure that around 95 percent of the population’s flour needs to be fortified with iron and folic acid. Albeit judgment on the effectiveness of flour fortification is limited due to the absence of the data on incidence of neural tube defects not preventable by folic acid. All locally produced and imported edible salt are iodized and controlled by the government authorities. Almost all households use iodized salt, though regional differences yet continue to exist. While the government’s efforts placed for food fortification is commendable, micronutrient supplementation is not yet the common practice in Turkmenistan.

On the demand side, the Government promotes broad public advocacy/information/education/communication work on healthy nutrition in the society and fosters healthy eating habits in every individual using printed media and TV. Healthy life style and nutrition related issues are integrated in the school programme, but analysis of the programme revealed, that nutrition related issues are not adequately covered. Promotion of physical activity to fight against overweight and obesity and prevent non-communicable diseases is attracting more attention in the country. The National Program for the Support and Development of Sports and Physical Education, promotes physical education, sports and healthy lifestyle and the active engagement of citizens in physical education and mass sports. Special informational programmes are broadcasted on TV to promote physical education, sports and healthy lifestyle. Physical activity is featured daily in child care and school settings. The role of physical activity is highlighted in the school programme on “Life skills”. Newly built schools are well equipped with specially organized spaces for physical activities and allotment of hours for sports, but old school buildings have structural limitations. Albeit, the
Government efforts to promote healthy nutrition and physical activity did not yet translate into desired behavior change among children and adolescents.

To ensure food security, accessibility and affordability of the nutrition services and appropriate nutrition for children and their mothers, the Government of Turkmenistan introduced number of policy measures. The Government ensures free access to health and nutrition services for pregnant women and children. Nutrition of preschool children is subsidized by the government and marketing of unhealthy food at schools is regulated. Access to balanced/healthy nutrition is ensured in the public sector. The nutritional norms have been revisited and enacted in public canteens. Adherence to established dietary norms is closely monitored by SES. Underlying causes of inequality is addressed through cash benefits, which proved to contribute to the improved access to quality food products.

In summary, whilst the NNP achieved system level changes in the areas of food security and safety, access to healthy nutrition and population behavior change, which translated in improved nutrition outcomes, challenges remain and new developments emerge.

Result area 3: Strict control of food quality and safety, support for food production in line with the healthy nutrition requirements, environmental and physiological standards. NNP was effective in establishment of enabling legislative and regulatory framework. National Regulatory framework is consistently updated according to international standards. Establishment of the Center of Public Health and Nutrition in 2016, was one of the main achievements of the NNP in ensuring food product quality and safety. Regular internal and external quality monitoring of imported and locally produced food staff is institutionalized. Continuous attention is payed to the capacity enhancement in food product quality and safety control. Regulation of salt, sugar and trans-fats use in daily diets is gradually obtaining higher attention of the Government. All bakery products, produced in public sector, comply with the new standard on the content of salt and sugar, issued by the government. The measures to reduce the content of trans-fatty acids in food products are implemented, but this work is yet in progress.

Result area 4: Scientific research of vital aspects of healthy nutrition in the country's natural climatic environment and implementation the findings in practices; training of specialists. Turkmenistan shows promising steps towards enhancement of evidence-based policy making and planning. Turkmenistan has developed a road map, which identifies strengthening of monitoring system of the salt iodization, including biomonitoring and improving a system of quality control as one of the priorities and initiated its implementation. The country is involved in number of international research studies, such as WHO STEPS, HSBC, MICS, etc. In addition, with UNICEF support, Turkmenistan plans to introduce a cost-effective approach for the collection of population level monitoring and surveillance data to track the implementation and impact of the (national) flour fortification programme FORTIMAS (Fortification Monitoring and Surveillance System) methodology as a potential approach to track the wheat flour fortification programme in a systematic manner over time.

Nevertheless, the country lacks most recent data on anemia, actual food consumption patterns and caloric characteristics of consumed food products, impact evaluation of demand side activities promoted by NNP, etc.

UNICEF played a primary role in promotion of nutrition related issues on the government’s top policy agenda and supported implementation. Nutrition related issues were given a priority in UNICEF’s previous and present Country Programme of Cooperation Document. Support provided in nutrition were relevant and largely contributed to the effectiveness of the NNP. Using its core roles such as policy dialogue and advocacy, knowledge generation, child rights monitoring and capacity development, have led to system-level and eventually impact-level changes for children and women.

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90 Report on key findings from the Health Behavior in School-aged Children (HBSC) random sampling survey among secondary school students of Turkmenistan, UNFPA, 2015
EFFICIENCY: Allocation of financial resources for the implementation of NNP and use of efficient use of resources in Government nutrition initiatives is difficult to track, due to the input based financing practiced in the country. To justify efficiency of investments in National Center of Public Health and Nutrition the Government acknowledges a need to resolve issues of staff shortages and minimize staff capacity deficiencies, which will allow to maximize effectiveness and efficiency of food laboratories.

Effective application of the intersectoral coordination mechanism allowed the government to efficiently use available resources by addressing nutrition related issues in other sector specific programmes and legislation. Selected best examples are Inclusion of nutrition into the school programme of “Life skills education”, funding of meals at pre-school and promotion of physical activity by revision of the school building standards in Educations system. Inclusion of Healthy nutrition issues in the nation programme of “Support and Development of Sports and Physical Education”. The Interagency action plan for conducting extensive educational work on healthy nutrition in the community and developing healthy food habits for every citizen of the society has been enforced.

Turkmenistan expands access to food through fostering public private partnerships. In line with food security commitments, Turkmenistan supports formation of private sector in agriculture and food production sector through removal of market entry barriers and liberalization of taxes. The National Programme for Socioeconomic Development 2011-2030, adopted in 2010, emphasizes the goals of diversifying economic activity and strengthening competitiveness within the context of further market and institutional reforms. Introduction of conducive market entry rules, allowed expansion of fruits, vegetables and fish production in the country. Agriculture plays an important role in the economy both for reasons of food security and as a source of income. It provides employment for nearly half of the domestic labour force. The Government was also successful to leverage funding from developmental partners to address emerging needs in technical assistance, knowledge exchange and monitoring and evaluation.

IMPACT: Turkmenistan’s progress towards global nutrition targets to improve maternal, infant and young child nutrition is slow and requires acceleration of actions. The effective implementation of NNP most likely contributed to better health outcomes, however achievements have to be interpreted with caution, as latest available data represents results by end of 2015. World Health Assembly (WHA) Global targets aim to call for action, and encourage desire and determination to achieve success at country level.

Notably, success in targeting women and children with different nutrition practices differs across the continuum of care (). Supplementation of women of reproductive age, pregnant women and children with Vitamine A are less prioritized by the government.

The equity gaps in nutrition remain among children coming from the urban and rural areas, migrant, socially vulnerable and the poor families. In terms of child nutrition indicators, the largest regional differences are found in the prevalence of stunting and overweight. The prevalence of stunted children ranges from 7 percent in Ashgabat city to 16 percent in the Dashoguz velayat. The percentage of overweighted children is the highest in Ahal velayat. Notable differences in the prevalence of underweighted or wasted children by mother’s education, area of residence or regions are not observed. An analysis by age patterns shows that a higher percentage of children aged 0-5 months are underweight and wasted (9 and 15 percent respectively) in comparison to older children.
SUSTAINABILITY: The NNP shows sustainability prospects. The Government demonstrates high political commitment towards nutrition related issues by establishment of conducive policy, legislative and regulatory framework and promotion of intersectoral coordination and collaboration. Sustainable public funding of flour fortification is another proof of government’s political will to ensure sustained access of population to fortified flour. Full reliance on local salt production and assurance of salt iodization quality is another factor guaranteeing continued consumption of iodized salt by households and prevention of goiter among population.

Inclusion of the nutrition related counselling in the package of health services delivered at PHC level and in maternity wards, albeit with some observed weaknesses; continued provision of free of charge balanced nutrition at pre-school; inclusion of nutrition and healthy lifestyles in school programme; introduction of regulations that ban sale of non-health food and drinks in schools and at shops nearby schools along with the use of different communication channels, affects population’s health behaviors and influence health outcomes.

Government’s continued support to food security is commendable, though it may face several challenges. Sustainability of the food security may be undermined by forecasted climate change and scarcity of water resources, which in turn will have serious adverse consequences for the agricultural sector and food security. These factors will influence production, sustainable diets and sustainable consumption. Changes are going to affect the availability of food and not only the availability, whether it’s there or not in the markets, but also access particularly of most vulnerable layers of population. Food prices are going to change, typically for the poorest, which will have a much more substantial impact on consumption\textsuperscript{91}. To mitigate negative impact on food security, consumption patterns and access, in June 2012, the Government adopted a National Climate Change Strategy that covers mitigation and adaption issues.

Inequities between best-off and most marginalized groups likely to increase in forthcoming years. Since 1993, people in Turkmenistan have enjoyed free access to natural gas (which is the most abundant resource of the country), water and electricity. With current global decline in natural gas prices and consequent sharp reductions in government export revenues, Turkmenistan is most likely to end the subsidies completely. In addition, prices on various goods, food products and services are likely to increase following the devaluation of Turkmenistan’s currency. Although price controls have, so far, successfully restrained inflation, the pass-through effects of the national currency devaluation and lower state subsidies will likely bring about marginally higher prices for food, construction

\textsuperscript{91} Ibid
materials, services and public utilities\(^{52}\), which will adversely affect the most marginalized groups of the society.

**COHERENCE & COORDINATION:** Turkmenistan demonstrates strong coordination of health and nutrition related interventions among development partners through well-established coordination mechanism. Key development partners are represented on ICC and actively participated in discussions of NNP implementation progress, challenges and planning corrective measures. Policies of the development partners are coherent with government policy and direct their engagement and support to the country around nutrition related issues. UN health team meetings allow regular discussions, development of plans and division of roles and responsibilities between WHO, UNFPA and UNICEF. There are numerous examples of effective coordination between development partners.

### 5.2 RECOMMENDATIONS

This section of the report provides key recommendations formulated based on the evaluation findings. Preliminary recommendations have been presented, discussed and agreed upon with the ICC members. For each recommendation, the priority level is defined as follows: i) “immediate” - within next 1-3 months; ii) “Short Term” – 3-6 months; iii) “Medium Term” – up to 2 years; iv) “medium to long term” – 2-4 years.

**Recommendation 1: It is recommended that new NNP meets following key requirements**

**Government:** The Government is strongly advised to address the shortcomings of the current NNP during the design of the new NNP (Immediate priority). The new NNP should:

- Formulate clear theory of change
- Support development of multi-sectoral, preferably a whole of government approach with strong control mechanisms at national and local levels
- Include a wide range of universal and targeted actions based on most recent evidence
- Incorporate specific goals, objectives and expected outcomes
- Provide a detailed implementation plan, including the allocation of financial resources and funding sources, roles and responsibilities of all involved public and non-public structures and timelines
- The accountability and results matrix of the new NNP should show how each of the results can be realized and how each NNP implementing sector should contribute for better nutritional outcomes over the course of the lifecycle

**UNICEF:** Provide technical support for the development of the new National Nutritional Programme and ensure that new NNP has clear theory of change and meets key requirements stipulated above. UNICEF can be instrumental in advocating the government to consider recommendations provided by the evaluation.

**Recommendation 2: Elaborate adaptive response for food security challenges from climate change to improve food security and nutrition of households**

**Government:** Climate-change adaptation starts from an assessment of risks and vulnerabilities of a specific system, of how climate change will modify them and what impact it will have on food security. Adaptation can require substantial changes in the food system and therefore will need to build on comprehensive approaches. Any change in agricultural and food systems has a range of consequences which all have to be considered and accounted for. Special consideration must be given to socially disadvantaged groups, gender differences and the critical role of women in the food

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\(^{52}\) ADB Outlook, September 2015
system by recognizing that women are not a single homogeneous set and that there are also groups of vulnerable men. The opportunities of using disadvantaged groups and women as agents of change should be realized. Thus, the Government is advised to (medium term priority):

- Prioritize the needs of the most vulnerable in climate change adaptation efforts, particularly children – who will bear the burden of climate change far longer than adults.
- Providing children youth and their parents with climate change education, awareness raising and training.
- Align and coordinate work on climate change adaptation, preparedness and disaster risk reduction at national and sub-national levels.
- Protect children and their families who are forced to move because of climate change.
- Invest in children as part of national climate plans on mitigation and adaptation.

UNICEF: UNICEF is advised to advocate and provide technical support to the Government in the following areas:

- Accelerate the work climate change adaptation, preparedness and disaster risk reduction at national and sub-national levels.
- Advocate and reaffirm the role of climate change education. If climate change education is built into the curriculum of primary and secondary schools, and becomes part of higher, alternative and vocational education, children and young people will develop an early understanding and appreciation of all aspects of environmental sustainability including climate change adaptation and mitigation.
- Assist the Government in scaling-up of proven approaches to address the changing needs of children due to the climate change.

Recommendation 3: Prioritize nutrition specific interventions in the new NNP

Government: Government is strongly advised to accelerate several nutrition-specific interventions across the lifecycle and include them in the new NNP. Specifically, priority should be given to introduce promising evidence-based interventions: i) in the preconception period and in adolescents by addressing micronutrient deficiencies and emerging issues of overweight and obesity in adolescents through community and school-based education platforms; ii) promotion of optimal maternal nutrition during pregnancy through interventions that include balanced energy protein, calcium, and multiple micronutrient supplementation as well as disease and obesity prevention; iii) promotion of infant and young child feeding by continuous advancement of breastfeeding, improvement the effectiveness of complementary feeding strategies; iv) Improvement of infant and child nutrition through micronutrient supplementation, disease prevention and treatment as well as deworming and obesity prevention.

Figure 22). The government must ensure that these services are included in the basic health service package, adequately funded and human resource capacity built for the provision of quality nutrition services (Immediate priority).

UNICEF:

- Advocate for the inclusion of micronutrient supplementation in the basic health package starting from pre-conception and ensure full financial coverage of these services
- Provide technical assistance to the government in strengthening of supplementation interventions
- Support the Government efforts for the health human resource capacity building
Figure 22: Proposed nutrition specific interventions across the life cycle

Recommendation 4: Continue inclusion of nutrition sensitive interventions in related national programmes of other sectors.

**Government:** Nutrition-specific interventions are key to accelerating progress. However, it is also critical that other sectors—like agriculture, education, and social welfare—develop nutrition-sensitive interventions. A truly multi-sectoral approach will achieve optimal nutrition outcomes through greater coverage, while also helping other programmes achieve more powerful results and demonstrate their own potential for impact. Nutrition-sensitive programmes should: i) incorporate specific nutrition goals and actions in addition to their own goals into the design of the sectoral programmes; ii) directly address factors that influence undernutrition, like food security, access to health services, or ensuring safe and hygienic environments; iii) Improve targeting of key audiences including the poor, timing, and duration of exposure to interventions; and iv) Use conditions to stimulate demand for programme services, while ensuring good service quality (short to medium priority).

**UNICEF:** Accelerate advocacy efforts for inclusion of nutrition sensitive interventions in related national programmes. Provide technical advice on the evidence based effective nutrition sensitive interventions to be incorporated by different sectoral programmes. Work closely with health and social sectors to ensure that nutrition sensitive interventions are well presented in sectoral programme and are coherent with overall nutrition policy. Encourage resourcing in the areas of school feeding, nutrition, and food security in addition to promoting best practices for connecting family farmers to markets.

Recommendation 5: Strengthen consumer protection by further improving the quality and safety of food products

**Government:** Effective food quality and safety control programmes are essential and may comprise a variety of measures, such as laws, regulations and standards, together with systems for effective inspection and compliance monitoring including laboratory analysis. Albeit adequate food quality and safety monitoring system is in place, further enhancement of the system is required to address newly emerged standards, such as compliance with salt, sugar and the trans-fatty acids content in food
products. Where appropriate, government, in close collaboration with other interested parties (short to medium), should:

- Adopt and strengthen comprehensive measures to cover the control of food quality and safety with a view to protecting the health of consumers and producers and ensuring sound production, good manufacturing and fair trade practices. Where measures exist, they should be regularly reviewed and updated, as appropriate, for better producer and consumer protection.
- Enforcement of food regulations covering the fortification of foods with micronutrients.
- Enhance measures to protect the consumer from unsafe, low quality, adulterated, misbranded or contaminated foods through revisiting food labeling standards and requirements and ensure that labels are clear and easy to understand;
- Develop the human resources required for designing, implementing and monitoring food quality control systems.

UNICEF:
- Continue ongoing human capacity building interventions to enhance food quality and safety.
- Provide support in in raising capacity of the National Nutrition and Public Health Center as a Nutrition learning hub to share experience, evidence and provision of technical assistance to support country scale up;

Recommendation 6: Implement comprehensive programmes that promote the intake of healthy foods and reduce the intake of unhealthy foods and sugar-sweetened beverages by the population and children and adolescents.

**Government:**
- Ensure that appropriate and context-specific nutrition information and guidelines for adults, children and adolescents are developed and disseminated in a simple, understandable and accessible manner to all groups in society (immediate and to be continuous).
- Implement an effective tax on sugar-sweetened beverages (medium term).
- Develop nutrient-profiles to identify unhealthy foods and beverages (medium term).
- Implement interpretive front-of-pack labelling, supported by public education of both adults and children for nutrition literacy (medium term).
- Establish settings such as schools, child-care settings, children’s sports facilities and events to create healthy food environments (short term).

**UNICEF:**
- Provide technical assistance for the development of nutrition information and guidelines
- Advocate the Ministry of Education for the integration of nutrition information and guidelines into the national primary, secondary and higher education programmes.

Recommendation 7: Implement comprehensive programmes, directed towards reduction of obesity rates, that promote physical activity and reduce sedentary behaviours in children and adolescents.

**Government:** Childhood obesity is one of the most serious public health challenges of the 21st century. Childhood obesity is reaching alarming proportions in many countries and poses an urgent and serious challenge. The Sustainable Development Goals identify prevention and control of noncommunicable diseases as core priorities. Among the noncommunicable disease risk factors, obesity is particularly concerning and has the potential to negate many of the health benefits that have contributed to increased life expectancy. Overweight and obese children are likely to stay obese into adulthood and more likely to develop noncommunicable diseases like diabetes and cardiovascular diseases at a younger age. Overweight and obesity, as well as their related diseases, are largely preventable. Prevention of childhood obesity needs to be a high priority in new NNP and should consider at least the minimum package of interventions such as:
- Provision of guidance to children and adolescents, their parents, caregivers, teachers and health professionals on healthy body size, physical activity, sleep behaviours and appropriate use of screen based entertainment (short term).
- Include an additional focus on appropriate nutrition in guidance and advice for both prospective mothers and fathers before conception and during pregnancy (short term);
- Ensure that adequate facilities are available on school premises and in public spaces for physical activity during recreational time for all children (including those with disabilities), with the provision of gender-friendly spaces where appropriate (medium to long term).

**UNICEF:**
- Assist the Government in the design of guidance to children and adolescents, their parents, caregivers, teachers and health professionals on healthy body size, physical activity, sleep behaviours and appropriate use of screen based entertainment;
- Advocate for strengthening of counselling services during facility based visits and more importantly during the home visits;
- Advocate the Ministry of Education on the inclusion of physical activities into the national primary, secondary and higher education programmes.

**Recommendation 8: Plan for the development of effective communication strategy of and periodic evaluation of its impact on the behavior change of population**

**Government** is advised to improve effectiveness of its communication efforts. Namely:
- Better elaboration of communication support strategy design (short term),
- Improved integration of messages across channels and across cycles of use (short term),
- Improved scheduling of mass media messages and effective guidance on optimum placement and use of materials (short term);
- Development of guidelines for adapting messages for specific target groups (ethnic minorities, urban and rural) (short term);
- Improved YICF message balance from the period of pre-pregnancy as opposed to that beginning with pregnancy etc. (short term)
- Improvements in the balance of messages concerning improvements in nutrition during pregnancy and on complementary feeding compared to messages on breastfeeding alone (short term).
- Ensure funding for the periodic assessment of effectiveness of communication strategy on level of population’s information and consequent behaviour change (medium to long term)

**UNICEF:**
- Provide technical assistance for the design of effective communication strategy;
- Support the Government in periodic assessment of behaviour changes among population with emphasis on most vulnerable groups.

**Recommendation 9: Introduce coordinated, integrated system for monitoring and surveillance of food, nutrition status and nutrition determinants with the regular collection, analysis and presentation of data to inform decision-making and improving the quality.**

**Government:** There is common recognition of the need for accurate, timely food and nutrition data to inform policy responses. The Government is advised to introduce coordinated, integrated system for monitoring and surveillance of food, nutrition status and nutrition determinants (short to medium term). Specifically:
- Develop a theoretical framework for the selection and prioritization of indicators;
- Integrate the surveillance system into training and educational systems;
- Build analytical capacities at nation and sub-national levels and promote evidence based policy making;

**UNICEF:**
- Provide technical support to the Government for the establishment of integrated monitoring and surveillance system;
- Support Government interventions in institutionalization of evidence based policy making
ANNEXES

ANNEX 1: LIST OF DOCUMENTS REVIEWED

POLICY & LEGAL DOCUMENTS
4. UNICEF Turkmenistan. Proposing a Comprehensive Approach to Early Childhood Nutrition
5. Law Republic of Turkmenistan on Safety and quality of food products, 2014
6. Draft law on "Infant and Young Child Feeding
9. Nation programme of Support and Development of Sports and Physical Education
11. Minutes of inter sectorial Working Group meeting on the Progress of in implementation of State Nutrition Programme, 2015
12. Minutes of strategic conference on nutrition, 2015
13. Resolution of the President of Turkmenistan "Regarding Folic Acid-Fortified and Iron-Fortified Flour Production", 2006
14. The national strategy for the implementation in 2014-2020 of tasks defined in the Ashgabat Declaration prevention and control of non-communicable diseases in Turkmenistan

RESEARCH, STUDIES, EVALUATION REPORTS
17. UNICEF Turkmenistan. Early Childhood Situation Analysis
18. Committee on the Elimination of All Forms of Discrimination Against Women. Combined Third and Fourth Periodic Reports
20. PHC MCH home visiting assessment in Turkmenistan, 2012
21. Country Annual Reports, UNICEF
22. Turkmenistan Situation analysis of the boys and girls with disabilities, UNICEF, 2015
26. MICS 2015-2016
27. Strengthening the response to noncommunicable diseases in Turkmenistan, WHO, 2013
29. Health system financing country profile: Turkmenistan, 2014, WHO
30. The impact of the cash and non-cash benefit programmes for families with children in Turkmenistan: Results from an exploratory survey in two regions and the capital of Turkmenistan, UNICEF, 2014
32. Committee on the Elimination of All Forms of Discrimination Against Women. Combined Third and Fourth Periodic Reports
33. National nutrition study with a focus on anemia and vitamin A deficiency in Turkmenistan, UNICEF, 2012

INTERNATIONAL EVIDENCE
36. Committee on the Elimination of All Forms of Discrimination Against Women. Combined Third and Fourth Periodic Reports
38. Committee on the Elimination of All Forms of Discrimination Against Women. Combined Third and Fourth Periodic Reports

OTHER
52. UNICEF, WHO, World Bank Group joint nutrition estimates, May 2017
53. The DAC Principles for the Evaluation of Development Assistance, OECD
# ANNEX 2: LIST OF PEOPLE INTERVIEWED

<table>
<thead>
<tr>
<th>#</th>
<th>NAME</th>
<th>ORGANIZATION</th>
<th>POSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Agaeva B.</td>
<td>MoHMI</td>
<td>Head of medical statistics Department</td>
</tr>
<tr>
<td>2</td>
<td>Gaizova G.</td>
<td>MoHMI, State Sanitary Inspection</td>
<td>Head of the Department of State Sanitary Inspection</td>
</tr>
<tr>
<td>3</td>
<td>Redjepova S.</td>
<td>MoHMI, State Sanitary Inspection</td>
<td>Chief Specialist of the State Sanitary Inspection Department</td>
</tr>
<tr>
<td>4</td>
<td>Nazarov A.</td>
<td>Public Health and Nutrition Center</td>
<td>Head of the Scientific Department</td>
</tr>
<tr>
<td>5</td>
<td>Mametsakhatova M.</td>
<td>State Medical University</td>
<td>Teacher of the Department of Hygiene</td>
</tr>
<tr>
<td>6</td>
<td>Velvmamedova G.</td>
<td>State Concern &quot;Turkmenkhimiya&quot;</td>
<td>Chemical Engineer</td>
</tr>
<tr>
<td>7</td>
<td>Tachmamedov G.</td>
<td>State service &quot;Turkmenstandartlary&quot;</td>
<td>Chief Specialist</td>
</tr>
<tr>
<td>8</td>
<td>Yagmirova S.</td>
<td>Ministry of Education</td>
<td>Chief Specialist</td>
</tr>
<tr>
<td>9</td>
<td>Soltanmyradova S.</td>
<td>State Association of Food Industry</td>
<td>Deputy Head of Department</td>
</tr>
<tr>
<td>10</td>
<td>Azizov M.</td>
<td>State Committee on Fisheries</td>
<td>Head of Production Department</td>
</tr>
<tr>
<td>11</td>
<td>Armanova A.</td>
<td>Ministry of Agriculture and Water Resources of Turkmenistan</td>
<td>Chief specialist of the Department for the Production of Grain Products</td>
</tr>
</tbody>
</table>
# EVALUATION FRAMEWORK

<table>
<thead>
<tr>
<th>Question</th>
<th>Feasibility</th>
<th>Judgment and Indicators</th>
<th>Data collection methods</th>
<th>Type of analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RELEVANCE</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Q1 Was the NNP relevant to expanding access to adequate child nutrition and quality food and health services?</td>
<td>H</td>
<td>Evidence of comprehensive needs assessment/situation analysis in the formulation of government’s programmes</td>
<td>DR IDI FGD SV</td>
<td>Qualitative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Type of bottlenecks and barriers identified and consecutive interventions planned under government’s nutrition programme</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Qualitative judgment: highly adequate; adequate; somewhat adequate; not adequate</td>
<td></td>
<td></td>
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<tr>
<td>Q2 Were the government and UNICEF interventions in nutrition relevant to existing service delivery structure in Turkmenistan?</td>
<td>H</td>
<td>Extent to which the government interventions targeted the key system barriers/bottlenecks identified in service delivery?</td>
<td>DR IDI FGD SV</td>
<td>Qualitative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Qualitative judgment fully address; partially address and not address</td>
<td></td>
<td></td>
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<tr>
<td>Q3 Were the needs of the most marginalized groups addressed?</td>
<td>H</td>
<td>Extent to which the interventions addressed the needs of most marginalized groups</td>
<td>DR IDI FGD SV</td>
<td>Qualitative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Qualitative judgment fully address; partially address and not address</td>
<td></td>
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<tr>
<td>Q4 What is the value of the government programme in nutrition in relation to global priorities?</td>
<td>L</td>
<td>Evidence of the programmes’ alignment to international standards and norms</td>
<td>DR IDI FGD SV</td>
<td>Qualitative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Qualitative judgment: Fully aligned, partially aligned, not aligned</td>
<td></td>
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</tr>
<tr>
<td>Q5 Was UNICEF’s planned engagement in implementation and monitoring of the NPP relevant?</td>
<td>H</td>
<td>Evidence of UNICEF’s interventions alignment with the NNP</td>
<td>DR IDI FGD SV</td>
<td>Qualitative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Qualitative judgment: Fully aligned, partially aligned, not aligned</td>
<td></td>
<td></td>
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<tr>
<td><strong>EFFECTIVENESS</strong></td>
<td></td>
<td></td>
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<tr>
<td>Q6 To what extent were system level changes achieved? Did these catalyze equity-focused results for children?</td>
<td>H</td>
<td>Evidence of the system level changes (all three tiers)</td>
<td>DR IDI FGD SV</td>
<td>Qualitative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Evidence that system level changes resulted in equal results for children</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Qualitative judgment: yes, partially, no</td>
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</tbody>
</table>
### Q7: What was the underlying theory of change that led to increased access? Was it valid?

**M**
- Evidence of available theory of change (TOC)
- Evidence of the validity of TOC to the context

Qualitative judgment: yes, partially, no

Quantitative judgment based on the baseline and end-line surveys (2010-2016)

### Q8: Were contextual factors (political, social, economic, cultural) considered in the design/implementation of the nutrition interventions?

**H**
- Evidence of rigorous risk assessment (political, social, economic, cultural)
- Evidence of risk mitigation measures taken into account in the design / implementation of the nutrition interventions

Qualitative judgment: yes, partially, no

### Q9: Were efforts made to establish an enabling environment (necessary and appropriate policies, legislation, budgets) for the expansion of nutrition programmes?

**M**
- Evidence on availability of:
  - Social norms: recognition of the importance of child development, early learning and school readiness
  - Legislation, policy: laws, by-laws, strategies and resources promoting the expansion of nutrition programmes
  - Budget and expenditure: nutrition programme funding and budget execution trends
  - Management & coordination mechanisms: availability of effective coordination mechanism at governance and service delivery level

Qualitative judgment: yes, partially, no

- Evidence of recognition of the importance of child development, early learning and school readiness
- Evidence on allocation and utilization of public, private and other resources

Quantitative judgment based on the investment trends in nutrition programmes: increased, stable (low/high), decrease

### Q10: Did public and private service delivery systems reach the most marginalized groups?

**M**
- Coverage of children by public and private service delivery systems

- **Q**
### EVALUATION OF NATIONAL NUTRITION PROGRAMME IN TURKMENISTAN

**Quantitative judgment:**
- increased, stable (low/high),
- decrease

<table>
<thead>
<tr>
<th>Question</th>
<th>Description</th>
<th>Measurement</th>
<th>Evidence</th>
<th>Qualitative judgment</th>
</tr>
</thead>
</table>
| Q10.1    | Extent to which supply side bottlenecks were addressed? (existing coverage, range and quality of services provided, readiness and availability of resources); | M - | Evidence on availability of:  
  - Adequate number and type of services, with particular focus on rural areas  
  - Adequate number of professional staff, inputs  
  - Level of funding | o o o o o |
|          |             |             |          |                       |
| Q10.2    | What were the main constraints on demand? | H - | Evidence of documented demand bottlenecks  
  Qualitative judgment: yes, partially, no  
  - Evidence of improved utilization of services by children and families  
  - Changes in cultural and societal behaviors and beliefs  
  - Improved financial access to Nutrition services | o o o o o |
|          |             |             |          |                       |
| Q11      | Which interventions of NNP were most and least effective? | H - | Effectiveness measured by comparison of attained results of each programme.  
  Qualitative judgment: yes, partially, no | o o o o o |
|          |             |             |          |                       |
| Q12      | Did the intervention results contribute to reducing the underlying causes of inequality and discrimination? | L - | Evidence of documented reduction of underlying causes of inequality and discrimination  
  Qualitative judgment: yes, partially, no | o o o o o |
|          |             |             |          |                       |
| Q13      | What was the role of UNICEF in ensuring the effectiveness of the NPP? | H - | | o o o o o |
|          |             |             |          |                       |
| Q14      | Where there any unintended positive and/or negative results and whether the negative results could have been foreseen and managed? | M - | Evidence of unintended positive and negative results  
  Respondents and the ET judgment | o o o o o |
|          |             |             |          |                       |
| Q15      | Did Government Nutrition initiatives use resources in the most economical manner to achieve expected results? (current costs and flow of funds) | L - | Comparison of average per child costs of government spent resources vs. donor spent resources  
  - Trends in State programme budget execution rates | o o |
|          |             |             |          |                       |
| Q16      | How cost-effective were alternative approaches for reaching the end of beneficiaries and most vulnerable groups? (Who finances services | M - | Comparison of average per child costs of each alternative approach | o o |
|          |             |             |          |                       |
### EVALUATION OF NATIONAL NUTRITION PROGRAMME IN TURKMENISTAN

e.g., national government, local governments, non-governmental organizations, private entities?

<table>
<thead>
<tr>
<th>Question</th>
<th>Description</th>
<th>Evidence</th>
<th>Qualitative judgment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q 17</td>
<td>Was funding leveraged from external and internal sources? (Are fortified food and service available? Public-private partnership developed?)</td>
<td>M: Evidence on the resources leveraged; Evidence on the expansion of public-private partnerships</td>
<td></td>
</tr>
</tbody>
</table>

Quantitative judgment: increased, stable (low/high), decrease |

| Q 18     | Were cost-efficient models Nutrition interventions piloted/modelled? | H: Documented evidence on cost efficiency of proposed nutrition interventions planned for modelling and/or piloted |  


Qualitative judgment: yes, no |

| Q 19     | What strategies of UNICEF were the most efficient in influencing improvements in nutrition status and improvement of equitable access? | H: Evidence on how well the UNICEF’s core roles were implemented according to general criteria of good practice |  

Qualitative judgment: yes, partially, no |

| Q 20     | Has the programmes/projects facilitated synergies and avoided duplications with interventions promoted by the government and other developing partners? | H: Programmes/projects facilitating synergies and avoiding duplications |  


Qualitative judgment: Fully avoided, partially avoided, not avoided |

| IMPACT   | What were the results in children’s lives of the interventions (intended and unintended, positive and negative) including the effects on most marginalized groups? | L: The Nutrition Programme contributed to achieving (or not) the expected impact level results |  


Quantitative judgment: decreased, increased (data disaggregated by age, gender, rural/urban, wealth, etc.) |

| Q 22     | How did the results affect the rights and responsibilities of the most marginalized children, communities and institutions? To what extent did results contribute to decreased inequities between majority groups and most marginalized groups? | L: Evidence on the decreased inequities between majority groups and most marginalized groups (when possible to obtain) |  


Quantitative judgment: decreased, increased (data disaggregated by age, gender, rural/urban, wealth, etc.) |

| Q 23     | Were there any unintended results on Human Rights & Gender Equality in the intervention? Were they | H: Respondents and the ET judgment |  


positive or negative and in which ways did they affect the different stakeholders?

### SUSTAINABILITY

<table>
<thead>
<tr>
<th>Q 24</th>
<th>Will UNICEF’s contribution to system level changes continue to impact on the most beneficiaries and most vulnerable groups after support is withdrawn?</th>
<th><strong>H</strong></th>
<th>Evidence of reflection of the supported priorities in the relevant national, sectoral policies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Qualitative judgment: fully, partially, no</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q 25</th>
<th>What were/are the enabling factors contributing to sustainability?</th>
<th><strong>H</strong></th>
<th>Respondents and the ET judgment on the level of ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Qualitative judgment: fully contributing, partially contributing, not contributing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q 26</th>
<th>Are inequities between best-off and most marginalized groups likely to increase, remain stable, or decrease when support is withdrawn?</th>
<th><strong>H</strong></th>
<th>The ET judgment on the likelihood of adequate funding to become available, once external support ends</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Qualitative judgment: yes, no</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q 27</th>
<th>To what degree did participating organizations change their policies or practices to improve HR &amp; GE fulfillment (e.g. new services, greater responsiveness, resource reallocation, improved quality etc.)?</th>
<th><strong>M</strong></th>
<th>The ET judgment on the changed policies of participating organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Qualitative judgment: Yes, no</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q 28</th>
<th>Extent to which UNICEF ensured hand over of the elements/components of its assistance to the Government?</th>
<th><strong>H</strong></th>
<th>Evidence of the handover measures of the Project elements/components</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Qualitative judgment: fully, partially, no hand over</td>
</tr>
</tbody>
</table>

### COORDINATION

<table>
<thead>
<tr>
<th>Q 29</th>
<th>What were the effects of coordination among different stakeholders and donors at national level?</th>
<th><strong>H</strong></th>
<th>The ET judgment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Qualitative judgment: Yes, no</td>
</tr>
</tbody>
</table>

### COVERAGE

<table>
<thead>
<tr>
<th>Q 30</th>
<th>Which groups were reached because of Government and UNICEF’s interventions/contributions at systems level, i.e. poor, ethnic minority, rural/remote, children with disabilities?</th>
<th><strong>M</strong></th>
<th>Evidence on coverage of different groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Quantitative judgment: increased, stable (low/high), decrease</td>
</tr>
</tbody>
</table>

### COHERENCE

<table>
<thead>
<tr>
<th>Q 31</th>
<th>What were areas and ways of cooperation with other donor agencies in regard to achieving the goals and objectives? Was there coherence across policies of different donor agencies and national stakeholders?</th>
<th><strong>H</strong></th>
<th>The ET judgment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Qualitative judgment: Yes, no</td>
</tr>
</tbody>
</table>
Consent for Participation in Interview Research

Introduction:

My name is _______________________. On request of the Government of Turkmenistan UNICEF CO has contracted us to evaluate the National Nutrition Programme. The findings of the given evaluation will help to identify remaining weaknesses and inform future government actions.

For the purpose of this assignment, we would like to collect qualitative data from all key stakeholders related to subject of the research. Among other stakeholders (around 30-40), you are kindly request you to take part in this research.

Your participation in this research is entirely voluntary. It is your choice whether to participate or not. The choice that you make will have no bearing on your job or on any work-related evaluations or reports. You may change your mind later and stop participating even if you agreed earlier.

During the interview, I or another interviewer will sit down with you in a comfortable place. No one else but the interviewer will be present unless you would like someone else to be there. You will not be required to introduce yourself by name and no record of your identity will be taken. If you do not wish to answer any of the questions during the interview, you may say so and the interviewer will move on to the next question. The information recorded is confidential, and no one else except investigators will access to the information documented during your interview. The entire interview will be tape-recorded, but no-one will be identified by name on the tape. The tape will be securely stored. The information recorded is confidential, and no one else except Investigators will have access to the tapes. The tapes will be destroyed after 60 days.

The interview will last about 45-60 minutes. Nothing that you tell us today will be shared with anybody outside the research team, and nothing will be attributed to you by name. The knowledge that we get from this research will be shared with you and your community before it is made widely available to the public. Each participant will receive a summary of the results. There will also be a debriefing meeting and this will be announced. Following the meeting, we will publish the results so that other interested people may learn from the research.

If you have any questions related to this research and/or interview, please ask. If not, we would appreciate if you sign the certificate of consent.

Certificate of Consent

I volunteer to participate in a research project conducted by Dr. Tamar Gotsadze. I understand that the project is designed to gather information about government programmes related to child nutrition. I will be one of approximately 30 people being interviewed for this research.

1. My participation in this project is voluntary. I understand that I will not be paid for my participation. I may withdraw and discontinue participation at any time without penalty. If I decline to participate or withdraw from the study, no one on my campus will be told.

2. I understand that most interviewees in will find the discussion interesting and thought-provoking. If, however, I feel uncomfortable in any way during the interview session, I have the right to decline to answer any question or to end the interview.

3. Participation involves being interviewed by the researcher. The interview will last approximately 30-45 minutes. Notes will be written during the interview. An audio tape of the interview and subsequent dialogue will be made. If I don't want to be taped, no recording will be made.
4. I understand that the researcher will not identify me by name in any reports using information obtained from this interview, and that my confidentiality as a participant in this study will remain secure. Subsequent uses of records and data will be subject to standard data use policies which protect the anonymity of individuals and institutions.

5. Individuals from higher administration level will neither be present at the interview nor have access to raw notes or transcripts. This precaution will prevent my individual comments from having any negative repercussions.

6. I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study.

7. I have been given a copy of this consent form.

<table>
<thead>
<tr>
<th>GROUP OF STAKEHOLDERS</th>
<th>QUESTIONS TO BE ASKED</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNICEF</td>
<td>Q1, Q3, Q6, Q7, Q9, Q10, Q11, Q12, Q14, Q18, Q23, Q24, Q25, Q26, Q29, Q30, Q31</td>
</tr>
<tr>
<td>Ministries</td>
<td>Q1, Q3, Q6, Q7, Q9, Q10, Q11, Q12, Q13, Q14, Q19, Q23, Q24, Q25, Q26, Q30, Q31</td>
</tr>
<tr>
<td>Other Government</td>
<td>Q1, Q3, Q6, Q7, Q9, Q10, Q11, Q12, Q13, Q14, Q19, Q23,</td>
</tr>
<tr>
<td>Institutions</td>
<td></td>
</tr>
<tr>
<td>Health Service</td>
<td>Q1, Q2, Q3, Q6, Q9, Q10, Q12, Q13, Q14, Q19, Q23, Q24, Q25, Q26, Q30</td>
</tr>
<tr>
<td>Providers</td>
<td></td>
</tr>
<tr>
<td>Development Partners</td>
<td>Q1, Q2, Q3, Q6, Q7, Q9, Q10, Q11, Q12, Q13, Q14, Q18, Q19, Q20, Q23, Q24, Q25, Q26, Q29, Q30, Q31</td>
</tr>
</tbody>
</table>

There are no NGO/CSOs in Turkmenistan that are active in nutrition and/or maternal and child health. Flour mills are public entities. All service providers represent the public sector.
1. **Introduce yourself**
   My name is _______________________

2. **Introduction to the objectives of the research**
   On request of the Government of Turkmenistan UNICEF CO has contracted us to evaluate the National Nutrition Programme. The findings of the given evaluation will help to identify remaining weaknesses and inform future government actions.

3. **A brief introduction to the rules of focus groups**
   a. The FGD will last for 50-60 minutes
   b. Your participation in this research is entirely voluntary. It is your choice whether to participate or not. The choice that you make will have no negative consequences on you.
   c. Your names will not be asked and recoded. Names will not be associated with responses. Everything said and done is confidential and will not be used outside the room except for the purposes of this research;
   d. FGDs will be tape-recorded
   e. You are also requested to keep the information you get from other participants during the discussion in confidence.
   f. You do not have to talk about anything you do not want to and you may end your participation in discussion at any time
   g. Every statement is right;
   h. Please do not hesitate to disagree with someone else;
   i. But do not all talk at once

4. **Ask questions**

   I would like to begin our discussion with some general questions about nutrition services and practices in your facility.

   - Please name nutrition services being provided at your health facility.
     o Probe for: Taking mid-upper arm circumference (MUAC) correctly and accurately, taking height/length correctly and accurately, taking weight correctly and accurately, plotting of the child health card correctly and accurately, Interpretation of growth curves to the mother, checking for edema correctly, checking for pallor (i.e., pale palms and inner eyelids), Hemoglobin estimation, Taking dietary history, Categorization of nutrition status
   - What are the topics for nutrition education, counselling and support?
     o Probe for: Infant and young child feeding and support, Maternal nutrition counselling, Counselling for malnourished clients, Health and nutrition education on various health and nutrition topics, Conduct food demonstration sessions, provide supplementary foods
   - Which micronutrient supplements you usually provide to pregnant women and children?
   - Which guidelines/guides/standards/job aids are available at your hand that you use for nutrition service provision?
   - Please name nutrition education materials available in the facility for clients
     o Probe for: brochures, flyers, posters, etc.
   - How often do you use nutrition status indicator reference charts/growth monitoring and promotion charts?
     o Probe for: BMI-for-age z-score chart for children from 5–19 years (coloured), BMI cut-offs for adults, Weight-for-height z-score tables for children less than 5 years, Weight-for-age tables/child health growth charts,
- Most frequently where do you provide nutrition services?
  ○ Probe for: facility, at home
- How many of you have undergone nutrition specific training? How many of you would like to enhance your knowledge in nutrition?
- What are prevailing nutritional problems among pregnant women and children 0-6 years old in your catchment area? And what do you think what are reasons for that?

Summary:
- If there was one thing you could change about the services available in your community to pregnant women and children 0-6 years old, what would it be?
- Is there anything I haven’t asked about that you would like to tell me related to the topics we have discussed?
- Bring the meeting to a close. Thank you very much for coming. We enjoyed the discussion and have learned a lot from your comments and suggestions.
ANNEX 5.2 FGD GUIDE FOR PARENTS WITH CHILDREN 0-3

1. **Introduce yourself**
   2. My name is _______________________

3. **Introduction to the objectives of the research**
   - On request of the Government of Turkmenistan UNICEF CO has contracted us to evaluate the National Nutrition Programme. The findings of the given evaluation will help to identify remaining weaknesses and inform future government actions.

4. **A brief introduction to the rules of focus groups**
   - The FGD will last for 50-60 minutes
   - Your participation in this research is entirely voluntary. It is your choice whether to participate or not. The choice that you make will have no negative consequences on you.
   - Your names will not be asked and recoded. Names will not be associated with responses. Everything said and done is confidential and will not be used outside the room except for the purposes of this research.
   - FGDs will be tape-recorded
   - You are also requested to keep the information you get from other participants during the discussion in confidence.
   - You do not have to talk about anything you do not want to and you may end your participation in discussion at any time
   - Every statement is right;
   - Please do not hesitate to disagree with someone else;
   - But do not all talk at once

5. **Ask questions**

   I would like to begin our discussion with some general questions about children age six or younger.

   - For how long did you breastfeed your child?
     - Probe for: Exclusive breastfeeding, start of complementary food, how often should a baby younger than six months be breastfed or fed with breastmilk?
   - How should a lactating woman eat in comparison with a non-lactating woman to be healthy and produce more breastmilk?
     - Probe for: Eat more food (more energy), Eat more protein-rich foods, eat more iron-rich foods, use iodized salt when preparing meals
   - How can you recognize that someone is not having enough food? What are the signs of undernutrition?
   - How can you (caregiver) find out if the baby is growing well or not?
   - Have you heard about iron-deficiency anemia? Can you tell me how you can recognize someone who has anemia? What are the health risks for infants and young children of a lack of iron in the diet? How can anemia be prevented?
   - Now I would like to ask you about (other) liquids or foods that your baby/child ate yesterday during the day or at night either at home or in preschool.
     - Probe for: Grains, roots and tubers, Dairy products, Vitamin A fruits and vegetables, meat, fish, etc.
   - How many times did your child eat foods?
   - What worries you about feeding of your child?
   - What were the topics you’ve been counselled on by your doctor or nurse during your last visit?
   - What type of flour do you use? What are criteria for selecting the flour for purchase?
   - What kind of salt do usually use at home? How do you select the salt for purchase?
- Where and How do you keep salt at home?
- How much salt your family consumes per day/month?

Summary:
- If there was one thing you could change about the services available in your community to children 0-6 years old, what would it be?
- Is there anything I haven’t asked about that you would like to tell me related to the topics we have discussed?
- Bring the meeting to a close. Thank you very much for coming. We enjoyed the discussion and have learned a lot from your comments and suggestions.
1. **Introduce yourself**

2. My name is ______________________

3. **Introduction to the objectives of the research**

   On request of the Government of Turkmenistan UNICEF CO has contracted us to evaluate the National Nutrition Programme. The findings of the given evaluation will help to identify remaining weaknesses and inform future government actions.

4. **A brief introduction to the rules of focus groups**

   a. The FGD will last for 50-60 minutes
   b. Your participation in this research is entirely voluntary. It is your choice whether to participate or not. The choice that you make will have no negative consequences on you.
   c. Your names will not be asked and recoded. Names will not be associated with responses. Everything said and done is confidential and will not be used outside the room except for the purposes of this research;
   d. FGDs will be tape-recorded
   e. You are also requested to keep the information you get from other participants during the discussion in confidence.
   f. You do not have to talk about anything you do not want to and you may end your participation in discussion at any time
   g. Every statement is right;
   h. Please do not hesitate to disagree with someone else;
   i. But do not all talk at once

5. **Ask questions**

   I would like to begin our discussion with some general questions about your health and nutrition during pregnancy.

   - How is your pregnancy going? What health or medical concerns, if any, do you or your medical provider have about your pregnancy
     Probe for: high blood pressure, anemia or gestational diabetes
   - How should a pregnant woman eat in comparison with a non-pregnant woman to provide good nutrition to her baby and help him grow?
     o Probe for: Eat more food (more energy), Eat more protein-rich foods, eat more iron-rich foods, use iodized salt when preparing meals
   - How likely do you think you are to have a low-birth-weight baby? How serious do you think it is for your baby to have a low-birth-weight?
   - Which medications, if any, have you been subscribed by your health provider? What vitamins or other dietary supplements do you take, if any?
   - What were the topics you’ve been counselled on by your doctor or midwife during your last antenatal visit?
   - How your usual daily diet look like? Please list products that are included in your daily meal
     o Probe for: meats, dairy products, fruits, vegetables, and grains.
   - What type of flour do you use? What are criteria for selecting the flour for purchase?
   - What kind of salt do usually use at home? How do you select the salt for purchase?
   - Where and How do you keep salt at home?
   - How much salt you receive per day?

Summary:
- If there was one thing you could change about the services available in your community to pregnant women, what would it be?

- Is there anything I haven't asked about that you would like to tell me related to the topics we have discussed?

- Bring the meeting to a close. Thank you very much for coming. We enjoyed the discussion and have learned a lot from your comments and suggestions.
ANNEX 6: TERMS OF REFERENCE

1. BACKGROUND AND CONTEXT

Basic information: Turkmenistan is the second-largest country in Central Asia in size, with an estimated population of 5.2 million in 2010, according to the World Bank. Children younger than age 18 comprise about one-third of the population, with under-5 children totaling to about 506,000. Fewer than half of the people live in urban areas. According to the official data, nearly 95 percent of the population are Turkmen; other ethnicities include Uzbek, Russian, Kazakh, Azeri and Armenian.

Average life expectancy from birth has risen to 65.7 years, but remains lower than in many neighboring countries. Turkmenistan still has a high fertility rate compared with its neighbors, in part because of birth incentives from the Government; the Total Fertility Rate rose from 2.3 in 2007-2008 to 3.2 births per woman in 2015. The rate is slightly higher in rural areas than in urban areas (3.3 vs 3.0 in 2015).

The Human Development Index (HDI) for Turkmenistan is 0.691, ranking Turkmenistan 111th out of 187 countries and placing it near the top of the country list in the medium human development category. GNI per capita was reported to be US$14,027 in 2015, with the mean years of education standing at 10.8. Turkmenistan’s human development trends since 2005 have been higher than those of other medium-human-development countries, but remain well below the regional average for Europe and Central Asia, which is 0.75.

Child mortality is still high for an upper middle income country. The under-five mortality rate was 51 per 1,000 live births, infant mortality rate 44 per 1,000 live births and neonatal mortality 23 per 1,000 live births in 2015. Nutritional Status: Children’s nutritional status is a reflection of their overall health. When children have access to an adequate food supply, are not exposed to repeated illness, and are well cared for, they reach their growth potential and are considered well nourished. Undernutrition is associated with more than half of all child deaths worldwide.

Malnutrition, and as a sign of it, stunting in early childhood - known also as growth faltering - is a major child rights and global and national development concern given its link to child mortality, irreversible loss of cognitive development (especially when stunting is severe), and loss of productivity and national income. Despite the progress made in the recent decade in reduction of stunting (from 19% in 2006 to 11% in 2015), sustaining the gains and addressing disparities remain key concerns. Chronic malnutrition is specifically related to poor infant and young child feeding practices in the first 2 years of life, as indicated by MICS. Related to this, there has been a tangible progress in increasing breastfeeding rates among newborns. The exclusive breastfeeding rate among children under 6 months of age rose from 11% in 2006 to 59% in 2015.

As indicated by the 2012 Nutrition Surveillance data, anemia prevalence in the country was at 44% among children aged 6-59 months, 53% among pregnant women, 57% among non-pregnant women of reproductive age, and 38% among men. As per the WHO standards, anemia of more than 40% represents a moderate to significant public health issue.

Remaining equity gaps: It is assumed that the equity gaps in nutrition remain among children coming from the urban and rural areas, migrant, socially vulnerable and the poor families. In terms of child nutrition indicators, the largest regional differences are found in the prevalence of stunting and overweight. The prevalence of stunted children ranges from 7 percent in Ashgabat city to 16 percent in the Dashoguz velayat. The percentage of overweighted children is the highest in Ahal velayat. Notable differences in the prevalence of underweighted or wasted children by mother’s education, area of residence or regions are not observed. An analysis by age patterns shows that a higher percentage of children aged 0-5 months are underweight and wasted (9 and 15 percent respectively) in comparison to older children.

Policy overview: Mother and child health and nutrition has always been one of the top priorities of the Government of Turkmenistan. The Ministry of Health and Medical Industry (MoHMI) is committed to accelerating progress on newborn, child, adolescent and maternal health and wellbeing through implementation of the State Health Program “Saglyk”, the National Strategy and Action Plan on Maternal, Newborn, Child and Adolescent Health in Turkmenistan for 2015-2019 and the National Nutrition Programme for the period of 2013-2017 (NNP).

95 http://mics.unicef.org/surveys
98 2006 and 2015/16 Multiple Indicator Cluster Surveys (MICS), respectively
99 Ibid.
The Government has also put in place a food fortification program fortifying flour with iron premix and salt with potassium iodate. As a result, 100% of flour produced in the country are fortified with iron and folic acid, which reportedly cover about 90 percent of the population’s flour needs. 97 percent of households consume adequately iodized salt.

The Government nationalized SDGs in 2016, adopting 6 targets (one with a revision) out of 8 globally and 10 indicators under SDG2. UNICEF has committed to supporting the Government both in achievement of SDG2 and in monitoring systems for measuring progress against children-related nutrition indicators. The Government has also been enhancing its efforts to monitor nutrition outcome and impact indicators. In addition to increasing the capacity of health facilities to measure and report on anemia status among pregnant women, the Government conducted and co-funded the 2015–16 Multiple Indicator Cluster survey and is planning to conduct another in 2019.

2. OBJECT OF THE EVALUATION

The objects of the Evaluation are the components of the NNP related to children and mothers and UNICEF’s contribution to its development, implementation and monitoring.

The overall expected outcome of the NNP for the period from January 2013 to December 2017 is improved public health with increased average life expectancy as a result of healthy nutrition and life styles. The expected outputs of the NNP:

- Increased accessibility and affordability of the nutrition services and appropriate nutrition for children and their mothers;
- Enhanced quality of the nutrition-related services;
- Improved collaboration at all levels for the implementation of the NNP.
- Some of the main activities of the NNP include:
  - broad advocacy for healthy nutrition in the society and fostering of healthy eating habits in individual behaviors;
  - adoption of the best development practices of healthy nutrition rules and diets which will be the basis for non-communicable disease prevention,
  - improvement of reporting and methodological obligations;
  - strict control of food quality and safety, support for food production in line with the healthy nutrition requirements, environmental and physiological standards;
  - scientific research of vital aspects of healthy nutrition in the country’s natural climatic environment and implementation the findings in practices;
  - training of specialists of the all sectors involved into the implementation of the NNP.

It should be stated that the adopted short version of the NPP was based on a longer version that is also more amenable to evaluation. In addition, a logical model to support the development of the NNP was developed by UNICEF, which was not officially part of the NNP but was used to inform its development process. The information on the planned and executed budget for implementation of the NNP is available for selected components only, but additional information will be requested during the evaluation process. Information on UNICEF’s financial contribution to support the NNP implementation and monitoring will also be extracted as much as possible.

The NNP has been implemented with the participation of various ministries and agencies, such as the Ministries of Trade and External Affairs, Agriculture and Water Recourses, Economy and Development. The MoHMI has also been responsible for coordination of activities of these ministries and agencies involving also international organizations, such as the World Health Organization, UNICEF and UNDP.

Other stakeholders in the evaluation include representatives of milling and salt industry, local staff of the SES (Sanitary Epidemiological Service) and policlinics as the main implementers of the NNP and a primary source of information.

3. RATIONALE
The current NNP is coming to an end at the end of 2017. Meanwhile, the Government has already started developing the next generation of a nutrition program that will cover the period of 2018-2022. Therefore, undertaking this evaluation now will be very timely as its findings and recommendations can inform and provide valuable insights into the development of the program as well as to the process of integration of nationalized SDG2 targets and indicators, concerning children and women.

On the other hand, evaluating UNICEF’s contribution can help understand if/how UNICEF’s support to system-level changes has led to advances in the behaviors of key duty-bearers as well as the nutritional status of children and women. The evaluation can eventually help UNICEF to better define and determine its strategic engagement as well as the mode and level of support for the next nutrition program. The findings and recommendations generated by the evaluation will be used, inter alia, to influence strategic direction and partnerships/advocacy as well as program strategies (nutrition-specific, across sectors, and cross-cutting) to achieve the results and targets outlined in Country Program Document.

Intended users of the Evaluation:
Primary: the MoHMI and UNICEF, should use the results of the Evaluation as the main developers and implementers of the NNP.
Secondary: Ministry of Finance and Economy as the responsible body for SDG implementation coordination and monitoring, Ministry of Agriculture and Water Sources, local governments, line ministries and MPs need to be informed and engaged. International and national civil society organizations, academic and private entities and sister UN agencies are expected use the results of the evaluation in order to gain more knowledge and to improve their advocacy and practical actions in development of the next nutrition program.

1. OBJECTIVES

UNICEF, in partnership with the MoHMI, will be hiring a team of international and national consultants to undertake this external evaluation. The main purpose of the Evaluation is to evaluate the Government’s nutrition program and UNICEF’s contribution to its development, implementation and monitoring.

There are three objectives of the evaluation: to generate lessons learned, evidence and learning to guide effective action towards the achievement of SDG2 in Turkmenistan and development of the next generation of the nutrition program of the country, to help define UNICEF’s role in supporting the country efforts in the nutrition-related SDG implementation process in the country during the next five-to-ten years, to promote results-based management and evidence-based policy development.

The evaluation will generate learning on effective approaches – including use of upstream policy work, multi-sectoral engagement, governance, coordination and partnerships, and key interventions required to reduce malnutrition as well as stunting in various contexts. Findings and recommendations of this evaluation will primarily be addressed to policy makers and program managers in the Government and UNICEF.

The evaluation will present a broader review of progress in improved nutritional status of children under 5 and will look at specific UNICEF’s contribution to system level changes and reduction of bottlenecks in effective delivery of nutrition interventions.

UNICEF’s work is guided by a set of Core Roles which are common to most country contexts for a sustainable UNICEF engagement and its universal presence in support of results and the realization of the rights of children everywhere:

- **Advocacy (the independent voice):** advocating and communicating to mobilize political will and dialogue on social issues, social norms, behaviours and attitudes, in order to positively impact the realization of the rights of all children and adolescents;
- **Policy dialogue and advice:** influencing the development of the normative frameworks for child rights compliant national legislation, policies, regulations and standards, budgets, and programs, based on evidence and UNICEF’s knowledge of best practices;
- **Knowledge generation and child rights monitoring:** generating independent data, research, evaluation and analysis on the situation of children and critical bottlenecks to the realization of their rights, strengthening national collection, availability and use of reliable, disaggregated data, as well as developing accountability institutions, mechanisms and partnerships for effective monitoring of child rights implementation;
- **Convening partnerships and leveraging resources for children:** fostering catalytic partnerships of diverse public and private stakeholders for the achievement of results for children, including platforms
for direct engagement with children and adolescents, and using evidence-based advocacy to leverage the influence and investments of major actors for children:

- **Capacity development of professionals and organizations**: strengthening the technical capacities of government and civil society actors, at national and local levels, for the improved development, implementation and monitoring of inclusive, rights-based, child-friendly policies and services;

- **Modelling and testing innovations**: modelling the operationalization of inclusive programs and policies at local level (at scale), independently evaluated and costed to secure government commitment to nationwide replication, demonstrating new ways in which social norms, systems and services for children can evolve to reduce equity gaps and guarantee fulfilment of the rights of all children;

- **Horizontal cooperation beyond-borders**: enabling horizontal cooperation and exchange of experience, resources, expertise, and knowledge among countries and regions on ‘what works’ for enhancing child rights realization, gender equality and equity;

- **Ensuring proper internal controls and risk management**: managing the accountabilities for the proper stewardship, custody, and reporting on UNICEF resources, including staff, inventory and assets, with proper risk management and quality assurance practices.

The above Core Roles reflect the UNICEF normative principles of Human Rights Based Approach to Development, Gender Mainstreaming and Environmental Sustainability. In addition, they match the Implementation Strategies of the 2014-17 Strategic Plan. The evaluation should look into how UNICEF’s support to the Government through the above core roles, in particular policy dialogue and advice, knowledge generation and child rights monitoring and capacity development, have led to system-level and eventually impact-level changes for children and women.

2. **SCOPE**

The evaluation will have both summative and formative dimensions. It will drive key lessons learned for the next nutrition program based on the lessons learned and good practices during the implementation of the NNP. It will also provide recommendations for UNICEF’s further engagement in the area of nutrition, particularly during the second half of the current country program, but also in the medium-term. The MoRES (Monitoring of Results for Equity Systems) determinant analytical framework will be used explicitly to identify which bottlenecks were removed and if/how changes were achieved.

The evaluation will review specific components of the NNP which are addressing the needs of children and mothers through both demand and supply side including governance and management, resource allocations and capacity development, service delivery and behavioral change, and the broader enabling environment. The evaluation will examine both:

- **Government’s role and responsibilities** to develop and implement the NNP including governance, management, resource allocations and capacity development, service delivery, quality assurance, surveillance and monitoring over the interventions under the NNP framework

- **UNICEF’s role** in supporting the scale up of direct nutrition interventions as well as mainstreaming nutrition in non-nutrition sectors, including education, water, sanitation and hygiene, health, ECD, and child /social protection.

Last but not least the evaluation will assess the impact of the NNP on children using the MICS 3 and 5 results, and other available data.

The target group of the evaluation will be children, particularly children under 5 and as relevant, women, particularly pregnant women and mothers of newborns.

**Period to be covered**: 2013-2017 (or earlier if evaluators will need to have a retrospective analysis) The proposed time period is chosen to reflect the duration of the NNP and allows sufficient time to measure their effectiveness, efficiency and as much as possible impact of the Government interventions and UNICEF’s contribution to them.

**Geographical coverage**: The evaluation’s geographic focus will be national. Focused assessment may be needed in selected areas to assess UNICEF contribution.

**Potential limitations to the evaluation:**
Lack of a clear logical model for the NNP and lack of data might present a significant constraint for assessing evaluation effectiveness. The data mainly available from administrative sources and focus on aggregated numbers rather than on gender, location, disability, age, social status factors. Such approach presents a significant limitation to the Evaluation, as the reliability of poorly disaggregated administrative data will require additional methodological work though some reliable data on nutrition might be retrieved from the 2006 and 2015 MICS.

The staff turnover in management and implementing partners will limit the opportunity to reach key “organizational memory” human resources. Sensitivity of reported indicators on insufficient coverage or quality of food, nutrition interventions might bring a challenge for evaluators especially during data collection stage, as respondents might not feel comfortable to talk openly.

Last but not least, the evaluation timeline is quite ambitious, but is set this way in order to increase the utility of the evaluation for the next nutrition program.

6. EVALUATION FRAMEWORK

The evaluation will answer the following preliminary research questions. Based on initial discussions, the consultants are expected to propose further refinements to the questions and the scope of the evaluation in the inception report:

**Relevance:**
- Was the NNP relevant to expanding access to adequate child nutrition and quality food and health services?
- Were the government and UNICEF interventions in nutrition relevant to existing service delivery structure in Turkmenistan?
- Were the needs of the most disadvantaged groups addressed?
- What is the value of the government program in nutrition in relation to global priorities?
- Was the mechanism of coordination with other sectors are relevant and effective?
- Was UNICEF’s planned engagement in implementation and monitoring of the NPP relevant?

**Effectiveness:**
- To what extent were system level changes achieved? Did these catalyze equity focused results for children?
- What was the underlying theory of change that may have led to increased access? Was it valid?
- Were contextual factors (political, social, economic, cultural) taken into account in the design/implementation of the nutrition interventions?
- Were efforts made to establish an enabling environment (necessary and appropriate policies, legislation, budgets) for the expansion of nutrition program?
- Did public and private service delivery systems reach the most marginalized groups?
- What were the main constraints on supply? (existing coverage, range and quality of health and nutrition services provided, readiness and availability of resources);
- What were the main constraints on demand? (extent of utilization of services by children and families);
- Which interventions in the NNP were most and least effective?
- Did the intervention results contribute to reducing the underlying causes of inequality?
- What was the role of UNICEF in ensuring the effectiveness of the NPP?

**Efficiency:**
- A measure of how economically resources/inputs (funds, expertise, time, etc.) were converted to system level results.
- Did Government Nutrition initiatives use resources in the most economical manner to achieve expected results? (current costs and flow of funds)
- How cost-effective were alternative approaches for reaching the end of beneficiaries and most vulnerable groups? (Who finances services e.g., national government, local governments, non-governmental organizations, private entities?)
- Was funding leveraged from external and internal sources? (Are fortified food and service available? Public private partnership developed?)
- Were cost-efficient models Nutrition interventions piloted/modelled?
- What strategies of UNICEF were the most efficient in influencing improvements in nutrition status and improvement of equitable access?

**Sustainability.**
EVALUATION OF NATIONAL NUTRITION PROGRAMME IN TURKMENISTAN

- The continuation of benefits to end of beneficiaries and most vulnerable groups after major development assistance has been completed. Sustainability looks to the probability of continued long-term benefits to end of beneficiaries and most vulnerable groups.
- Will UNICEF’s contribution to system level changes continue to impact on the most beneficiaries and most vulnerable groups after support is withdrawn?
- What were/are the enabling factors contributing to sustainability?
- Are inequities between best-off and most marginalized groups likely to increase, remain stable, or decrease when support is withdrawn?
- To what degree did participating organizations change their policies or practices to improve HR & GE fulfillment (e.g. new services, greater responsiveness, resource reallocation, improved quality etc.)?

Impact.
- Positive and negative, primary and secondary long-term effects produced by Government (and UNICEF) interventions in public health and nutrition at system level, directly or indirectly, intended or unintended, on the most end of beneficiary and vulnerable groups as well as inequities between best-off and most marginalized groups.
- What were the results in children’s lives of the interventions - intended and unintended, positive and negative - including the effects on end beneficiaries and most vulnerable groups?
- How did the results affect the rights and responsibilities of the end of beneficiaries and most vulnerable groups and institutions?
- Were there any unintended results on human rights and gender equality in the intervention? Were they positive or negative and in which ways did they affect the different stakeholders?

The following 10 determinants, or “conditions”, will help categorize critical bottlenecks and barriers:

<table>
<thead>
<tr>
<th>Determinants</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Norms</td>
<td>Widely followed social rules of behavior that are followed within a society</td>
</tr>
<tr>
<td>Legislation/Policy</td>
<td>Adequacy of laws and policies to reduce/avoid barriers</td>
</tr>
<tr>
<td>Budget / expenditure</td>
<td>Allocation &amp; disbursement of required resources that constrain effective coverage</td>
</tr>
<tr>
<td>Management / Coordination</td>
<td>Bottlenecks that obstruct accountability and transparency, as well the impediments to coordination and partnership</td>
</tr>
<tr>
<td>Availability of essential commodities / inputs</td>
<td>Essential commodities/ inputs required to deliver a service</td>
</tr>
<tr>
<td>Access to adequately staffed services, facilities and information</td>
<td>Target population’s physical access to the relevant services, facilities and information</td>
</tr>
<tr>
<td>Financial access</td>
<td>Direct and indirect costs that prevent target group from utilizing available services or adopting certain practices</td>
</tr>
<tr>
<td>Social and cultural practices and beliefs</td>
<td>Individual/community beliefs, behaviors, practices, attitudes</td>
</tr>
<tr>
<td>Timing and Continuity of use</td>
<td>Completion/ continuity in service, practice that undermine the effectiveness of such service, practice, or other intervention</td>
</tr>
<tr>
<td>Quality of care</td>
<td>Adherence to quality standards (national or international)</td>
</tr>
</tbody>
</table>

7. METHODOLOGY

A team of international consultant and national consultant should propose a methodology taking into account the following approaches:

Evaluability of the system changes proposed for evaluation:

The Evaluation Framework will include the main expected outputs of the NNP:
- Increased accessibility, affordability and participation as a result of the implementation of the program;
- Enhanced quality of the nutrition-related services;
- Improved collaboration at all levels for the implementation of the NNP.

The proposed for evaluation system outputs have a high evaluability potential in terms of benefits, demand, supply and costs. They were selected based on the cross-sectorality approach and government’s priorities.
The impact of the NNP (access, equity and quality) on wellbeing of children will be measured against a set of international targets (0-5 ages Growth and Development Monitoring Standards, WHO 2008, average for OECD countries) for children in yearly ages, and available MICS 3 and 5 data, as well as routine statistics indicators.

The sector plans and concepts are selected as a baseline for measuring the progress of the system development. The target groups are defined at the planning stage.

At the same time information is available through household surveys such as two rounds of MICS (2006 and 2015/16), specific studies, administrative data from the MoHMI and others, etc. which can be accessed and used for the evaluation.

Data on nutrition status does not form a systematic and regular part of national data collection and monitoring systems, the data collection and management systems at national level are weak or non-existent. This situation is going to pose a challenge to the evaluation.

Data sources: The evaluation will use practical approaches to gather and analyze a variety of data from primary and secondary sources:

Desk review of secondary data and documents: A list of relevant materials together with electronic copies of key documents will be shared with the evaluation team during the inception phase. In addition, the team will be provided with survey data on stunting and related variables that are readily available from various sources, such as the 2006 and 2015 MICS. The information shared will be reviewed and analyzed during the inception phase to determine the need for additional information and finalization of the detailed evaluation plan.

Interviews with key informants: Interviews will be conducted at the national and local levels. An external experts and stakeholders and key staff from all ministries and agencies involved will be interviewed during the second phase of the evaluation 2nd. In the implementation phase, interviews will be conducted with additional experts and staff including local level personnel involved in managing and supporting UNICEF programs. Additional interviews will be conducted with policy makers and staff of other UN agencies and organizations that contribute to and partner in health and nutrition sectors at national level.

Triangulation of data/findings from various sources. As noted above, the evaluation will use a mix of quantitative and qualitative data and information which will be determined during the inception phase. It will make selective use of triangulation to validate data and findings from various sources as this is a common approach in mixed-methods evaluations. Strong quantitative and qualitative data analysis skills are required for this evaluation.

Evaluation approach
As described above, the evaluation will employ relevant internationally agreed evaluation criteria of relevance, efficiency, effectiveness, impact, and sustainability.
UNICEF brings a human rights perspective and strives to mainstream gender issues in all its work for children, with the Convention on the Rights of the Child (CRC) as a principal reference, and recognizes the mutually supportive relationship between the CRC, the Convention on the Elimination of all Forms of Discrimination against Women and the Convention on the Rights of Persons with Disability. UNICEF recognizes that the empowerment of women is especially important for the realization of the rights of girls and boys, and for the creation of healthy families and society.

An equity-based approach to UNICEF’s evaluation seeks to understand whether the undertaken interventions managed to address the needs and uphold the rights of the specific groups of the most vulnerable women and children in Turkmenistan as well as the root causes of inequity. Equity-based evaluations should also generate knowledge and recommendations for UNICEF’s further focus in Improvement nutrition status of children and women.

Evaluation should contribute to the UNICEF ‘theory of change’ as related to the evaluated areas. UNICEF involvement in nutrition programming in the country and in the CEE/CIS region is partially guided by the regional ‘theory of change’ approach based on understanding that the progressive realization of child rights and reduction of equity gaps is best achieved through changes in systems at the national, regional and local levels and that sustained UNICEF engagement through its core roles contributes to these system changes.
The “theory of change” guiding the evaluation shall be included in the evaluation report. The “theory of change” will specifically look at how UNICEF contributed to the systemic changes through its “Core Roles” according to the established priorities for the country office.

Ethical considerations:
The evaluation design and implementation will consider ethical safeguards where appropriate, including protection of confidentiality, dignity, rights and welfare of human subjects particularly children, and respect of the values of the local community, referring to UNEG ethical guidance for evaluation101, which outlines the ethical principles in part of evaluation intentionality, obligations of evaluators, obligations to participants and evaluation process and products as well as to Turkmenistan CO SOPs on Research, Studies and Evaluations and UNICEF ethical standards. The selected evaluation team should clearly identify any potential ethical issues and approaches, as well as the processes for ethical review and oversight of the evaluation process in the inception report, based on which, a need for the review of a separate Ethical Review Board (ERB) will be established. If needed, the Long-Term Agreement of the UNICEF Regional Office will be drawn upon to ensure an ERB review considering that no such boards exist in the country yet.

The evaluation process shall comply with the United Nations Evaluation Group norms and standards102. The Evaluation inception report and final report will undergo the review of the UNICEF Regional Evaluation Review Facility.

8. WORKPLAN AND EVALUATION MANAGEMENT

The evaluation will be conducted by a team of an international consultant (who will also be a team leader) and national expert. The consultants will operate under the supervision of a dual-tiered evaluation management and oversight structure. To deliver this assignment, the international expert will be working in close collaboration with a national expert as a team, in particular benefiting from his/her inputs and contribution in the evaluation design, data collection, analysis and interpretation. In addition, the evaluation team will be supported by a UNICEF Program Associate, who has been involved in supporting the Government planning and implementation and has access to the relevant institutional memory and documentation.

Direct supervision will be provided by the UNICEF Health and Nutrition Specialist, supported by the Child Right Monitoring Specialist and under the supervision of the Deputy Representative. UNICEF Country Office (CO) will be responsible for the day-to-day oversight and management of the evaluation. It will assure the quality and independence of the evaluation and guarantee its alignment with UNICEF/UNEG Norms and Standards and Ethical Guidelines, provide quality assurance checking that the evaluation findings and conclusions are relevant and recommendations are implementable, and contribute to the dissemination of the evaluation findings and follow-up on the management response.

The advisory body for the evaluation will be the Evaluation Reference Group (EFG) bringing together the stakeholders from the MoHMI, other ministries and UNICEF. The EFG will be chaired by the UNICEF Deputy Representative and Deputy Minister of Health and will have the following role:
- contribute to the conceptualization, preparation, and design of the evaluation including providing feedback on the draft terms of reference, feedback and comments on the inception report and on the technical quality of the work of the consultants;
- provide comments and substantive feedback to ensure the quality – from a technical point of view - of the draft and final evaluation reports;
- assist in identifying UNICEF staff and external stakeholders to be consulted during the evaluation process;
- participate in review meetings organized by the CO and MOHMI and with the evaluation team as required;
- play a key role in learning and knowledge sharing from the evaluation results, contributing to disseminating the findings of the evaluation and follow-up on the implementation of the management response.

The specific tasks of the evaluation team (international and national consultants) will be to:

101 http://www.unevaluation.org/ethicalguidelines
102 http://www.uneval.org/normsandstandards/index.jsp?doc_cat_source_id=4
http://www.uneval.org/papersandpubs/documentdetail.jsp?doc_id=980
- Review the National Nutrition Strategy, its monitoring framework, UNICEF’s draft concepts in supporting the country in meeting its commitments in the area of nutrition towards children
- Review background information on health and nutrition status of children and women of reproductive age, including, growth monitoring, development outcomes of Turkmenistan, available statistics, ongoing healthcare, social programs and policy documents, etc. for the period of 2012-2017 period.
- Evaluate and validate health and nutrition/food systems achievements regarding implementation of the child’s right to adequate nutrition;
- Examine the effectiveness of the health and agriculture and trade services in terms of its purpose and intended outcomes for young child nutrition;
- Evaluate the relevance and appropriateness of the national nutritional strategies, program and activities implemented in the health, social and other relevant sectors;
- Assess the compatibility of the national nutritional policies and practice with internationally recognized norms and practices;
- Assess the level of inter-sectoral coordination in terms of planning, resource management and implementation of NNP
- Evaluate the efficiency and challenges in the coverage of the most vulnerable groups of children by health and social protection systems;
- To assess the system changes, the consultants would undertake a desk review/assessment of the health and nutrition counselling service (PHC) including an analysis of access, equity in utilization and quality of these services.
- Together with various stakeholders, document important lessons learned and best practices of the National Nutrition Programming and activities;
- Suggest strategic, focused and operational recommendations that can be used by Government of Turkmenistan and UNICEF in the ongoing and future activities to improve nutrition and health status of children and women of reproductive age and achieve expected outcomes.
The table below lists the expected deliverables, tentative timeline and distribution of responsibilities for conducting the evaluation.

### Key Deliverables

<table>
<thead>
<tr>
<th>Deliverables</th>
<th>Date</th>
<th>Team Leader (days)</th>
<th>National Expert (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed desk review</td>
<td>End June</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Inception report including: Evaluation work plan, detailed methodology of evaluation and instruments, list of indicators to request from the MoHMI and UNICEF. Analysis of all available data and existing documents provided by partners: MOHMI, MoE, MoA SSC, and UNICEF.</td>
<td>5 July</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>3. First visit to Turkmenistan for presentation of the Inception Report (including at the International Health conference) and data collection in the field</td>
<td>15 Jul – 5 Aug</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>4. Additional data collection, analysis and triangulation</td>
<td>5 Aug-5 Sep</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>5. Draft report, including recommendations to UNICEF and the Government of Turkmenistan</td>
<td>5 Oct</td>
<td>18</td>
<td>5</td>
</tr>
<tr>
<td>7. Second draft report and second mission for validation workshop with UNICEF and the Government – 10 days including 5 days in-country</td>
<td>1-15 Nov</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>8. Third version of report for review by UNICEF, Government and Regional Office Review Facility – 3 days</td>
<td>25 Nov</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>9. Final report – 2 days</td>
<td>15 Dec</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><strong>Total days</strong></td>
<td></td>
<td>70 days</td>
<td>55 days</td>
</tr>
</tbody>
</table>

The final report with recommendations to UNICEF and the Government of Turkmenistan will include: (1) a full report with an executive summary and annexes, not exceeding 45-60 pages, (2) annexes in excel sheets with raw data, (3) power point presentation and evaluation brief based on the main findings and recommendations.

All submissions should be electronic (Word, Excel and Power Point). Deliverables cannot be reproduced, distributed or published without written permission from UNICEF.

### Profile of Research Experts/Team Leader

The evaluation is expected to be undertaken by an international consultant supported by a national consultant. The evaluation team should either individually or as a team have the following qualifications:

- Advanced university degree in public health, nutrition/or social sciences
- Extensive work experience in the conduct of strategic/thematic evaluations
- Demonstrated expertise in data collection, analysis and reporting of quantitative and qualitative data
- Work experience in public and child nutrition or knowledge of technical aspects of Nutrition programming
- Strong and proven level of expertise on gender equality and child/human rights
- Work experience and/or technical knowledge of nutrition programs in an international context, and of the CEE/CIS region.
- Good skills for assessment of child nutrition and program evaluation
- Demonstrated capacity and partnership building skills with local partners
- Good communication and advocacy skills
- Knowledge and experience of research on socio-economic issues in CEE/CIS region. Field experience in CEE/CIS countries is an asset.
- Record of research experience and/or written publications at the regional level.
- Experience in designing and implementing evaluation and surveys.
- Excellent written English language skills, demonstrable with samples of publications. Knowledge of Russian or Turkish is a very strong asset.
- Excellent drafting skills and ability to synthesize complex information and issues.
- Strong analytical and conceptual thinking.
9. STRUCTURE OF THE EVALUATION REPORT
The evaluation report structure must be compliant with the UNICEF-adapted UNEG Evaluation Reports Standards, 2010\textsuperscript{103} and will include:
- The title page and opening pages
- Executive Summary (2-3 pages)
- Annexes
- Object of Evaluation
- Evaluation Purpose, Objective(s) and Scope
- Evaluation Methodology
- Findings
- Conclusions and Lessons Learned
- Recommendations
- Gender and Human Rights, including child rights

UNICEF will keep the right to share the shorter (external) version of the report with the Government and make it public. The evaluation team will also be requested to prepare an evaluation brief and presentation in a pre-agreed format.

UNICEF GENERAL TERMS AND CONDITIONS
UNICEF’s general terms and conditions will apply to the contract awarded to the vendor. Please note that, in the evaluation of the technical merits of each proposal, UNICEF will take into consideration any proposed amendments to the UNICEF General Terms and Conditions. Proposed amendments to the UNICEF general terms and conditions may negatively affect the evaluation of the technical merits of the proposal.

UNICEF reserves the right to withhold all or a portion of payment if performance is unsatisfactory, if work/outputs is incomplete and not provided timely as indicated in the individual work plan of Contractor. This ToR is an integral part of the contract (PO) signed with the consultant.

UNICEF retains the right to patent and intellectual rights, as well as copyright and other similar intellectual property rights for any discoveries, inventions, products or works arising specifically from the implementation of the project in cooperation with UNICEF. The right to reproduce or use materials shall be transferred with a written approval of UNICEF based on the consideration of each separate case. Consultants should always refer to UNICEF Turkmenistan support in developing the materials when publishing the results of the research conducted while in Turkmenistan in academic journals, books and websites. For the time-being, academic publishing of the evaluation report has not been foreseen.

PROCEDURES AND LOGISTICS:
Travel arrangements including purchase of the air tickets is the responsibility of the selected consultant/company/institution and estimated cost of travel should be clearly indicated in the financial proposal. Calculations of travel costs should be based on economy class travel regardless of the length of the travel. Cost estimates should be exclusive of all taxes as UNICEF is exempted from all taxes. UNICEF does not provide or arrange health insurance coverage for contractors.

\textsuperscript{103} http://intranet.unicef.org/epp/evalsite.nsf/0/2BDF97BB3F789849852577E500680BF6/$FILE/UNEG_UNICEF\%20Eval\%20Report\%20Standards.pdf and the GEROS Quality Assessment System
Research Ethics Approval

5 July 2017

Tamar Gotsadze, MD, PhD
Public Health and Health Systems Specialist
17 Mtsheta str., 0162,
Tbilisi, Georgia


Dear Dr. Gotsadze,

Protocols for the protection of human subjects in the above study were assessed through an ethics review by HML Institutional Review Board on 27 June – 5 July 2017.

This study’s human subjects’ protection protocols, as stated in the materials submitted, received IRB approval. Please inform this IRB if there are any changes to your human subject protection protocols.

Sincerely,

D. Michael Anderson, Ph.D., MPH
Chair & Human Subjects Protections Director, HML IRB

cc: Siraj Mahmudlu, Aigul Nurgabilova, Dilara Ayazova, Shohrat Orazov, Diana Vakarelska, Penelope Lantz.
# ANNEX 8: NNP IMPLEMENTATION PLAN

<table>
<thead>
<tr>
<th>№</th>
<th>Activity</th>
<th>Time frame</th>
<th>Implementers</th>
</tr>
</thead>
</table>
| 1.1 | Develop and implement a public healthy nutrition advocacy plan/campaign  | 2013-2017     | Ministry of Health and Medical Industry of Turkmenistan  
Ministry of Education of Turkmenistan  
Ministry of Culture of Turkmenistan  
Ministry of Trade and Foreign Economic Relations of Turkmenistan  
State Committee of Television and Radio Broadcasting and Cinematography of Turkmenistan  
Turkmen State Medical University  
Turkmen State Publishing Service  
Academy of Sciences of Turkmenistan  
Newspapers and Magazines |
| 1.2 | Develop a section on "Healthy Nutrition" for the Basic Life Styles curriculum for secondary schools | 2014-2015     | Ministry of Health and Medical Industry of Turkmenistan  
Ministry of Education of Turkmenistan |
| 1.3 | Develop and implement a comprehensive healthy nutrition plan for general secondary schools and preschools. Develop a student healthy nutrition manual | 2014-2015     | Ministry of Health and Medical Industry of Turkmenistan  
Ministry of Education of Turkmenistan  
Ministry of Agriculture of Turkmenistan  
Local authorities in provinces and Ashgabat city |
| 1.4 | Broadcast regular TV programs on healthy nutrition, both in Ashgabat and in provinces, with participation of nutrition specialists | on-going       | Ministry of Health and Medical Industry of Turkmenistan  
Ministry of Culture of Turkmenistan State Committee of Television and Radio Broadcasting and Cinematography of Turkmenistan  
Local authorities in provinces and Ashgabat city |
| 1.5 | Conduct broad public healthy nutrition advocacy through media             | on-going       | Ministry of Health and Medical Industry of Turkmenistan  
Ministry of Culture of Turkmenistan State Committee of Television and Radio Broadcasting and Cinematography of Turkmenistan  
Local authorities in provinces and Ashgabat city  
Newspapers and Magazines |
| 1.6 | Conduct regular public education and communication work through media by organizing various meetings and events/talk shows about importance of healthy eating habits to promote normal body development and prevent overweight/obesity | on-going       | Ministry of Health and Medical Industry of Turkmenistan  
Ministry of Culture of Turkmenistan State Committee of Television and Radio Broadcasting and Cinematography of Turkmenistan  
Turkmen State Medical University  
Local authorities in provinces and Ashgabat city  
Newspapers and Magazines |
| 1.7 | Develop and implement recommendations on how to foster sustained habits of rational and healthy eating in pregnant and lactating mothers taking into account their specific nutritional needs | on-going       | Ministry of Health and Medical Industry of Turkmenistan  
Ministry of Culture of Turkmenistan State Committee of Television and Radio Broadcasting and Cinematography of Turkmenistan  
Turkmen State Medical University  
Local authorities in provinces and Ashgabat city |
| 1.8 | Conduct regular workshops and meetings on rational nutrition in secondary schools and preschools | on-going       | Ministry of Education of Turkmenistan  
Ministry of Health and Medical Industry of Turkmenistan  
Local authorities in provinces and Ashgabat city |
| 1.9 | Conduct regional workshops and meetings on healthy nutrition for primary healthcare and education workers | 2014-2017     | Ministry of Health and Medical Industry of Turkmenistan  
Ministry of Education of Turkmenistan  
Turkmen State Medical University |
### EVALUATION OF NATIONAL NUTRITION PROGRAMME IN TURKMENISTAN

1.10. Conduct, together with the international organizations, education and communication activities to foster healthy eating habits in foreign nationals and stateless persons, including refugees and migrants  
   - Ministry of Health and Medical Industry of Turkmenistan  
   - Ministry of Foreign Affairs of Turkmenistan  
   - National Red Crescent Society of Turkmenistan

### II. Develop healthy nutrition standards and regulations in line with the World Health Organization recommendations and international standards, and adopt them in practices as measures for disease prevention and improvement of statistical reporting and organizational and methodological work

2.1. Revise national standards, sanitary norms and regulations on food products and food production, and methodological guidelines on food safety taking into consideration international requirements and scientific evidence, and create a data bank of these documents  
   - Ministry of Health and Medical Industry of Turkmenistan  
   - Ministry of Agriculture of Turkmenistan  
   - Main State Standards Service “Turkmenstandartlary”  
   - State Association of Food Industries of Turkmenistan  
   - State Fishery Committee of Turkmenistan  
   - State Bread Association “Turkmengallaonumlery”  
   - Academy of Sciences of Turkmenistan

2.2. Develop dietary standards for different age and sex population groups based on physiological body functions, occupations, labor consumption levels and climate impact  
   - Ministry of Health and Medical Industry of Turkmenistan  
   - Academy of Sciences of Turkmenistan

2.3. Develop recommendations on rational dietary standards, food safety and physical activity in accordance with different sports, physiological body functions and climatic conditions for different age groups of athletes  
   - Ministry of Health and Medical Industry of Turkmenistan  
   - State Sports Committee of Turkmenistan  
   - Turkmen State Medical University  
   - National Institute for Sports and Tourism of Turkmenistan

2.4. Provide recommendations on rational diets and physical activity and enhance efforts to assess an individual nutrition status at the primary health care level  
   - Ministry of Health and Medical Industry of Turkmenistan

   - Ministry of Health and Medical Industry of Turkmenistan  
   - Ministry of Trade and Foreign Economic Relations of Turkmenistan  
   - Turkmen State Medical University  
   - Local authorities in provinces and Ashgabat city

2.6. Develop methodological guidelines on human healthy nutrition for family physicians  
   - Ministry of Health and Medical Industry of Turkmenistan

2.7. Develop and approve, in accordance with the established order, “Procedures for organization of public catering system in educational institutions, enterprises and other places”  
   - Ministry of Trade and Foreign Economic Relations of Turkmenistan  
   - Ministry of Economy and Development of Turkmenistan  
   - Ministry of Education of Turkmenistan  
   - Ministry of Health and Medical Industry of Turkmenistan

2.8. Improve the state statistical reporting system in order to ensure regular supervision of the fortified foods’ sales  
   - Ministry of Health and Medical Industry of Turkmenistan  
   - Ministry of Trade and Foreign Economic Relations of Turkmenistan  
   - State Statistics Committee of Turkmenistan

2.9. Maintain records of food-related diseases in compliance with the World Health recommendations  
   - Ministry of Health and Medical Industry of Turkmenistan  
   - State Statistics Committee of Turkmenistan

### III. Stringent food safety and quality control, and support for organization of food production in compliance with the requirements for healthy nutrition, ecological and physiological standards

3.1. Ensure regular supervision/monitoring of food production-and-sale related enterprises for compliance with the state standards, sanitary  
   - Ministry of Health and Medical Industry of Turkmenistan  
   - Ministry of Agriculture of Turkmenistan
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<tr>
<th>Task</th>
<th>Responsible Authorities</th>
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<td>and veterinary norms, as well as methodologies and guidelines on food safety</td>
<td>Main State Standards Service “Turkmenstandartlary” State Association of Food Industries of Turkmenistan State Fishery Committee of Turkmenistan State Bread Association “Turkmengallaonumlery” Local authorities in provinces and Ashgabat city</td>
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<td>3.2. Conduct biological monitoring of different age groups of population for provision with iodine, iron, folic acid and Vitamin A</td>
<td>on-going Ministry of Health and Medical Industry of Turkmenistan Turkmen State Medical University</td>
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<td>3.3. Conduct activities in educational institutions to create conditions for rational nutrition and daily provision of hot meals to students during midday breaks</td>
<td>on-going Ministry of Education of Turkmenistan Ministry of Trade and Foreign Economic Relations of Turkmenistan</td>
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<td>3.4. Equip food laboratories in line with the international standards in order to monitor food quality and safety</td>
<td>2013-2017 Ministry of Health and Medical Industry of Turkmenistan Relevant ministries and agencies</td>
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<td>3.5. Establish food safety control systems at food production enterprises to prevent food contaminations</td>
<td>2013-2017 Ministry of Trade and Foreign Economic Relations of Turkmenistan Ministry of Health and Medical Industry of Turkmenistan State Association of Food Industries of Turkmenistan State Fishery Committee of Turkmenistan State Bread Association “Turkmengallaonumlery” Union of Industrialists and Entrepreneurs of Turkmenistan</td>
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<td>3.6. Ensure importation of safe and high-quality nutritious food products. Improve food safety and quality system during transportation, storage and sale of raw and ready foods</td>
<td>2013-2017 Ministry of Health and Medical Industry of Turkmenistan Ministry of Trade and Foreign Economic Relations of Turkmenistan Ministry of Agriculture of Turkmenistan State Association of Food Industries of Turkmenistan State Fishery Committee of Turkmenistan State Bread Association “Turkmengallaonumlery” Union of Industrialists and Entrepreneurs of Turkmenistan</td>
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<td>3.7. Ensure control/monitoring of production and consumption of foods fortified with micronutrients</td>
<td>2013-2017 Ministry of Health and Medical Industry of Turkmenistan Ministry of Trade and Foreign Economic Relations of Turkmenistan Ministry of Agriculture of Turkmenistan State Association of Food Industries of Turkmenistan State Bread Association “Turkmengallaonumlery” Union of Industrialists and Entrepreneurs of Turkmenistan</td>
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<td>3.8. Expand fruit and vegetable production through development of gardening and vegetable farming in agricultural sector</td>
<td>2014-2017 Ministry of Agriculture of Turkmenistan Ministry of Nature Protection of Turkmenistan Union of Industrialists and Entrepreneurs of Turkmenistan</td>
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<td>3.9. Increase local food production based on natural raw materials with low content of saturated fats, sugar and salt, and fortified with micro nutrients, using scientific evidence, new technologies and equipment</td>
<td>2014-2017 Ministry of Agriculture of Turkmenistan Ministry of Trade and Foreign Economic Relations of Turkmenistan State Association of Food Industries of Turkmenistan State Fishery Committee of Turkmenistan State Bread Association “Turkmengallaonumlery” Union of Industrialists and Entrepreneurs of Turkmenistan</td>
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<td>3.10. Ensure sustainable production of enriched foods, primarily high quality iodized salt and vitamin-and-micronutrient fortified wheat flour; organize controls.</td>
<td>on-going Ministry of Agriculture of Turkmenistan Ministry of Health and Medical Industry of Turkmenistan</td>
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<td>Ensure that food products are appropriately packed in optimal different weight consumption packages</td>
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<td>3.11</td>
<td>Carry out works to produce safe and ecologically clean foods in order to prevent incidence of non-communicable diseases</td>
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<td>IV.</td>
<td>Scientific research and practical adoption of urgent healthy nutrition issues in the natural and climatic country environment; training of specialists</td>
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<td>4.1.</td>
<td>Develop and implement scientific research plans in the research institutions in order to address scientific and practical challenges in the healthy nutrition sphere</td>
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<td>4.2.</td>
<td>Carry out scientific and analytical research of nutrition status of the population in Turkmenistan and discuss the findings at scientific and practical conferences</td>
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<td>4.3.</td>
<td>Explore, from the scientific perspective, possibilities for extra fortification of foods with vitamins and micronutrients and adopt them in practices in connection with the healthy nutrition of the population</td>
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<td>4.4.</td>
<td>Improve education, training and retraining of nutrition specialists in line with the global practices</td>
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