

Republic of the Union of Myanmar



MULTI-SECTORAL NATIONAL PLAN OF ACTION ON NUTRITION (MS-NPAN)

2018/19 – 2022/23

COSTED ACTION PLAN

DECEMBER 2018



Foreword by the Union Minister for the Ministry of Health and Sports

The Ministry of Health and Sports has implemented Nutrition Promotion Programs in the country since 1954. It includes nutrition education and counseling through community as well as institution based activities. This includes assessment of nutritional status, treatment and prevention of macronutrient and micronutrient deficiencies, and nutrition promotion including athletes. In order to continue these activities and also address nutrition problems in a more holistic and comprehensive approach the Ministry of Health and Sports led all stakeholders to develop the Multi-Sectoral National Plan of Action on Nutrition (MS-NPAN) for the period of 2018/19 -2022/23.

The MS-NPAN represents a high level and multi-sectoral political commitment to address malnutrition in Myanmar. It has also been framed within the context of high-level political commitment to address malnutrition problems in Myanmar. In January 2017, the State Counselor convened multiple sectors and development partners for Inter-Ministerial Coordination Meeting on Nutrition in Pakokku Township of Magway Region. This was then followed by the establishment of the national level Steering Committee on Nutrition Promotion to guide and steer the multi-sectoral coordinated efforts of promoting nutrition comprising Union Ministers for Ministry of Health and Sports, Ministry of Agriculture, Livestock and Irrigation, Ministry of Education, and Ministry of Social Welfare, Relief and Resettlement.

Reflecting the importance of nutrition as a priority area for development assistance, "Nutrition Sector Coordination Group-NSCG" was also formed under the umbrella of the Development Assistance Coordination Unit (DACU) in which the Union Minister for Ministry of Health and Sports serves as the chair.

The MS-NPAN includes six key result areas; one for each of the four sectors (Health, Social Welfare, Education and Agriculture / Livestock), one for Governance and one for Monitoring and Evaluation. These key areas of focus reflect the collective contributions that will be made in each domain towards reaching the overall goal of reducing all forms of malnutrition amongst mothers, children and adolescent girls.

I am confident that the development of the MS-NPAN will facilitate implementation of all related nutrition promotion activities in the country by leveraging the collective and complementary inputs of multiple sectors with different strengths and enabling convergence of interventions and services at the community, household and individual level it will be possible to have a significant impact on nutrition outcomes. It will help for the long-term and sustainable improvement of nutrition for women, children, and adolescents in Myanmar.

I would like to take this opportunity to thank my team at the Ministry of Health and Sports; the Minister and team at the Ministry of Agriculture, Livestock and Irrigation; the Minister and team at the Ministry of Education; and the Minister and team at the Ministry of Social Welfare, Relief and Resettlement, for their valuable inputs to develop this Action Plan for Nutrition. I also wish to express my sincere appreciation to all development partners and stakeholders for their participation, partnership and continuous support.

Acknowledgements

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Those who made significant contributions include the two national facilitators: Dr. Aye Thwin (consultancy supported by 3-MDG and Alive and Thrive –Myanmar SUN CSA), Dr. San San Myint (UN REACH Facilitator, UN REACH/WFP), and Dr Ye Naing Win (World Bank Consultant) and Dr. Jonathan Gorstein (World Bank Consultant from the University of Washington). Technical inputs were obtained from a number of development partners, particularly from Ms. Anne Marie Provo and Ms. Hnin Hnin Pyne from the World Bank Group, Ms. Sabah Barigou from the WFP, Ms. Hedy Ip from UNICEF and Ms. AnnaLisa Noak and Paul De Witt from FAO. Dr. Helen Connolly was responsible for the development of costing estimates and Dorothy Foote provided a detailed editorial review. Valuable inputs from other individuals, agencies and non-governmental organizations, particularly SUN CSA, are also acknowledged.

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Executive Summary

Goal

The overall goal of the Myanmar Multi-sectoral National Plan of Action on Nutrition (MS-NPAN) is to reduce all forms of malnutrition in mothers, children and adolescent girls with the expectation that this will lead to healthier and more productive lives that contribute to the overall economic and social aspirations of the country.

Rationale

The improvement of nutrition in Myanmar supports the National Economic and Social Development Plan, which sets forth a vision for the country to become a peaceful, modern and developed nation. Malnutrition can be passed on from mothers to their children, perpetuating intergenerational cycles of poor health and poverty. Maternal and child malnutrition leads to a higher incidence and severity of illness, and therefore increases health care costs and compromises overall socioeconomic development, with estimates that child malnutrition may decrease as much as 11 percent of GDP. Nutrition is both an input to and an outcome of national development and it has been highlighted that investments in evidence-based nutrition interventions will lead to significant economic returns with an average cost benefit ratio of 1:16 and can be as high as 1:35. Well-nourished populations are healthier, earn more and spend less on health care.

The nature of malnutrition is multifaceted and multidimensional which demands that the solution to address the problem utilizes a multidisciplinary approach. The approach of the MS-NPAN will be to strengthen Myanmar's systems for a multi-sectoral response to malnutrition and deliver a prioritized package of essential nutrition services/interventions.

Background

The MS-NPAN was developed within the context of high level political commitment to address malnutrition in Myanmar. In January 2017, the State Counselor, Daw Aung San Suu Kyi, convened multiple sectors and development partners for the first ever Inter-Ministerial Coordination Meeting on Nutrition in Pakokku Township of Magway Region. This was then followed by the establishment of a National Nutrition Steering Committee (NSGC) under the umbrella of the Development Assistance Coordination Unit (DACU), signaling the importance of nutrition as a priority area for development assistance.

Status of Nutrition

In spite of strong macroeconomic growth and poverty reduction over the past decade, Myanmar continues to suffer from a high prevalence of maternal and child undernutrition. While stunting, or chronic undernutrition, has declined from just over 40% in 1990 to 29.2% in 2016, there are still some 1.4 million children under five years of age who are classified as stunted (DHS 2015-16). At the same time, acute undernutrition, or wasting, remains high affecting 7% of preschool children. Micronutrient deficiencies are also a cause for concern, as exemplified by the high burden of anemia amongst 57.8% of children of 6-59 months and 46.5% of women of reproductive age and is likely attributable in part to inadequate dietary intake of iron. Finally, the prevalence of low birth weight (LBW) is 8.1% and is an important indicator of both maternal and child nutrition since it is the direct result of poor nutrition in pregnancy. Adolescent mothers are at higher risk of having LBW babies, and every year more than 50,000 teenage girls give birth in Myanmar. The four manifestations of maternal and child undernutrition (stunting, wasting, micronutrient deficiencies, and low birth weight) each have unique etiologies, and as such, require distinct approaches to ameliorate the problem.

Strategic Approach

The MS-NPAN is based on the underlying assumption that collaboration between key actors and stakeholders is imperative for the long-term and sustainable improvement of nutrition for women, children, and adolescents in Myanmar. By leveraging the collective and complementary inputs of multiple sectors with different strengths and enabling convergence of interventions and services at the community, household and individual level it will be possible to have a significant impact on nutrition outcomes.

This Myanmar Multi-Sectoral National Costed Action Plan for Nutrition (MS-NPAN) describes the nature of the problem, the key factors which lead to poor nutrition, priority interventions and the rationale for the proposed multi-sectoral approach. This plan provides the basis for initial implementation which will commence with a series of program preparation steps during an inception period from 1st October 2018 – 30th September 2019 during which time State/Region plans for priority geographical areas will be adapted to the specific conditions and requirements of those areas. In year two, the MS-NPAN will be scaled-up in all parts of the country according to State/Region plans. The MS-NPAN will prioritize certain interventions in each State/Region based on (1) the most important factors causing poor nutrition, and (2) the interventions which are most amenable to effective operationalization and scale-up to achieve high coverage, and as a result will lead to the greatest impact.

Components and Convergence

The MS-NPAN Plan includes six key result areas; one for each of the four sectors (health, social welfare, education, and agriculture/livelihoods), one for Governance and one for Monitoring and Evaluation. These key results describe the collective contributions that will be made in each domain towards the overall goal of reducing malnutrition amongst mothers, children and adolescent girls. The key results for the MS-NPAN are complementary and mutually important. The sector priorities and key result areas are all imperative, but it is the convergence and synergies between these result areas that will achieve the greatest overall impact.

The indicative total cost to implement the five-year MS-NPAN 2018/19-2022/23 is MMK 929 billion (USD 663 million). The total indicative funding required to deliver 5-year sector-level key results in the four participating sectors are MMK 285 billion (USD 203 million) in MoHS; MMK 196 billion (USD 140 million) in MoE; MMK 222 billion (USD 158 million) in MoALI; and MMK 225 billion (USD 161 million) in MoSWRR. More details on the costing of the MS-NPAN, as well as details on the costs for the first-year inception period are [provided below](#).

I. Context and Rationale

1. Investments in nutrition can have a direct impact on the overall economic and social aspirations of a country.¹ Achieving optimal nutrition enhances human development at all stages of the lifecycle by improving cognitive development, school performance and productivity. The improvement of nutrition in Myanmar supports the National Economic and Social Development Plan which sets forth a vision for the country to become a peaceful, modern and developed nation.
2. It is well established that eliminating malnutrition stimulates economic growth. Investing in nutrition has been found to be one of the “best” buys for overall economic development. The 2012 Copenhagen Consensus² concluded that the elimination of malnutrition should be a top priority for policy makers because every \$1 invested to improve nutrition can have returns as high as \$35.³
3. Malnutrition can be passed on from mothers to their children, perpetuating intergenerational cycles of malnutrition and poverty. Maternal and child malnutrition leads to increased risk of morbidity and mortality, impaired physical and cognitive development, reduced economic productivity, and—if unabated in adulthood—transmission to the next generation. As a result, the costs of child malnutrition may compromise as much as 11 percent of GDP.⁴ ⁵ Reducing the intergenerational consequences of malnutrition is imperative to poverty reduction and sustainable development in Myanmar. Well-nourished populations are healthier, earn more and spend less on health care.
4. The election of the National League for Democracy (NLD) in 2015 marked a key moment in Myanmar’s political and economic transition. The country has experienced strong macroeconomic growth over the past decade, averaging 5.1 percent per year between 2005-06 and 2009-10 and projected growth over 6% for the coming three years. Furthermore, Myanmar has seen substantial poverty reduction over the last decade using nationally benchmarked measures of poverty: poverty decreased from 48.2 percent in 2004 to 42.4 percent in 2009-10, and to 32.1 percent in 2015 using the new poverty assessment method.⁶
5. In spite of economic improvements at the national level, Myanmar continues to suffer from a high prevalence of maternal and child undernutrition. While stunting, or

¹ Howlader SR, Sethuraman K, Begum F, Paul D, Sommerfelt AE, Kovach T. Investing in nutrition now: a smart start for our children, our future. Estimates of benefits and costs of a comprehensive program for nutrition in Bangladesh, 2011–2021. PROFILES and Nutrition Costing Technical Report. Washington DC, USA: Food and Nutrition Technical Assistance III Project (FANTA), 2012. Food and Nutrition Technical Assistance III Project (FANTA), FHI. 2012;360.

² Copenhagen Consensus, 2012. Challenge Paper, Hunger and Malnutrition, Available from: <http://copenhagenconsensus.com/sites/default/files/Hunger%2Band%2BMalnutrition.pdf>

³ Shekar M, Kakletek J, Eberwein JD, Walters D. An Investment Framework for Nutrition: Reaching the Global Targets for Stunting Anemia Breastfeeding and Wasting. 2017.

⁴ Horton S, Steckel RH. Malnutrition: global economic losses attributable to malnutrition 1900–2000 and projections to 2050. How Much Have Global Problems Cost the Earth? A Scorecard from 1900 to. 2013; 2050:247-72.

⁵ Shekar M, Dayton Eberwein J, Kakietek J. The costs of stunting in South Asia and the benefits of public investments in nutrition. *Maternal & child nutrition*. 2016;12(S1):186-95.

⁶ Ministry of Planning and Finance and World Bank “Poverty Assessment: An analysis of poverty in Myanmar, Poverty Assessment Part 02” December 2017.

chronic undernutrition, has declined from over 40% in the 1990s to 29.2%⁷ in 2016, there are still marked geographical disparities and some 1.4 million children under five years of age are currently classified as stunted (DHS 2015-16). At the same time, acute undernutrition, or wasting, remains high affecting 7.0% of preschool children. Micronutrient deficiencies are also a cause for concern, as exemplified by the high burden of anemia amongst 57.8% of children of 6-59 months and 46.5% of women of reproductive age and is likely attributable in part to inadequate dietary intake of iron.⁸ Finally, the prevalence of low birthweight (LBW) is 8.1% and is an important indicator of both maternal and child nutrition since it is the direct result of poor nutrition in pregnancy. Adolescent mothers are at higher risk of having LBW babies, and every year more than 50,000 teenage girls give birth in Myanmar.⁹ These four manifestations of maternal and child nutrition (stunting, wasting, micronutrient deficiencies, and low birth weight) each have unique etiologies, and as such, require distinct approaches to ameliorate the problem.

6. This costed, action plan describes the vision for the Myanmar Multi-sectoral National Plan of Action on Nutrition (MS-NPAN). It describes the nature of the problem, the key factors which lead to poor nutrition, priority interventions and the rationale for the proposed multi-sectoral approach. The plan includes updated log frames and illustrative costs and outlines a number of key activities to be carried out in the inception period to establish the operational framework for the MS-NPAN.

II. Purpose of the MS-NPAN

7. This Multi-Sectoral National Plan of Action on Nutrition (MS-NPAN), covering the five-year period between 2018/19 and 2022/23, is an evidence-based plan which addresses the high levels of malnutrition in Myanmar and establishes the systems and capacity required to assure that progress is accelerated, and achievements are sustained.
8. To have the greatest impact, the focus of the MS-NPAN will be on improving the nutritional well-being of the most vulnerable groups in the first 1,000 days period from conception through pregnancy and the first two years of life, with additional support to children between two and five years of age, adolescent girls, and all women of reproductive age. These improvements in nutrition will help assure that all children are born with the potential to thrive, enabling them to learn, earn, innovate and compete, thereby maximizing their contributions to their families and communities, as well as to the nation's economic and developmental goals.
9. The MS-NPAN builds on previous policies and successes to improve nutrition in Myanmar while addressing emerging challenges and priorities. The Government of Myanmar (GoM) has long been committed to the improvement of nutrition. Policies, plans and strategies have been in place since 1954 to support nutrition, leading up to the 2011-2015 National Plan of Action for Food and Nutrition (NPAFN).¹⁰ In addition, policies enacted by different line Ministries have explicitly mentioned the

⁷ MoHS, ICF. Myanmar Demographic and Health Survey (2015-16): Final Report. 2016.

⁸ Myanmar Micronutrient and Food Consumption Survey(2017-18) should provide additional details on micronutrient status and the causes of anemia.

⁹ 2014 Myanmar Population and Housing Census

¹⁰ National Nutrition Centre. Policy, Plan and Legal Framework Overview. Part 1: Landscape. 16 September 2017

improvement of nutrition as a core concern and focus^{11 12 13} although there has not yet been a systematic effort to align efforts across Ministries in the past. To address this shortcoming and improve harmonization, a National Nutrition Stocktaking exercise was executed in 2016 which brought together key stakeholders to review the current nutrition landscape, review current nutrition policies and plans, and map the geographic coverage and distribution of current activities. The MS-NPAN builds upon and reinforces the results of the Stocktaking.

10. The MS-NPAN was developed within the context of high level political commitment to address malnutrition in Myanmar. It will be implemented within the broader Government effort to strengthen the country's health system and pave the way towards achievement of Universal Health Care. The main goal of the country's 2017-2021 National Health Plan (NHP) is to enable access to a Basic Essential Package of Health Services (EPHS) to the entire population by 2020. The promotion of improved nutrition is one of 11 program areas in the EPHS, and the MS-NPAN will leverage reforms underway, specifically by strengthening the health system, prioritizing key evidence-based interventions, engagement of communities and harmonizing efforts across sectors through better coordination of planning and implementation at the National and Township levels. Indeed, the health plan makes critical contributions to improving nutrition and has already been endorsed by the MoHS.
11. In January 2017, the GOM with the leadership of the State Counsellor, Daw Aung San Suu Kyi, convened multiple sectors and development partners for the first ever Inter-ministerial Coordination Meeting on Nutrition in Pakokku. This was then followed by the establishment of a Nutrition Sector Coordination Group (NSCG) under the umbrella of the Development Assistance Coordination Unit (DACU), signaling the importance of nutrition as a priority area for development assistance. The NSGC is chaired by the Union Minister for Health and Sports (MoHS), who serves as the overall focal point for the MS-NPAN, with participation from Ministries of Social Welfare, Relief, and Resettlement (MoSWRR); Education (MoE); and Agriculture, Livestock and Irrigation (MoALI). In addition, the National Nutrition Centre has initiated to establish a Nutrition Promotion Steering Committee (NPSC) which was officially set up by the President on 22 June 2018. The NPSC formalizes the multi-sectoral collaboration for nutrition and aims to direct support across government and non-government partners- to a subset of core sector priorities.
12. The MS-NPAN will translate scientific knowledge and programmatic evidence on the causes of and solutions to malnutrition into concrete actions. The plan will prioritize those interventions which are most amenable to effective operationalization and scale-up to achieve high coverage, and as a result will have the greatest impact.

III. *Process for Developing the MS-NPAN*

13. The process for developing the MS-NPAN entailed the broad participation of all key players through extensive stakeholder consultations and scientific evidence reviews. The National Nutrition Centre (NNC) has served as the custodian of MS-NPAN development with the support of two national coordinators under the auspices of the Union Minister of Health and Sports, Focal Point for the NSGC and the chair of the

¹¹ Ministry of Health and Sports. National Health Plan (2017-2021)

¹² Ministry of Agriculture, Irrigation and Livestock. National Action Plan for Poverty Alleviation and Rural Development through Agriculture (2014-2016)

¹³ Ministry of Education. National Education Strategic Plan (2016-2021)

Nutrition Promotion Steering Committee. It was also informed by the National Nutrition Centre (NNC) Nutrition Stock Taking Exercise completed in June 2017 with the collaboration of the Ministry of Agriculture, Livestock and Irrigation (MoALI); the Ministry of Social Welfare, Relief and Resettlement (MoSWRR); the Ministry of Education (MoE); and the Ministry of Planning and Finance (MoPF).

14. To help jumpstart the overall planning, the SUN UN Network supported NNC to organize a meeting on 28 August 2017 with all relevant Ministries. The purpose was to develop a Road Map for the development of the MS- NPAN. On 30 August 2017, the Road Map and proposed Coordinating and Governance structures of the MS- NPAN were presented to the DGs of the 4 Ministries and endorsed.
15. A series of sector reviews and discussions helped to identify key strategic priorities. This process culminated in a meeting on 31 October 2017 when the key Ministries outlined priorities on Myanmar Nutrition Investments which provided the foundation for the development of sector-specific log frames. The log frames for the MS-NPAN were developed by technical representatives of each sector based on the existing strategies of the respective Ministries.
16. A critical step in the planning process was to develop a single high-level goal statement that would best represent the aspiration of the overall plan. This was finalized during an inter-agency/stakeholder meeting which took place in November 2017. At that time, a series of standardized templates were described to help further guide the sectors in the preparation of log frames.
17. The intention of the log frames was to define the main contributions that each sector would make to the overall MS-NPAN, which required the articulation of a series of strategic outcomes. Once the outcomes were identified, sectoral teams considered a range of potential interventions, which if effectively implemented, would lead to the desired output and outcome. The preliminary interventions were selected based on robust scientific evidence that has demonstrated that high coverage will lead to a measurable reduction in the burden of chronic undernutrition.¹⁴
18. The preliminary sectoral log frames were included in the MS-NPAN Strategic Framework document which was endorsed by the DGs of all key line Ministries on 19 Jan 2018 and submitted to DACU in February 2018. The log frames were further discussed and refined for this final version of the MS-NPAN (see Annex 1 for a copy of all final sectoral log frames). A verification workshop took place on 23-24 July 2018 to review the MS-NPAN with all key stakeholders, including representatives of each Ministry participating in the MS-NPAN and development partners. The objectives of the workshop were to discuss and verify the sectoral log frames (including key results, interventions, outputs, outcomes and indicators), review technical narratives outlining the sectoral contributions, review the inception phase activities and initial cost estimates.

IV. *The Problem: Situation Analysis*

A. Background and Current Nutrition Situation

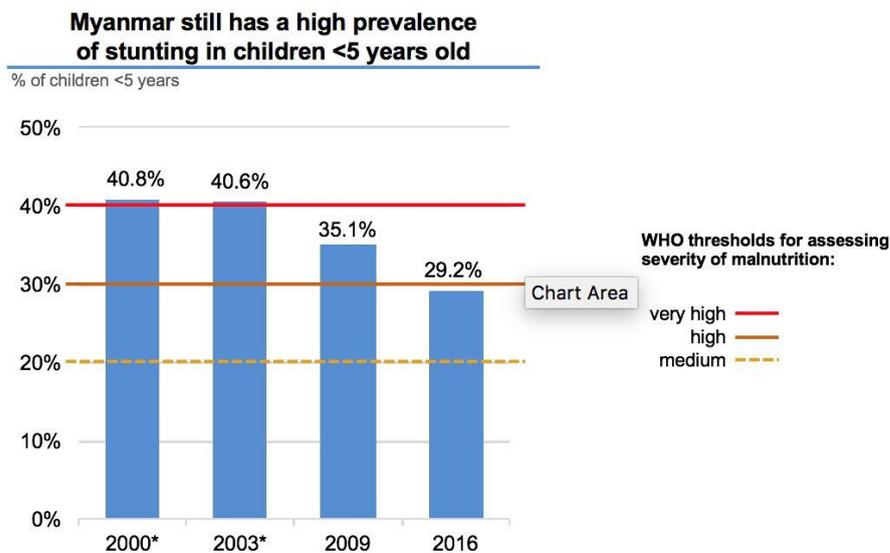
19. Despite strong macroeconomic growth in Myanmar, the prevalence of undernutrition among women and children remains high. Data on trends in maternal and child

¹⁴ Bhutta Z A, Das J K; Rizvi A; Gaffey M F; Walker N; Horton S; Webb P; Lartey A; Black R E. Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost? *The Lancet* (2013) 382(9890):452-477.

nutritional status are available from several Multiple Indicator Cluster Surveys (MICS) and Demographic Health Survey (DHS) conducted between 1997 and 2016 using different indicators. The current status of nutrition in Myanmar is reflected by the prevalence of stunting, wasting, underweight, low birth weight and micronutrient deficiencies as summarized below.

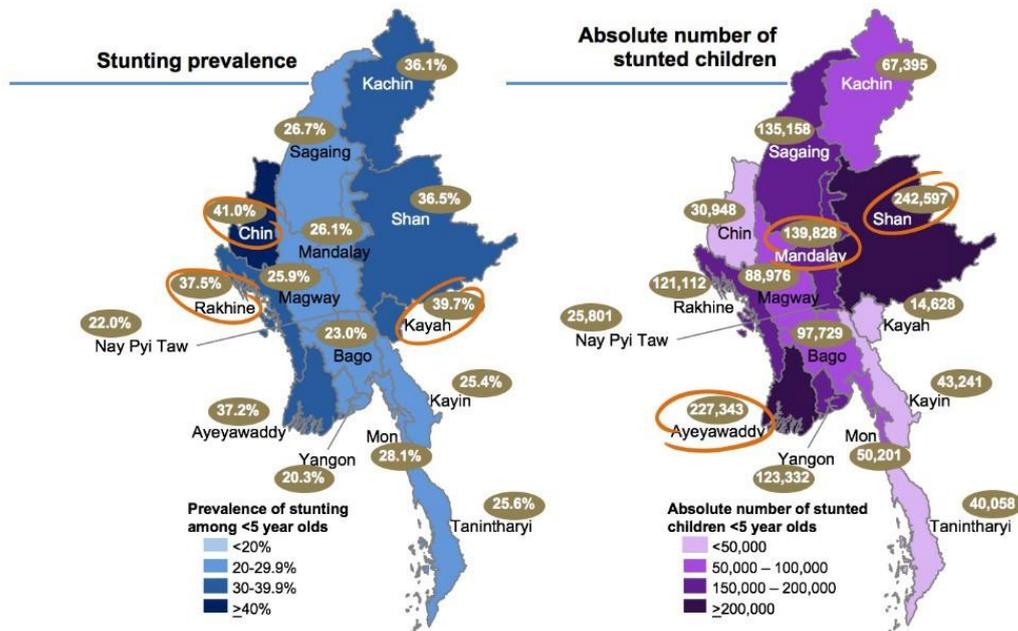
20. Stunting, or low height-for-age, is an anthropometric measure of linear growth that indicates chronic undernutrition in children and is caused by long-term dietary insufficiency and recurrent infectious diseases. Stunting is associated with deficits in cognitive development, poor performance in school and reduced productivity in adulthood. The most recent estimates from 2015-16 show a national prevalence of stunting of 29.2%, having declined from 40.8% in 2000¹⁵ (Figure 1).

Figure 1. Trends in the Prevalence of Stunting



21. Stunting tends to mirror poverty and low overall socioeconomic development. Stunting is higher among children in poor households (38.0%) as compared to children from wealthy households (16.0%). It is also higher in children whose mothers have little or no formal education (39.3%) relative to those whose mothers have a secondary education or higher (16.9%). It is important to acknowledge that even in the highest wealth quintile, almost one of every six children have suboptimal growth which impairs their overall development potential. These results reinforce the fact that key determinants of stunting, such as inadequate sanitation and poor child feeding practices exist in households across the spectrum of socioeconomic status.
22. The prevalence of stunting in rural areas (31.6%) is higher than in urban areas (21.0%), and there are substantial differences by State/Region. The highest rates of stunting, according to the 2015-16 DHS are found in Chin State (41.0%), Kayah State (39.7%) and Rakhine State (37.5%). The greatest number of stunted children are estimated to be in Shan State (242,597), Ayeyawaddy region (227,343), and Mandalay region (139,828) as seen in Figure 2 below.

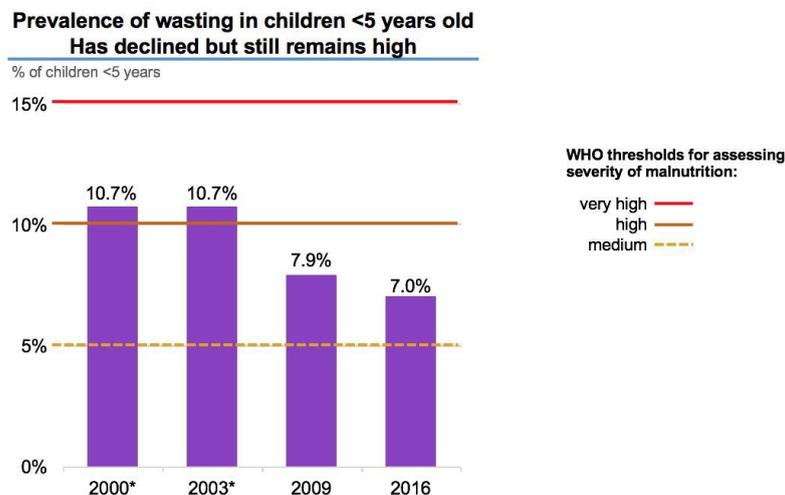
Figure 2. Prevalence and Distribution of Stunting – by Region/State



Sources: 2014 Myanmar Population and Housing Census (Volume 4-F); Myanmar DHS 2015-16

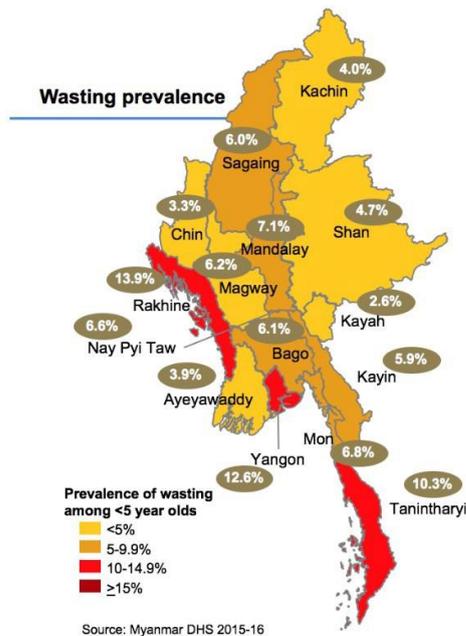
23. Acute malnutrition, or wasting, is an indicator of recent or current undernutrition and is often the result of a short-term inadequacy of food and a high burden of morbidity, such as diarrhea or respiratory infection. It is assessed by measurements of weight-for-height, mid-upper arm circumference (MUAC), or the presence of edema. According to the 2015-16 DHS, 7.0% of children under five years of age are classified with acute malnutrition, which is a reduction of about a third from levels observed in 2000 of 10.7% (Figure 3). The prevalence of severe acute malnutrition (SAM) among under-five children is only 1%, while the problem of moderate acute malnutrition (MAM) is significantly higher. Although younger children have a higher risk of wasting, there are no significant differences based on socioeconomic status which implies that problems leading to acute short-term nutritional insults are widely distributed in the country and occur even among families who should be able to afford sufficient quality and quantity of food.

Figure 3. Trends in the Prevalence of Wasting



24. There are regional differences in the prevalence of acute malnutrition, with the highest rates being found in Rakhine State (13.9%), Yangon (12.6%) and Tanintharyi (10.3%), according to the 2015-15 DHS (Figure 4). In a 2013 LIFT Household Survey, major differences in the prevalence of wasting were also found between different agroecological zones. In the Uplands, only 3.8% of children under five were found to be acutely malnourished, compared with 9.4% in the Coastal/Delta Zone (Rakhine State and Ayeyarwaddy Region) and 10.2% in the Dry Zone (Magway, Mandalay, and Sagaing Regions).¹⁶

Figure 4. Prevalence of Wasting – by State/Region



25. There is a high prevalence of underweight among women, as measured by a low BMI (15.5% with BMI<16). Maternal underweight is associated with low birthweight in newborns, which is a reflection of poor nutrition prior to and through pregnancy, resulting in diminished fetal growth.

26. Low birth weight is highly correlated with perinatal, neonatal, and postnatal morbidity and mortality. Increasing birth weight contributes to a better overall child growth and increased adult height. Global evidence has demonstrated that birth weight can be rapidly improved, even in populations of short adult women (UNSCN, 2011). According to the 2015-16 DHS, the prevalence of low birth weight (less than 2,500 grams) was 8.1%, representing an improvement from 15% in 2000. However, only 45.4% of newborn children in the survey were weighed at birth, with major regional differences. For instance, only 12.6% of children in Rakhine State were weighed at birth, compared with almost 80% in Yangon.¹⁷

27. Anemia is a condition that develops when blood does not contain a sufficient quantity of hemoglobin, which is required to bind and transport oxygen to meet the body’s physiologic needs. Anemia is a major public health problem in Myanmar. According to the 2015-16 DHS, 57.8% of children under five and more than 70% of children 6 to 23 months of age are anemic. There are wide differences by region, with the high prevalence of anemia seen in Sagaing (70.5%), Yangon (66.3%) and

¹⁶ ICF International and Myanmar Survey Research (MSR). 2013 LIFT Household Survey. 2013
¹⁷ MoHS, ICF. Myanmar Demographic and Health Survey (2015-16): Final Report. 2016.

Ayeyarwady (61.9%). It is of note that there are virtually no variations across income group, nor based on maternal education, underscoring the persistence of the problem.

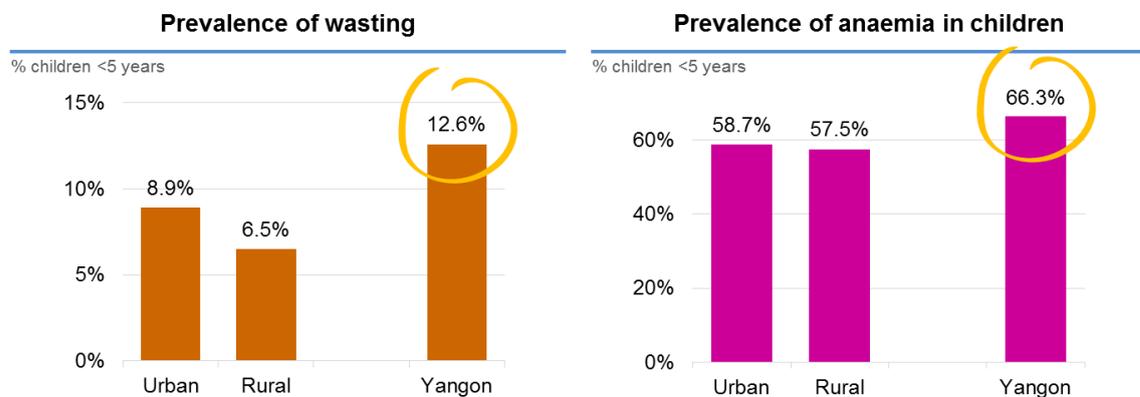
28. Anemia is also quite important for women and can be a contributing factor to maternal mortality, spontaneous abortion, premature birth and low birth weight. According to the 2015-16 DHS, 45.8% of non-pregnant women ages 15 to 49 years are anemic, while 56.9% of pregnant women are classified with anemia. As with children, socio-economic status is not a major determinant of anemia and it is a widespread problem which needs to be addressed.
29. Globally, iron deficiency is the most common cause of anemia, although a lack of other vitamins (including folic acid and vitamin B12), parasitic infections (such as malaria), other helminth diseases and genetic hemoglobin disorders can all cause anemia. Iron deficiency is particularly important for infants and young children as it leads to developmental delays. Early iron deficiency may have specific effects on the central nervous system, causes a lasting deficit in brain iron, which persists into adulthood despite correction of the anaemia.¹⁸
30. A 2005 survey undertaken by NNC and UNICEF found worm infestation to be associated with anemia in all groups. Levels of infestation were particularly high in coastal areas: 92% of pregnant women and 70% of children were found to have one or more of three common worm types (Ascaris, Trichuris and Hookworm), compared with national estimates of 45% and 31%, respectively (MNPED & UNICEF, 2013). Understanding etiology is critical in designing the most appropriate, and ultimately, most effective strategy to prevent and reduce the burden of anemia in the country.
31. Iodine deficiency is one of the leading causes of preventable brain damage and mental disability throughout the world. When a mother is iodine deficient in the first trimester of pregnancy, it can lead to irreversible brain damage and impaired cognitive development in the fetus. Recent data on household iodized salt consumption indicates that only about 68.8% of households are consuming salt that was adequately iodized for the prevention of iodine deficiency¹⁹ and suggests that additional improvements to the supply and availability of iodine in the diet are required.
32. Finally, it should be noted that while the focus of the MS-NPAN will be to reduce undernutrition, the burden of overnutrition is growing in Myanmar, albeit from a low base. Overweight among children (weight-for-height >2 SD) was 1.3% in 2015-16, while among women of reproductive age, overweight (19.2%) and obesity (5.5%) are considerably more common. However, experience from other countries has demonstrated the importance of optimal nutrition and adoption of healthy nutrition practices early in life as an avenue to reduce risk of later life overnutrition and NCDs. The MS-NPAN will therefore focus on what WHO has termed 'double duty actions' for nutrition, which can address both undernutrition and overnutrition through common interventions, while attention will be paid to these emerging issues of overweight/obesity, nutrition in emergencies and urbanization.
33. Urban malnutrition is also a concern - Yangon region is experiencing a rapid urban growth as migration from rural to urban areas is increasing. According to the 2015-16 DHS, this region has the second highest prevalence of wasting and the second highest

¹⁸ World Health Organization. [The Global Prevalence of Anaemia in 2011](#). Geneva: WHO, 2011

¹⁹ National Nutrition Council. 2006 Household Iodized Salt Consumption Survey. Yangon: NNC. Unpublished data.

anemia prevalence in children aged 6–59 months (Figure 5).

Figure 5. Prevalence of Wasting and Anaemia – by Urban/Rural location



34. Myanmar is vulnerable to a wide range of natural disasters and is the most disaster-prone country in South-East Asia. Such crises are a major contributing factor to nutrition vulnerability among children, adolescent girls and women.

V. Alignment with Global Development Initiatives

35. There has been increasing global awareness of the importance of nutrition as a development imperative to help populations lead healthy and productive lives. Myanmar joined the Scaling Up of Nutrition (SUN) Movement in May 2013, and five networks were formed for the SUN movement in Myanmar namely: Government network, Donor network, UN network, Civil society network and Private sector network. In addition, a multi-stakeholder platform was established, and consensus was achieved on core nutrition actions with strong high-level commitment after the Pakokku meeting.
36. The Zero Hunger Challenge (ZHC) was announced at United Nations Conference on Sustainable Development, Rio+20 in June 2012 by United Nations (UN) Secretary-General. It was in direct response to the persistent global problem of hunger and malnutrition. As the first step towards making the ZHC a reality in member countries, the UN Regional Thematic Working Group on Poverty and Hunger, prepared “The Regional Guiding Framework for Achieving Zero Hunger in Asia and the Pacific”. This framework aimed to provide guidance to UN Member States in the formulation and implementation of activities to end hunger through multi-stakeholder consultations and coordination at the country level. In October 2014, the Government of the Myanmar (GoM) made a commitment to translate the Zero Hunger Challenge (ZHC) into concrete, time-bound actions for the accelerated reduction of food insecurity and undernutrition.
37. The importance of nutrition was further reinforced with the designation of the United Nations Agenda 2030 and Sustainable Development Goals (SDGs) in 2015 which included a challenge to countries to end all forms of malnutrition by 2030 by including as the second SDG, “End hunger, achieve food security and improved nutrition and promote sustainable agriculture”. Nutrition is recognized as central to the SDGs with at least 12 of the 17 SDGs containing indicators vital for nutrition improvement (Figure 6), and Myanmar has adopted these.

Figure 6. Importance of Nutrition in Achieving the Sustainable Development Goals (SDGs)

NUTRITION IS ESSENTIAL FOR THE SUCCESS OF ALL THE SDGs

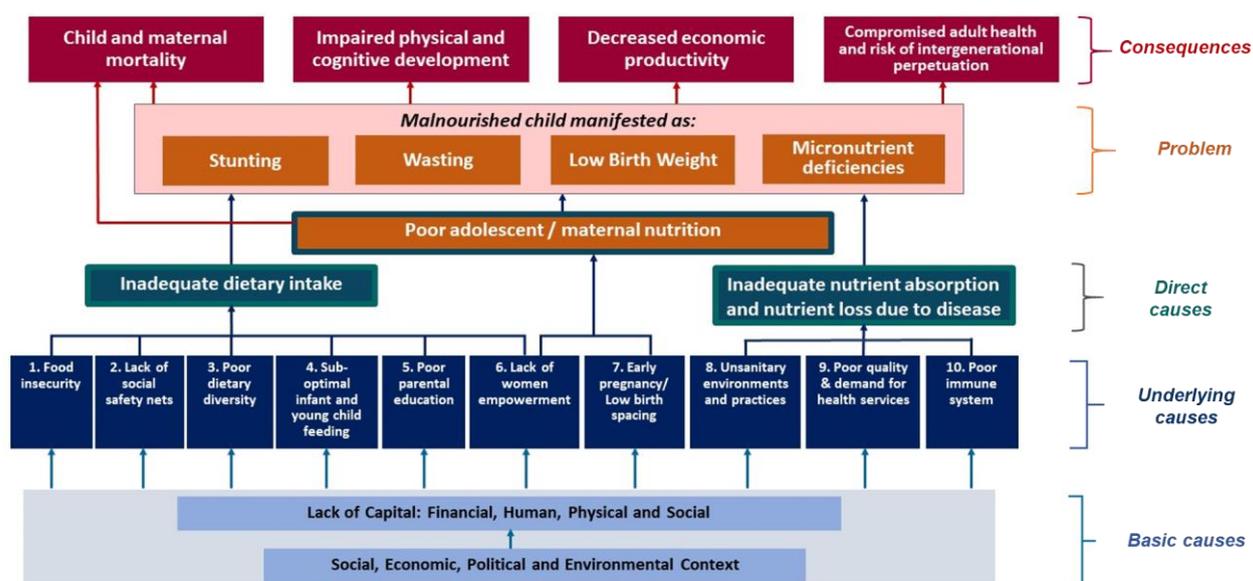
Optimal nutrition is essential for achieving several of the Sustainable Development Goals, and many SDGs impact nutrition security. Nutrition is hence linked to goals and indicators beyond Goal 2 which addresses hunger. A multisectoral nutrition security approach is necessary for success.



VI. Conceptual Framework

38. To help guide the development of the MS-NPAN, a conceptual framework (Figure 7) was used which describes the key determinants of undernutrition at three levels of analysis (direct, underlying and basic) with the implication that effectively addressing these determinants will help achieve the overall goal of improved nutrition in mothers, children and adolescent girls. The framework highlights the long-term consequences of child malnutrition, including an increased risk of morbidity and mortality, impaired physical and cognitive development, reduced economic productivity, and—if unabated in adulthood— transmission to the next generation.
39. The framework designates four distinct manifestations of child undernutrition which result from the same set of key factors, albeit in different combinations and degrees of intensity, namely: stunting, wasting, low birthweight and micronutrient deficiencies.
40. The direct causes of poor nutrition are a combination of inadequate dietary intake and poor nutrient absorption and nutrient loss resulting from a high burden of infectious diseases. A diet may be inadequate in terms of macronutrients, such as dietary energy, and/or insufficient micronutrients. Even where there is sufficient food in the diet, the ability of the body to utilize nutrients may be impaired because of infectious pathogens and disease. It is the synergy between nutrient intake and disease which leads to poor nutritional outcomes.

Figure 7. Conceptual Framework Adopted by the MS-NPAN: Key Determinants of Malnutrition



adapted with permission from Shawn Baker (2017)

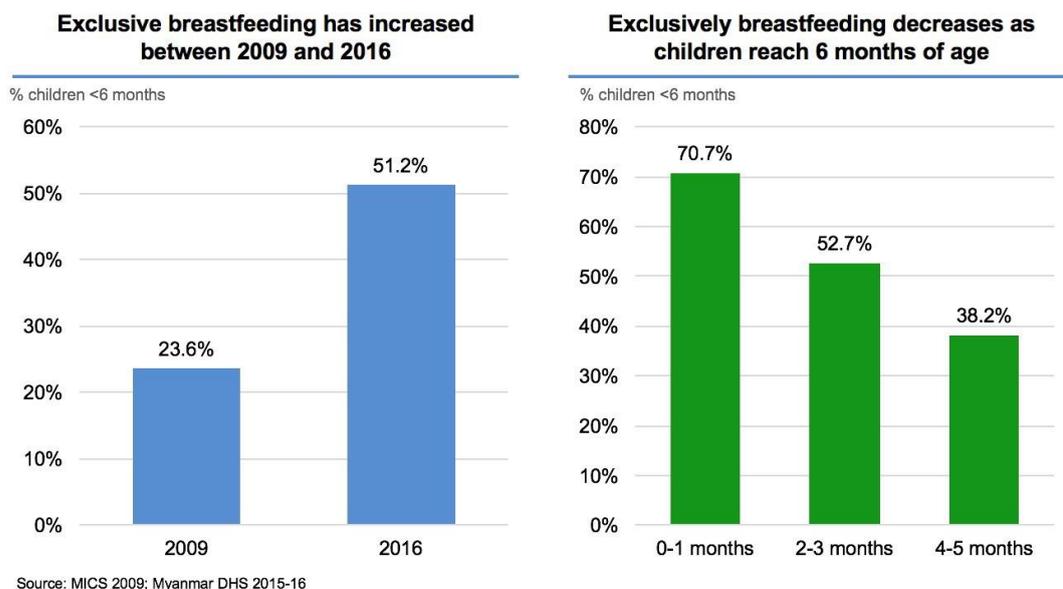
41. There are several underlying causes which lead to inadequate dietary intake and a high burden of infection. The MS-NPAN considered the relative importance of these factors and both national and global experiences with different interventions to address them. An important feature of the framework is that it underscores the fact that there is no one sector or single intervention that will eliminate all of the causes which lead to malnutrition. Instead, it is the complementary, collective action from multiple sectors that is needed to achieve the greatest sustainable impact at scale. In the first year of the MS-NPAN, a detailed analysis of the key causes of undernutrition will be reviewed for each State/Region in the country in order to design the most [appropriate package of priority interventions](#) tailored to the specific conditions of different parts of the country.
42. For example, a lack of dietary diversity among young children can be improved by providing micronutrient supplements, encouraging the fortification of staple foods with vitamins and minerals, stimulating demand by enhancing caregiver, health worker, and community knowledge about the problem, expanding the production and supply of micronutrient-rich foods, and increasing the access (availability and affordability) of diversified nutritious foods through social assistance. These actions fall outside of the domain and mandate of any one single sector. The most effective response to malnutrition requires the engagement of different disciplines and sectors, each with distinct expertise and proficiencies. Although each of the underlying causes included in the framework are important, a few are described here in greater detail.
43. Suboptimal infant and young child feeding (IYCF) practices can be a major impediment to optimal growth and development. The powerful impact of adhering to recommended feeding practices in promoting the health of young children has been well documented.²⁰ In particular, early initiation of breastfeeding (within the first hour of life), exclusive breastfeeding for the first 6 months, introduction of adequate

²⁰ Britto PR, Lye SJ, Proulx K, Yousafzai AK, Matthews SG, Vaivada T, et al. Nurturing care: promoting early childhood development. *The Lancet*. 2017;389(10064):91-102

complementary foods at 6 months, increasing the frequency of meals and expanding the diversity of foods in the diet, as well as continued breastfeeding up to 2 years are all critical practices that increase the health and survival of young children (UNICEF, 2011).

44. Breastfeeding is common in Myanmar with almost 98% of all children breastfed at some point in their life and many continue to be breastfed until 2 years of age. Just over two-thirds (66.8%) of all women reported initiating breastfeeding within 1 hour of birth (2015-16 DHS). Although useful, this indicator does not capture the prevalence of giving other liquids besides breastmilk to newborns, which is a common practice in certain regions in Myanmar (Dry Zone- Save the Children et al., 2014; Rakhine State- Save the Children, 2014). Just over half of all children under 6 months of age are exclusively breastfed (DHS 2016), which represents a dramatic increase from 11% in 2000 and 23.6% in 2009. Within the first six months of life, the rate of exclusive breastfeeding declines as children get older. For example, almost 70.7% of infants were reported to be exclusively breastfeeding in the first two months of life, but this decreases to 52.7% for infants 2-3 months of age and then declines further to only 38.2% of infants exclusively breastfeeding at the time that they reach six months of age. The WHO recommends that exclusive breastfeeding continues for the six months of age in order to achieve its full benefits.

Figure 8. Trends in Exclusive Breastfeeding and Differences by Age

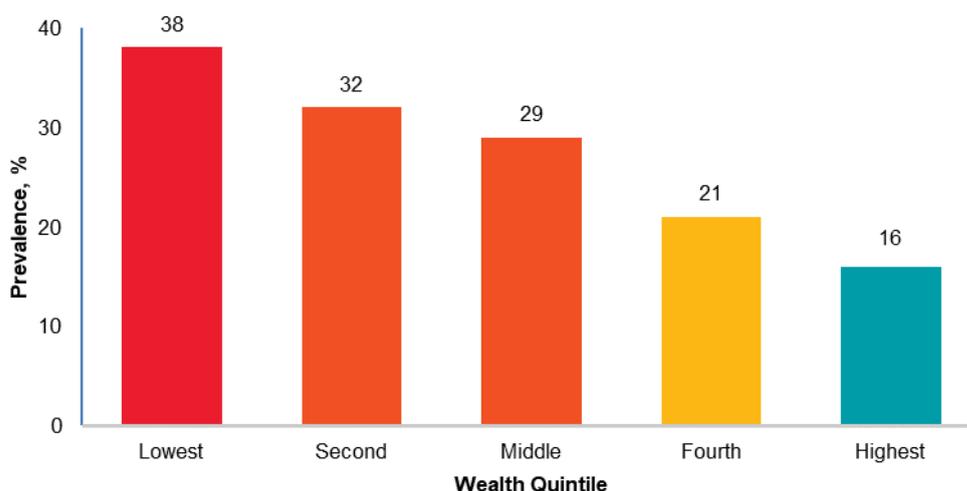


45. Currently in Myanmar, only 25% of children 6-23 months are consuming a diet considered to be diverse enough to provide all needed vitamins and minerals, while only 16% achieve a “minimum acceptable diet” which is a composite indicator which includes breastfeeding or milk feeds, dietary diversity and meal frequency.
46. Parental education is clearly associated with nutrition. Children of mothers with no schooling are significantly more likely to be stunted (39.3%) than children of mothers with a secondary education (22.5%) or mothers with more than a secondary education (16.9%). This lack of education contributes to poor nutrition in a number of ways, including reduced earning potential. However, it is ultimately the low levels of awareness about the importance of nutrition, how to achieve an optimal diet and what other factors contribute to good nutrition which underscores its importance. Those with less education are also less likely to seek appropriate treatment for

children during illness and utilize of preventive health services, thereby increasing the severity of illness which directly affects nutrient absorption.

47. Unsanitary environments and practices increase chronic exposure to contaminated food and water, which increases exposure to enteric pathogens and cause intestinal inflammation. This environmental enteropathy results in poor absorption of food, vitamins and minerals which leads directly to poor growth and development. National level data on water supply, sanitation and hygiene in households are available from the 2015-16 DHS. At the national level, 80% of households have an improved source of drinking water, including 89% of households in urban areas and 77% in rural areas. The most common source of improved drinking water in urban areas is bottled water (48%), while in rural areas, it is from a tube well or borehole (33%). The fact that a high proportion of households do not have access to an improved water source is troubling especially since many households do not effectively treat their drinking water and are therefore at risk of ingesting water-borne pathogens.
48. According to the 2015-16 DHS, nearly half of households (48%) have improved toilet facilities, including 65% in urban areas and 42% in rural areas, leaving a high/significant proportion of people at risk of contact with human waste. Eleven percent of households have no toilet facility. The most common type of toilet facility in rural areas is an open pit or a pit latrine without a slab (31%). In contrast, a toilet that flushes to a pit latrine is the most common type of toilet in urban areas (37%).
49. Handwashing is one of the most effective ways to prevent germs from spreading. In Myanmar, 84% of households have soap and water for washing hands, while 3% of households have no water, soap, or other cleansing agent. Ninety-five percent of urban households have soap and water available for washing hands, compared with 80% of rural households. There are considerable regional disparities, with only 12% of households in Kayin State reporting no water, soap, or other cleansing agent, followed by 10% of households in Kayah State. There is a clear association between income and the availability of soap and water. Almost all the households in the wealthiest quintile have soap and water for handwashing on the premises, whereas in the lowest quintile only 67% of households do.
50. Poverty and a lack of social safety nets is a critical factor which increases the vulnerability of households and communities. Maternal and child undernutrition is most prevalent among the poor. As already highlighted, children in the poorest households are more than twice as likely to be stunted as those in the richest households (Figure 9). This is due to a number of factors, including the lower purchasing power and competing demands for scarce resources of the poor, reduced demand for health services, unsanitary environments, poor water supply and lack of appropriate hygiene. While poverty reduction is beyond the scope of the MS-NPAN, appropriately targeted social assistance and support for nutrition-sensitive livelihoods can provide needed financial stimulus, together with nutrition messages to support nutritionally vulnerable populations. Although poverty is closely associated with undernutrition, it is important to note that the National DHS results show that household poverty does not fully explain all undernutrition: 1 in every 6 children in the highest wealth quintile is stunted.

Figure 9. Child stunting by household wealth quintile, Myanmar, 2015-16



Source: DHS, 2015-2016: Key Indicators Report. MoHS and ICF International

51. Women’s empowerment and well-being is critical to improving nutrition. As the position of women in society is elevated, so is their self-confidence, autonomy/control in allocation of resources and decision- making; and available time and manageable workload. In contrast, poor maternal health is associated with a number of negative nutritional outcomes for children. Maternal short stature (defined as height <145 cm) is a sign of a women’s own malnutrition in earlier life which perpetuates the intergenerational cycle of malnutrition by increasing the risk of low birthweight births. Nationally, 6.4% of women age 15-49 are of short stature, with the prevalence as high as 14% in Chin State. Maternal stature continues to be the strongest predictor of child stunting in Myanmar, with children born to mothers of short stature 6 times more likely to be stunted. Female labor force participation is currently estimated to be 52%, significantly lower than that of men - 74%, and lower than what would be expected based upon levels of overall economic development (World Bank "Myanmar Living Condition Survey 2017").²¹ Low-wage parity, a high degree of informal employment, increasing migration, and limited social and labor protection create difficulties for women in breastfeeding or providing adequate nutrition and care for their children.

VII. Overall Goal and Vision of the MS-NPAN

A. Expected Impact of the MS-NPAN

52. The overall goal of the MS-NPAN is to “Reduce all forms of malnutrition in mothers, children and adolescent girls” with the expectation that this will lead to healthier and more productive lives that contribute to economic growth and sustainable development. The key indicators that will help measure progress against this anticipated goal are adapted from the globally agreed World Health Assembly (WHA) nutrition targets by 2025²² and the Sustainable Development Goals (SDGs) by 2030

²¹ World Bank and Ministry of Planning and Finance. Myanmar Living Condition 2017 survey.

²² The six global targets to be achieved by the year 2025 are (1) 40% reduction of the global number of children under five who are stunted (2) 50% reduction of anaemia in women of reproductive age (3) 30% reduction of low birth weight (4) no increase in childhood overweight (5) increase the rate of exclusive breastfeeding in the first six months up to at

that Myanmar is compelled to report on (Table 1).

Table 1: Key Indicators and Targets of the MS-NPAN

1. *Reduced prevalence of stunting among children 0-59 months from 29% in 2015 to 21% in 2025 (WHA indicator target 1);*
2. *Reduce the prevalence of acute malnutrition (wasting) among children 0-59 months from 7% in 2015 to less than 5% in 2025 (WHA indicator target 6);*
3. *Reduced prevalence of low birthweight from 8% in 2015 to less than 6% in 2025 (WHA indicator target 3);*
4. *Reduced prevalence of anaemia among women of reproductive age (15-49 years) from 46.6% in 2015 to 25% in 2025 (WHA indicator target 2);*
5. *Reduced prevalence of anemia among under five children from 47.8% in 2015 to 25% in 2025*
6. *Maintain median urinary iodine concentration of women of reproductive age (15-49] years) between 100-299 µg/L.*

B. Key Approach of the MS-NPAN

53. The overarching approach of the MS-NPAN will be to strengthen multi-sectoral coordination in nutrition and deliver a package of essential nutrition-specific and nutrition—sensitive services/interventions to Myanmar’s mothers²³, children and adolescent girls. This multi-sectoral approach involves several different Ministries (e.g. MoALI, MoHS, MoE and MoSWRR) each with complementary mandates and proficiencies, operating at multiple administrative levels (National, State/Region, District, Township and Ward/Village Tract) and is supported by multiple stakeholders (Government, Development Partners– UN/multilateral organizations, bilateral agencies, donor agencies, NGOs, CSOs, academia and private sectors).
54. The MS-NPAN is based on the underlying assumption that multi-sectoral collaboration between key actors and stakeholders is imperative for the long-term and sustainable improvement of nutrition. By leveraging the collective and complementary inputs of multiple sectors with different strengths, it will be possible to have greater effectiveness than any one sector working unilaterally.

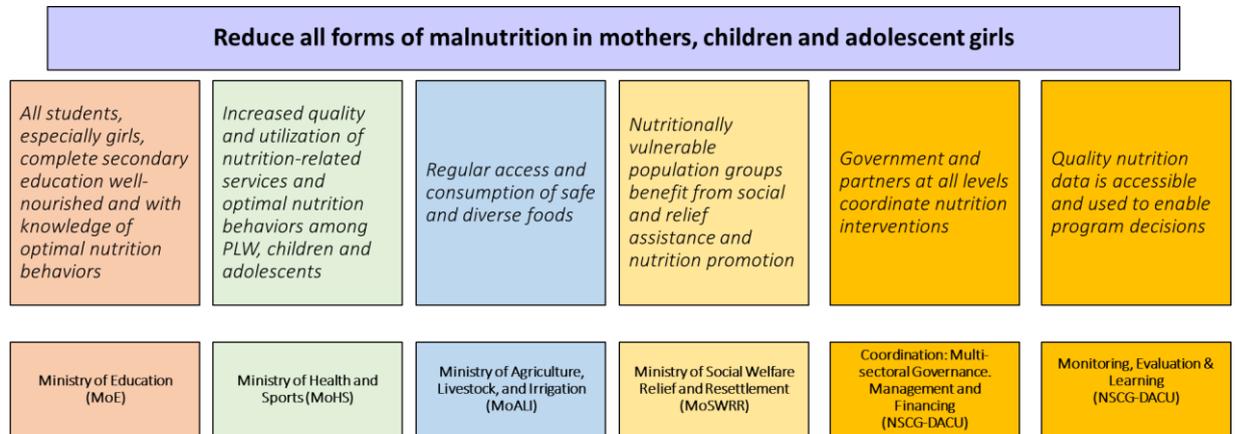
VIII. Key Results and Sector Outcomes

55. The MS-NPAN includes six key result areas; one for each of the four sectors, one for Governance and one for Monitoring and Evaluation (Figure 10). These key results describe the collective contributions that will be made by each sector towards the overall goal of reducing malnutrition amongst mothers, children and adolescent girls. The key results for the MS-NPAN are complementary and mutually important. While the sector priorities and key result areas are each imperative, it is the geographic

²³ least 50% and (6) reduce and maintain childhood wasting to less than 5%.
Lancet series on Maternal and Child nutrition – 2013 “Framework for actions to achieve optimum fetal and child nutrition and development: evidence based high impact nutrition specific and sensitive interventions

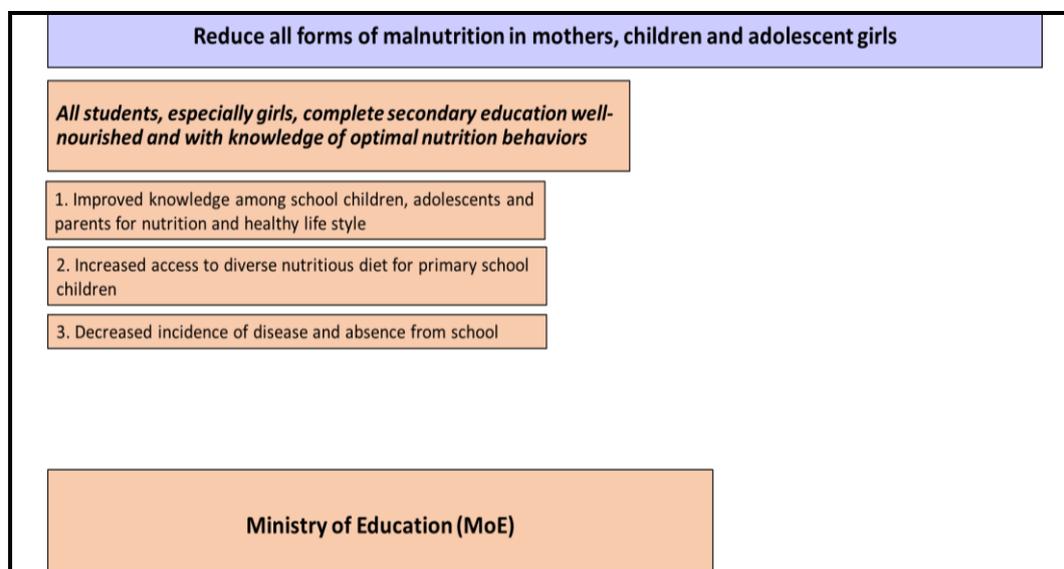
convergence and synergies between these result areas that will achieve the greatest overall impact. In fact, there are some outcomes which are common to multiple sectors.

Figure 10. Overall Goal, Key Results and Outcomes by Sector



56. This MS-NPAN proposes a series of sector-specific outcomes which will address the different underlying causes of malnutrition (see Conceptual Framework) and contribute towards the improvement of nutrition. Identification of these outcomes was facilitated by a review of existing global and country-level evidence of the potential impact of different interventions and actions. In the sections below, the main sector-specific outcomes are described, along with the anticipated underlying cause(s) which they will address.

Ministry of Education



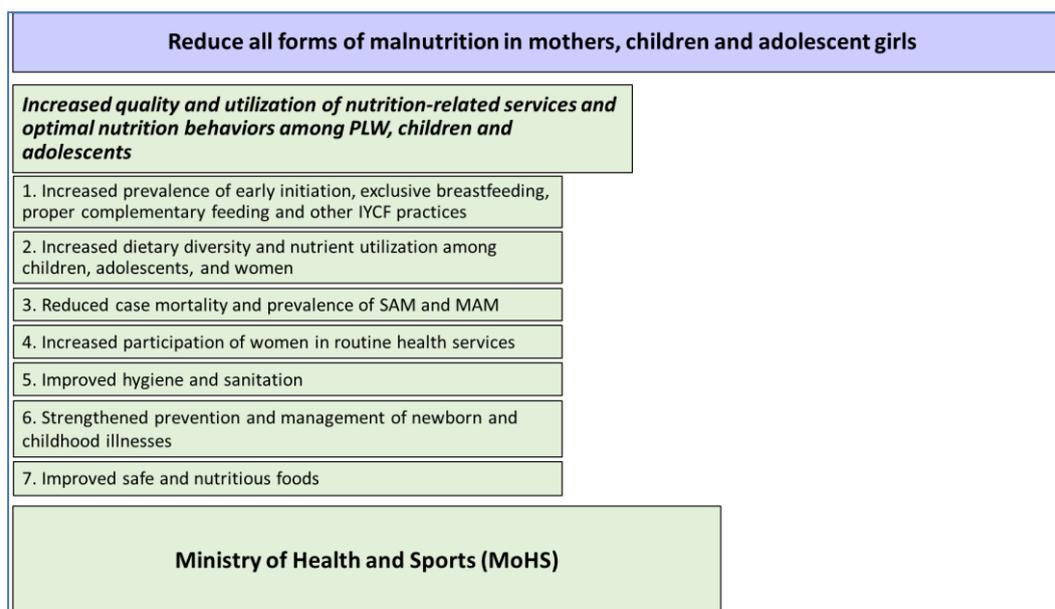
57. The key result in the MoE will be that all students, especially girls will complete secondary education, well-nourished and with knowledge of optimal nutrition behaviors, which will be supported by the attainment of three priority outcomes. There is a critical link between education and nutrition. Studies have shown that children who attend schools are more likely to have optimal nutrition, delayed age at marriage and childbirth, increased earning potential and economic empowerment than their counterparts who do not attend schools.

58. The MoE will use schools as a platform for the delivery of nutrition-specific

interventions to reach school aged children and adolescents who are difficult to access through the health system. For example, schools can promote nutrition information and provide nutrition-related services, such as micronutrient supplements and deworming tablets. Education is particularly important in helping children increase their knowledge about the importance of dietary diversity and helping to shape habits which will continue throughout their lives. Schools are also important as a means to improve hygiene and sanitation knowledge and practices and an awareness of the importance of disease prevention, working in collaboration with the MoHS. Currently, the student: toilet ratio is below recommended levels. Proper hand-washing and safe drinking water facilities are also limited. Provision of those basic facilities creates an environment which secures children's safety, health and attendance in classes. In addition, children are more receptive and quick to adopt new behaviors and can become change agents among their peers, families and communities. Therefore, water, sanitation and hygiene in school makes a visible impact on the health and hygiene of children through improvement in their health and hygiene practices, and those of their families and the communities

59. Myanmar has had some experience with school feeding programs which have had a primary objective of increasing school attendance and retention. The MoSWRR and MoE have implemented a feeding program with nutrition education. The strengths of these programs will be reviewed and scaled-up as appropriate as part of the MS-NPAN, with a particular focus on improving access to more nutritious and diverse foods. While the global evidence of the nutritional impact of school feeding is limited, there is strong political interest in maintaining these programs and ready development partner support. In the education sector, the inclusion of nutrition education as part of the primary school curriculum has been an important step in the right direction and will be leveraged moving forward.
60. The MoE will explore how to strengthen the role of Parent Teacher Associations (PTA) in all schools to ensure that parents have increased awareness of good practices for health, nutrition and hygiene. Then, they can work jointly to monitor and improve the health and wellbeing of students. Contents in the life skills curriculum will be revised and disseminated so that all school children develop knowledge, skills, attitudes and competencies that are relevant to their lives and to the socio-economic development needs of 21st century Myanmar (National Education Strategic Plan 2016-2021).

Ministry of Health and Sports

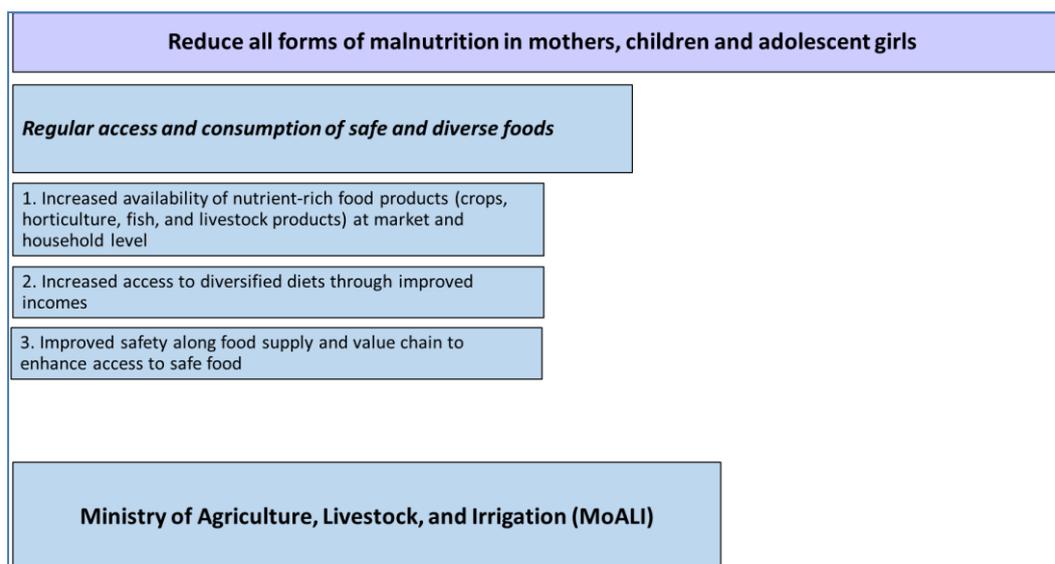


61. The key result of the Ministry of Health and Sports will be to increase the quality and utilization of nutrition-related services and optimal behaviors amongst pregnant and lactating women, children and adolescents which will be supported by the achievement of seven priority outcomes. In addition to the Nutrition Division (i.e. NNC), there are distinct Divisions under the Department of Public Health of the MoHS which will contribute to nutrition, including Child Health, Maternal and Reproductive Health, EPI, WASH and School Health. Some of the specific outcomes will be to increase early and exclusive breastfeeding, proper complementary feeding and other optimal IYCF practices. The MS-NPAN will leverage lessons - both from its own prior experiences and effective approaches from other countries--for the protection and promotion of breastfeeding and promotion of optimal complementary feeding through multiple channels, such as policy/advocacy, mass media, interpersonal communication, provision of quality counselling and support services, and social mobilization. The Division of Child Health will have an active role, together with MoSWRR, in promoting early childhood care and development, alongside IYCF promotion for children under two years of age, and as part of child health checks for children between 2 and 5 years of age.
62. The MoHS will reinforce the importance of a strong and integrated primary health care in order to deliver nutrition interventions and services at the community and facility levels. Such efforts will aim to improve dietary diversity and enhance vitamin and mineral intake through scaling up of micronutrient supplementation and large-scale fortification of salt and rice. MoHS will collaborate with MOALI's efforts to improving households' access to diversified food, to improve dietary diversity. An additional critical outcome will be to strengthen the Integrated Management of Acute Malnutrition for children at risk of wasting.
63. The MoHS will collaborate closely with other Ministries, such as MoE, and MoALI to improve sanitation, water supply and hygiene practices as well as food safety along the food production value chain. This will entail assessment of most effective tools to reduce the transmission of enteric pathogens and adoption of lessons from recent operational studies to improve the integrity of the gut microbiome. Related to this will be to strengthen the routine prevention and management of infectious diseases, such as the routine delivery of anti-helminths and distribution of antimalarial bed

nets in areas at high risk for malaria, the treatment of measles with vitamin A and management of acute diarrhea with zinc. There will special attention to improve the supply and quality of nutrition-related services targeted to adolescent girls and women of reproductive age, including pregnant women.

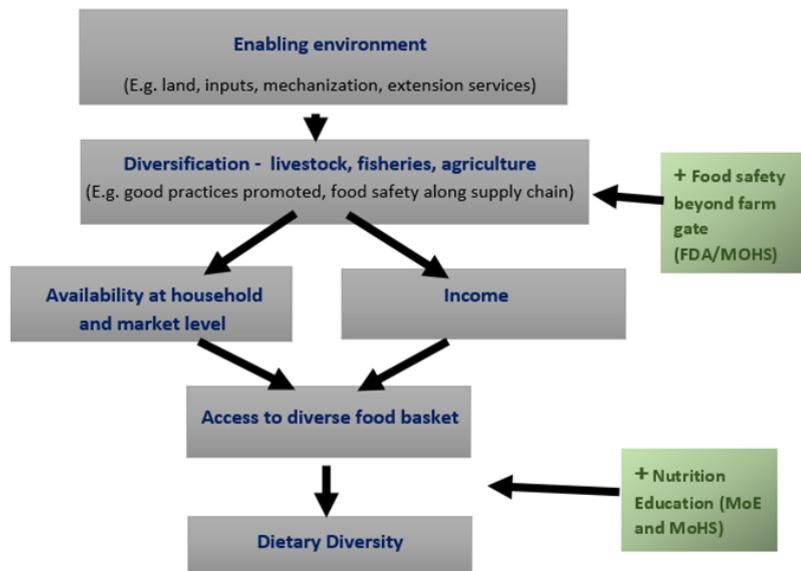
64. Nationwide estimates on the proportion of children with diarrhea who received ORT was reported to be 62% (MDHS 2016). Zinc provision is still not universally used in the treatment of diarrhea although it is recommended in the national guidelines, and the MS-NPAN will redouble efforts to increase the provision of this critical service. (National Strategic Plan for newborn and child health development 2015-2018). Cold chain expansion, engaging Ethnic Health Organizations (EHOs) to reach geographically remote and hard to reach areas, and conflict affected areas and among urban migrant populations are tools that will be leveraged by the MoHS to increase the demand and uptake of immunization services.
65. Many factors influence the participation of women in programs which provide basic maternal health services, including lack of empowerment, cost, distance, health knowledge. The MoHS will aim to increase access, reduce cost barriers (universal health coverage), and improve health knowledge as tools to increase the likelihood of participation. The proportion of babies that are estimated to be born with a low birth weight as 8.1% (MDHS 2016). The MoHS will increase the coverage of simple caring practices such as immediate thermal care, kangaroo mother care and breastfeeding support to support LBW infants. Improving access to quality newborn health services at the community level and facility level will help reduce newborn and childhood illnesses.
66. The MoHS will work closely with other sectors to support communication efforts to increase the awareness and knowledge of health care providers, school teachers and beneficiaries about the importance of nutrition. For example, the MoHS will support the school lunch initiatives in collaboration with the Ministry of Education, and lead counselling sessions targeted to recipients of maternal cash transfer (MCCT) to complement social protection efforts. School lunches have been found to be a good way to improve attendance, which links to longer-term nutrition outcomes if girls stay in school longer (are more educated and defer pregnancy). Indeed, it is the synergy of combining cash with nutrition information through Social Behavior Change Communication (SBCC) that will enable pregnant/lactating women to improve their dietary intake and diversity, improve the affordability of basic health care during pregnancy and birth and feeding of their young children. The MoHS will work closely with the MoSWRR by providing monthly awareness-raising sessions on a range of topics, like health, WASH and early childhood care and development (ECCD), related to improved nutritional outcomes. These sessions will be delivered by the local auxiliary midwife, adapting to the needs and interests of the local women and building on their existing knowledge and practices. All pregnant women who enroll in the MCCT programme will continue to receive programme benefits until their new child reaches the age of 24 months. The new mothers will continue to be enrolled through the programme cycle.
67. Finally, there may be scope to strengthen the regulatory environment for foods and the overall food system. This includes enhancing food safety monitoring and enforcement, aligning the inspection of fortified foods and other processed commodities, as well as improved principles of marketing and labelling of nutrition. Strengthening of regulatory monitoring and food control systems will assure the quality production and supply of fortified salt and fortified rice as this intervention becomes more widely adopted in the country.

Ministry of Agriculture, Livestock and Irrigation



68. The key result area for MoALI will be to assure regular access and consumption of safe and diverse foods for the entire population. This will be achieved through three outcomes. All major Departments from MoALI will be involved with the MS-NPAN, including the Department of Agriculture, Department of Fishery, Livestock Breeding and Veterinary Department, Department of Rural Development, Cooperative Department, Department of Agricultural Land Management and Statistics, Irrigation and Water Utilization Management Department, Agricultural Mechanization Department, and will be coordinated by its Department of Planning and its Agricultural Policy Unit and the Monitoring and Evaluation Unit.
69. ADS as a platform to address nutrition sensitive agriculture - MoALI recently launched its Agricultural - Development Strategy (ADS) 2018-2023 to create a diverse, productive and competitive economy with agriculture and rural development at its foundation. It aims to improve food security and nutrition, increase smallholder farmer's income and reduce rural poverty. MoALI is largely responsible for creating an enabling environment for smallholders, SMEs and the commercial sector to (i) make a more diversified food basket available and for rural households and (ii) to generate income from their engagement in the agricultural sector to access a balanced and healthy diet. MoALI's priority outcome areas that contribute to nutrition, are articulated in this plan.
70. The impact of MoALI's contribution to the MS-NPAN will be measured by a number of 'nutrition-sensitive' indicators that include availability of diverse foods at household and market level, access to a diverse food basket (through improved incomes) and gender-sensitive indicators. The Minimum Dietary Diversity score for Women (MDD-W) is included as the overall indicator for outcome areas 1 and 2 and is reflected in Figure 11. This indicator will also be contributed to by interventions carried out by the Ministry of Health and Sports and Ministry of Education. In that sense, it may also be suggested to include it in the logical framework of the ADS at a later stage.

Figure 11. Pathways through which MoALI will contribute to improved dietary diversity



71. Diversification of agricultural production as a strategy - Smallholder driven diversification of agrarian production systems is the underlying principle for achieving two of the three MS-NPAN agriculture outcomes as well as realizing the overall objective of the ADS. Diversification of agriculture production in time and space is also an excellent approach for generating risk mitigated stable income, as well as a strategy for increasing resilience against natural disasters and climate change risks, especially for poorer and marginalized households. Moreover, diversification of production and income sources also contributes to cope with seasonality of harvests, prices, temporary labor, morbidity and investment needs. Myanmar is home to some the most diverse production systems in the region. But rather than exploring this diversity, most public investments in the agricultural sector in Myanmar, up to an estimated 85% of the annual budgets, continue to be channeled towards the development of the rice sector. These investments cover infrastructure development for rice production, research and agricultural extension, and subsidized seasonal loans.
72. This is the result of a legacy of 50 years of Rice Bowl policy, even when overwhelming evidence suggests that rice productivity in Myanmar is much lower and less competitive compared to neighboring countries, and farmer’s net income from paddy production in Myanmar is less than half of that in Cambodia and Vietnam and less than one fifth of that in Thailand (World Bank Public Expenditure Review). In addition, current rice-based farming systems generate significantly less cash for smallholders compared to most other production systems, such as those based on beans, pulses, oilseeds, aquaculture, and a wide range of other smallholder cash crops. Moreover, rice production requires high investments in the sowing season, forcing of farmers to become indebted in the informal system (at high interest rates). With low rural wages, disposable income is largely insufficient to secure a balanced food basket, suggesting the need to improve rural livelihoods, market infrastructure, and the rural credit system. Market exchanges remain constrained, especially in upland areas due to limited infrastructure, natural hazards, and occasionally disputes, limiting seasonal accessibility to diverse food product. Improving the consumption of diverse diets will require joint efforts that improve the availability of diverse foods for self and local-consumption, increase purchasing power, and promote nutrition education.

73. Food plates vary drastically across Myanmar and are often composed of ingredients that are locally produced and available at local markets. Rice continues to account for some 60-65 percent of people's diet throughout the year, but the consumption of other ingredients such as iron-rich vegetables, vitamin A rich vegetables and fruits, or animal protein, depends to a large extent on region and season-specific availability at local markets, and of course on the availability of self-produced and locally-grown food stuffs. It must be noted that porous borders and opening of trading routes are also contributing to a change of diets towards more processed, sugary foods (i.e. nutrition transition).
74. Options for diversification are multiple, but depend significantly on inputs (mechanization, seeds, extension, water access, credit and land). These depend on land use potentials of different agro-ecological zones (often categorized as delta, coastal, dry zone and uplands) and their technical suitability. These include small scale aquaculture, possibly in combination with rice production and chicken/duck raising and fish in delta and coastal areas; beans/pulses in drier parts of the country together with livestock and fodder production; diverse vegetables, green leaves, and fruits in more hilly areas. There is also a large potential for smallholders to produce high-value cash crops for income generation such as all sorts of vegetables, coffee, cardamom, pepper, chilies, turmeric, onion, garlic, mango, ginger, elephant foot yam, etc. Many of these crops are integrated into agroforestry systems in upland and hilly areas, currently managed under customary land systems. A rigorous information system for agriculture, livestock, and fish market is required to track flows (exports and imports of food items) to match production with consumption trends.
75. Planning for diversification needs to be translated into actionable township and village-level plans through improved coordination between sub-sectors and facilitation to incorporate diversification/nutrition considerations into Villages Development Plans.
76. Need for enabling land and land use legislation - The current legal land framework significantly hampers the implementation the ADS' diversification agenda. In fact, the current framework, especially the Farmland Law of 2012, largely facilitates the production of rice, and as such, is not a tool to enable agricultural diversification. The Farmland Law narrowly defines Farmland and refers exclusively to crop land that is permanently cultivated, often with a single crop. Neither the Farmland Law nor any other law unequivocally secures tenure over lands that are not legally classified as "Farmland." These include systems that hold immense potential to contribute to dietary diversity, including village grazing lands, fishponds, home gardens located in rural settlements and villages, most agroforestry systems, and different forms of shifting cultivation. Thus, major reforms are needed to achieve the official recognition of customary land systems, and the acceptance of legal tools to provide legal tenure security over these lands.
77. Because customary systems are not officially recognized, these lands also continue to be legally classified by the government as "fallow or virgin lands." The "Vacant, Fallow and Virgin (VFV) Land Law" facilitates private investors and companies to take up these lands.
78. The National Land Use Policy gives guidance on several major land reform streams to address the contribution of agriculture to nutrition in Myanmar. The first one deals with making tenure security over farmland increasingly unconditional as opposed to prescribing land-use. This entails applying the principle of free crop choice, and by extension, more flexibility for converting different land uses of titled land as farmers

see fit. The second is about extending the limited coverage that the current Farmland Law presents to secure tenure over nutrition friendly agrarian production systems, such as agroforestry, aquaculture-livestock mixes, orchard-annual crops- legumes systems, and shifting cultivation. It is also required to respond to the needs for accessing land and securing land use rights for some specific vulnerable groups, including women (through co-titling schemes) and especially the landless who will depend on agricultural activities for their livelihoods (especially laborers). This can take the form of a land-rights based social protection scheme, i.e. re-allocating unused VFV land to landless people including Internally Displaced Peoples (IDPs).

79. Household-level interventions - Small homestead plots can be conducive for the production of vitamin A and iron-rich vegetables, small fish ponds, backyard poultry, and fruit trees. This can enable households to consume a variety of nutrient-dense foods and also sell some, increasing availability and access at the local level. For landless households, particularly in the uplands, backyard poultry and ownership of small ruminants can offer a good source of petty cash and protein. These diversification activities can reduce idiosyncratic risks, serve as informal economic safety nets during extreme events or disasters, and help articulate the role of women and children in household-level risk reduction.
80. Household level interventions may be part of a social protection scheme or integrated into a community-driven development program, complemented by nutrition education. Extension services in Myanmar will require additional training and while well placed to promote such activities, this intervention will likely be realized with the support of non-governmental organizations. For having successful home garden interventions, at least two requirements need to be met: i) availability of water at the plot level, and ii) sufficient parcel space.
81. Small Scale Aquaculture - Fish is well recognized as a quality animal sourced protein, rich in micronutrients of high bioavailability. As a more affordable and a preferred animal protein, fish plays a vital role in the Myanmar diet and an increasingly important livelihood activity. Using Integrated Household Living Conditions Assessment survey (IHLCA) data, national average fish consumption for 2010 was estimated at 20.72 kg/capita²⁴. Standing at well under half the 50.2 kg/capita fish supply reported in the FAO food balance sheet for 2010 (FAO 2015). This highlights the importance of monitoring production and consumption in order to assess the contribution of fish to food and nutrition security in Myanmar.
82. Disaggregating fish consumption from the IHLCA by wealth quintiles, total annual fish consumption per capita among the wealthiest 20% of the population is more than double than that among poorest 20% (28.22kg vs. 7.57kg). Inequality in consumption between rich and poor is greatest for aquaculture fish, where average consumption per capita is around six times higher among members of the wealthiest quintile than among those in the poorest 20% of the population (4.68 kg versus 0.77 kg)²⁵. This trend emphasizes the nutritional risk for vulnerable populations. Combining large with small species in inland fish ponds can support households to regularly access a nutrient-rich source of food (particularly small fish that can be eaten whole). This practice, combined with training of farmers and extension workers in efficient and

²⁴ So-Jung Youn, Jessica Scott, Joanna van Asselt, Ben Belton, William W. Taylor, Alexa Lupi (2018, In press, Investigation study in development) Determine the Role of Wild-Caught and Aquaculture-Based Inland Fisheries in Meeting Burma's Nutritional Needs

²⁵ So-Jung Youn et al.

effective aquaculture methods, safe production practices, along with basic nutrition education and promotion of dietary diversity can further strengthen behavior change to improve human nutrition.

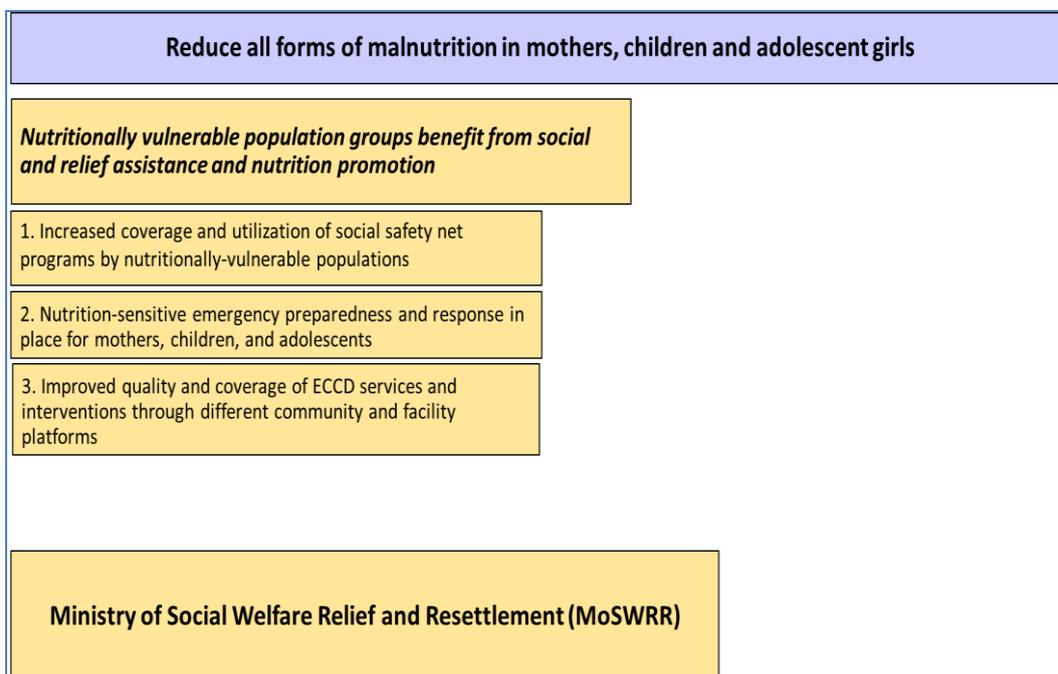
83. As livelihood enhancing activities, small-scale aquaculture and rice-fish systems have huge potential. There is evidence to suggest that aquaculture may generate up to 3.6 times higher earnings per acre than crop farming²⁶. Small-scale aquaculture activities can be implemented in several ways to help address very specific household nutrition needs and production/income challenges. Small and nutrient-rich species can easily be promoted; short-cycle species can be produced in communities that have shorter water availability periods (e.g. shorter rainfall periods); and high-value commercial species can be cultured as an individual or community-based undertaking and significantly enhance income flows. Rice-fish systems, on the other hand, have the potential to diversify household production and increase income while at the same time reducing chemical inputs use and risk exposure and allowing for the cultivation of small species for consumption. However, as most fishponds emerge from converted paddy fields, owners often find themselves in a precarious and insecure land tenure situation.
84. Livestock production - Animal-sourced foods (ASF) including meat, eggs, and dairy products are a rich source of protein, vitamins, iron, calcium, and folate. Livestock raising is an important livelihood in Myanmar, especially in the Central Dry zone. However, in a Buddhist majority area, taking the life of an animal is not traditionally practiced, whereas meat consumption is common (except for beef). Therefore, meat is almost exclusively sold and purchased. Even self-raised eggs are seldom consumed as they are kept for hatching. Increasing the consumption of animal-based foods will likely depend on income generation and market infrastructures, including food safety of animal-based products. Income derived from livestock raising is an important driver for improving access to a nutritious diet, if complemented by nutrition education.
85. The potential for livestock raising in Myanmar is unrivalled given the insatiable market for animal-sourced foods across all borders. If pro-poor (targeting landless, marginalized peoples and women), support to livestock raising can serve as an effective means for poverty alleviation. Raising of small animals, such as pigs and chicken, can be a lucrative small business and serve to supply the local market with animal-sourced foods, improving access to a locally-preferred nutritious diet. It is noted that most village/community grazing lands were converted into other land uses. The production of fodder on farmland faces some regulatory problems as this land use is not considered as legal land use class under the Farmland law.
86. Food safety - With the above envisaged enrichments to household dietary patterns and diversification of livelihoods, as well as increased trade activity, it is therefore important that the entire range of risks to the food chain are understood and addressed in an integrated and interdisciplinary way. This will require collaboration among experts in animal and aquatic health, food safety, human health and nutrition, plant protection, communication and emergency response (i.e. food chain emergencies). Overall, Myanmar is lagging in the development of food safety standards, regulations, and infrastructure. With the opening of the country in 2012, there has been a rapid influx of new goods and a change of lifestyles including food preferences and habits, driven by rapid urbanization and exposure.
87. The burden of unsafe food in Myanmar is estimated at USD 500 to 700 million (World

²⁶ Ben Belton, Ame Cho, M. Filipski, C. Hu and D. Boughton. Powerpoint presentation on Aqua-Agricultural survey in Yndon and Ayeyawaddy – Findings and policy implications, 2017

Bank 2017). Diarrhea, which can be caused by consumption of contaminated food, is the fourth leading cause of morbidity in Myanmar and is a risk factor of acute and chronic malnutrition. While regulations exist, enforcement is a challenge, especially given that much of food production and exchange in Myanmar occurs in the informal sector.

88. The implementation of various measures, such as GHP/GAP/GMP and Hazard Analysis and Critical Control Points (HACCP) in food businesses is critical to ensure better food safety and quality standards in domestic market areas as well as compliance with the Myanmar Pesticides Law. It is therefore important to trace the different problems/barriers to food safety along the entire supply chain continuum. The number of standards need to be expanded over a wider range of foods, and capacities strengthened to support households to comply with standards and conduct routine food safety tests. Clean water is a prerequisite for food safety. Improving access to potable water is an important intervention to complement WASH education.
89. Training on nutrition sensitive agriculture- In order to translate national objectives into sub-national realities, capacity strengthening of township and extension staff is required. Departing from business as usual will require long-term capacity strengthening of key decision makers on how to realize key objectives of the ADS on food security and nutrition at State and Region level and secondly, train extension staff from each sub-sector (livestock, fishery and crops) about the importance of dietary diversity. A module would ideally be included into existing extension curricula.

Ministry of Social Welfare, Relief and Reconstruction



90. The key result from the MoSWRR will be to support nutritionally vulnerable population groups to benefit from social and relief assistance and nutrition promotion through three key outcomes. These will be implemented by the Departments of Social Welfare, Relief and Resettlement. The National Social Protection Strategic Plan identified eight flagship programmes to extend social assistance to vulnerable populations which contribute to improved nutrition. These include cash transfers to encourage participation in social and behavioral change

communication (SBCC) sessions on nutrition. Global evidence has demonstrated that when such cash transfers are provided together with nutrition messages delivered via interpersonal communication (IPC), community mobilization, and mass media engagement, it is possible to stimulate rapid changes in dietary practices, health service utilization and leveraging of care resources.

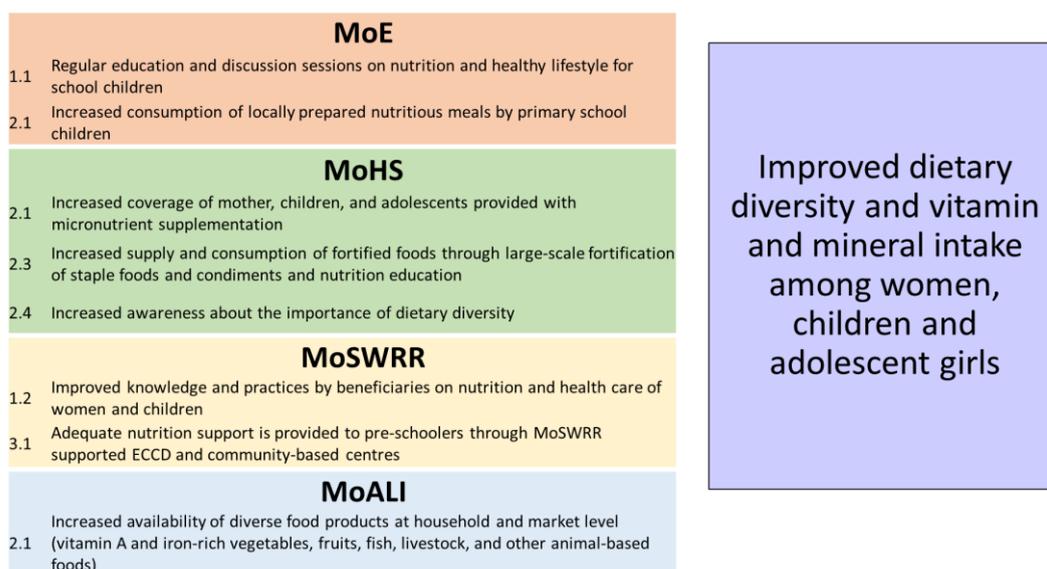
91. The MoSWRR will work closely with the MoHS to leverage social welfare programs to stimulate the demand for health and nutrition services, increasing the purchasing power for diverse diets, and enabling women to have better access to health services, including travel to health facilities. There is already a national plan in place to scale-up maternal child cash transfers (MCCT) as a key component of the National Social Protection Strategic Plan (2014) which will be financed under different mechanisms, and aspirations of the MS-NPAN will be to assure that these efforts are purposefully linked to the improvements in nutrition through strengthening nutritional promotion and underscoring the complementarity of the interventions to have the greatest impact.
92. Social safety net programs will have the greatest likelihood of achieving nutritional impact by targeting beneficiaries when they need nutrition the most, such as during the first 1000 days. These programs will target all pregnant and lactating women and children under 2, for whom additional resources may help afford more diversity of foods, but also expand the demand for and utilization of health services and care resources.
93. The MoSWRR is also responsible for the overall coordination (preparation and management) of responses to emergencies and will aim to expand the nutrition component of its interventions. This may entail a mapping of stakeholders and community groups which can be leveraged in cases of emergency. It would also entail ensuring that relief efforts are adequate to protect and support the nutritional needs of affected populations, including women and children. This may include the distribution of fortified nutritious foods or micronutrient supplements in the food ration and working with other sectors like to ensure affected populations, especially women and children, have safe and hygienic spaces for breastfeeding and complementary feeding, and that livelihoods are protected so women and children can continue accessing and consuming a diversified diet. To achieve these outcomes, coordination mechanisms between MoSWRR and relevant Ministries will need to be supported and relevant capacities strengthened to ensure nutrition sensitive emergency and disaster relief efforts are delivered.
94. Early Childhood Care and Development is critically linked to positive nutrition outcomes as well as to healthy cognitive and emotional development, which have long-term impacts on children's future abilities to be productive and emotionally healthy adult members of society. Good nutrition is needed for healthy brains and bodies to develop, and so is appropriate care and stimulation. MoSWRR will work together with other sectors (especially MoHS and MoE) to strengthen the ECCD components of existing health, nutrition, and social protection services for all children 0-5 months of age, and especially for young children in the 1,000-day window of opportunity. Entry points for ECCD services can include existing health and IYCF counselling services, cash-transfer sessions, preschools and government ECD centers. Key elements of ECCD include raising caregiver awareness of early stimulation and nurture, age-appropriate developmental milestones, positive discipline, etc.

Harmonization and Complementarity of Interventions Between Sectors

95. While the work to be undertaken by the individual Ministries is important and will invariably lead to important outcomes, it will be the geographic convergence and complementarity of interventions which will make the most significant contribution towards the MS-NPAN goal (Figure 12). As one example, depicted in the figure below, the improvement in dietary diversity and consumption of critical vitamins and minerals in the diet cannot be achieved by one sector alone. Rather, the MS-NPAN will bring together the collective inputs from:

- MoE to provide nutritional education sessions and increase the consumption of locally prepared foods,
- MoHS through expanding and increasing the coverage and supply of micronutrient supplements and fortified foods together with increasing awareness among caregivers and enhancing health-nutrition literacy, which includes dietary diversity,
- MoSWRR to increase the knowledge of beneficiaries of MCCT through behavior change communication (BCC) and nutritional support to preschool children participating in ECCD programs, and finally
- MoALI who will increase the supply and production of diverse foods products with micronutrients at the household and market level.

Figure 12. Key Strategic Contributions from different Sectors towards improved dietary diversity (Numbers indicate the sector-specific outputs)



96. There are several other similar areas of program synergy, such as through the collective contributions towards the reduction of childhood illness by the MoHS to improve immunization service delivery and providing deworming tablets which will be reinforced by promotion of safe water, sanitation and hygiene (WASH) in schools by the MoE and improvements in food safety along the value chain to be implemented by the MoALI.

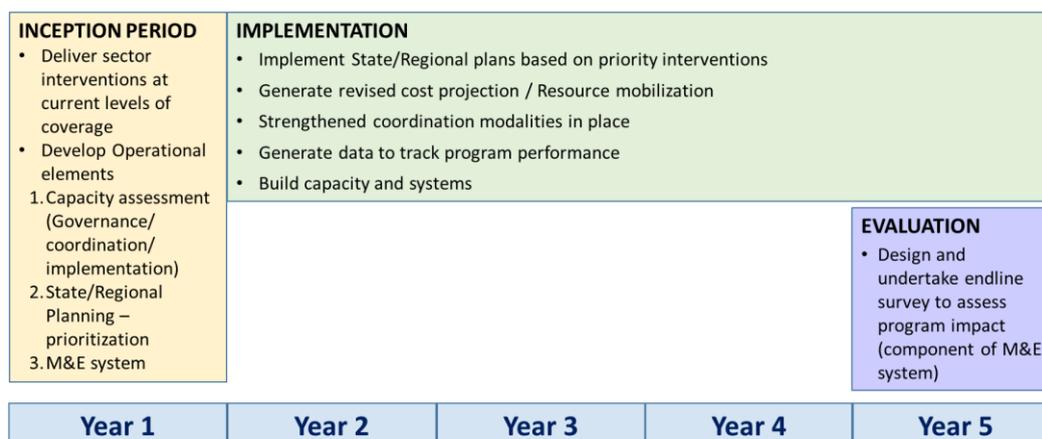
97. An important feature of the MS-NPAN is that there will be shared and common outcomes and indicators across sectors, which implies that no one sector is singularly responsible to achievements, but rather there will be shared accountability. This convergence of activities will require promotion, coordination and robust data to

demonstrate how the respective sectoral actions are contributing to improve nutrition and will help to make the case for the added value of the multi-sectoral approach.

IX. Inception Period - Overview

98. The inception period for the MS-NPAN will take place between 1 October 2018 and 30 September 2019 and will further define the overall structure and critical operational elements of Key Result Areas 5 and 6 for the effective management, financing, implementation, and monitoring of all interventions and activities. Because of the multi-sector approach, it will be particularly important to develop mechanisms which will facilitate collaboration, accountability and understanding between different stakeholders, and to generate data and evidence to help guide the process. These require deliberate focus and effort and will be part of a series of actions to be carried out during the inception period. Furthermore, the MS-NPAN will be adapted to the specific characteristics and needs of each of the States/ Regions through a series of workshops that will result in the development of sub-national plans based on intervention prioritization. This prioritization exercise will define a 'package' of priority interventions to be deployed and scaled up for each State/Region in the country.
99. The inception period will entail a series of three complementary streams of work which are elaborated on the sections below and will include:
- [Capacity Assessment and Capacity Development Plan, including a\) Governance and Coordination Capacity at the Union level and State/Regional level and b\) Implementation Capacity at Program Delivery level](#)
 - [State/Regional Prioritization and Planning](#)
 - [Monitoring and Evaluation Systems Development](#)
100. In addition to these three streams of work, there will be a significant drive during the inception period to secure the needed funding commitments from domestic channels (High level Government commitment, as well as from each of the involved sectors), donors, development partners etc. To facilitate this, the Ministry of Planning and Finance and DACU will explore opportunities to secure fixed commitments and mobilize additional resources for the MS-NPAN.
101. The overall cost to carry out the inception period activities is estimated to be approximately MMK 1.815 billion (US\$ 1.3 million). A timeline which highlights how the inception period activities align with the broader MS-NPAN is presented in Figure 13 below. A more detailed plan of action and proposal of the inception period activities will be developed by NNC with the intention of mobilizing funds for the inception period and commencing preparatory activities in August 2018.

Figure 13. Timeline for the MS-NPAN



A. Capacity Assessment and Capacity Development Plan

102. A Capacity Assessment (CA) exercise was initiated as part of the MS-NPAN planning process to review Myanmar’s ability to coordinate, implement, and monitor the MS-NPAN. The first stage of this assessment, which commenced in July 2018, has been a quick initial CA, focusing primarily on coordination and governance at the central level. This exercise is expected to be completed by the end of August 2018 and will provide initial impressions and options for central level coordination. The second stage of CA, lasting one year during the inception phase of the MS-NPAN, will be a more comprehensive exercise that considers both coordination and operational capacity at the national and sub-national levels. Finally, a third stage of CA will extend beyond assessment, and begin to translate the key observations and recommendations into broad nutrition capacity development efforts which will be a continuous process that includes oversight, recruitment and training.

103. The Capacity Assessment adopts the methodology and tools recommended by the SUN UN Network Guidelines and Toolkit (2016). That methodology recommends the consideration of four capacity areas: (i) Policies, programmes and frameworks; (ii) Resources and infrastructure; (iii) Coordination and partnerships; and (iv) Evidence-based decision-making. The stage 1 of the CA exercise focuses primarily on the coordination and partnerships aspects but does consider the broader aspects of nutrition capacity as well. Stage 2 will cover the other three areas as well, comprehensively and at all levels. As per the SUN UN Guidelines, the following issues are being considered by the CA exercise in stage 1 and have been analyzed based on a series of key informant interviews with several stakeholders representing different Ministries and Development partners.

Coordination and Partnerships	
Coordination of nutrition actions at all levels	<ul style="list-style-type: none"> ▪ Existence of an institutional set-up to coordinate multi-sectoral nutrition actions with relevant stakeholders at all levels (e.g. MSP) ▪ Evidence that there is coordination around nutrition at sector level ▪ Evidence that coordination mechanisms are functional, strategic and effective ▪ Adequate representation and participation in relevant nutrition coordination meetings at all levels ▪ Adequate government-led secretariat functions supporting multi-sectoral and multi-stakeholder coordination at all levels ▪ Internal stakeholder networks coordination (e.g. government, CSO, UN, academia, donor, business) ▪ Mechanisms in place to foster information-sharing between partners (e.g. good practices) ▪ Establishment of procedures for preventing and managing conflicts of interest to safeguard public health and nutrition in the engagement with stakeholders
Partnerships, collaborations and alliances	<ul style="list-style-type: none"> ▪ Existence of a culture of formal and informal consultations and incentives for collaborative actions ▪ Partnerships, collaborations and alliances developed with key actors (including the media) ▪ Relevant personnel in place with networking skills to support collaborations and partnership building at all levels

104. An essential management proficiency for the MS-NPAN will be the ability of the sectors to collaborate and to leverage the complementarity of different interventions, as well as to implement activities at the community level. This requires the design and endorsement of mechanisms for high level coordination and programmatic oversight, to assure that the different activities which the sectors have agreed to in their planning are being implemented in a quality manner, and in cases where there are challenges or bottlenecks identified, appropriate remedial measures can be taken. Good governance will be an integral component to the successful implementation of the MS-NPAN as it provides the necessary enabling environment for program implementation, scale-up and sustainability. Good governance is also important to sustain political will and Government commitment, ensure accountability and generating the confidence required to increase allocation of financial and human resources.

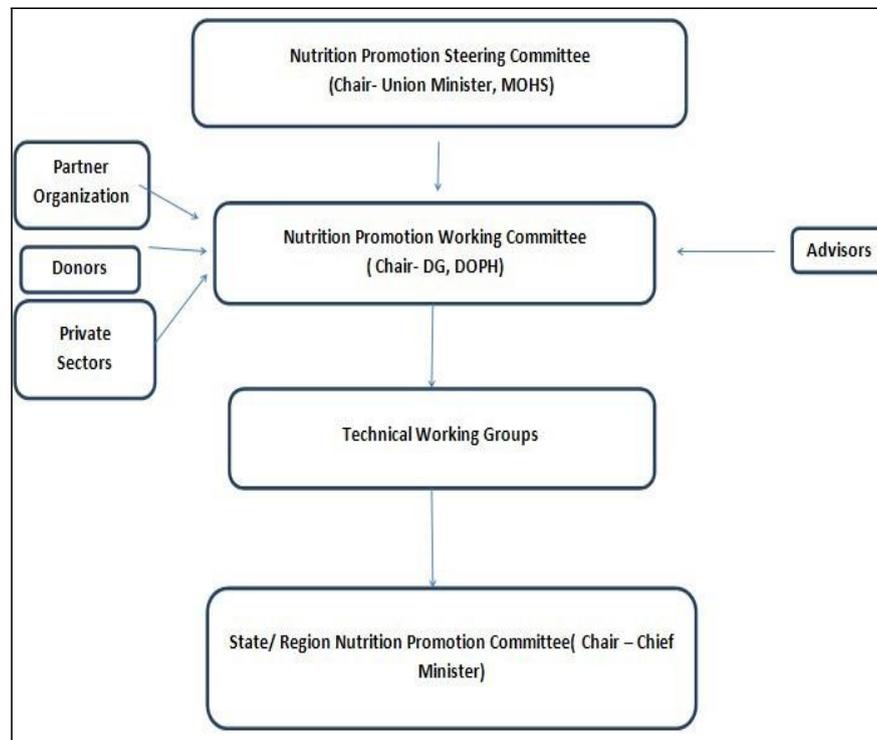
105. Overall planning and coordination is critical to align implementation of the MS-NPAN to achieve far greater results than what any one single sector could achieve alone. In Myanmar, multi-sectoral collaboration is required at several distinct administrative levels: Union, State/Regional and Township.

106. Ensuring accountability is particularly important to keep each of the sectors on board and providing the inputs and resources which had been committed. This requires that roles and responsibilities are clearly defined and that different actors are provided with ample political support to carry out their functions as effectively as possible. The key actors across these domains include the Development Assistance Coordinating Unit (DACU), National Nutrition Centre (NNC), Government Ministries, Development Partners; Civil Society Organizations (CSO) including NGOs; the Private Sector, and communities.

107. One of the follow up actions after the high-level meeting at Pakokku was the formation of a National Nutrition Steering Committee (NSGC) which is under the direct umbrella of DACU. Another follow up action was the formation of Nutrition Promotion Steering Committee (NPSC) which was followed by formation of a Nutrition Promotion Working Committee and Technical Working Groups (Figure 14). The Steering Committee includes 7 members with the Union Minister for Health and Sports serving as Chair, and the Union Ministers for Social Welfare, Relief, and Resettlement, Education, and Agriculture, Livestock and Irrigation as members. The

Director General (Department of Public Health) is secretary, and the Director General (Department of Planning) from the Ministry of Planning Finance and the Deputy Director General (Department of Public Health) are joint secretaries.

Figure 14. Coordination Mechanism for Nutrition Promotion



108. The Nutrition Promotion Steering Committee (NPSC) is responsible for the overall development of policies and regulations related to nutrition improvement, monitoring and guidance of the strategies, planning and implementation of nutrition programs, ensuring coordination with related sectors, fund raising and proper resource allocation and supervision and provision of guidance on the activities of working committee and technical groups.

109. The Nutrition Promotion Working Committee (NPWC) will include 17 members including the Director General (Department of Public Health- SUN Country Focal) serving as Chair while members are the Director General (Department of Agriculture); the Director General (Livestock Breeding and Veterinary Department); the Director General (Department of Rural Development); the Director General (Department of Basic Education); the Director General (Department of Social Welfare); the Director General (Department of Disaster Management); the Director General (Department of Planning Development); the Director General (Central Statistical Organization); one representative of the SUN UN Network (alternate Chair); one representative from DIFD (as SUN Donor Convener); one representative from the World Bank Group; two representatives from Civil Society Network (SUN CSA); the Deputy Director General (Department of Public Health) as Secretary; and the Director and Deputy Director of the National Nutrition Centre as joint secretaries.

Lessons learned on Multi-Sector Nutrition in Myanmar

Since 2015, Myanmar SUN movement has established a multi stakeholder platform (SUN MSP) with work plan following the SUN-recommended strategic approach. Nutrition Stock Taking-2016 and this MS-NPAN were the result of multi-stakeholder's effort in SUN-MSP. The Chair of SUN-MSP, DG-DOPH as SUN Country Focal, becomes chair of NPWC in the structure of the recently established highest Governance/Coordinating body, the "DACU". SUN-MSP will be adapted into the new structure.

The Ministry of Health and Sports, as the Focal Point for SUN, initiated a sub-national multi-sectoral nutrition plan in 2016 known as the "Integrated Program for Nutrition Improvement (IPNI)" in Kayin State and expanded to and Chin State and Magway Region within two years. The IPNI includes 3 main components including: 1) Nutrition-specific Interventions, 2) Nutrition-sensitive Interventions, and 3) Inter-sectoral Coordination involving all related ministries and sectors. The IPNI has provided some initial experiences in multi-sectoral nutrition program design and implementation and has underscored the need for robust planning and the use of data to track implementation, expenditures and enable mid-course modifications, as required. The design of the MS-NPAN has leveraged these experiences and examined how to further strengthen and expand sub-national coordinating structures and formalize links with the national level NPSC and NPWC.

110. The NPWC is responsible for providing guidance and support to the operationalization of the MS-NPAN at the national and sub-national levels, strengthening linkages between sectors, reviewing funding and shifting resources as required. The NWCNP will facilitate negotiation and collaboration with national and international experts to make sure that the MS-NPAN is rooted in the most robust scientific evidence, will form technical working groups at the central level and state/region level to disseminate best practices, increase awareness about the importance of nutrition, track progress of implementation by identifying the monitoring and evaluation indicators, and report to the NPSC on a quarterly basis.

111. Initial impressions from the Stage 1 Initial Capacity Assessment, based on interviews conducted as of the submission of this plan to DACU, are presented as [Annex 1](#).

Coordination and Partnerships

Union level

112. There is an existing multi-sector coordination platform (the NSGC) under DACU and this should be made operational and effective. NNNC has been providing effective secretariat support to the NSGC (which has been the force behind the preparation of this MS-NPAN through a broad-based participatory process). The inception phase CA will review the strengths and limitations of the currently proposed National Governance Structure and provide recommendations to the government regarding necessary modifications to meet these needs. This question is currently under discussion within the Government, and the CA exercise is also examining it.

State/Region level

113. A new coordination mechanism will need to be developed for the MS-NPAN, ideally under the State/Regional Chief Minister or Social Minister, who has the mandate to convene all partners to review plans, identify opportunities for synergy and alignment, and recommend adjustments to costs. It is important to review the current IPNI coordination mechanisms in Kayin, Chin and Magway (see Text Box page

34) and take lessons from that experience. The Stage 2 of the CA exercise will aim to address this issue in close consultation with the State/Region level stakeholders.

Township level

114. Perhaps the most critical level where synergies across sectoral interventions must be obtained to ensure maximal effectiveness of the MS-NPAN is the Township level. Managers and implementers at Township level and below of the 4 sectors who carry out ground-level implementation of these interventions need to work in harmony, avoiding duplication and contradictions. The General Administration Department (GAD) under the Ministry of Home Affairs plays a major role in coordination and it will be important to consider what role they can play in support of the MS-NPAN implementation. The mode of operations of Township coordination in IPNI should be reviewed. The Stage 2 CA exercise will delve into this level of coordination as well.

Ward/Village Tract Community level

115. There are currently many committees operating at the Ward/Village Tract level, and there is a need to organize these more systematically and identify how to encourage better alignment and collaboration between sectors. This is particularly critical since this is the level at which the program interacts with the intended beneficiaries, so improved coordination will translate to improved efficiency and performance. The experience of the Burnet Institute's Village Coordinating Committee and Mother Support Groups for Newborn Care should be reviewed as a potential model.

Key Actors of the MS-NPAN

116. The key implementers of MS-NPAN will include Government Ministries, Departments and Agencies (MDA); State/Regional Government Authorities; Development Partners; Civil Society Organizations (CSOs) including NGOs; the private sector; and communities. The specific mandates and functions of each of these actors relevant to MS-NPAN are described below:

Development Assistance Coordination Unit (DACU)

117. General responsibilities for DACU: i) Provide policy guidance on how the overall national response to nutrition should be coordinated, including ensuring effective contribution by Ministries, Departments and Agencies to the MS-NPAN, ii) Support the multisectoral response to nutrition and ensuring that Nutrition is adequately mainstreamed in policies and strategies of the key line ministries, and iii) Provide oversight for governance and accountability of all sectors and actors in nutrition. Additional responsibilities of DACU are to: identify priority projects and programmes for development assistance; draw up a national policy for development assistance; review and revise the existing Sector Working Group structures, so as to ensure better coordination at Sector-level; support the Economic Committee in reviewing potential loans and major grant and technical assistance projects; and identify and where possible to resolve 'implementation constraints' to the effective delivery of development assistance.

National Nutrition Centre

118. General responsibilities for NNC: i) Provide overall technical assistance and support to all aspects of the MS-NPAN, as the Secretariat for NPWC, ii) Coordinate and closely monitor MoHS activities (nutrition-specific interventions) of MS-NPAN to be carried out by relevant Divisions such as EPI, Child Health, Maternal and reproductive health, School Health, Water Supply and Sanitation, and iii) Report on the overall progress of implementation, prepare routine reports of the MS-NPAN and exchange data with each line Ministry.

Ministries and Departments

119. General responsibilities for all line Ministries: i) Ensure that the sectors priority interventions outlined in MS-NPAN are adequately reflected in Ministry policies, strategic plans, programs, legislation, regulations and guidelines; ii) Identify, mobilize and allocate human, financial and organizational resources to the MS-NPAN; iii) Report on the implementation of their nutrition interventions done in the context of the MS-NPAN to NNC; and iv) Collaborate with NNC, other key sector line ministries and actors to realize the MS-NPAN goals, objectives and targets.

Development Partners

120. There is a significant role to be played by the United Nations (SUN UN Network for Nutrition including REACH, WFP, WHO, UNICEF, UNFPA, UNOPS, World Bank, FAO and UN Women), SUN Donor Network with bilateral donors, DFID acting as Donor Convener, civil society organized as SUN CSA, and development partners in influencing and raising awareness through advocacy at the highest level of government, resource mobilization and provision of technical assistance and implementation support aligned with the MS-NPAN. There are several critical partners who will be integral to the success of the MS-NPAN. These include UNOPS with its two trust funds: Livelihoods and Food Security Trust Fund (LIFT) and the Three Millennium Development Goal Fund (3MDG), among others.²⁷

Key Actions to take place in Inception Period (FY 2018-19)

121. With regard to capacity assessment, the following activities will be carried out during the inception period to further establish key principles and operational requirements for Governance at all levels:

- Define principles of coordination, governance and accountability (Develop Terms of Reference for different institutions).
- Decide on an appropriate multi-sectoral institutional home for MS-NPAN, with the necessary authority and mandate, and design an effective mechanism to provide oversight for MS-NPAN.
- Identify short-term human resource capacity gaps that must be filled within NNC in order to carry out all the activities envisaged for the Inception Period (FY 2018-19); develop TORs for Technical Assistance (TA, international and national) to fill specific human resource gaps, mobilize financing and procure such TA with support from Development Partners.
- Carry out Stage 2 of the Capacity Assessment in order to review comprehensively all capacity aspects in the national and sub-national levels across the country; identify gaps and develop a capacity development plan to prioritize those areas that need to be addressed for effective implementation, monitoring and coordination of MS-NPAN. The review of implementation

²⁷

LIFT is a multi-donor fund established in 2009 to improve the lives and prospects of smallholder farmers and landless people in rural Myanmar. LIFT is working to ensure that Myanmar's rural economic transformation is inclusive. LIFT's activities lead to improved food security and help people to cope better with shocks and setbacks. The 3MDG Fund strengthens the national health system at all levels, extending access for poor and vulnerable populations to quality health services. The 3MDG Fund has a significant, timely and nationwide impact improving maternal, newborn and child health, and nutrition, and strengthens the health system to deliver sustainable, efficient and responsive healthcare across Myanmar. Both LIFT and the 3MDG are managed by UNOPS. Finally, the Myanmar Civil Society Alliance (CSA) strives to form a functioning cross sectoral alliance of CSOs to ensure a voice is given to a range of small, independent, regional and national organizations to further the aims of the Scaling Up Nutrition movement.

capacity will be particularly important in Stage 2 so as to gain a more realistic impression of the systems, infrastructure and manpower in place to deliver interventions across sectors at the community level. The current proficiencies and understanding will be assessed, and recommendations put forward to strengthen these, where required. Such implementation capacity is imperative to assure the successful delivery of activities and sustain progress.

B. State/Regional Prioritization and Planning

122. The design of MS-NPAN focuses on the convergence of a series of high impact nutrition-specific and nutrition-sensitive interventions which will be deployed by four sectors to achieve the greatest nutritional impact. Obviously, one approach to reduce malnutrition in accordance with the global targets²⁸ would be to simply increase the reach and coverage of all identified high impact interventions across the country. However, the reality is that there are distinct social, cultural and economic conditions in each State/Region which influence and contribute towards the different manifestations of malnutrition, and thereby require distinct actions.
123. The MS-NPAN will be adapted to the specific conditions and characteristics of each of the fifteen States/Regions in the country. Priority interventions will be reviewed based on the extent to which they address the most critical local risk factors contributing to the burden of poor nutrition, and if delivered and scaled-up, will have the greatest likelihood of impact. Such prioritization is critical to assure the most efficient use of resources and achieve maximum impact on intended beneficiaries. Such prioritization intends to provide planners, implementers, development partners and stakeholders with the analytical information which will enable (a) prioritization of States/Regions for scale-up actions, (b) development of "packages of essential interventions" unique to each State/Region for scale up, and (c) the establishment of criteria for the prioritization of high-risk groups, through "beneficiary targeting". To help guide this exercise, some preliminary work has been undertaken as part of the MS-NPAN to develop the tools and templates which will enable the key decisions to be taken for sub-national planning.
124. The prioritization analysis has been based on the sector-specific log frames, which detail key outcomes, outputs and most importantly, priority interventions, as summarized below. In total, some 71 interventions have been identified across the four sectors, contributing to 16 outcomes, as summarized below:

²⁸ WHA-2012 nutrition targets

	MoE	MoHS	MoALI	MoSWRR	Total
Outcomes	3	7	3	3	16
Interventions	4	34	24	9	71

125. The first step in the process was to review the key interventions which are included in the MS-NPAN sector-specific log frames and determine how each could address the main underlying and direct causes of different types of malnutrition outlined in the MS-NPAN [Conceptual Framework](#).

126. The second step was to craft indicators associated with each of the ten identified underlying causes. A total of 26 indicators were defined (as in Table 2), and in each State/Region each indicator was classified as 'High' or 'Low' according to globally recommended cut-offs. For those parameters where there was no recommended cut-off, 50% level or the "Union average" was used to determine the level of risk.

Table 2. Key Indicators for the 10 underlying causes included in the MS-NPAN Conceptual Framework

1. Food insecurity	1 % HH with Food Poverty 2 % HH with acceptable Food Consumption Score
2. Lack of social safety net	3 Poverty Gap as indicator for need of social safety net 4 Risk of natural disaster
3. Poor dietary Diversity	5 Children consuming Iron Rich Food 6 Household coverage with iodized salt
4. Sub-optimal Breast feeding and complementar	7 Breastfeeding within 1 hour of birth 8 Children fed with Minimum Acceptable Diet
5. Poor parental Education	9 Population aged 25 year and over completed at least secondary education level
6. Lack of Women Empowerment	10 Women participation in HH Decision Making 11 Life Expectancy Ratio Female to Male 12 Women education attainment at least secondary level
7. Early pregnancy/Low birth spacing	13 Teenage Pregnancy 14 women with Birth Intervals < 24 months
8. Unsanitary environment and practices	15 Rural Households access to Improved water sources 16 Rural Households access to Improved sanitation facilities 17 Households with hand washing practices
9. Poor Health Demand/ Poor health services	18 AN care - % receiving from skilled workers 19 % Delivery in health facility 20 % HH facing problems in health care access 21 % Townships below optimum health access point and work force 22 Maternal Health services (# townships with below satisfactory MHI) 23 Child services (# townships with below satisfactory CHI)
10. Poor immune system	24 Vaccination Status (% children received all basic vaccinations) 25 ARI status (% children with Acute Respiratory Infection) 26 Diarrhea status (% children with Diarrhea)

127. The third step was to review the key "high risk" causes in each State/Region, as reflected by the associated indicator(s) and to quantify the number of "high risk" underlying causes in each State/Region. This step helped (a) propose the most appropriate "package" of interventions which needed to be in place to effectively

address undernutrition in each State/Region, and (b) categorize which 'levels' of implementation of the different interventions would be required, e.g. "scale-up", "investigate", "monitor" or "maintain". Preliminary results of this prioritization work are presented in [Annex 2](#).

Key Actions to take place in Inception Period (FY 2018-19)

128. During the Inception period, this initial experience with prioritization will be further reviewed and a methodology will be developed to guide a series of individual State/Regional workshops. The approach will consider how to leverage small area estimates to guide decisions on geographic targeting and incorporate basic tools of cost: benefit and cost-effectiveness analyses, where available. The objective of these workshops will be to undertake a systematic background analysis of the major nutrition problems and the key causes, to identify the optimal 'package' of interventions. This work will be carried out concomitantly with the Stage 2 CA exercise which will assess coordination mechanisms, systems infrastructure and implementation capacity so that the viability of delivery and achieving high levels of coverage will be considered. An additional dimension which may be considered would be the feasibility of targeting interventions to beneficiaries by focusing on those most affected. The process for this sub-national prioritization will be a unique feature of the MS-NPAN.

C. Monitoring and Evaluation System Development

129. The third stream of work in the inception period will be to develop a comprehensive Monitoring and Evaluation (M&E) system. This essential component of the MS-NPAN is the periodic review of program implementation for improving performance, enhancing transparency and accountability, and estimating impact. The collection and analysis of robust data is particularly relevant for the MS-NPAN given the complexities and involvement of multiple sectors coming together with the aspiration of achieving complementary results and attributing such results to the contributions of different interventions and program elements.

130. For the MS-NPAN, the preliminary foundation for M&E was developed according to a Logical Framework Approach (LFA) which defined key indicators and performance expectations. Logical frameworks serve to clarify the objectives of a program, based on causal linkages between interventions, outputs, outcomes and impacts. The development of an initial series of sector-specific logical frameworks was performed in the design of the MS-NPAN which included the specification of indicators which, if collected, would help measure the performance of the program. Indicators were discussed and selected among the sector focal groups also to help establish targets for the program, which include estimation of the current or baseline level as well as an anticipated level at the end of the program period. As such, these indicators and projection estimates provided the basis for the scaling up scenarios for different interventions as part of the MS-NPAN planning process and were included in the costing calculations.

131. M&E systems should always be designed so that data can be analyzed and used to improve the quality and design of a program by providing a comprehensive description of the program's activities, reviewing progress and taking timely corrective action. For the MS-NPAN, the indicators to track the implementation of interventions will form the basis of the routine process monitoring and will help MS-NPAN program managers keep track of the status of their delivery. For the evaluation of the MS-NPAN, indicators at the outcome and impact level will be measured to determine overall results, and attribute any changes observed among key parameters

to exposure to the different interventions.

132. While the specification of an initial series of indicators and proposed results was important as part of the design of the MS-NPAN, a more comprehensive process is required to design a practical and operational M&E system and will take place during the inception period as outlined below.

Key Actions to take place in Inception Period (FY 2018-19)

Finalization of logical frameworks

133. As the program shifts from design to implementation, the NNC will work with each of the sectors to develop operational guidelines for M&E. Using the draft logic frames, there will be a systematic review of each of the proposed indicators in the logical frameworks, with attention to their definition, e.g. clarification of numerators, denominators and calculation. The basic principle is that an indicator should be simple, measurable, accessible, robust, and a timely marker of progress. As above, indicators of “process,” which are used to monitor the effective implementation of activities are distinct from indicators of “effect,” which assess the immediate and long-term impact of interventions at the level of outputs and outcomes. Process indicators generally derive from routine program management data, while impact indicators are generated through several sources, typically stand-alone surveys, as detailed below.

134. Once the indicators have been refined, the next step will be to determine the source of data and who and how the information will be collected, starting with the existing sector-specific information systems. Ideally, many of the key performance indicators can be generated using the routine data collection systems of the individual sectors, as long as they are reliable. Each sector has ongoing data collection systems but there are major constraints and limitations which need to be reviewed and addressed. The key challenges include:

- Human resource shortage
- Inadequate infrastructure and hardware, including tools that could expedite and improve data management and transfer
- Low budget allocated for M&E (not getting prioritized in budget allocation)
- Systematic reports of ongoing programs and routine activities are uncommon (evaluation is done more commonly in projects assisted by DPs)
- Capacity for analyzing and utilizing data for decision making at the implementation level and not just for transmitting to the next level
- Reported data are not adequately verified for several reasons including limited budget
- Insufficient awareness on the reliability of data and importance of M&E even when reports are submitted, there is usually no analysis, feedback and instructions coming from the higher levels with recommendations for program improvement
- No integration of data (e.g. reports/data on projects implemented by NGOs are not regularly integrated into the Government’s information system)

135. In cases where routine data may not be employed for the collection of any of the indicators, alternative data collection modalities will be considered, such as sentinel surveillance or period rapid surveys. In the Inception year, several concrete steps will be taken to establish and refine the scope and functionality of the MS-NPAN M&E system, including:

- Mobilize resources to strengthen the M&E system
- Advocate decision makers to earn commitments for more budget allocation for M&E

- Transition to electronic systems using mobile technology, routine analytic software with reporting that has direct program relevance
- Design of dashboards which present key performance indicators which can be reviewed as part of annual program reviews and trigger discussions about where program modifications may be required

X. Empowerment of communities to invest in good nutrition

136. Beyond the key operational issues outlined above, an important element of the MS-NPAN will be to focus on the human, institutional and organizational functional capacity for the delivery of nutrition services and interventions at the community level. Encouraging local ownership of nutrition programme and their outcomes will be important to assure high demand and utilization of services. Since malnutrition occurs at the individual/household/community level, focusing actions and encouraging participatory processes to these levels will result in the greatest impact.

137. Community participation can be strengthened by convening leaders, reviewing the current situation, identifying key problems and considering potential actions and solutions. Such a process requires purposeful development of the capacity of the community and that of community-based organizations to facilitate such needs assessments and strengthen social accountability mechanisms. Development of the capacity of communities should go hand in hand with efforts to build capacity at the higher levels - Village/ward, Township, State/Region, Union.

XI. Costing – Indicative Funding Requirements

A. Cost Methodology and Assumptions

138. The initial cost estimation of the MS-NPAN is a high-level exercise to estimate indicative costs of specified interventions included in the four sectoral logical frameworks and the inception phase. Many of the interventions identified to achieve the Key Results require additional capacity building and/or further planning to better understand the specific activities and costs of implementation. Therefore, this should be considered a working document to be updated as planning and capacity building is undertaken in years 1 and 2 of MS-NPAN implementation.

139. Key stakeholders from each sector were interviewed to better understand (1) the implementation activities required to complete each intervention; (2) whether (and to what extent) the intervention is included (budgeted and/or costed) as part of an already existing sectoral plan or planning document; and (3) what were the costs associated with any new tasks or identified included in the MS-NPAN.

140. The costing methodology varied if the intervention/associated activity was included in existing sectoral plans:

- I. Where interventions/associated activities were costed in existing plans or strategies this cost was used but adjusted according to two weighting factors: (1) the proportion of the activity aligning with the MS-NPAN intervention; and (2) the estimated proportion of the intervention contributing to nutrition outcomes. Weights were generated through stakeholder consultation.
- II. Where (1) interventions were identified that are not already included in existing plans; (2) stakeholders identified specific activities that augment existing planned activities to improve nutrition outcomes; or (3) further planning activities are required to better understand the implementation activities of an intervention, stakeholders were asked to specify the activities involved in implementation. This includes identifying personnel, time required, supplies, equipment, and other

associated inputs for the activity. Stakeholders were also asked to supply cost sheets for supplies, budgets for meetings, and other relevant cost sheets that help to better calculate the costs of the specific activities identified. Costs were estimated using information provided by stakeholders.

141. Unless new personnel are required, time spent on interventions is assumed to be part of existing personnel duties at minimal time and cost. With the completion of the Capacity Assessment, a more precise costing exercise will be conducted to include personnel time and carefully consider where additional personnel are required to complete all additional activities.
142. Population numbers by subgroup were provided by NNC. Annual growth rates were calculated using population estimates from Worldometers.²⁹ Monitoring and evaluation (M&E) costs are assumed to be 15% of implementation costs. General and Administrative Costs (G&A) for overhead, implementation, and contingencies are added to the overall plan costs at the rate of 12%. All costs are in 2018 MMK (or USD @ 1,400.9 MMK - 1 USD). Costs beyond FY2019 are adjusted assuming an annual CPI growth of 1.55%. Intervention coverage targets were provided by key stakeholders.

B. Information Sources

143. For each of the four sectors, key government and non-government stakeholders were interviewed (see [Annex 3](#)) and reference documents for activities, implementation, and costs identified ([Annex 4](#)). Main sources for each sector are listed below.

Ministry of Health and Sports (MoHS)

144. For the identified interventions supported by MoHS, individuals were interviewed from NNC, Child Health, School Health, Maternal and Reproductive Health, EPI, FDA, and Environmental Sanitation as well as WHO, UNFPA, and UNICEF (WASH). The primary cost documents referenced were the Draft Costed National Plan of Action for Food and Nutrition (2016-2019); Estimated Cost of National Strategic Plan for Newborn and Child Health Development (2015-2018); Costed Implementation Plan to Meet FP2020 Commitments 2014; and the National Investment Plan for Rural Water Supply, Sanitation and Hygiene (WASH), WASH in Schools, and WASH in Health Facilities (2016-2030).

Ministry of Education (MoE)

145. The Department for Basic Education (DBE) was consulted for interventions supported by MoE. Additional information was provided by MoHS, MoALI, and WFP on cross-sectoral interventions implemented through DBE. The primary cost documents referenced were the Draft Costed National Plan of Action for Food and Nutrition (2016-2019); Estimated Cost of National Strategic Plan for Newborn and Child Health Development (2015-2018); and the National Investment Plan for Rural Water Supply, Sanitation and Hygiene (WASH), WASH in Schools, and WASH in Health Facilities (2016-2030).

Ministry of Agriculture, Livestock, and Irrigation (MoALI)

146. Stakeholders contributing to the understanding of the MoALI interventions included individuals working in DoA, DoF, and DRD. FAO and UNICEF (WASH) staff provided additional information. While a majority of the MoALI interventions included in the MS-NPAN are referenced in the Investment Plan (2018-19 to 2022-23) of Myanmar Agriculture Development Strategy (ADS), stakeholders communicated that additional

²⁹ <http://www.worldometers.info/world-population/myanmar-population/>

planning was required to better understand the steps required to implement the specific activities in the MS-NPAN. Where stakeholders identified the need for further planning, these planning activities and costs are included in the calculations for the MoALI-supported interventions.

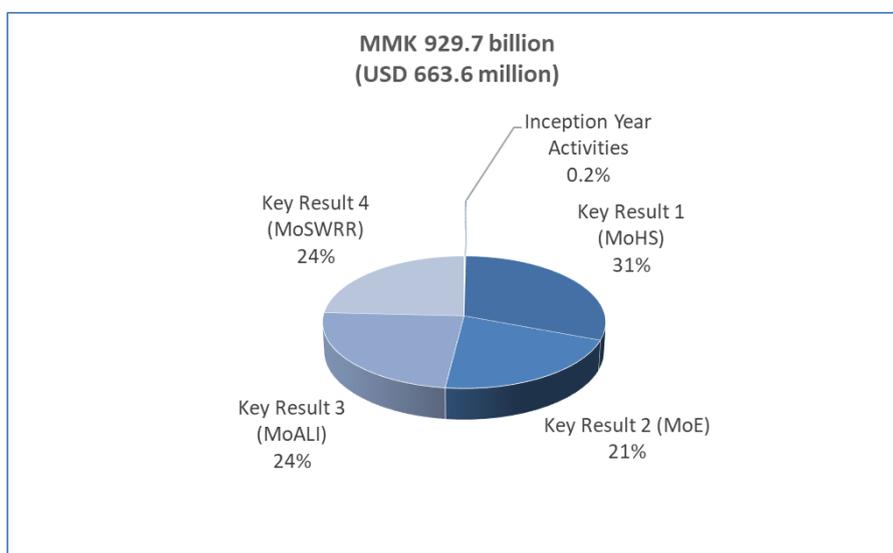
Ministry of Social Welfare, Relief, and Reconstruction (MoSWRR)

147. Information about the MoSWRR-led interventions was provided by DSW and DDRM, as well as MoHS and representatives from World Bank, WFP, and UNICEF. The primary document used to identify coverage goals and costs of MoSWRR interventions is the Costed Social Protection Sector Road Map, Myanmar, 2018-2022.

C. Summary of Indicative Costs

148. The indicative total cost to implement the five-year MS-NPAN FY19-FY23 is MMK 929.7 billion (USD 663.6 million). Figure 15 shows the relative distribution of the funding requirements across the four involved sectors.

Figure 15. Indicative Financial Resource Requirement to Deliver the MS-NPAN FY19-FY23



149. Annual costs over the five-year period of the MS-NPAN are shown in Figure 16. Total indicative funding required to deliver the key results of the 5-year plan depends on commitment to incorporating monitoring and evaluation as well as the level of implementation, general and administrative costs, and unforeseen contingencies and is estimated to be between MMK 732 billion and 930 billion (USD 523-664 million). Estimated costs in the four participating sectors are:

- MMK 224-285 billion (USD 160-203 million) in MoHS;
- MMK 154-196 billion (USD 110-140 million) in MoE;
- MMK 175-222 billion (USD 125-158 million) in MoALI; and
- MMK 177-225 billion (USD 126-161 million) in MoSWRR.

Figure 16. Indicative Annual Funding Requirements to Deliver the MS-NPAN FY19-FY23 (MMK millions)

Key Result	FY19	FY20	FY21	FY22	FY23	Subtotal	M&E (15%)	Implementation, G&A, contingencies (12%)	Total
<i>Inception Year Activities</i>	1,815	-	-	-	-	1,815	-	-	1,815
<i>Key Result 1 (MoHS)</i>	27,752	37,338	47,559	56,469	55,305	224,423	33,663	26,931	285,017
<i>Key Result 2 (MoE)</i>	12,619	20,973	30,048	39,917	50,808	154,365	23,155	18,524	196,044
<i>Key Result 3 (MoALI)</i>	32,360	34,928	38,103	35,807	33,473	174,671	26,201	20,960	221,832
<i>Key Result 4 (MoSWRR)</i>	19,813	22,959	36,482	45,137	52,725	177,116	26,567	21,254	224,937
Total	94,359	116,197	152,191	177,331	192,311	732,390	109,586	87,669	929,645

150. Inception year activities include technical assistance (international, national, State/Regional interviewers, and data analysts); workshops (introductory, state/regional planning, dissemination); a baseline survey for monitoring and evaluation; and office equipment for NNC and State/Region offices. These FY19 costs are estimated at MMK 1.8 billion (USD 1.3 million).

151. Annual costs generally increase over the years of the MS-NPAN as planning activities are completed and interventions are implemented and scaled up. For a sector-level description of all log frame activities, timing, and costs, see [Annex 5](#).

152. Figure 17 provides a *very rough* estimate of new funding required to deliver the key results of the 5-year plan. Each intervention activity was categorized as “new” if it was identified as such by stakeholders or was described as a nutrition-related task that is part of the larger intervention. Interventions where the proposed scale up in the MS-NPAN exceeds those presented in currently existing plans were also classified as “new”, even where a portion of the intervention costs are covered in the other plans. All inception year costs are classified as new costs.

153. It should be noted that the newly developed Investment Plan (2018-19 to 2022-23) of Myanmar Agriculture Development Strategy (ADS) is well-aligned with the interventions of the MS-NPAN and, therefore, many of the costs for MoALI are not considered “new” in the MS-NPAN. Additionally, the primary financial contribution of MoSWRR is the flagship MCCT/CA program, which is fully accounted for in the Costed Social Protection Sector Road Map, Myanmar, 2018-2022, through FY22. Therefore, only FY23 costs for the MCCT/CA are considered new in this exercise

154. Where interventions and costs are included in other plans, it is assumed that contingency and M&E costs are also contained in those plans. Therefore, monitoring and evaluation as well as the level of implementation, general and administrative costs, and unforeseen contingencies is calculated from the identified “new” costs.

155. New funding requirements are estimated to be between MMK 313 billion and 397 billion (USD 223-283 million). Estimated costs in the four participating sectors are:

- MMK 136-172 billion (USD 97-123 million) in MoHS;
- MMK 103-131 billion (USD 74-94 million) in MoE;
- MMK 18-23 billion (USD 13-16 million) in MoALI; and
- MMK 54-69 billion (USD 39-49 million) in MoSWRR.

Figure 17. Indicative New Annual Funding Requirements to Deliver the MS-NPAN FY19-FY23 (MMK millions)

Key Result	FY19	FY20	FY21	FY22	FY23	Subtotal	M&E (15%)	Implementation, G&A, contingencies (12%)	Total
<i>Inception Year Activities</i>	1,815	-	-	-	-	1,815	-	-	1,815
<i>Key Result 1 (MoHS)</i>	10,221	19,486	29,671	38,742	37,566	135,684	20,353	16,282	172,319
<i>Key Result 2 (MoE)</i>	6,619	13,356	20,380	27,644	35,228	103,227	15,484	12,387	131,099
<i>Key Result 3 (MoALI)</i>	3,042	3,440	3,707	3,769	3,827	17,785	2,668	2,134	22,587
<i>Key Result 4 (MoSWRR)</i>	260	428	480	556	52,725	54,449	8,167	6,534	69,150
Total	21,957	36,710	54,237	70,711	129,346	312,961	46,672	37,337	396,970

D. Limitations

156. As stressed above, the initial cost estimation of the MS-NPAN is a high-level exercise to calculate indicative costs of specified activities and interventions using existing plan documents supplemented by stakeholder input. The costs identified here are indicative of the level of expenditure required to meet the stated goals of the MS-NPAN and should be revisited and updated as planning and capacity building is undertaken in years 1 and 2.³⁰

157. Assumptions across interventions and sectors are broad. Supplemental costs (including M&E, G&A, and contingencies) are assumed to be the same across all sectors. Because many of the interventions require additional planning to document the activities are required for implementation, only costs for planning activities are identifiable at this point; full costs of implementation will not be clear until the planning activities are completed. Among nutrition-sensitive activities, the exception is the Maternal and Child Cash Transfer in the MoSWRR that has recently been costed in detail. For this reason, the costs for MoSWRR include a greater ratio of implementation to planning costs as compared with other ministries.

³⁰ All tasks and cost assumptions are provided in calculation worksheets for each intervention provided to the NNC and can be used to update cost estimates as more information is known.

Annex 1. Preliminary Results from State 1 Capacity Assessment

Policy, strategy and plans provide a solid framework, and high-level commitment is clear. Clear costing, budgeting and greater stakeholder involvement (especially at the sub-national levels) will strengthen the plan of action further. Most sectors have their own strategic plans, and only some are aligned with MS-NPAN.

Financing is inadequate, though there are multiple ways to increase resources include: improve efficiency (allocative and technical) of current spending; increase the budgetary allocation to nutrition both overall, and proportionately; mobilize external financial assistance and corporate funding. It is not easy to secure budgets specific to nutrition in some departments.

Human resources are by far the biggest capacity constraint (both numbers and skills gap). This gap is present in almost all areas: service delivery, program management, fiduciary aspects, communication, and technical skills. This finding suggest that nutrition-related human resources should be strengthened and expanded across line Ministries.

Performance Management of personnel does not exist as a systematic process, especially in the public sector. There is a need to improve performance through motivational efforts, recognition, and/or non-financial incentives, but first there needs to be a strong system of evaluating performance; the existing system could not reflect performance of assigned tasks.

M&E - There are clear limitations in the current systems and capacity. Capacity for M&E depends on clear and realistic indicators, robust information systems, and effective mechanisms to analyze, interpret and ACT on evidence.

Infrastructure and Technology (office space, vehicles, computers and equipment) are insufficient at all levels. There is a need to modernize and strengthen IT.

Proposed nutrition architecture (Steering Committee, Working Committee and Technical Committees, all with MoHS in the lead) have been formed on paper but the Committees have never convened. The Secretariat of the Working Committee has been the engine behind the Steering Committee, while the composition and mandate of each of the structures needs to be reviewed, activated and made to function effectively.

Intra-sectoral coordination is reportedly quite good but can be improved further; there is a need to establish and strengthen routine and regular intra-sectoral coordination meetings.

Technical leadership - the NNC is providing strong leadership and direction as a technical secretariat but has serious human resource constraints. It will need to be further strengthened to provide technical guidance across sectors and serve as the resource for the working committee; but have been put in a position to provide oversight, which is not its mandate. A suggestion was made to place the technical secretariat at a higher level, e.g. the Vice-President's Office. The extended UN Network has provided critical technical and political support ever since the country became a SUN Country member. The extended UN Network (UN partners, donors and CSOs) has provided the main support that sensitized and mobilized political leaders to become a SUN Country member. These efforts need to be sustained.

Collaborative culture is good, but **information sharing** can be improved – both within and beyond one's department.

No effective system exists to prevent or manage **conflicts of interest** while engaging with stakeholders.

Stakeholder networks exist but can be strengthened, especially regarding better collaboration with Government counterparts.

There are examples of **partnerships and alliances** with academia, media and the corporate sector, but there is scope for much greater use of such alliances.

Designated personnel dedicated to coordination and partnerships are very much needed. Currently this function is done on a part-time basis along with other responsibilities.

A report from this initial CA stage 1 is expected to be available by the end of August and will provide additional insights into possible modalities to strengthen overall governance, and to help inform the following critical decisions regarding program coordination. The assessment will also clarify the current roles and responsibilities of key actors engaged in the MS-NPAN.

Annex 2. Preliminary Results of Prioritization Analysis

Geographic prioritization of state/regions for scale-up actions

The analysis offered five possible options for geographic prioritization where the burden of undernutrition was highest, in case of resource limitation. The results are presented below and outlined in Figure 18.

Option 1: Prioritization by "stunting prevalence"; Chin, Kayah, Rakhine, Ayeyarwassy and Shan- in order of priority.

Option 2: Prioritization by "number of under-five children stunted"; Shan, Ayeyawady, Mandalay. Sagaing. Yangon, Bago - in order of priority.

Option 3: Prioritization by "Burden of stunting and wasting"; Rakhine, Chin, Kayah, Shan, Ayeyawady, Kachin- in order of priority

Option 4: Prioritization by " Composite Score of All Nutrition Outcomes (stunting, wasting, LBW, anemia)"; Mon, Yangon, Shan, Mandalay, Kayin, Chin - in order of priority

Figure 18. Geographic prioritization based on different nutrition outcomes

PRIORITY RANKING OF STATES/REGIONS TOP SIX HIGHER RISK STATES/REGIONS				
S/R	by Stunting Prevalence	by # stunted	by burden of stunting and wasting	by composite score of malnutrition
CHIN	1		2	6
KAYAH	2		3	
RAKHINE	3		1	
AYEYAWADY	4	2	5	
SHAN	5	1	4	3
KACHIN	6		6	
MON				1
SAGAING		4		
MANDALAY		3		4
MAGWE				
TANINTHARI				
KAYIN				5
BAGO		6		
NAY PYI TAW				
YANGON		5		2

Packaging of Essential Interventions unique for each state/region for scale up

The most important output of this initial exercise was to develop a template and a preliminary approach to determine how to select high priority interventions which would be most appropriate for each State/Region based on the key "high risk" causes. To facilitate this process, the Key Nutrition Actions adopted as part of the Nutrition Stocktaking exercise were reviewed, as in Table 3. This table highlights which actions would be most useful to address the different underlying or direct causes of malnutrition from the MS-NPAN conceptual framework and which of the sectoral interventions correspond to the respective actions. For example, the first key action is the 'promotion of infant and young child feeding (IYCF)' which corresponds with the fourth underlying cause in the conceptual framework (sub-optimal infant and young child feeding) and would best be addressed by several interventions in the MoHS log frame.

As part of the preliminary analysis, it was evident that several underlying causes could be addressed by interventions from more than one sector, and in some cases multiple interventions within the same sector. As such, the prioritization exercise required a detailed assessment of how to optimize the different interventions and develop packages to achieve the greatest impact.

Prioritization for "Beneficiary Targeting"

Finally, it was noted that among the 26 indicators used to determine the risk level associated with the underlying causes, all indicators were highest among poor households, especially among children who were either not provide with a minimum acceptable diet or were suffering from acute undernutrition. To further support this, the NNC has been developing small area estimates of poverty and malnutrition. These can be used to guide decisions on sub-national geographic targeting. Further work will be required in the inception period to develop tools and criteria for targeting of interventions to those most vulnerable in order to yield the greatest impact.



Table 3. Key Nutrition Actions

Key Nutrition Actions from Stocktaking Exercise	MS-NPAN Underlying factors		MS-NPAN Interventions			
			MoHS	MoE	MoSWRR	MoALI
1 Promotion of infant & young child feeding (IYCF) Provide child health checks, including Growth Monitoring Practices	4					
2 (GMP)	4					
3 Provide Vitamin A supplementation	3					
4 Provide Iron / folate supplementation	3					
5 Carry out / support salt iodization	3					
6 Carry out / support rice fortification (with iron, folic acid, B1, A)	3					
7 Provide therapeutic and supplementary feeding as part of integrated management of acute malnutrition (IMAM)	11					
8 Provide deworming tablets	8	10				
9 Provide diarrhea treatment ORS / Zinc	8	10				
10 Provide antenatal care visits, including counselling on optimal nutrition practices	7	9				
11 Provide post-natal care visits during post-partum period	9					
12 Provide nutrition and healthy lifestyle education for adolescents	6	7				
13 Promotion of health, nutrition and hygiene activities	8					
14 Promotion of safe hygienic environment and hygiene education	8					
15 Provide materials / construct infrastructure and BCC for hand washing	8					
16 Provide materials / construct infrastructure and BCC for improved sanitation	8					
17 Provide nutritious school feeding combined with nutrition education	3					
18 Provide nutrition sensitive social safety net actions	2					
19 Nutrition-sensitive agriculture activities, such as crop diversification	1					
20 Ensure food safety through measuring all hazardous contaminants in foods	9					
21 Safe food storage, postharvest facilities, and processing facilities along the value chain	9					
22 Alternative income generation activities	5	6				
23 Enhance household food security with activities such as small scale horticulture	1					
24 Enhance household food security with activities such as small scale fishery and livestock	1					

Annex 3. Stakeholders Interviewed

No.	Name	Unit	Department, Ministry
1	Dr. Htin Lin	Deputy Director-General	FDA, MoHS
2	U Ye Lin Myint	Deputy Director-General	DBE, MoE
3	Daw Khin Gyi	Deputy Director-General	DBE, MoE
4	Dr. Lwin Mar Hlaing	NNC	DoPH, MoHS
5	Dr. Aung Nyan Min	NNC	DoPH, MoHS
6	Dr. Kaday Kyaw	NNC	DoPH, MoHS
7	Dr. Myint Myint Than	Child Health	DoPH, MoHS
8	Dr. Thida Win	Child Health	DoPH, MoHS
9	Dr. Ae Mon Tun	School Health	DoPH, MoHS
10	Dr. Myo Ko	Maternal and Reproductive Health	DoPH, MoHS
11	Dr. Wit Yee Phyo	Maternal and Reproductive Health	DoPH, MoHS
12	Dr. Aye Mya Chan Thar	EPI	DoPH, MoHS
13	U Htay Win	Environmental Sanitation	DoPH, MoHS
14	Daw Kyaw Thida	Environmental Sanitation	DoPH, MoHS
15	Dr. Kyaw Lin Htin	Social Protection	DSW, MoSWRR
16	Daw Ohmar Khine	Social Protection	DSW, MoSWRR
17	Daw De Par Tun	Child and Youth	DSW, MoSWRR
18	Dr. Min Thein	Relief	DDRM, MoSWRR
19	Dr. Tin Yu Aye	DBE	MoE
20	Daw Thit Khine	DBE	MoE
21	Daw Naw Thi Htoo	DBE	MoE
22	U Hla Aung	DoP	MoPF
23	U Tun Win	DoA	MoALI
24	Daw Mar Lar Than	DoA	MoALI
25	Dr. Yin MoE	DoF	MoALI
26	U Saw Lah Paw Wah	DoF	MoALI
27	Daw Mee Htwe	DRD	MoALI
28	Dr. Win Min Oo	DRD	MoALI
29	Sabah Barigou		WFP
30	Lu Sam		WFP
31	Stephen Chacko		WHO
32	Paul De Wit		FAO
33	AnnaLisa Noack		FAO
34	U Tint Khine		FAO
35	Dr. Tin Mg Chit		UNFPA
36	Bishnu Pokhrel		UNICEF

Annex 4. Reference Documents

Plans

Costed Implementation Plan to Meet FP2020 Commitments 2014; MoHS, UNFPA

Draft Costed National Plan of Action for Food and Nutrition (2016-2019); MoHS

Costed Social Protection Sector Road Map, Myanmar, 2018-2022; Economic Policy Research Institute (EPRI)

Estimated Cost of National Strategic Plan for Newborn and Child Health Development (2015-2018); MoHS

The Investment Plan (2018-19 to 2022-23) of Myanmar Agriculture Development Strategy; MoALI

National Investment Plan for Rural Water Supply, Sanitation and Hygiene (WASH), WASH in Schools, and WASH in Health Facilities (2016-2030); MoALI, MoE, MoHS, UNICEF

Other Documents

Basic Disaster Management Course Syllabus, DDRM

The Components of the “Life Skills” Curriculum (Primary Level), School Health

The Components of the “Life Skills” Curriculum (Grade 10), School Health

The Components of the Revised “Life Skills” Curriculum (Secondary Level), School Health

Myanmar National Social Protection Strategic Plan (NSPSP) and its Implementation Status and Scale Up, DSW

National School Feeding Program Operational Guidelines, Ministry of Education

Nutrition for Growth and Development in Myanmar, World Bank

Operation Process of Chin MCCT, DSW

Rakhine MCCT Operation Process & Learning Experiences

School Feeding in Myanmar, presentation; MoE, WFP

Price lists, budget request, Funding Authorization and Certificate of Expenditures, and coverage reports from various sources

Myanmar Nutrition Stock Taking Report - Ministry of Health and Sports; Ministry of Education; Ministry of Agriculture, Livestock and Fisheries; Ministry of Social Welfare, Relief and Resettlement; Ministry of Planning and Finance. July 2017.

Annex 5. Annual Indicative Cost Estimates by Sector

Inception Year (FY19)

INCEPTION YEAR ACTIVITIES

Outcome/Output/Intervention	Timeline FY19									Resources Required				
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	(K million)	(USD 000s)
1 Technical assistance													1,145	818
1.1 International TA													369.8	264.0
1.2 National TA													537.9	384.0
1.3 State/regional interviewers, data collectors, and													237.6	169.6
2 Workshops													244	174
2.1 Introductory workshop for state and regions in NPT													35.6	25.4
2.2 State/regional workshops													172.7	123.3
2.3 Dissemination workshop for state and regions in NPT													35.6	25.4
3 M&E systems development													350	250
3.1 Baseline survey													350.2	250.0
4 Equipment													76	54
4.1 Equipment package													75.6	54.0
Inception Year Activities Funding Requirement													1,815	1,296

Key Result 1 (MoHS)

SECTOR-LEVEL KEY RESULTS (MoHS)

Outcome/Output/Intervention	Resources Required (K million)					Total
	FY19	FY20	FY21	FY22	FY23	K million
1 Increased prevalence of early initiation, exclusive breastfeeding, and other IYCF practices	643	712	786	874	964	3,980
1.1 Increased number of women with good knowledge on breastfeeding and other IYCF practices						
1.1.1 Promote and support IYCF through health services delivery including BHS and BFHI strengthening						
1.1.2 Strengthen growth monitoring and promotion activities						
1.2 Increased and effective legislative coverage for all working mothers in both public and private sectors						
1.2.1 Monitor and enforce maternity entitlement legislation (to increase legislative coverage for all working mothers in both public and private sectors)						
1.3 Reduced violations of the BMS marketing code						
1.3.1 Monitor the code for marketing of formulated foods for infants and young children						
1.3.2 Enforce the code for marketing of formulated foods for infants and young children						
2 Increased dietary diversity and nutrient utilization among children, adolescents, and women	8,090	8,584	8,424	8,252	8,063	41,413
2.1 Increased coverage of mother, children, and adolescents provided with micronutrient supplementation						
2.1.1 Biweekly iron and folic acid supplementation for adolescent school girls						
2.1.2 Multiple micronutrient or iron tablet supplementation for pregnant women						
2.1.3 Post-natal Vitamin A supplementation						
2.1.4 Vitamin B1 supplementation for pregnant and lactating women						
2.1.5 Biannual Vitamin A supplementation for infants and						
2.2 Increased coverage of dewormed women and children						
2.2.1 Deworming for pregnant women						
2.2.2 Biannual community-based deworming for children aged 2 to 9 years (out of school children)						
2.2.3 Biannual deworming for all school children						
2.3 Increased supply and consumption of fortified foods through large-scale fortification of staple foods and condiments and nutrition education						
2.3.1 Supplementation of multiple micronutrient powders (for home fortification of complementary foods) for children aged 6 to 23 months						
2.3.2 Develop recommendations for policy and legislation on rice fortification and salt iodization						
2.3.3 Nutrition education to increase consumption of iodized						
2.4 Increased awareness about the importance of dietary diversity						
2.4.1 Nutrition education to increase consumption of diversified food as per the Myanmar dietary guideline						
3 Reduced case fatality rate and prevalence of SAM and MAM	9,552	18,322	28,426	37,402	36,129	129,831
3.1 Increased coverage and quality of IMAM services						
3.1.1 Scale up integrated management of acute malnutrition						
4 Increased participation of women in routine health services	94	96	97	99	100	486
4.1 Increased demand and coverage of maternal nutrition services						
4.1.1 Maternal nutrition counseling for pregnant and lactating women during ANC and PNC visits						
4.2 Increased demand and coverage of family planning services						
4.2.1 Strengthening post-partum family planning services						
5 Improved hygiene, sanitation, and access to safe water	2,949	2,994	3,041	3,088	3,136	15,208
5.1 Increased proportion of population with access to safe water						
5.1.1 Strengthening infrastructure to improve access to safe water in rural communities and health centers						
5.2 Increased adoption of safe hygiene practices						
5.2.1 Promotion of appropriate WASH behaviors						
5.3 Improved access to and utilization of sanitary latrines						
5.3.1 Improvement of basic sanitation (Community-Led Total Sanitation (CLTS)/Community Approaches Total Sanitation (CATS)/others)						

SECTOR-LEVEL KEY RESULTS (MoHS), cont.

Outcome/Output/Intervention	Resources Required (K million)					Total
	FY19	FY20	FY21	FY22	FY23	K million
6 Reduced newborn and childhood illnesses	6,424	6,580	6,733	6,703	6,860	33,299
6.1 Increased coverage and quality of newborn and child health services						
6.1.1 Immediate thermal care						
6.1.2 Extra support for feeding small and preterm babies						
6.1.3 Kangaroo mother care for preterm and low birth weight						
6.1.4 Home visit for newborn care by health care providers and health volunteers						
6.1.5 Provision of ORS and Zinc for treatment of children with diarrhoea						
6.2 Increased demand and coverage of children with immunization services						
6.2.1 Enrichment of the demand for immunization services through the development and implementation of a communication plan, and effective participation of the community and civil society organizations						
6.2.2 Improving immunization service quality and availability for hard to reach and underserved populations through the implementation of the cold chain expansion and improvement plans						
6.2.3 Strengthened EPI data management, monitoring, and evaluation through establishment of electronic reporting systems						
7 Improved safe and nutritious foods	-	50	51	52	52	205
7.1 Improve compliance of National food laws and regulations						
7.1.1 Finalize and implement the national food laws and regulations						
7.1.2 Integrate monitoring of all fortified foods as part of the routine food control systems						
SUBTOTAL	27,752	37,338	47,559	56,469	55,305	224,423
Monitoring and evaluation (15%)	4,162.8	5,600.7	7,133.8	8,470.4	8,295.7	33,663
Overhead, implementation, and contingencies (12%)	3,330.3	4,480.6	5,707.0	6,776.3	6,636.6	26,931
MoHS INDICATIVE FUNDING REQUIREMENT	35,245	47,419	60,400	71,716	70,237	285,017

Key Result 2 (MoE)

SECTOR-LEVEL KEY RESULTS (MoE)

Outcome/Output/Intervention	Resources Required (K million)					Total K million
	FY19	FY20	FY21	FY22	FY23	
1 Improved knowledge among children, adolescents and parents	237	300	363	365	374	1,639
1.1 Regular education and discussion sessions on nutrition and healthy lifestyle for school children						
1.1.1 Organize nutrition and healthy life style education sessions in existing or (newly created youth group/s) in schools						
2 Increased access to diverse nutritious diet for primary school	5,261	10,779	16,549	22,584	28,893	84,066
2.1 Increased consumption of locally prepared nutritious meal by primary school children						
2.1.1 Nutrition education with school feeding						
2.1.2 School Feeding Program with locally available nutritious meals						
3 Decreased incidence of disease and absence from school	7,121	9,893	13,136	16,969	21,541	68,660
3.1 Increased awareness of good practices for health, nutrition and hygiene among school children, parents and						
3.1.1 Health, Nutrition, and Hygiene Promotion program for school children and their parents						
3.2 Increased use of safe water, sanitation and proper hygiene among students at primary and secondary schools						
3.2.1 Promote water and sanitation facilities in primary and secondary schools						
SUBTOTAL	12,619	20,973	30,048	39,917	50,808	154,365
Monitoring and evaluation (15%)	1,892.8	3,145.9	4,507.2	5,987.6	7,621.2	23,155
Overhead, implementation, and contingencies (12%)	1,514.3	2,516.7	3,605.8	4,790.1	6,097.0	18,524
MoE INDICATIVE FUNDING REQUIREMENT	16,026	26,635	38,161	50,695	64,526	196,044

Key Result 3 (MoALI)

SECTOR-LEVEL KEY RESULTS (MoALI)

Outcome/Output/Intervention	Resources Required (K million)					Total K million
	FY19	FY20	FY21	FY22	FY23	
1 Increased availability of nutrient-rich food products (crops, horticulture, fish, and livestock products) at market and	15,710	17,862	20,395	17,787	15,113	86,868
1.1 Increased diversity of food products produced (vitamin A and iron-rich vegetables, fruits, fish, livestock, and other animal-based foods)						
1.1.1 Enhanced Homestead-based food production and other innovations						
1.1.2 Planning support for diversification						
1.1.3 Facilitate construction of small-scale irrigation and tube wells for households to enable diversification						
1.1.4. Access to quality inputs (seeds, fertilizers)						
1.1.5 Nutrition-sensitive land tenure: Enable land regulatory framework to i) improve flexibility of land-use conversion; and ii) secure tenure over rotating and fixed agro-forestry systems, grazing lands, fishponds, other land use systems under customary tenure						
1.1.6 Land (co-)titling schemes for both women and men						
1.1.7 Training on nutrition-sensitive agriculture for extension services						
1.1.8 Training program to extension services for knowledge and skills on techniques to add value and minimize post-production food losses * linked with 2.1.2						
1.1.9 Improve access to mechanization to address labor shortage (out migration)						
1.1.10 Strengthen intra-sectoral coordination and capacity development on nutrition to realize a key objective of the Agriculture Development Strategy on food security and nutrition						
2 Increased access to diversified diets through improved incomes	4,455	4,732	5,080	5,249	5,366	24,882
2.1 Income sources diversified through improved agricultural diversification and expanded markets						
2.1.1 Rural Development programs leveraged, particularly revolving fund for fish and livestock						
2.1.2 Vocational training for skilled casual labor and support for alternate income-generating activities						
2.1.3 Developed opportunities for increased participation of women in agriculture, livestock, and fisheries (including production, farming, and marketing), as well as gender-sensitive decision-making over the use of agricultural resources						
2.1.4 Support to establishment of agriculture, livestock, and fish supply/market information systems to track food flows (imports/exports and commodities)						
2.1.5 Land rights-based social protection for landless and land poor by way of (re-)allocation of unused VFW and other available land						
2.1.6 Livestock promotion particularly for women and the landless (pigs, goats, poultry)						
2.1.7 Agro-forestry promotion on non-permanent forest estate lands (in context of preserving biodiversity including neglected and underutilized crops, securing access to firewood for cooking, supporting shifting cultivation, and low-input livelihood activities such as cultivation of herbs and spices)						
2.1.8 Develop and demonstrate feasibility of small-scale aquaculture and integrated rice-fish models for local consumption and income generation						

SECTOR-LEVEL KEY RESULTS (MoALI), cont.

Outcome/Output/Intervention	Resources Required (K million)					Total
	FY19	FY20	FY21	FY22	FY23	K million
3 Improved safety along food supply and value chain to enhance access to safe food	12,195	12,333	12,628	12,772	12,994	62,921
3.1 Improved compliance with safety standards at household level and at market level						
3.1.1 Food safety standards expanded over wider range of food products						
3.1.2 Awareness raising for farmers in use of agrochemicals						
3.1.3 Support compliance with Pesticides Law						
3.1.4 Support good practices of agriculture, livestock, agroforestry and fishery, particularly for smallholders						
3.1.5 Stengthening protocols and institutional capacity to implement routine food safety testing (including quarantine)						
3.2 Increased access to improved water supply						
3.2.1 Improve water supply management, water supply design, planning, and infrastructure; water quality standards, water safety plans, operation, and maintenance						
SUBTOTAL	32,360	34,928	38,103	35,807	33,473	174,671
<i>Monitoring and evaluation (15%)</i>	4,854	5,239	5,715	5,371	5,021	26,201
<i>Overhead, implementation, and contingencies (12%)</i>	3,883	4,191	4,572	4,297	4,017	20,960
MoALI INDICATIVE FUNDING REQUIREMENT	41,097	44,358	48,390	45,475	42,511	221,832

Key Result 4 (MoSWRR)

SECTOR-LEVEL KEY RESULTS (MoSWRR)

Outcome/Output/Intervention	Resources Required (K million)					Total K million
	FY19	FY20	FY21	FY22	FY23	
1 Increased coverage and utilization of social safety net	19,712	22,831	36,325	44,952	52,514	176,334
1.1 Increased capacity of families to improve IYCF practices	-	-	-	-	-	-
1.1.1 Provision of regular social cash transfers to all pregnant women and mothers of children under the age of 2 years						
1.1.2 Provision of cash allowance for children aged 25 to 60 months						
1.2 Improved knowledge by beneficiaries on nutrition and health care of women and children (for the first 1000 days and beyond)						
1.2.1 Social Behaviour Change Communication (SBCC) strategy is developed and implemented to support MCCT and nutritional outcomes in collaboration with MoHS						
1.3 Increased role and capacity of women in making decisions for health and nutrition issues in families as well as in social/community matters/issues						
1.3.1 Formation of women's groups						
1.3.1.2 Formation of women's groups for knowledge sharing on child care and networking, with principle members being mothers and adolescent girls						
2 Nutrition-sensitive emergency preparedness and response in	7	7	7	7	8	36
2.1 Adequate consumption of required nutrients by affected mothers and children during emergency, recovery, and rehabilitation periods						
2.1.1 Coordinate relevant stakeholders, local governments, and CBOs to provide nutritious food rations and support to mothers and children in emergencies						
2.2 Mothers and children have access to proper shelter and sanitation facilities during emergency, recovery, and rehabilitation periods						
2.2.1 Mother- and child-friendly WASH, shelter, and protection support in emergencies						
3 Improved quality and coverage of ECCD services and interventions through different community and facility	94	121	149	178	204	746
3.1 Adequate nutrition support is provided to pre-schoolers through MoSWRR-supported ECCD and community-based centres						
3.1.1 Development of a pre-school nutrition program in ECCD and community-based centres, which includes fortified rice, healthy meal planning, nutrition screening and promotion						
3.1.1.1 Provide fortified rice lunch program in MoSWRR-run ECCD centres						
3.1.1.2 Fortified rice lunch program in community-based centres						
3.2 Increased integration of health, nutrition and welfare services for ECCD, including childhood stimulation and care in existing service delivery platforms						
3.2.1 Coordinate with MoHS to conduct education sessions on ECCD, including childhood stimulation and care in existing service delivery platform, especially for children aged 0 to 60 months						
3.2.2 Improve guidelines and tools to integrate child care and stimulation into health, nutrition, and welfare services including hard-to-reach areas						
SUBTOTAL	19,813	22,959	36,482	45,137	52,725	177,116
Monitoring and evaluation (15%)	2,971.88	3,443.90	5,472.27	6,770.59	7,908.78	26,567
Overhead, implementation, and contingencies (12%)	2,377.50	2,755.12	4,377.81	5,416.47	6,327.03	21,254
MoSWRR INDICATIVE FUNDING REQUIREMENT	25,162	29,158	46,332	57,324	66,961	224,937