Reducing stunting in children under five years of age

a process evaluation of UNICEF Papua New Guinea's strategies and approaches, 2017-2022

December 2022

Reducing Stunting in Children Under Five Years of Age - A Process Evaluation of UNICEF Papua New Guinea's Strategies and Approaches, 2017-2022

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Executive Summary

Overview of interventions: UNICEF supported the Government to address the high stunting rates by implementing initiatives to address bottlenecks around three key areas of nutrition service delivery, enabling environment and demand generation**.** The objectives of UNICEF Papua New Guinea Nutrition Programme (hereafter, Nutrition Programme) is for children under five, adolescent girls and women, to adopt improved nutrition and care practices and increase utilization of nutrition-specific and nutrition sensitive services, especially in the most disadvantaged and marginalized communities. The Program outputs are as follows:

Output-1: National and provincial governments have improved capacity to formulate policy and strategy, plan, budget, manage and coordinate multi-sectoral nutrition-specific and nutrition-sensitive interventions for the most vulnerable and disadvantaged children, adolescents, and women, including during emergencies

Output -2: National and provincial health authorities have improved capacity and necessary supplies to ensure the delivery of nutrition-specific interventions, including SAM management, infant and young child feeding, micronutrient supplementation and maternal nutrition services, to prevent excess morbidity and mortality among girls, boys, and women, including during emergencies

Output-3: Male and female caregivers and families, especially the most vulnerable and disadvantaged, have improved knowledge of appropriate feeding and caring practices for women, adolescent girls, infants, and young children and to seek quality health and nutrition services, including in emergencies

Evaluation Purpose: To foster learning and contribute to improving the Nutrition Programme to make it more effective in malnutrition reduction in the Papua New Guinea (PNG) context

Objective: The objectives of the process evaluation were:

- To document the Nutrition Programme's fidelity to its prescribed strategy and design plan
- To assess the added value, strengths, weaknesses, facilitators, and barriers of selected processes, including resource mobilization, engagement with partners, and monitoring and use of evidence
- To identify key lessons learned, including success and failures, good practices, and innovations from implementation of the programme
- To generate a set of clear, forward-looking, and actionable recommendations logically linked to the findings and conclusions.

Design: The evaluation was non-experimental, using mixed-methods, including a cross-sectional survey and qualitative research methods.

Study Populations: Health workers, community health workers, managers of the National Department of Health and Civil Society Organizations at district and province levels

Study Site(s): Three provinces were selected among the main target provinces in PNG where the Nutrition Programme has been implemented**.**

Intended Audience: The primary audience of the evaluation is the UNICEF PNG Nutrition Section and the Front Office, and other Programmes Sections within UNICEF PNG. The secondary audience are relevant Government institutions and authorities in charge of Nutrition, relevant development partners, donors, contracted project implementers and experts, and other UNICEF Offices and Sections

Key conclusions on finding:

UNICEF supported the government at national level to lead cross-sector collaboration and coordination along with non-public partners, of which activeness and functionality were not maintained subsequently. Instead, UNICEF recently re-established the Nutrition Sector Meeting. At province level, partnership meetings have been initiated recently in a few provinces. After Integrated Management of Acute Malnutrition (IMAM) training and rollout and Infant and Young Child Feeding (IYCF) training for health workers and Village Health Assistants (VHA) in selected provinces, UNICEF adapted a new strategy and in 2021 started the new pilot project targeting the three provinces and which will be expanded to 7 additional provinces. The pilot project adopted a life-course approach which is different from the previous model in terms of target group and service delivery platform. Support officers were assigned to equip their counterparts at the province level. A new nutrition information systems and database were designed and utilised and data have been routinely analysed at the national level to inform coverage of nutrition interventions. UNICEF also developed a Cluster Response Plan for nutrition.

The findings of this evaluation are organized by the process evaluation framework and evaluation questions.

[Relevance] The project design was considered relevant among key stakeholders. UNICEF nutrition strategy adapted to local context and needs through the gap analysis and assigned Nutrition Support Officers at the Provincial Health Authority (PHA). A baseline survey would have benefited selection of the target population based on severity or magnitude of nutrition problems.

[Effectiveness] The project was effective in mobilizing financial resources from several major donors for the coming years which was a large leap from the level of funding for nutrition in the previous years and maintained coordination with several international partners who supported nutrition interventions. Implementation of the new nutrition register and reporting forms faced some challenges in maintaining consistent reporting rates.

[Sustainability] Full integration of the pilot nutrition interventions into health services will require an improved enabling environment in terms of availability of human resources (nutrition focal person at PHA, and trained health workers and continuous engagement of VHA), strengthened nutrition information and supply systems, active and functioning multisector nutrition coordination.

[Efficiency (process)] Despite the overall fidelity to the IMAM/IYCF protocols, some variations in the practices existed. The COVID-19 pandemic affected availability of health workers for nutrition, delayed shipment of supply and attendance of beneficiaries. On the positive side, funding for health services in general increased during the pandemic. The inhibiting factors include insufficient commitment of government leaders, inefficiency in the management systems, limited availability of nutrition courses at higher education and insecurity.

[Coherence] The Nutrition Programme is in line with most of the objectives of National Nutrition Policy as well as UNICEF Programming Guide of IYCF and global evidence-based strategy for nutrition interventions. Regular coordination with the partners has been maintained at the province level to avoid duplication while protocol, guideline and materials produced by UNICEF/NDOH have been used by the partners. It is expected UNICEF and partners will enhance regular exchange of information to maximize synergy through technical collaboration over new protocols for multisector nutrition sensitive interventions.

[Human-rights approach] The UNICEF nutrition strategy targets the most nutritionally vulnerable population; children, women, and adolescents. The IMAM may need more in-depth instructions in the cases of adoption and/or separation and early pregnancy and strengthened outreach services to hard-to-reach populations.

Lessons Learnt

Evaluability of a nutrition programme needs improved archiving of relevant reports which will additionally benefit cost-efficiency, timeliness and technical adequacy of future evaluations.

The pilot project demonstrated the potential for integrating nutrition specific services into regular health services into the health system by enhancing coverage and impact of the service delivery in a larger scale and addressing the remaining challenges in the enabling environment.

It is worth considering replication of the model of pilot project in PNG in other countries.

Recommendations:

(High priority)

1. Train nutrition service providers at health facilities, communities and schools in the seven new provinces where the nutrition programme has been scaled to. The focus should be put on the issues identified by this evaluation**.**
2. Develop training modules for service providers in health facilities, communities and schools.
3. Update the present nutrition information system based on field implementation experiences in the ten programme provinces with focus put on the issues identified by the evaluation.

(Medium priority)

4. Hold at least one advocacy meeting with key stakeholders on the need for increased investments for nutrition.
5. Support the NDOH to set up a technical Working Group at national level to lead the preparation for a national nutrition survey.

(Low priority)

6. Review and update IMAM protocol.

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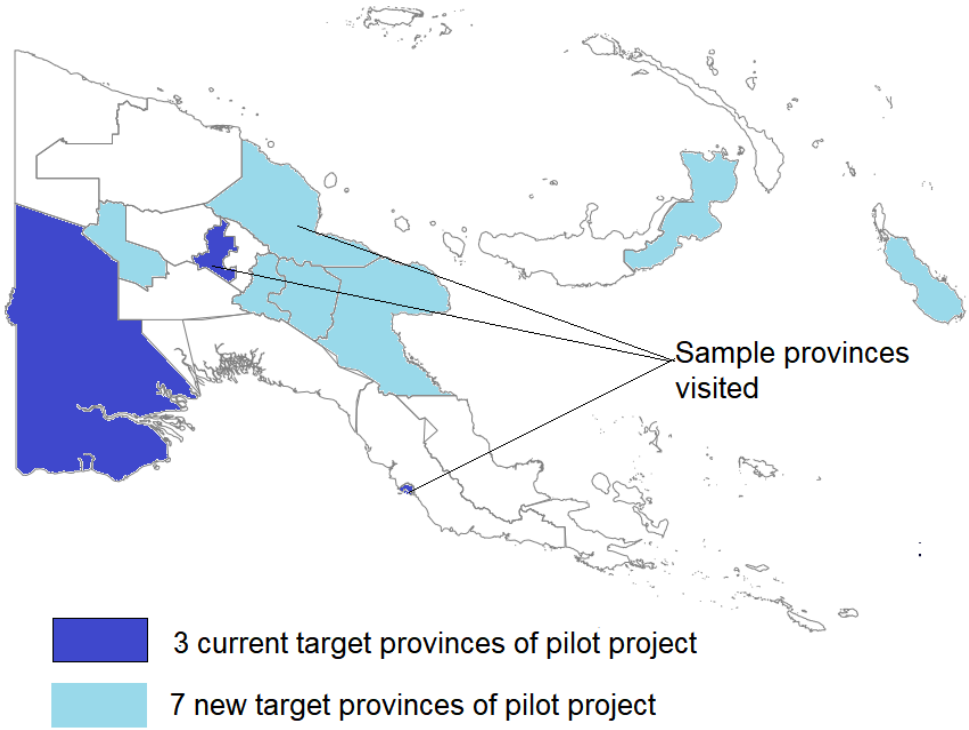
Acronyms and Abbreviations

AROB	Autonomous Regio of Bougainville
CARES	Community-based Approach to Reduce and End Stunting
CCHS	Catholic Church Health Service
CIFF	Child Investment Fund Foundation
CSO	Civil Society Organization
DAC	Development Assistance Committee
DFAT	Department of Foreign Affairs and Trade
FGD	Focus Group Discussion
HIES	Health Income and Expenditure Survey
IFA	Iron Folic Acid
IMAM	Integrated Management of Acute Malnutrition
IYCF	Infant and Young Child Feeding
KII	Key Informant Interview
LLG	Local Level Governments
MIYCN	Maternal Infant and Young Child Nutrition
MNP	Micronutrient Powder
MUAC	Mid-Upper Arm Circumference
NCD	National Capital District
NDOH	National Department of Health
NHIS	National Health Information System
NiE	Nutrition in Emergency
NNP	National Nutrition Policy
NSAP	Nutrition Strategic Action Plan
OECD	Organisation for Economic Co-operation and Development
PHA	Provincial Health Authority
PNG	Papua New Guinea
RUTF	Ready-to-use Therapeutic Food
SAM	Severely Acute Malnutrition
SAP	Strategic Action Plan
SAPR	Statistical Annual Performance Report
SBCC	Social Behaviour Change Communication
SDG	Sustainable Development Goal
SUN	Scaling Up Nutrition
TB	Tuberculosis
UNEG	United Nations Evaluation Group
USAID	United States Agency for International Development
VHA	Village Health Assistant
WHP	Western Highland Province
WP	Western Province

Map


Sample provinces visited
3 current target provinces of pilot project
7 new target provinces of pilot project

1. INTRODUCTION

1.1 Background and context

Nutrition is vital but was long neglected in Papua New Guinea (PNG). The rate of malnutrition (under-nutrition) is unacceptably high and remains a significant underlying factor for illness and deaths particularly for children under five. Almost half of children under five years in PNG are stunted (short for age). The prevalence of stunting and underweight are particularly high in the first two years of life and much higher in both rural than urban areas. Malnutrition remains a persistent public health problem with serious development implications that the country has struggled to tackle over the recent decades.

UNICEF supported the Government to address the high stunting rates by implementing initiatives to address bottlenecks around three key areas of nutrition service delivery, enabling environment and demand generation. During the 2018-2022 country programme, UNICEF supported the Government of PNG to develop and sign off a National Nutrition Policy (NNP) (2016 – 2026). The objective of the NNP was to provide a framework to address malnutrition issues in children through a multi-sectoral approach involving stakeholders at all levels.

Coordinated by the Government, this milestone policy brings together a range of stakeholders including the public sector, institutions, academia, private sector, development partners, civil society, media, and communities to contribute towards the achievement of optimal nutrition outcomes. Additionally, UNICEF supported the Government to join the Global Scaling Up Nutrition (SUN) Movement and develop a Strategic Action Plan that is currently being implemented (2018-2022).

Objectives of Nutrition Programme (hereafter, referred to as "Nutrition Programme"): By 2022, children under five, adolescent girls and women, adopt improved nutrition and care practices and increase utilization of nutrition-specific and nutrition sensitive services, especially in the most disadvantaged and marginalized communities.

- Outcome indicator (1): Proportion of infants exclusively breastfed up to 6 months in selected provinces [from 36 to 80%]
- Outcome indicator (2): No. of provincial hospitals providing Severely Acute Malnutrition (SAM) treatment of SPHERE standards [Target:19]
- Outcome indicator (3): Proportion of children 6-59 months who received 2 vitamin A doses (from 22% to 80%)

Outputs and activities:

Output-1: National and provincial governments have improved capacity to formulate policy and strategy, plan, budget, manage and coordinate multi-sectoral nutrition-specific and nutrition-sensitive interventions for the most vulnerable and disadvantaged children, adolescents, and women, including during emergencies

- Indicators (1-1): Costed multi-sectoral national nutrition Strategic Action Plan (SAP) 2017–2021 endorsed by the government
- Indicator (1-2): Six (6) provinces with costed cross sectoral Nutrition Action plans
- Indicator (1-3): Six (6) provinces with budget allocation for nutrition

Results: UNICEF supported the government at the national level to lead cross-sector collaboration and coordination along with non-public partners, including in emergency preparedness and response. A multi-sector nutrition coordination mechanism was established, and the focal person was assigned to the National Planning Office who actively supported development of the Multisector Nutrition Strategy. The National Nutrition Strategic Action Plan (NSAP) of PNG (2018-2022) was published which included a costed plan with a total budget of PGK 386,879,000 over 5 years (Table 1).

Table 1: Costed Plan of PNG National Nutrition Strategic Plan (NSAP)

Outcomes	Amount (PGK thousand)
Objecive-1: Strengthen nutrition governance, coordination, communication, partnerships, and research to effectively plan, implement, monitor, and evaluate nutrition activities across sectors	19,208
Objecive-2: Improve nutrition capacity including pre-service training, cross sector in-service training, supportive supervision, work force development, career structures and operational resource	111,367
Objecive-3: Implement and strengthen interventions to prevent, control and treat under nutrition, including low birth weight, stunting, wasting and underweight across the lifecycle (focusing on adolescents and women of childbearing age, pregnant and lactating women, children under 5, pre-school and primary school children)	230,427
Objecive-4: Strengthen interventions to prevent and control micronutrient deficiencies including iron, vitamin A, iodine, zinc, and other micronutrients	24,688
Objecive-5: Implement interventions to prevent and control overweight and obesity to reduce the risk of diet related lifestyle diseases	0
Objecive-6: Comprehensive strategies shall be developed and implemented to prevent, control, and treat malnutrition among vulnerable populations	1,097
Objecive-7: Strengthen interventions that protect resilience and support recovery of households from the impact of nutrition emergencies and other vulnerabilities	92
TOTAL	**386,879**

The multi-sector coordination was not maintained at the level of initial intensity subsequently. UNICEF re-established the Nutrition Sector Meeting in 2021 which covered both emergency and development and the members include health, education, agriculture, social protection, and WASH. It was still at the early stage and its function has been limited to information exchange. As part of the new coordination, World Bank (WB) has developed the Child Nutrition and Social Protection Project (90 million USD for 6 years) in 4 provinces through multi-sector collaboration of NDOH, Department of Youth and Religions, and one other department. UNICEF has been involved in the project particularly in the community platform.

In terms of partnership coordination at province level, there has been no multi-sector coordination at province level at present. A few monthly meetings for partners have been organized recently in NCD to share experience. Budget plan for the UNICEF project was developed at province level and submitted to NDOH/UNICEF. Fund resource come from UNICEF and disbursed through NDOH.

UNICEF also developed nutrition information systems and data which were routinely analysed and used at national level to inform approaches and interventions at scale. Although National Health Information System (NHIS) in PNG included a few nutrition data (Mid-Upper Arm Circumference (MUAC) measured and underweight), they were underreported and insufficient to capture other nutrition services. The nutrition information system introduced through the pilot project[1] was completely covering all nutrition data.

Output -2: National and provincial health authorities have improved capacity and necessary supplies to ensure the delivery of nutrition-specific interventions, including SAM management, infant and young child feeding, micronutrient supplementation and maternal nutrition services, to prevent excess morbidity and mortality among girls, boys, and women, including during emergencies

- Indicators (2-1): Emergency Preparedness Plan for nutrition in UNICEF selected six (6) provinces developed and in place.
- Indicators (2-2): 80% of hospitals and health facilities in selected six (6) provinces equipped with at least one

[1] The pilot project is a part of UNICEF PNG Nutrition Programme.

trained staff and have supplies to implement nutrition specific services (SAM) management, maternal nutrition, adolescent nutrition, micronutrient supplementation and Infant and Young Child Feeding (IYCF) counselling services

- Indicators (2-3): In selected six (6) provinces, 75% of children aged 6-59 months with SAM in humanitarian situations admitted to SAM programmes and recover

Results: Since 2016/2017, UNICEF supported NDOH to conduct IMAM training across the whole country (all health facilities) targeted. Apart from the IMAM training and rollout, IYCF and IMAM training was carried out during 2017-2020 in the 3 selected provinces of Western province (WP), Western Highland province (WHP) and Autonomous Region of Bougainville (AROB). The training started in 2017 in AROB for a total of 67 health workers, which was followed in 2019 and 2020 In WHP where IYCF training was conducted for health workers of 6 health facilities in Hagen Central District by UNICEF and in Western Highlands by the Provincial Health Authority. Maternal Infant and Young Child Nutrition Educators' Resource Pack was published by UNICEF / NDOH in August 2019. In 2020, 42 healthcare workers in North Fly district of WP were trained with coordination by the Catholic Church Health Services (CCHS). The IMAM program database of UNICEF indicated a total of 6,400 new SAM admissions in 97 health facilities in the 10 provinces over 4.5 years during 2016 - 2021. The annual new admission was 1,804 in 2017 which was gradually declined to 812 (2021).

Since 2021, UNICEF adapted new strategy and started the pilot project targeting a total of 26 health facilities in the 3 provinces of NCD, WP and WHP (8 health facilities in the 3 districts in NCD, 12 health facilities of Hagen Central District in WHP and 6 health facilities in Northern Fly district of WP) to strengthen the nutrition specific services. The new expansion phase has been starting recently in the additional 7 provinces in which CCHS covers 4 (Madang, Shimbu, Hale, and New Britain) and UNICEF/PHA covers Morobe, AROB and Eastern Highland provinces.

The 2-days training was provided for health workers on IYCF, MUAC screening, weight/height measurement, admission criteria of acute malnutrition and treatment with Ready-to-Use Therapeutic Foods (RUTF), and the new nutrition registers / reporting. In NCD and WHP, UNICEF provided one support officer in each province to support PHA by equipping them with knowledge, skills, and resources to improve facility-based nutrition care and providing supportive supervision and monitoring systems to maintain accountability of the services. The implementation was sub-contracted to CCHS in Western province. The training strengthened nutrition services which were previously limited to nutrition education, growth monitoring and micronutrient supplementation by improving quality of services and providing new tools (nutrition register/reports, height boards, and Micronutrient Powder (MNP)). It also supported the linkage between inpatients and outpatients wards in hospitals for SAM treatment which was previously done by doctors at paediatric wards with little linkage with primary health services. The database developed for the pilot project provided total numbers of beneficiaries who received the main nutrition services (SAM children admitted, women and others who received IYCF counselling, under-5 children who received MNP, Vitamin A and deworming and adolescents who received Iron Folic Acid (IFA)) during 2021-2022 (Table 2).

Table 2: Total number of key nutrition services provided at health facility in the 3 target provinces

Nutrition services and target groups	Numbers
Lactating women who received IYCF counselling	14,410
Pregnant women who received IYCF counselling	3,371
Others who received IYCF counselling (Others)	9,009
Under-5 children who received MNP supplementation	9,592
Under-5 children who received Vitamin A supplementation	11,375
Under-5 children who received deworming	6,777
Under-5 SAM children who admitted	826

UNICEF established a Nutrition Sector Meeting in 2021 which covered both emergency and development. UNICEF developed a Cluster Response Plan for nutrition in July 2022 which targeted 287,250 people in the two provinces of Enga and Southern Highlands Province (SHP). The document included emergency preparedness and response for

Nutrition in Emergency (NiE) interventions.

Output-3: Male and female caregivers and families, especially the most vulnerable and disadvantaged, have improved knowledge of appropriate feeding and caring practices for women, adolescent girls, infants, and young children and to seek quality health and nutrition services, including in emergencies.

- Indicators (3-1): Adoption of the International Code on Marketing of Breastmilk substitutes as legislation by PNG, with a designated body carrying out going monitoring and translated to the population
- Indicators (3-2): Country has an endorsed training curriculum on 'infant and young child feeding' that includes training on 'early childhood stimulation and development' for community workers/health service providers for outreach and disseminated
- Indicators (3-3): 75% of Local Level Governments (LLGs) in selected six (6) provinces which have at least one trained community health workers on promotion of adolescent, maternal and IYCF practices

Results: The pilot project adopted a new strategy of enhanced target group to include adolescents and diversified service delivery platform with community and schools. During 2019-2020, VHAs from 37 villages of the 2 provinces (7 villages in WP and 30 in WHP) were trained on awareness, advocacy and MUAC screening. Under the pilot project (2021-2022), a total of 56 VHAs were trained in the 3 target provinces (10 in NCD, 26 in WHP and 20 in WP). In addition, schoolteachers within the target areas were trained on the same subjects. After the training, IYCF counselling was provided at community and schools to improve knowledge of appropriate feeding and care practices (Table 3).

Table 3: Total number of key nutrition services provided at community and schools in the 3 target provinces

Nutrition services and target groups	**Number**
Lactating women who received IYCF counselling	6,693
Pregnant women who received IYCF counselling	1,610
Others who received IYCF counselling	11,192

UNICEF supported the Government to provide improved nutrition and care practices particularly in disadvantaged and marginalized communities. This support included making available globally standardized therapeutic foods and nutrition supplies to treat and manage children with severe acute malnutrition as well as provide Vitamin A for all eligible children and iodine supplementation for communities that have limited access to table salt and with evidence of cretinism. To ensure service delivery for nutrition, UNICEF in close partnership with the Government, provided training for health workers and is also currently reviewing the pre-service curriculum for health worker cadres.

Locations of intervention implementation: PNG

Timelines of programming: 2018 - 2022

Cost/budget: 12,000,000 USD[2]

Implementation status: On-going

Intended rights holders (beneficiaries): Children under 5, adolescent girls and women in PNG. Target number of beneficiaries is approximately 2 million in PNG.

Duty bearers;

- NDOH: The main responsible government agency at national level for planning, implementation, monitoring and evaluation of the Nutrition Programme

[2] Based on the Annual Work Plan of Nutrition Programme (2020, 2021 and 2022) since the plan in previous years were not available

- PHA: The government agency at provincial level responsible for management of the Nutrition Programme
- Health workers and VHA: Responsible for nutrition service delivery at health facility and community level
- NGOs/CSO

Key implementing agencies: NDOH, CCHS,

Donors: UNICEF, Department of Foreign Affairs and Trade (DFAT) of Australia, USAID

The Nutrition Programme is directly linked with SDG-2 (end hunger, achieve food security and improved nutrition and promote sustainable agriculture) and the indicators of prevalence of stunting and wasting in children under the age of 5. Also, it is directly linked with SDG-3 (ensure healthy lives and promote well-being for all at all ages, particularly for under-5 mortality rate).

In line with the Country Programme Costed Evaluation Plan, an evaluation of the Nutrition Programme was expected to occur at the end of the programme cycle (2022). This is a first UNICEF PNG country office thematic evaluation of the Nutrition Programme and a critical requirement for country office accountability, performance and learning to support effective planning on nutrition and the 2023-2027 Country Programme cycle. UNICEF PNG Country Office undertook this process evaluation of the Nutrition Programme to foster learning and contribute to improving the programme and make it more effective in malnutrition reduction in the PNG context.

1.2 Objective of the evaluation

The purpose of this process evaluation is to foster learning and contribute to improving the Nutrition Programme to make it more effective in malnutrition reduction in the PNG context.

The evaluation aims to assess the appropriateness and relevance of the programme design as well as the efficiency, effectiveness, and coherence of implementation of the programme as designed and against the main programme outcome: Promote the well-being of mothers and children and contribute to addressing malnutrition of children in poor families, since the pregnancy until the age of two, to enhance their physical and mental development.

The objectives of the process evaluation are:

1. To document the Nutrition Programme's fidelity to its prescribed strategy and design plan.
2. To assess the added value, strengths, weaknesses, facilitators, and barriers of selected processes, including resource mobilization, engagement with partners, and monitoring and use of evidence.
3. To identify key lessons learned, including success and failures, good practices, and innovations from implementation of the programme.
4. To generate a set of clear, forward-looking, and actionable recommendations logically linked to the findings and conclusions.

The primary audience of the evaluation is the UNICEF PNG Nutrition Section and the Front Office, and other Programmes Section within UNICEF PNG. The secondary audience of the evaluation are relevant Government institutions and authorities in charge of Nutrition, relevant development partners, donors, contracted project implementers and experts, and other UNICEF Offices and Sections. The evaluation was managed by a UNICEF evaluation management team consisting of the Chief of Nutrition, Evaluation Specialist and the Planning, Monitoring & Evaluation Specialist. The evaluation was steered, quality assured and technically supported by a Reference Group / Steering Committee whose members included the Chief of Nutrition of UNICEF PNG, UNICEF Regional advisers for Nutrition and Evaluation and a representative of the Government of PNG at the national level.

1.3 Scope of the evaluation

Geographic scope: Overall implementation of the programme was planned to cover the entire country. However, the process evaluation and related data collection exercise focused on 3 provinces of National Capital District (NCD), Western Highland province (WHP) and Madang province where the interventions have been implemented. The provinces and districts that were targeted for the evaluation were purposively selected according to a set of criteria agreed by the evaluation reference group.

Temporal/Chronological scope: The evaluation covered the period from start of current programme period (2018) until the time of data collection.

Thematic scope: The appropriateness and relevance of the Nutrition Programme design as well as the efficiency, effectiveness, and coherence of implementation of the programme as designed and against the main programme outcome were within the scope of the evaluation.

2. METHODOLOGY

2.1 Evaluation criteria and questions

In order to evaluate the process of the implementation functioning, the key evaluation questions were grouped under the 5 OECD/DAC criteria of 1) relevance, 2) effectiveness, 3) efficiency, 4) sustainability, 5) coherence, along with the criterion of 6) human-rights approach / gender equity. The key evaluation questions guided information to be gathered and data source / means of data collection which are summarized in the preliminary evaluation framework below. For each question, information was collected from multiple sources to be triangulated as much as possible. The matrix was reviewed and refined through document review, consultation with primary audiences mentioned above and completed in the inception report.

Table 4: Evaluation matrix

Main evaluation questions	Sub-questions	Data source / means of data collection
Relevance		
Do the programme stakeholders, including programme beneficiaries, find the programme approach and intervention activities acceptable and useful?	• How the actions undertaken were relevant and appropriate given the local context and needs of the target population?	KII with national/local stakeholders, health workers, Civil Society Organization (CSO)
	• To what extent were the needs of beneficiaries and stakeholders take in to account in target province and facility selection?	Review project data KII with stakeholders FGD with beneficiaries
Effectiveness		
To what extent have the processes – specifically resource mobilization and partnerships – successfully supported the Nutrition	• Were the resources properly allocated to reach the objectives? • Were partners adequately engaged in the resource mobilization and the program deliveries? What were	Review of budget KII with partners

Programme delivery? What could have been done differently, if any, to be more effective?	their specific contributions?	
How well is the current Nutrition Information System functioning in terms of analysis and use of evidence? How can it be improved?	• What nutrition data has been collected at health facilities? • How are data compiled and analyzed at sub-regional and national level? • What were the major challenges	Review reports of nutrition information systems Review records at health facility, and summary reports at district/province and national level. Interview with health workers, nutrition managers at province levels, national level.
Efficiency (process)		
How well was the programme implemented in terms of fidelity to the model, design, and plans, in the prescribed order, intensity, quality, consistency, costs and timeframe? If the programme design has changed, how well did it respond and adapt to changes in the context, including during the COVID-19 pandemic, to be more relevant?	• How well was the Nutrition Programme costed and budgeted • How often and in what manner were the planned activities conducted? • Is the training following the national guideline or protocol? • What are the numbers and frequencies of the key service delivered against the target? • Are necessary supplies and equipment available? • How have the number and frequencies of the key service deliveries changed over time particularly during COVID-19? • Were any change made in planning and/or activities to address the change? If so, what were they? • What are the views/recognition among the key stakeholders of the project activities/strategies/ approaches?	Review of costing plan Project records / reports / secondary data Observation at local health facilities/LLG KII with health workers/CSO/national and provincial stakeholders Review of protocol / training program/ material/ reports Observation of nutrition services and materials at hospitals/ health facilities/LLG
What were the enablers and inhibitors in the process of programme implementation?	• What were the enablers which facilitated the implementation? • If any activities were not implemented as planned or delayed, what were the reasons? • What challenges were faced in terms of training needs, coverage, human and financial resources, supervision?	KII with health workers, CSO, managers at province levels.
Sustainability		
To what extent is nutrition service delivery institutionalized within different national systems and sectors? What is the likelihood that the programme approach and	• How well is the overall management set up of the project? • How well were the key nutrition services (SAM management, IYCF, MN supplementations, etc.)	Project management reports Interview with provincial and national health

strategies are sustained by national partners and stakeholders over time?	integrated into the routine health services in terms of training, monitoring and supervision, and reporting? • How well is nutrition integrated with other sectors integration at the policy level: Education, Agriculture. Social Protection, Water and Sanitation)? • How is the level of engagement among community health workers (Village Health Assistance: VHA) on promotion of adolescent and maternal nutrition and IYCF practices? • How can the lessons learnt from the selected 3 provinces inform other provinces?	offices, local stakeholders FGD/KII with community health workers
Coherence		
To what extent has the programme aligned with implementation of the National Nutrition Policy 2016 – 2026?	• Are the Nutrition Programme goals, strategies and interventions aligned with the national nutrition policy?	KII with UNICEF, key stakeholders at national and provincial level.
How consistent was the programme with other similar interventions in PNG (i.e., adding value without duplicating efforts)? And how can it better target its contribution to the Nutrition SDGs?	• What other institutions in PNG implement nutrition and how is their approach, target, interventions similar to or different from the UNICEF program? • What is the distinctiveness of the program and potential complementarity with other programs?	KII with other institutions implementing nutrition programmes (NGO, CSO, etc.) KII with national level stakeholders.
To what extent was the programme aligned to regional office and head quarter internal nutrition guidance as well as global nutrition norms and standards?		KII with UNICEF Regional Nutrition Office Document review (regional / global strategy)
Human-rights approach		
To what extent did the implementation strategies of the programme address gender equality and disability issues?	• How was the project assessed and how did it address gender equality: differences in vulnerabilities between men, women, boys and girls, people with disability? • How did the project reach hard-to-reach areas and the most vulnerable populations?	KII with UNICEF, key stakeholders at national and provincial level.

The preliminary analytical framework was reviewed, modified/detailed and finalized through secondary data collection/analysis as well as discussion with the reference group.

2.2 Target population and sampling

This evaluation study was conducted in provinces in PNG where the Nutrition Programme has been implemented. The 3 targeted provinces were selected among the main target provinces which represented different topographic characteristics of PNG: one from the capital, another from highland and another from coastal. Within each province, 1-3 districts were selected which represented different socio-economic and other conditions. Considering accessibility based on interviews with UNICEF and stakeholders, a few health facilities and their catchment areas were selected by balancing socio-economic, types of facility, government/non-government (i.e., church, NGO), within each of the districts. At the national level, UNICEF, NDOH, other institutions implementing nutrition programmes, and other stakeholders were interviewed. At the health facility level, nutrition focal persons of the selected healthy facilities, health workers (nurses and community health workers) and managers were interviewed while observation were conducted for tools, equipment, supply, and other materials.

Sampling strategy

Selection of the targeted province, district and health facilities for the process evaluation was discussed with UNICEF and NDOH. The total sample size was 47, of which breakdown is shown in Table 5.

Table 5: Sample sizes by locality and source.

Source/Locality	National	NCD	WHP	Madang	Total
NDOH	2				2
UNICEF	1				1
NGO	4				4
Province		2	3	4	9
Hospital		1	1	1	3
Health facility		4	3	4	11
Community		2	14	1	17
Total	**7**	**9**	**21**	**10**	**47**

2.3 Data collection methods

Secondary data collection: Program database of the nutrition information systems was used to explore the performance indicators.

Primary data collection methods: Qualitative data collection methods for the process evaluation was applied using assessment tools developed based on the evaluation framework. The following methods were used for data collection.

- Focus group discussions (FGD): The focus group discussion with approximately 6 – 12 persons was guided by a facilitator, during which group members spoke freely and spontaneously about discussion topics. FGD is a type of group interview designed to explore people's attitudes. It can be used to find out what issues are of most concern for a community or group when little or no information is available[3]. FGD participants in this evaluation were community health workers. During the FGD, group members spoke freely and spontaneously about the topics below.

  Discussion topics

  Training and support provided (free listing)
  Perception of quality of the training they received from health facilities
  Things they learnt from the training
  Usefulness for their community (positive as well as negative)
  Challenge in participation

[3] https://www.betterevaluation.org/methods-approaches/methods/focus-groups

Other feedback

- Key informant interview: A key informant interview (KII) involves interviewing people who have particularly informed perspectives on an aspect of the program being evaluated[4]. KII were used with UNICEF, NDOH, health workers, manager and CSO partners involved in the project activities.

Key questions for UNICEF/NDOH

- Perception about relevance of the program (content and target site selection) under local context and needs
- Process of nutrition information system development and strength/challenges at national level
- Perception about fidelity to the project plan (activities/strategies/ approaches, input)
- Perceived enablers and inhibitors in the process of programme implementation including resource mobilization
- Degree and challenge of integrating nutrition services into health systems
- Management structure and perceived challenges in project management capacity
- Coherence of the Nutrition Programme with the national nutrition policy
- Perception about distinctiveness of the program and replicability in other provinces

Key questions for health workers

- Perception about relevance of the program (content and target site selection) under local context and needs
- Perception about the completeness, accuracy, timeliness, and challenges of data collection, reporting and analysis
- Achievement of the project (process, numbers and frequencies of the key services / supplies and equipment delivered)
- Perceived enablers and inhibitors in the process of programme implementation
- Contents, process and perceived benefit and challenges of training for community health workers

Key questions for health managers

- Perception about relevance of the program (content and target site selection) under local context and needs
- Perception about the completeness, accuracy, timeliness, and challenges of data collection, reporting and analysis
- Achievement of the project (process, numbers and frequencies of the key services / supplies and equipment delivered)
- Degree and challenge of integrating nutrition services into health systems at the provincial level
- Management structure at the provincial level and perceived challenges in project management capacity
- Coherence of the Nutrition Programme with the national nutrition policy
- Perception about distinctiveness of the program and replicability in other provinces

Key questions for other institutions (NGO, CSO) implementing nutrition

- The Nutrition Programme approach, target, and interventions
- Potential complementarity with other programs

- Observation: Project related activities and supply/materials were observed

Data collection tools

[4] https://www.betterevaluation.org/methods-approaches/methods/key-informant-interviews

Questionnaires, FGD question guides and instructions, observation grid, KII question guides were drafted in English based on the evaluation grid and reviewed by the Reference Group members before finalization. They were rapidly pre-tested for validation. The data collection tools are presented in the **annex.**

Data collector

The Evaluator guided and worked with a local researcher throughout the evaluation to ensure systematic and high-quality data collection, and to contribute to national evaluation capacity.

2.4 Analytical approaches

Design and approach: Based on the objectives of the evaluation, the overall design of the evaluation was non-experimental, although whenever possible, with a comparative and external perspective which were sought to assess the evaluation criteria and identify potential variations in perceptions. The evaluation was utilization focused, providing continuous and rapid feedback to primary users during the evaluation process.

Qualitative data analysis: The consultant and research assistant made transcripts of all qualitative data collected which were crosschecked and validated by the consultant. Qualitative data analysis was done using excel spreadsheets. Data was summarized and examined for any marked differences by sub-groups and locations.

Interpretation and triangulation: In accordance with the evaluation matrix above, data was collected from multiple sources to answer the same questions. Those different data sources were triangulated (i.e., the practice of using multiple sources of data or multiple approaches to analysing data to enhance the credibility of a research study) to make valid interpretations to answer the key evaluation questions.

2.5 Ethical issues

Ethical considerations: The evaluator was bound by ethical research principles of impartiality, independence, credibility, conflicts of interest, and accountability, in line with the UNEG Ethical Guidelines, UNEG norms and standards, UNEG Code of Conduct and the UNICEF Procedure on Ethical Standards in Research, Evaluation and Data Collection and Analysis. The following issues were ensured:

- **Respect for rights of individuals and institutions**: The evaluator accorded informants the opportunity to participate voluntarily while maintaining their anonymity, and to make an independent decision to participate without pressure or fear of penalty (informed consent/assent). Informed consent to participate in interviews was obtained from all study participants prior to conducting interviews. The participant was asked to verbally confirm consent. Also, interviewers assured respondents that information would be confidential, and that reports would be written such that responses/contributions would not be traced back to them. Interview notes and any recordings were accessible to the team members only. For this purpose, all the collected data was de-identified, and names or other identifying information of the study participants were not maintained. All raw electronic and audio data were securely stored and protected with password to limit access and will be disposed of after an appropriate period.
- **Respect for cultural identities and sensitivities**: Variances in ethnicities, culture, religious beliefs, gender, disability, age were respected.
- **Professional responsibilities and obligations of evaluators**: The evaluator exercised independent judgement and operated in an impartial and unbiased manner. During data collection, any sensitive issues and concerns were addressed through the appropriate mechanisms and referral pathways.
- **The ethical clearance of data collection tools and methodology**: The evaluator worked with UNICEF to obtain the ethical clearance at the end of the inception phase.

Potential ethical risks and mitigation measures: When FGD was conducted with Village Health Assistants, sensitive religious, cultural, and tribal norms of the population may have caused impediment to data collection because of group composition and power dynamics of participants. To mitigate this risk, health workers at the nearest health facility and community leader were consulted in advance to knows well the respondents to ensure there was no harm against them and minimize potential conflict. Also, the local researcher was trained on interview skills with socio-cultural and religious sensitivity considered.

Ethical training: Prior to implementation, the local researcher was trained on all the potential ethical considerations, risks and mitigation measures, informed consent, and other related issues.

Ethical clearance: Prior to any data collection, the evaluation protocols, instruments, and tools underwent an ethical review, by an independent committee setup within UNICEF East Asia and Pacific Region. The Letter of Ethical Approval issued by this entity is attached as an annex.

2.6 Limitations and constraints

The study collected data from duty bearers and not from beneficiaries because the evaluation focused mainly on the process and outputs instead of outcomes. Although careful efforts were made to minimize respondents bias by making sure at the beginning of interviews that respondents can freely express their ideas and views, potential for respondents bias could remain as it was not possible to validate their views with those of beneficiaries.

The three provinces surveyed were selected purposively through consultations with NDOH and UNICEF. Although it was ensured the selected provinces represented different climate and topographic conditions in PNG, they did not represent the whole target areas of the program.

It was difficult to access program reports and secondary data at national level due to insufficient reports archiving system in place within UNICEF PNG. The evaluator, therefore, had to collect documents and data from different stakeholders within UNICEF to understand the activities, outputs, and process of the implementation, which reduced efficiency in data collection for the evaluation questions. Also, challenges were faced in coordinating with national level stakeholders at the beginning of field work, which hampered timely appointment making and initiation of data collection.

2.7 Management and logistic support

UNICEF provided financial support for the international consultant. UNICEF and NDOH communicated with the local health offices and partners in the 3 provinces to make necessary arrangement for the data collection teams' access to study sites.

Quality assurance: Data quality was checked through multiple methods. First, when the consultant and local researcher collected data, it was ensured that respondents were selected properly, introductions were done and questions were asked according to the standard manner, and answers were recorded accurately. Once the interviewer was completed, any important issue was discussed, Secondly, data analysis results and reports were be shared with the Evaluation Reference Group / Steering Committee for comments and feedback to ensure the quality of the analysis and reports.

3. FINDINGS

The findings were organized below by the process evaluation framework and research questions, as described in Section 2.1.

3.1 Relevance

Evaluation question (3.1.a): *Do the programme stakeholders, including programme beneficiaries, find the programme approach and intervention activities acceptable and useful?*

- Scale Up Nutrition (SUN) country profile of PNG stated that since the inception of the multisectoral National Nutrition Policy 2016–2026, some leverage was achieved in securing government support for nutrition intervention. According to interviews with national level stakeholders, although general interest and commitment to nutrition was not initially high, they now acknowledged the importance of nutrition support in PNG because of the needs of nutrition interventions which were high in the country. Those facts indicated increased demand for nutrition services in PNG at national level (output-1).
- The more a program responds to needs and challenges among stakeholders who deliver nutrition services, the more it is accepted and perceived useful among them. The nutrition focal person of NCD did a rapid assessment at the beginning of her assignment and found some gaps in human resource, capacity and reporting. The UNICEF support officer in WHP visited all the health facilities within the target district and found the gaps in nutrition supply, services delivered knowledge among health workers. Those findings guided them to focus on the gaps through their routine works on training, monitoring and supervision. This suggests the nutrition strategy of UNICEF was responsive to the local context and needs through the gap analysis. The UNICEF Nutrition Support Officer positioned at PHA was perceived helpful and useful among stakeholders at province and health facility levels (output-2).
- Design of the pilot project adapted to the needs of most vulnerable age group and gaps in the service delivery. More specifically, the strategy applied a life-course approach by including adolescent girls in the target group, diversified service delivery platform from primarily health facility based to including community and schools (output-2,3) and introduced the new reporting system and online database which included all the key nutrition indicators as compared to HMIS which contained only a few nutrition data.
- Although Demographic Health Survey (DHS) conducted in 2016-2018 included data collection on anthropometry, the results were not presented in the report due to data quality concerns. Since baseline and midline surveys have not been conducted during the UNICEF strategy period since 2015, the conducting of that would have benefited selection of the target population based on severity or magnitude of nutrition problems.

3.2 Effectiveness

Evaluation question (3.2.a): *To what extent have the processes – specifically resource mobilization and partnerships – successfully supported the Nutrition Programme delivery? What could have been done differently, if any, to be more effective?*

- According to the interview with UNICEF Chief of Nutrition, UNICEF has mobilized nearly 20 million USD from several major donors including the DFAT of Australia (10 million), UNICEF UK (4 million), CIFF (4 million) and USAID (1 million) for coming years which was large leap from the level of funding for nutrition in the previous years. According to UNICEF Annual Work Plans during 2019 – 2020, UNICEF budgeted approximately 12 million over the 3 years. Therefore, the fund mobilized will sufficiently cover the coming years. Also, World Bank will invest in the Child Nutrition Social Protection (40 million). (output-1)
- In addition, several international partners, namely Save the Children and World Vision supported nutrition interventions in several provinces of PNG. Save the Children has implemented its nutrition programmes in 3 provinces of Western, East Sepik and AROB since May 2022 while World Vision is starting the new project of nutrition sensitive agriculture in Western, Balimo and AROB. Most of those interventions focused on community and school platforms while nutrition service delivery at health facilities were provided through NDOH and UNICEF, with the complementary partnership contributing to the Nutrition Programme and strategy (output-1).
- In response to the enhanced financial resources from donors, the PNG government also increased its budget allocation for nutrition. However, according to the 2021 Scale Up Nutrition (SUN) Country Profile, PNG has not

completed a budget tracking exercise, identified funding gaps, nor tracked domestic expenditures on nutrition. Therefore, it would be difficult to confirm the level of local resource mobilization for nutrition (output-1).

Evaluation question (3.2.b): *How well is the current Nutrition Information System functioning in terms of analysis and use of evidence? How can it be improved?*

- After reviewing the IMAM report system which were developed and implemented previously, the pilot project re-designed and launched the new nutrition registers and reporting forms which collected all nutrition data (number of children covered by IYCF, MUAC screening, number of SAM/MAM, exclusive breastfeeding, complementary feeding, etc.) monthly, which was analysed at NDOH to inform coverage of key interventions. The database has been stored at NDOH and analysed periodically to produce analytical outputs. Currently there is no systematic feedback provided from NDOH to provinces.
- Despite the large improvements made in the nutrition information system under the pilot project, implementation of the system has faced some challenges at some health facilities in maintaining consistent reporting rates mainly because of constraints of time and human resource. According to the database, average reporting rate among the health facilities under the pilot project was estimated at approximately 56% (minimum 20%, maximum 86%). According to a UNICEF key informant, only one health facility has submitted regularly and consistently while others were not consistent because of lack of human resources and time for reporting. A health worker mentioned "*It takes a whole day for the nurse to make the report*" (Ogelbeng Community Health Post). This implies that the volume of data in the new information system posed some challenges, The nutrition registers contain a total of 36 reporting items (photo shown in the annex). Other reasons of the challenges were reported by a nurse who said "*When X worked for the clinic, she did monthly reporting. Once she moved to other service, the reporting was not possible as the nurses working the clinic did not attend the training and do not know how to report*" (Urban Hagen Clinic, WHP). Those findings indicated the challenges of regular and complete reporting.
- Also, IMAM data from inpatient treatment at hospitals has not been sufficiently captured by the current nutrition information system. It was illustrated by the number of new SAM cases which has been reported in the Hospital Statistics: According to NDOH Child Morbidity and Mortality Annual Report in 2021, 2,514 children were admitted with severe malnutrition (weight for age <3 SD below the median), or with severe wasting or kwashiorkor in the 18 hospitals. In contrast, the nutrition information system reported annual new admissions of 812 in 2021.
- Harmonization with PNG Health Information Management System (HMIS) and digitalization of the system might benefit improved reporting quality. However, it needs careful consideration of spaces available within HMIS and e-literacy among health workers. It would be necessary to review/evaluate the system introduced in the pilot project in the 10 provinces to come up with better solutions.

3.3 Sustainability

Evaluation question (3.3.a): *To what extent is nutrition service delivery institutionalized within different national systems and sectors? What is the likelihood that the programme approach and strategies are sustained by national partners and stakeholders over time?*

- Some of the most essential nutrition services such as growth monitoring (weight measurement and plotting on growth charts), nutrition education, deworming and Vitamin A supplementation have long been a part of the regular health services in PNG. Those were delivered as the routine of well-baby and outpatient clinics as they have been a part of Standard Treatment for Common Illnesses of Children in PNG used by all the health facilities regardless of whether the facility received UNICEF/DOH training. In addition, detection and treatment of acute malnutrition has been rolled out nationally since 2016. Those core part of the nutrition services have been, therefore, institutionalized within the health system of PNG (output-2).
- The pilot project has strengthened the regular nutrition services by adding some new services which include

use of weight-for-height Z-score for admission criteria of SAM, provision of MNP, and IYCF counselling (output-2). It has covered 3 provinces in the past two years and will be expanded to 7 additional provinces. Those new elements of the nutrition services have not fully been institutionalized because of several reasons described below.

- Full integration of nutrition into health services will require an improved enabling environment in human resource, information system, constant supply of nutrition commodity and nutrition governance. Stakeholders at national, provincial and health facility levels reported challenges in these areas of the enabling environment (output-1).
- Presence of nutrition focal person and trained health workers at PHA were the key to sustainable implementation of nutrition within health services. Despite the nutrition focal position at PHA available for many years, it has not been fulfilled in most of the provinces. According to the Nutrition Strategic Action Plan of PNG (2018-2022), only 8 among the 22 provinces had a designated position for nutrition, who were not properly trained on nutrition. Potential reasons of this under-fulfilment of the positions were differently explained by the stakeholders interviewed. For example, NDOH mentioned "*the current salary scale not adequate for the position*", or "*absence of higher education course for nutrition*" as the potential causes. PHA in WHP and NCD claimed "*Position of nutrition focal person has been long available at province level and budgeted, but not fulfilled due to lack of commitment at management level*".
- There has been frequent turnover and lack of health workers trained on nutrition created gaps in nutrition services, which required continuous support of UNICEF support officers. Nutrition information and supply systems have also required support from UNICEF to avoid gaps of data and supply. For example, a nutrition focal person at a health facility in WHP mentioned, "*I did not receive the training. Two health workers were trained. Other nurses who participated were shifted to other heath facility*".
- Many VHA have been continuously and actively engaged in nutrition services even without incentives (particularly in WHP). According to the FGD with VHA in WHP, a total of 11 out of 14 VHA interviewed have been working continuously for multiple years. However, some VHAs' continued activities were hampered, mainly by delayed payment of incentives (e.g., NCD). In NCD, only two VHA were active at the time of this evaluation among a total of 10 VHA who were trained previously by UNICEF/NDOH (output-3).
- A multi-sector nutrition coordination body was developed with the support of UNICEF. Significant contribution of the coordination body resulted in the development of the National Nutrition Strategic Action Plan (NSAP) and National Nutrition Policy (NNP) with focal points assigned to the National Planning Office. The initial functionality of the body, however, was not sufficiently sustained during the implementation of the strategy and plan (output-1).
- Similarly, the coordination at province level has been limited. Several KII respondents shared the challenges of developing a provincial level coordination mechanism as illustrated by the quotes "*There has been no formal structures for multi-sector coordination at province level. Terms of reference for the multi-sector coordination meeting was made by the UNICEF support officer but senior management has not signed for long time*" (WHP) (output-1).
- UNICEF has been initiating the nutrition sector coordination meeting at national level and in some provinces which are still at the stage of information exchange (output-1).

3.4 Efficiency (process)

Evaluation question (3.4.a): *How well was the programme implemented in terms of fidelity to the model, design, and plans, in the prescribed order, intensity, quality, consistency, costs and timeframe? If the programme design has changed, how well did it respond and adapt to changes in the context, including during the COVID-19 pandemic, to be more relevant?*

- IMAM protocol (2018), IYCF policy (2014) and Maternal Infant and Young Child Nutrition (MIYCN) Educators'

Resource Pack (2019) were the basis of the training conducted. MUAC tape, weighing scale, and IYCF counselling books were delivered sufficiently among target health facilities and volunteers. Those facilitated the increased fidelity to the overall designs of IYCF and IMAM as the trained health workers followed IYCF key messages and IMAM protocols (output-2).

- Instructions for the nutrition registers and reports were carefully provided during the training based on the manuals. According to the observation of IYCF/IMAM training in Madang province, substantial part of the training was used for the reporting. It led to the database being established at NDOH which provided data of increased availability of the key nutrition services at the pilot project provinces (output-2).
- Despite the overall fidelity to the protocol, some variations in the practices were observed or reported at the interviews. For instance, MNP was distributed to all children under the age of 5 who came to a health facility or only given to moderately malnourished children. RUTF was prescribed only by health workers or occasionally also by VHAs. Those practices were adopted differently particularly among those who were not trained. Short supply of some nutrition commodity has been reported, particularly of albendazole, Vitamin A and therapeutic foods over extended periods in 2021 to early 2022. Supply of height boards has been limited in number, which led to admission criteria mainly based on weight-for-age or MUAC. Inpatients ward used alternative formula (Sunshine milk with sugar and oil) to replace F75/100 during the shortage period. In terms of the fidelity to the SPHERE standard, high defaulter rate has been reported from the database and interviews. According to the database, the average defaulter rate was around 40%. However, during KII with health workers, many of them reported a higher rate (more than 90%). It is assumed that follow-up of discharged children has been challenged by insufficient mobile outreach clinics and active volunteers at the community level (output-2).
- COVID-19 pandemic affected availability of health workers for nutrition as indicated by the interview with a health worker in Urban Hagen Clinic, who claimed "*most of health workers were picked for COVID responses for some months*". Most of the interviewees at health facility levels mentioned reduced attendance of beneficiaries as effects of COVID-19. Furthermore, an NDOH focal person claimed shipment of nutrition supplies were delayed during the COVID-19 pandemic, which affected all the nutrition services. On the positive side, funding for health services in general increased during the pandemic. These findings suggest availability and coverage of nutrition services were negatively affected by COVID-19 (output-2).

Evaluation question (3.4.b)*: What were the enablers and inhibitors in the process of programme implementation?*

- The challenges mentioned above have been caused by several inhibiting factors mainly at the national level.
- Most of the national level stakeholders shared the same perception that multi-sector coordination mechanisms faced challenges in maintaining the initial momentum. Despite significant contribution of UNICEF nutrition support to enhanced interest and commitment among the government, donors and partners, the current level of general commitment needs to be further enhanced to improve the enabling environment in general and the governance in particular. Multi-sector coordination at national and provincial level and fulfilment of the nutrition focal position at PHA will require stronger leadership and commitment of the senior management of the government at national and provincial levels (output-1).
- Management systems of the government for supply and financial resources were other barriers against smooth implementation of the pilot project. The project activities were hampered by delayed fund disbursement from the government account due to restricted fund transfer beyond the agreement term. The challenge was also reported by a key informant in WHP who mentioned "*After the training and waiting for fund transfer before staring activities*". Similarly, supply of key nutrition supplies was delayed at various points over supply chain of the government system. Albendazole and Vitamin A have been in short supply since early 2022 due to expiration of the previous stock (in all 3 provinces), and weighing scale and height measuring boards were not provided as planned (WHP).(output-1)
- Limited availability of nutrition courses at higher education was another negative factor which worked against availability of human resources with nutrition background for NDOH and UNICEF. Currently, there is no university in PNG which provides nutrition courses with a diploma. As previously described, two persons

interviewed at NDOH shared the same concern about the lack of human resources with nutrition background and expressed the needs of nutrition courses at universities in PNG (output-1).

- Insecurity in PNG also affected the implementation of the programme. General elections were held in Papua New Guinea from 4 to 22 July 2022 to elect the members of the National Parliament for a new five-year term. The elections and associated political campaigns hampered the project activities due to related insecurity and roadblocks.

3.5 Coherence

Evaluation question (3.5.a)*: To what extent has the programme aligned with implementation of the National Nutrition Policy 2016 – 2026?*

- The Nutrition Programme was in line with most of the objectives of NNP except for objective-5, prevention, and control of overweight and obesity which was not included in the National Nutrition Strategic Action Plan (NSAP) for 2018-2023.
- NNP objective-2 included pre-service training for nutrition among health workers. At the time of this evaluation, the pre-service training courses were not available.
- NNP objective-3 included implementation and strengthening of nutrition specific and sensitive interventions. UNICEF support has mainly focused on nutrition specific interventions, and it is expected to initiate nutrition sensitive interventions through partnership with the World Bank.

Evaluation question (3.5.b)*: How consistent was the programme with other similar interventions in PNG (i.e., adding value without duplicating efforts)? And how can it better target its contribution to the Nutrition SDGs?*

- Apart from CCHS which was the implementation partner of the UNICEF pilot project, Save the Children and World Vision also implemented nutrition projects. Regular coordination with these active partners has been maintained at the province level to avoid duplication. Protocol and guideline as well as other materials produced by UNICEF/NDOH have been used by those partners (output-2). Those facts ensured the Nutrition Programme has been consistent in its technical aspects with other similar interventions in PNG. Since the UNICEF programme and other institutions target different areas, they contributed to each other towards achievement of NNP as well as SDG-2, namely the reduction of prevalence of malnutrition in PNG.
- The World Bank has been prepared to implement Child Nutrition and Social Protection Projects in 4 provinces through multi-sector collaboration of NDOH, Department of Youth and Religions, and one other department. UNICEF will participate in component 1 – PNG Community-based Approach to Reduce and End Stunting (PNG CARES) including community mobilization and advocacy to create demand for – and change behaviours relevant to – nutrition and converge nutrition-sensitive water and sanitation and dietary diversification interventions; strengthening health systems to deliver nutrition-specific services and inter-personal Social Behaviour Change Communication (SBCC); and promoting early childhood stimulation and positive parenting. It is expected UNICEF will provide technical assistance and capacity development for the component. This partnership with the World Bank marked a significant contribution to the NNP objective-1 and SDG-2 (output-1).

Evaluation question (3.5.c)*: To what extent was the programme aligned to regional office and head quarter internal nutrition guidance as well as global nutrition norms and standards?*

- The Nutrition Programme has been mainly focused on nutrition specific services delivered through regular health services. It was designed based on the evidence-based interventions such as management of acute malnutrition, IYCF promotion and micronutrient supplementation. The Programme strategy was aligned with health system strengthening approach in the six building blocks (i) service delivery, (ii) health workforce, (iii) health information systems, (iv) access to essential medicines, (v) financing, and (vi) leadership/governance.
- MIYCN Educators' Resource Pack (2019) is the material developed by NDOH with support of UNICEF. The

material was the technical resource referred and used for IYCF training for VHAs and schoolteachers. Various elements of the Resource Pack were based on WHO/UNICEF IYCF guidance documents, training and other materials and the materials were produced with the support of UNICEF East Asia and Pacific Regional Office (EAPRO).

- The UNICEF strategy in PNG enhanced target age group (from under-5 children to life-course), and diversified service delivery platforms from a curative focus at health facilities to include preventive action at community and schools, aligned with the UNICEF Programming Guide of IYCF and global evidence-based strategy for nutrition interventions (output-2,3).
- RUTF use by VHAs is not in the current IMAM protocol. According to UNICEF Prevention and Treatment of Severe Acute Malnutrition in East Asia and the Pacific (2015), contributions from community engagement includes active case finding and raising awareness about acute malnutrition without handling of RUTF (output-2).

3.6 Human-rights approach

Evaluation question (3.6.a)*: To what extent did the implementation strategies of the programme address gender equality and disability issues?*

- UNICEF nutrition strategy targeted children and women with particular focus on pregnant and lactating women as well as adolescents as they are nutritionally most vulnerable. According to the available training reports and interviews, females were represented more than males as training participants. For example, according to the training report of IYCF/IMAM for VHA in WHP, among a total of 30 participants, 29 were female and one was a male. Therefore, gender equity has been addressed in terms of women's participation in the program (output-2).
- In terms of women's rights for health and nutrition, however, there were some issues that remained unaddressed. Early pregnancy is one of the critical causes of undernutrition in PNG. According to DHS in PNG (2016 – 2018), among women aged 15-19, 12% have started childbearing (i.e., they have already had a birth or are pregnant with their first child). When pregnancies are unplanned, young women are not exercising their reproductive healthcare rights. The children of those women are more likely to be adopted. One nurse in NCD mentioned *"(There are) approximately ¼ of all children are of teenage pregnancy of which child is cared by grandparents who use bottle feeding*". Although the issue was highlighted in the Resource Pack, the IYCF and IMAM training did not have specific reference to the issue (output-2).
- NNP objective-6 includes strengthened interventions to prevent and control malnutrition among vulnerable groups such as people living with HIV, TB, mental illness and disabilities, and people living in institutions. IMAM protocol included responses to acute malnutrition with TB, HIV/AIDS, and disability. Therefore, the right to access to health and nutrition among the most vulnerable groups has been addressed by the program (output-2).
- According to the interviews, health workers recognized that IYCF practices, particularly exclusive breastfeeding rate, was very low among mothers in difficult circumstances, namely in cases of adoption and/or separation and unemployment. Wet nursing was briefly introduced as part of the MIYCN Educators' Resource Pack, breastfeeding for adopted children and their mothers. However, this may need more in-depth instructions given the high demand in PNG (output-2,3).
- VHAs have been actively engaged in some health facilities to reach hard-to-reach villages particularly in WHP. It was illustrated by one VHA in WHP who mentioned "*We are from different ward and we work not only in our own community, but also some neighbouring villages*". Due to insufficient availability of fund and vehicles, outreach services were not conducted in many health facilities particularly in NCD. One health worker in NCD mentioned "*Follow up of defaulters need volunteers. There is no VHA. It is also challenge for them to identify good VHA for far distance villages/settlement without visiting villages. Because there has been no mobile outreach clinic, it is even more difficult*." The pilot project target districts were selected among the relatively

accessible instead of hard-to-reach. Therefore, the needs of those in hard-to-reach communities has remained unaddressed (output-3).

4. CONCLUSION

The results of this evaluation were organized by the process evaluation framework and evaluation questions.

1) [**Relevance]** The project design was considered relevant among key stakeholders. UNICEF nutrition strategy adapted to local context and needs through the gap analysis and assigned Nutrition Support Officers at the PHA, which was perceived helpful and useful among stakeholders at the province and health facility level. A baseline survey would have benefited selection of the target population based on severity or magnitude of nutrition problems (based on finding 3.1.a).

2) **[Effectiveness]** The project was effective in mobilizing financial resources from several major donors for the coming years which was a large leap from the level of funding for nutrition in the previous years. In addition, several international partners supported nutrition interventions which contributed to the Nutrition Programme and strategy (based on the finding 3.2.a). UNICEF also developed the new nutrition register and reporting forms of which implementation faced challenges in maintaining consistent reporting rates (based on finding 3.2.b).

3) **[Sustainability]** The pilot project has strengthened the regular nutrition services which have long been a part of the regular health services in PNG by adding some new services. However, full integration of nutrition into health services will require an improved enabling environment which was perceived as a challenge by stakeholders. Potential of sustainability will be enhanced by improved availability of human resources (nutrition focal person at PHA, and trained health workers and continuous engagement of VHA), strengthened nutrition information and supply systems, active and functioning multi-sector nutrition coordination (based on finding 3.3.a).

4) **[Efficiency (process)]** Despite the overall fidelity to the IMAM/IYCF protocols which guided the training, some variations in the practices were observed or reported at the interviews. High defaulter rate has been reported from the database and interviews. The COVID-19 pandemic affected availability of health workers for nutrition, delayed shipment of supply and attendance of beneficiaries. On the positive side, funding for health services was generally increased during the pandemic (based on finding 3.4.a). The inhibiting factors included insufficient commitment of government leaders to nutrition, inefficiency in the management systems of the government for supply and financial resources, limited availability of nutrition courses at higher education and insecurity within PNG (based on finding 3.4.b).

5) **[Coherence]** The Nutrition Programme was in line with most of the objectives of NNP. Although the past support has mainly focused on nutrition specific interventions, it is expected to initiate nutrition sensitive interventions through partnership with the World Bank (based on finding 3.5.a). Regular coordination with these partners has been maintained at the province level to avoid duplication. Protocol and guidelines as well as other materials produced by UNICEF/NDOH have been used by those partners. It is expected UNICEF and partners will enhance regular exchange of information to maximize synergy, for example, through technical collaboration over new protocols for nutrition sensitive agriculture, water and sanitation, social protection, and gender (based on finding 3.5.b). The UNICEF strategy was aligned with the UNICEF Programming Guide of IYCF and global evidence-based strategy for nutrition interventions such as life-course approach and health system strengthening (based on finding 3.5.c).

6) **[Human-rights approach]** The UNICEF nutrition strategy targeted children and women with a particular focus on pregnant and lactating women as well as adolescents as they were nutritionally most vulnerable. The IMAM protocol included responses to acute malnutrition with TB, HIV/AIDS, and disability, but for improved response to mothers in difficult circumstances, the protocol may need more in-depth instructions in the cases of adoption and/or separation and early pregnancy and strengthened outreach services to hard-to-reach population (based on finding 3.6.a).

Below are some cross-cutting conclusions, based on the overall findings:

7) UNICEF supported the government at the national level to lead cross-sector collaboration and coordination along with non-public partners. Although activeness and functionality of the national level coordination were not maintained subsequently, UNICEF recently re-established the Nutrition Sector Meeting which covers both emergency and development, and the members include health, education, agriculture, social protection, and WASH. At the province level, partnership meetings have been initiated recently in a few provinces to share experiences (output-1).

8) IMAM training was conducted, and the implementation was rolled out across the whole country based on IMAM guidelines since 2016. A total of 6,400 new SAM admissions were recorded in the 10 provinces during 2016 – 2021. IYCF training was conducted during 2017 – 2020 for health workers and VHAs in the 3 selected provinces using MIYCN Educators' Resource Pack developed by UNICEF and NDOH (output-2).

9) Since 2021, UNICEF adapted a new strategy and started the new pilot project targeting the 3 provinces of NCD, WP and WHP and it will be expanded in 7 additional provinces. The pilot project expanded the target group to include adolescents, diversified service delivery platform to include schools and assigned support officers of UNICEF to equip their counterparts in PHA with knowledge, skills, and resources to improve facility and community-based nutrition care and provided supportive supervision and monitoring systems to maintain accountability of the services (output-2).

10) A new nutrition information systems and database were designed and utilised under the pilot project in 3 provinces. Data have been routinely analysed at national level to inform coverage of nutrition interventions such as number of people who received IYCF counselling, micronutrient supplementation (MNP, Vitamin A, IFA) and deworming in the 3 provinces during 2021 - 2022. (output-2,3).

11) UNICEF developed a Cluster Response Plan for nutrition in July 2022 which targeted 287 people in the Enga province and 250 people in SHP. The document included emergency preparedness and response for NiE interventions.

5. LEARNING

Through the experiences of the Nutrition Programme, several lessons were leaned which are useful to programmes beyond the current project, and beyond PNG, and can be informative to other regional and global offices.

Planning of the process evaluation: This evaluation focused on the Nutrition Programme in PNG since 2016. The Programme contained many different components which have been implemented by different teams within UNICEF PNG at different timing. Although several reports of different components were shared, it took substantial time and effort to grasp the whole picture of the Programme from different pieces of information under unavailability of programme reports which summarize activities, inputs, and results of the entire Programme. Quality of a process evaluation relies on precise description of programme implementation status and process, without which interpretation of data is difficult, and further challenges answering research questions. Therefore, improved archiving of relevant reports will benefit future evaluations.

Integration of nutrition specific interventions into health services through health system strengthening: The evaluation data, though predominantly qualitative, found that the nutrition service delivery through the pilot project has been accepted among duty bearers and reached children, women, and adolescent girls in the target sites. Despite several challenges found in the enabling environment related to some building blocks particularly of human resources, supply and governance, the pilot project demonstrated the potential for integrating nutrition specific services into regular health services into health system by enhancing coverage and impact of the service delivery in a larger scale and addressing the remaining challenges in the enabling environment.

Potential for replicating the model in other countries in the South Pacific Islands: Many of the countries in the South Pacific share similar socio-cultural characteristics while availability and accessibility of nutrition services

have been limited. It is worth considering replication of the model of pilot project in PNG in these other countries.

6. RECOMMENDATIONS

The following recommendations were made based on the above findings and analysis. All recommendations are intended for the UNICEF PNG Nutrition Section's implementation. Both UNICEF PNG Nutrition Section and representative of NDOH were involved in the evaluation reference group which received the evaluation report and had an opportunity to comment on the recommendations, to ensure they are actionable and important.

(High priority)

1. Train nutrition service providers at health facilities, communities and schools in the seven new provinces where the nutrition programme has been scaled to. The focus should be put on the issues identified by this evaluation (based on conclusions-4,6,8,9).
2. Develop training modules for service providers in health facilities, communities and schools. (based on conclusions-4,6,8,9).
3. Update the present nutrition information system based on field implementation experiences in the ten programme provinces with focus put on the issues identified by the evaluation (based on conclusion-2 and finding 3.2.b).

(Medium priority)

4. Hold at least one advocacy meeting with key stakeholders on the need for increased investments for nutrition (based on conclusions-2,3).
5. Support the NDOH to set up a technical Working Group at national level to lead the preparation for a national nutrition survey (based on conclusion-1).

(Low priority)

6. Review and update IMAM protocol (based on conclusions-6,8).

Annex-1: List of documentary evidence reviewed

Policy / legal documents:

- National nutrition policy
- The Vision 2050
- National Health Plans 2011-2020
- PNG's Infant and Young Child Feeding (IYCF) Policy 2014
- Multi-sectoral National Nutrition Policy 2016-2026

Plan/strategy documents

- Costed multi-sectoral Strategic Action Plan (SAP)
- UNICEF PNG Country Programme Strategy Notes
- Emergency Preparedness Plan for nutrition

Program report / data

- UN Joint Monitoring Programme Report
- National Department of Health (NDOH) Statistical Annual Performance Report (SAPR)
- NDOH and Provincial Health Authority (PHA) Annual Report
- Hospital based admission data annually analysed and reported by the PNG Paediatric Society

Survey / assessment report

- Health Income and Expenditure Survey (HIES) 2009/2010
- Gender programmatic review of UNICEF conducted in May 2016
- PNG National Nutrition Survey (NNS) 2005

Protocol/manuals

- Integrated Management of Acute Malnutrition (IMAM) protocol
- Training report on infant and young child feeding for community workers/health service providers

Annex-2: Terms of Reference of the evaluation

TERMS OF REFERENCE FOR CONSULTANTS & INSTITUTIONAL CONTRACTORS

Title of Consultancy: Reducing stunting in children under five years of age - a process evaluation of UNICEF PNG's strategies and approaches	**Requesting Section/Hiring Manager:** Nutrition / Chief Nutrition	**Type of engagement** ☐ Consultant (ZCON) ☒ Individual Contractor (ZIND) ☐ Institutional Contract	**Duty Station:** ☐ Home Based ☐ Office Based ☒ N/A

Background and Purpose of Activity/Assignment:

Nutrition is vital but was long neglected in Papua New Guinea. The rate of malnutrition (under-nutrition) is unacceptably high and remains a significant underlying factor for illness and deaths particularly for children under five years old. Almost half of children under five years in PNG are stunted (short for age). The prevalence of stunting and underweight are particularly high in the first two years of life and much higher in both rural than urban areas. Malnutrition remains a persistent public health problem with serious development implications that the country has struggled to tackle over the recent decades.

Coordinated by the Government, this milestone policy brings together a range of stakeholders including the public sector, institutions, academia, private sector, development partners, civil society, media and communities to contribute towards the achievement of optimal nutrition outcomes. Additionally, UNICEF supported the Government to join the Global Scaling Up Nutrition (SUN) Movement, and develop a Strategic Action Plan that is currently being implemented (2018-2022).

UNICEF supports the Government to address the high stunting rates by implementing initiatives to address bottlenecks around three key areas of Nutrition service delivery, enabling environment and demand generation. During the 2018-2022 country programme, UNICEF supported the Government of Papua New Guinea to develop and sign off a National Nutrition Policy (NNP) (2016 – 2026). The objective of the NNP was to provide a framework to address malnutrition issues in children through a multi-sectoral approach involving stakeholders at all levels.

UNICEF PNG Nutrition Programme supports three output results: Nutrition Services Delivery; Nutrition Policies, Systems and Coordination; and Demand for Nutrition. UNICEF is supporting the modeling of nutrition service delivery in health facilities, communities and in schools. The nutrition services provided are a package of proven high impact nutrition interventions as identified and proposed by the Lancet series of 2013. On enabling environment, UNICEF is supporting the Government in creating a positive enabling environment of nutrition. To this end, UNICEF supported the development of the Breast milk Substitutes code, has strengthened the National Health Information Systems for nutrition as well as capacity building of front-line nutrition service providers. To raise demand for and improve uptake of nutrition services and positive nutrition practices, UNICEF is supporting initiatives to raise awareness around nutrition and messaging on positive practices to improve nutrition status. A theory of change for the programme components was developed as part of the Strategy Notes in 2017.

In line with the Country Program Evaluation Plan, an evaluation of the UNICEF PNG Nutrition Programme is expected to occur at the end of the current programme cycle (2022). This is a first UNICEF PNG country office thematic evaluation of the nutrition programme and a critical requirement for country office accountability, performance and learning to support effective planning on nutrition and the 2023-2027 Country Programme cycle. UNICEF PNG Country Office is therefore looking to engage an evaluator – or evaluation team - to undertake the evaluation of the programme.

Purpose of Assignment:

The purpose of this process evaluation is to foster learning and contribute to improving the Nutrition Programme in order to make it more effective in malnutrition reduction in the PNG context. The evaluation will aim to assess the appropriateness and relevance of the programme design as well as the efficiency, effectiveness and coherence of implementation of the programme as designed and against the main programme outcome: *Promote the well-being of mothers and children and contribute to addressing malnutrition of children in poor families, since the pregnancy until the age of two, to enhance their physical and mental development.*

The primary audience of the evaluation is the Nutrition Section and the Front Office, Programmes Section within UNICEF PNG. The secondary audience of the evaluation are relevant Government institutions and authorities in charge of Nutrition, relevant development partners, donors, contracted project implementers and experts, and other UNICEF Offices and Sections.

Objectives

The following are the main objectives for the process evaluation:

1. To document the Nutrition Programme's fidelity to its prescribed strategy and design plan
2. To assess the added value, strengths, weaknesses, facilitators and barriers of selected processes, including resource mobilization, engagement with partners, and monitoring and use of evidence;
3. To identify key lessons learned, including success and failures, good practices and innovations from implementation of the programme;
4. To generate a set of clear, forward-looking, and actionable recommendations logically linked to the findings and conclusions;

Evaluation Questions:

The Key Evaluation Questions are based on OECD/DAC evaluation criteria. The evaluation will provide evidence-based analysis to answer.

Relevance

- Do the programme stakeholders, including programme beneficiaries, find the programme approach and intervention activities acceptable and useful?

Effectiveness

- To what extent have the processes – specifically resource mobilization and partnerships - successfully supported nutrition programme delivery? What could have been done differently, if any, to be more effective?
- How does the nutrition programme's monitoring overlap, align with or deviate from the national monitoring system? Do the monitoring systems generate reliable, accurate, and consistent data that is used to improve programme effectiveness?

Efficiency

- How well was the programme implemented in terms of fidelity to the model, design, and plans, in the prescribed order, intensity, quality, consistency, costs and timeframe? If the programme design has changed, how well did it respond to changes in the context to be more relevant?
- How did internal and external factors – technical, financial, institutional, environmental, social – enable or hinder the implementation of the programme?

Sustainability

- Considering the emergency context and need for response under scenarios such as COVID-19, what programmatic adaptations were made, if at all, to continue programme implementation toward equitable reduction of child malnutrition?
- To what extent are the programme design approaches and strategies sustainable?

Coherence

- To what extent has the programme aligned with implementation of the National Nutrition Policy 2016 – 2026? How consistent was the programme with other similar interventions in PNG (i.e. adding value without duplicating efforts)? And how can it better target its contribution to the Nutrition SDGs?
- To what extent was the programme aligned to regional office and head quarter internal nutrition guidance as well as global nutrition norms and standards?

Human Rights Approach / Gender Equality

- To what extent did the implementation strategies of the programme address gender equality and disability issues?

The above evaluation questions are indicative. It is expected that the evaluator will consider these questions and propose changes, omissions, and additions to this list during inception. The evaluator would develop an evaluation matrix showing how each evaluation question will be answered, more detailed sub questions, success criteria for each question, how information will be collected and analyzed, and sources for data

Scope

The evaluation scope, in terms of time, will cover from 2017 until the time of data collection. The evaluation will cover all geographical regions of the country. The programme supports three outputs:

- Nutrition Services Delivery
- Nutrition Policies, Systems and Coordination
- Demand for Nutrition

All activities of the programme under these areas are within the scope of the evaluation.

It is crucial that the evaluation embraces the views of all key stakeholders, including a fair representation of girls and boys, men and women, especially the most marginalized and disadvantaged. Gender equality, equity and human rights considerations must also be used as a lens when responding to all the evaluation questions. Reference and use of rights-based framework, and/or CRC, and/or CCC, and/or CEDAW and/or other rights related benchmarks are expected in the design of the evaluation and analysis and presentation of findings.

Approach & Methodology

Based on the objectives of the evaluation, this section indicates a possible approach, methods, and processes for the evaluation. The evaluation will be non-experimental, although whenever possible, a comparative and external perspective will be sought to assess the evaluation criteria, and identify potential variations in perceptions. The evaluation will be utilization focused, providing continuous and rapid feedback to primary users in the course of the evaluation process. The evaluation is expected to be mixed method in nature, including relevant quantitative and qualitative data collection and analysis. The mixed methods will rely on primary and secondary data sources. The evaluation may draw on the following methods:

- Desk review of programme documents and other relevant data;
- Key Informant Interviews (KIIs) and/or Focus Group Discussions (FGDs);
- Online survey with select stakeholders and partners;
- Observation of Programme processes;
- Case studies of participants in the programme;
- Review and analysis of secondary quantitative data;

The consultancy will also require the development or adaptation of necessary quantitative and qualitative

data collection tools and protocols for the evaluation. The evaluation should also consider throughout issues of equity, gender equality and human rights. Methodological rigor will be given significant consideration in the assessment of the proposals. Hence consultants are invited to interrogate the approach and methodology proffered in the ToR and improve on it, or propose an approach they deem more appropriate. To ensure quality, the evaluator is required to adhere to UNICEF Evaluation Policy; to UNICEF procedure for ethical standards in research, evaluation, data collection and analysis; to UNEG Ethical Guidelines; to UNEG Norms and Standards for Evaluation; to UNEG Guidance on Integrating Human Rights and Gender Equality in Evaluation; and to UNICEF Evaluation Report Standards. All components of the evaluation work must be GEROS compliant.

An initial and more detailed methodology is to be submitted by the applicant as part of the technical proposal which will be used as a basis for proposal assessment by UNICEF.

The evaluation will be conducted in three phases i.e., 1. the inception, 2. data collection, 3. data analysis, validation and report writing. These phases will be implemented in the stated numerical order as the completion of phase 1 is crucial for the preparation and conduct of phases 2 and 3. Once these phases are conducted the implementation of the evaluation is expected to be complete.

Phase 1: Inception

The inception phase would establish a list of reference and documents will be agreed and shared with the evaluator. These may include but not limited to policy documents, theory of change and logical framework, current implementation and monitoring plans, reports and mechanisms. Existing quantitative data will also be considered and analyzed for relevance and utility during the desk review. An inception report will be prepared, conforming to UNEG Quality Checklist for Inception Reports, which should include the evaluation matrix, and the categories of stakeholders to be interviewed and engaged with during the course of evaluation. During the inception phase, the data collection instruments will be developed, tested and adapted. Ethical review, as needed, from an IRB is the responsibility of the evaluator and should be considered in the proposal and in the timeline.

Phase 2: Data collection

The data collection would focus on collecting key information which would enable the evaluator to analyze and answer the questions as outlined in the evaluation matrix. Primary data collection is expected to be accurately recorded to allow quotes from participants to be used in the evaluation report together with high-quality photos to illustrate the findings. Sampling of informants and selection of sub-national areas for the study should be done in consultation with UNICEF.

Phase 3: Data Analysis and writing of report

Analysis will systematically respond to the evaluation questions. An analytical framework will be articulated through the evaluation matrix to facilitate analysis, triangulation and support the report writing phase. An evaluation report with conclusions and recommendations based on evidence and the analytical framework highlighting the learnings will be drafted. Prior to finalization of the evaluation report, a consultation workshop will be organized with the Reference Group and Management Team to validate the findings, review conclusions, and co-create recommendations that are prioritized, useful and actionable. It is suggested that preliminary and well-thought recommendations are brought as inputs, although enough space should be given for acceptance of any modifications suggested. A Powerpoint presentation linked to the final report will be established for dissemination purposes.

Limitations

The COVID-19 pandemic, seasonal weather variations, and security challenges and emergencies make data collection and consultations utilizing traditional methods difficult. During the span of the evaluation the

situation may change. As such, in the inception phase, the evaluator will need to provide several scenarios regarding access - possibilities for travel to and within the districts, access to stakeholders, among other risk considerations - and propose innovative approaches to data collection including use of remote or blended methods to mitigate those risks. **Bidders for this evaluation should insert a short section in their proposal on headline thoughts on how they would carry out the evaluation against access scenarios and constraints.**

Ethical Consideration

The bidder will set out how they expect the evaluation process to be designed and undertaken in accordance with ethical guidelines as set out in UNEG Ethical Guidelines for Evaluation (2020) and the UNICEF Procedure for Ethical Standards and Research, Evaluation, and Data Collection and Analysis (2015). During the evaluation process, full compliance with all UNEG and UNICEF ethical guidelines will be required. All informants should be granted full confidentiality for all methods used, informed consent procedures shall be observed, and risks/benefits shall be disclosed with informants. Dissemination or exposure of results and any interim products must follow the rules agreed upon in the contract. In general, unauthorized disclosure is prohibited. Any sensitive issues or concerns should be raised, as soon as they are identified, with the evaluation management team.

All evaluations shall have ethical clearance issued either by an external board of review, or by an internal one. In 2015 the UNICEF Procedure for Ethical Standards in Research, Evaluation and Data Collection and Analysis was issued to guide UNICEF's evidence generation activities and to support the integrity of UNICEF's evidence base in order to ensure that UNICEF's programmes, policy and advocacy activities are grounded in ethical principles and practices. Under the UNICEF Procedure for Ethical Standards (2015) all proposals involving research, evaluations or data collection and analysis covered by this procedure, and meeting one or more of the following criteria must go through a relevant external ethical review board or panel:

- Evidence generation that involves vulnerable cohorts whose personal agency is limited due to age, situation or capabilities and for whom an additional duty of care is required. (includes all evidence generation involving children).
- Evidence generation involving primary data collection that has the potential to result in direct harm to the participant during the course of the programme
- Evidence generation that has the potential to compromise the privacy of subjects and the confidentiality of data
- Evidence generation that has the potential to compromise the safety and well-being of individuals in their context
- Evidence generation that involves non-universal distribution of resources (ie. RCTs involving the provision of cash transfers, or other goods and services, to one group and not to another group)

Where not required by National law or a partner institution to utilize a National or Institutional Review Board/Ethics Review Committee, use of a private ethics review vendor can be considered. Please see UNEG Ethical Guidelines for Evaluation (2020) and the UNICEF Procedure for Ethical Standards and Research, Evaluation, and Data Collection and Analysis (2015).

Consultant's Workplace, Travel and Logistics

This consultancy is open to individual contracts.

Given the COVID19 situation, it is desired that the consultant is based in PNG. If not possible, it is expected that the work will be split between PNG and home base, with some travel expected within PNG. The lump sum contract will include the cost of all trips on the most direct route and in economy class. All international and domestic travel cost should be budgeted for and included in the total contract value and described in the financial proposal. The selected consultant will be responsible for making their own travel arrangements. When relevant and necessary, UNICEF may facilitate the logistics arrangement for field visits, in coordination with the relevant government counterparts. The consultant is expected to have their own laptops, cameras, mobile phones and other relevant communications and working equipment.

Supervision:

The consultancy will operate under the supervision of the evaluation management team (MT), comprised of the UNICEF Multi-Country Evaluation Specialist and UNICEF PNG PME Specialist, who will be responsible for the day-to-day oversight and management of the evaluation, including management of the evaluation budget, assuring independence of the evaluation and its alignment with UNEG Norms and Standards and Ethical Guidelines, and providing quality assurance. All supervision will be done in consultation with Chief of Nutrition, UNICEF PNG. In all steps, the evaluation management will be guided by- and follow the- UNICEF PNG Standard Operating Procedure for Evaluation. The final report will be accepted/approved by the UNICEF Regional Evaluation Adviser and the UNICEF PNG Country Representative.

With a view to maximizing the credibility and hence utility of the evaluation, UNICEF PNG will establish an evaluation reference group (RG), bringing together the Chief of Nutrition, UNICEF PNG, representatives of Government and development partner institutions and authorities in charge of Nutrition, UNICEF EAPRO Regional Nutrition Adviser, and UNICEF EAPRO Evaluation Adviser. The RG will have the following role: contribute to the preparation and design of the evaluation, including providing feedback and comments on the inception report and on the technical quality of the work of the consultants; provide comments and substantive feedback to ensure the quality from a technical point of view of the draft and final evaluation reports, in particular that the conclusions are credible and the recommendations are actionable; assist in identifying internal and external stakeholders to be consulted during the evaluation process; participate in review meetings organized by the MT and with the evaluator as required; play a key role in learning and knowledge sharing from the evaluation results, contributing to disseminating the findings of the evaluation and follow-up on the implementation of the management response.

Bid Assessment process and methods for Institutional Contract

The bid assessment methodology is based on a highest combined score (based on the 70% technical offer and 30% price weight distribution).

Each interested institution is requested to submit in a brief a technical proposal for such assignment along with a copy of the organization profile, the proposed technical team curriculum vitae, detailed financial proposal as well as a sample of previous work undertaken in the last two years.

After the opening, each proposal will be assessed first on its technical merits and subsequently on its financial proposal. The proposal with the best overall value, composed of technical merit and price, will be recommended for approval. UNICEF will set up a bid assessment panel composed of technical and procurement staff and their conclusions will be forwarded to the internal UNICEF Contracts Review Committee or other relevant approving authority. The bid assessment panel will first assess each response for compliance with the requirements of this Terms of Reference. Responses deemed not to meet all the mandatory requirements will be considered non-compliant and rejected at this stage without further consideration. Failure to comply with any of the terms and conditions contained in these Terms of Reference, including provision of all required information, may result in a response or proposal being disqualified from further consideration.

The overall weighting between technical and price assessment will be based on the predefined criteria. The technical component will account for 70% of the total points allocated and the financial component will account for 30% of the total points allocated.

Item	Technical Criteria/Qualifications	Max. Points
1	**Overall Response**	**15**
1.1	Evidence of in-depth knowledge of the key issues and concepts underpinning this evaluation (5) Demonstrated thorough understanding of the ToR, its objectives, scope and deliverables (3)	
1.2	Overall concord between ToR needs and proposal (5) Explanation of a fully tailored and innovative approach for this evaluation (2)	
2	**Capability and experience in the field**	**25**
2.1	Information on similar activities having been undertaken by the individuals going to be involved in this evaluation (4) Recent and current contracts with similar agencies (UN, NGOs) using UNEG Norms and Standards (3)	
2.2	Number of years of relevant professional experience in delivering quality evaluations of nutrition interventions, and preferably in low and middle-income countries and preferably in PNG or the Pacific (5) Experience in nutrition area or similar (4) Quality of written report sample (4) Experience leading evaluations (3)	

	Relevant academic qualifications or training certificates (2)	
3	**Proposed Methodology and Approach**	**30**
3.1	Description of the proposed process for conducting the quantitative and qualitative data collection including the tools that will be used (7) References to relevant data and information sources (3) Description of data analysis (3) Other creative, innovative referenced ideas for methodology/tools and presentation of findings (7)	
3.2	Adherence to the proposed timeframe and workplan of the ToR (3) Adherence to all the milestones outlined in the ToR (2)	
3.3	At least two considerations and/or risks outlined (3) Description of methods to manage/mitigate these constraints/risks (2)	
	Total Technical Score	

Only Proposers obtaining a minimum of 49 out of 70 possible points in Technical Criteria evaluation will be considered for the Financial assessment.

Financial assessment:

The price/cost of each of the technically compliant proposals shall be considered only after evaluation of the above technical criteria. A maximum 30 point assigned to the financial proposal will be allocated to the lowest financial proposal. All other price proposals will receive scores in inverse proportion according to the following formula:

Score for price proposal A = (Maximum score for price proposal * Price of lowest priced proposal)/Price of proposal A.

As a result of the financial assessment, the points of each proposal will be taken into further consideration in the final assessment.

Reasons why consultancy cannot be done by staff: In compliance with UN Evaluation Group and UNICEF Evaluation policy, for evaluations to be independent and impartial, they should be conducted by individuals who have institutional and personal independence from the program being evaluated and therefore evaluation work are best outsourced to external evaluation expert consultants without ties to the program.		
Included in Annual/Rolling Workplan*:* ☒ Yes ☐ No, please justify:		
Included in Workforce Planner: ☒ Yes ☐ No, please justify:		
Consultant selection method: ☐ Competitive Selection (Desk Review/Roster) ☒ Competitive Selection (Advertisement) ☐ Single Source (emergency response) Head of Office approval		
Start Date: 2 May 2022	**End Date:** 30 November 2022	**Number of Days:** 75 days (working)

Annex-3: List of persons interviewed and sites visited

Province	Ogainisation	Title	Name	Remarks
National	CCHS	Project Director	Mr. Graham Apian	
National	National Department of Health	Technical Adviso	Mr. Wilson Karoke	
National	National Department of Health	Technical Officer	Ms. Helen Palik Javati	
NCD	NCD / PHA	Director-Family Health	Dr. Oge	
NCD	World Vision	Nutrition Officer	Ms.Joan Atawa	
NCD	World Vision	Nutrition Technical Advisor	Agnes Tal	
NCD	NCD / PHA	Family Health Coordinator	Sister Guba	
NCD	9mile clinic	Clinic Manager	Sister Dien Wama	
NCD	9mile clinic	9mile clinic Nutrition point of contact	Mrs Patricia Aomwa	
NCD	Save The Children	Pacific Nutrition Advisor	Adazea	
NCD	Gerehu hospital (outpatients ward)	Health worker-Nutrition POC	Ms. Lucy Emena	
NCD	Kaugera health centere	Health worker-Nutrition POC	Calryn Auka	
NCD	Koki village	Villlage Health Assistant (VHA)	Ms. Esther Avana	
NCD	Gerehu hospital (inpatients ward)	Medical Doctor	Dr. Kunera Kilomati	
NCD	Bomana village	Villlage Health Assistant (VHA)	Ms. Patricia Simoi	
WHP	Western Highlands PHA	UNICEF Support Officer - WHP	Jenniffer Mati Luvahike	
WHP	Western Highlands PHA	WHPPHA Environmental Health & Nutrition Focal Point-UNICEF	Mary Rex	
WHP	Ugelburg Health Center	Nurse (Nutrition Focal Point)	Merolyn, will confirm	
WHP	WHPPHA	Director Clinical Excellence/Paedetrics	Dr. Paulus Ripa	
WHP	Western Highlands General Hospital	Pediatrician	Sr. Catherine Kiap	
WHP	Western Highlands General Hospital	Outpatient Nurse	Sr. Doris Kaewa	
WHP	Rabiamul CCHS Health Center	Nutrition POCs	Georgina Okpul/Rebecca Namap	
WHP	Rabiamul HC	Male-VHA	Peter Pawa	Ward 02
WHP	Rabiamul HC	Female-VHA	Helen Mawa	Ward 10
WHP	Rabiamul HC	Female-VHA	Rachael Karr	Ward 02
WHP	Rabiamul HC	Female-VHA	Rose Botha	Ward 13
WHP	Rabiamul HC	Female-VHA	Rachael Kapil	Ward 05
WHP	Rabiamul HC	Female-VHA	Agnes Joe	Ward 02
WHP	Rabiamul HC	Female-VHA	Lisa San	Ward 02
WHP	Rabiamul HC	Female-VHA	Jessica Lowwa	Ward 15
WHP	Ogeulbeng HC	Female-VHA	Judy Nasu	Ward 33
WHP	Ogeulbeng HC	Female-VHA	Esther Ronari	Ward 17
WHP	Hagen Hospital	Female-VHA	Ekim Nare	Ward 01
WHP	Hagen Hospital	Female-VHA	Janet Taisa	Ward 01
WHP	Hagen Hospital	Female-VHA	Christina John	Ward 08
WHP	Hagen Hospital	Female-VHA	Margaret Naro	Ward 01
Madang	Madang PHA	Director Family Health	Dr Martin Damien	PHO

		Services		Madang
Madang	Madang-Alehishafen HC	Female-VHA	Margret Masai	Ward 10
Madang	Madang PHA	Surveillance Officer (IMAM trining co-facilitator)	Cathy Anis	PHO Madang
Madang	Madang PHA	Family Health Services Deputy Director	Sr. Jenifer Simon	PHO Madang
Madang	Alexishafen Health Center	Nurse (Nutrition Focal Point)	Sr. Muze Kawong	Sumakar LLG
Madang	Madang PHA	CEO		Madang
Madang	Madang PHA	Pediatric In-Patients	Dr. Tina Yarawong	Madang
Madang	Madang PHA	Pediatric out-Patients	Sr. Karen Damok	Madang
Madang	Sisiak Health Clinic	CHW (volunteer)	Mr. Tanis Nelo	Madang
Madang	Yagaun Health Center	Nursing Officer	Sr. Shelma Dam	Madang
National	National Department of Health	Nutrition Advisor	Mr. Wilson	
National	UNICEF	Chief of Nutrition	Andrew	

Annex-4: Qualitative data collection tools

Key Informant Interview (KII) / Instructions

Key informant interviews are "qualitative, in-depth interviews of people selected for their first-hand knowledge about a topic of interest. The interviews are loosely structured. Interviewer should cover all the topic areas in the question guide but does not necessarily follow a particular sequence. The discussion should flow as naturally as possible and some topics may be raised by respondent.

Persons interviewed: UNICEF Chief of Nutrition, MoPH -Technical Advisor

Duration: about 60 minutes

Informed consent: Verbal consent to be obtained before starting interviews.

Guide to Interviewer

1. Establish rapport. Begin with an explanation of purposes of the interview, confidentiality.
2. Sequence questions. Start with factual questions such as population of villages, followed by questions requiring opinions and judgments.
3. Use open question instead of closed question.
4. Use probing techniques by saying, for example, “what do you mean by …”,or “could you explain a bit more about … “ to encourage informants to detail the basis for their conclusions and recommendations.
5. Maintain a neutral attitude. Interviewers should be good listeners and avoid giving the impression of having strong views on the response.
6. Interviewers should audio-record the interviews and take notes and develop them in detail immediately after each interview to ensure accuracy.
7. Interviewer ensures concrete examples provided by participants to support their statements/opinions/ideas

KII question guide for UNICEF (Chief of Nutrition)

IDENTIFICATION

Name of respondent _____
Office / Position _____
Interviewer's Name _____
Date of interview _____
Time taken for interview: _____

Introduction

Good morning. My name is _____. We are here to collect information to asses key stakeholders' perspectives on PNG Nutrition Program implementation. As part of our work, we would like you to share your experiences and opinions. We want to learn from you about your thoughts and feelings related to the PNG Nutrition Program so there are no right and wrong answers and please talk freely and openly. Before we begin, do you have any questions for me? Our talk should last about 60 minutes.

I would like to audio record the discussion to make sure we do not miss any information. The digital files of the recordings will be transcribed and then destroyed. We will not keep your name or other identifying information. Everything you say here is confidential and you may select a name by which we refer to you during the interview. Is that ok with you? There are no direct benefits to joining this interview. If you need additional information, we will assist you. Your participation is completely up to you. MAY I START NOW? If permission is given, begin the interview.

Key questions

Overall: Perception about relevance of the program (content and target site selection) under local context and needs

[Relevance]

- How the programme approach and interventions designed?
  (Probe: was needs assessment and project formulation workshop conducted? Who designed the approach/interventions?, how the target selected provinces selected?)

[Coherence]

- Are the UNICEF Nutrition program goals, strategies and interventions go along with the national nutrition policy??
- What do you think are distinctiveness of the program and potential complementarity with other programs?

Implementation of activities against plans Perception about fidelity to the project plan (activities/strategies/ approaches, input)

[Efficiency / process]

- Have you experienced any change of the planned activities over time particular during COVID-19?? (if yes, what were them and why?)
- Were there any activities or services not implemented against target? (if yes, what were those and why?)
- Were there any change or delay of necessary supplies and equipment?

[Efficiency / process]

- Is the training following the national guideline or protocol?

Costing and Resource Mobilization: *Please let me ask about resource mobilization*

[Process]

- *How was the nutrition program costed and budgeted*

[Effectiveness)

- *Could you briefly explain how was resource mobilized?*
  (Probe: Who engaged in the process and how? What were their specific contributions from them? To what extent the required resources mobilized?)

Nutrition Information Systems*:* Process of nutrition information system development and strength/challenges at national level and degree and challenge of integrating nutrition services into health systems.

[Effectiveness]

- What nutrition data has been collected at health facilities?
- How nutrition data compiled and analysed at national level?
- What IT systems is used for nutrition information?
- What were the major challenges for nutrition information systems

Sustainability:

- Can you briefly explain how the management and coordination of the program set up in the target provinces?
- How CSO supported programs?
- How the key nutrition services integrated into the routine health services
  (Probe: in terms of training, protocol, monitoring and supervision, and reporting?)
- How other sectors (Education, Agriculture. Social Protection, WASH) has been integrated?
  (Probe: in terms of plan, coordination, training, M&E)
- What do you think are the lessons learnt from the selected 6 provinces which can inform for other provinces?

GAPS/CHALLENGES Perceived enablers and inhibitors in the process of programme implementation

- What were the main challenge in implementation process of the program? (Probe: in terms of resource mobilization, nutrition information systems, coordination, others?)
- Other feedback (open question)

CLOSING

Thank you so much for sharing your thoughts with me. I have learned so much about the project. Is there anything else you would like to tell me about the topics we discussed today?

<u>Instructions:</u> Give participant a chance to say more and then thank the participant again. If she has nothing more to say, thank her and close.

KII question guide for UNICEF (Nutrition Support Officers), MOPH Provincial/District coordinators, CSO managers

IDENTIFICATION

Name of respondent _____
Province _____
Interviewer's Name _____
Date of interview _____
Time taken for interview: _____

Introduction

Good morning. My name is _____. We are here to collect information to asses key stakeholders' perspectives on PNG Nutrition Program implementation. As part of our work, we would like you to share your experiences and opinions. We want to learn from you about your thoughts and feelings related to the PNG Nutrition Program so there are no right and wrong answers and please talk freely and openly. Before we begin, do you have any questions for me? Our talk should last about 60 minutes.

I would like to audio record the discussion to make sure we do not miss any information. The digital files of the recordings will be transcribed and then destroyed. We will not keep your name or other identifying information. Everything you say here is confidential and you may select a name by which we refer to you during the interview. Is that ok with you? There are no direct benefits to joining this interview. If you need additional information, we will assist you. Your participation is completely up to you. MAY I START NOW? If permission is given, begin the interview.

Key questions

Overall: Perception about relevance of the program design (content and target site selection) under local context and needs

[Relevance] [Human-rights approach]

- Do you think the programme approach and interventions address the local needs?
  (Probe: was needs assessment and project formulation workshop conducted?)
- How the project addressed gender equalities: differences in vulnerabilities between men, women, boys and girls, people with disability?

Implementation of activities against plans Perception about fidelity to the project plan (activities/strategies/ approaches, input)

[Efficiency / process]

- Have you experienced any change of the planned activities over time particular during COVID-19?? (if yes, what were them and why?)
- Were there any activities or services not implemented against target? (if yes, what were those and why?)
- Were there any change or delay of necessary supplies and equipment?

[Efficiency / process]

- How the training conducted (participants, venue, duration, topics, use of the national guideline or protocol)?

Costing and Resource Mobilization: *Please let me ask about resource mobilization*

[Effectiveness)

- *Has resource mobilized at province level?*
  (Probe: If yes, who engaged in the process and how? What were their specific contributions from them? To what extent the required resources mobilized?)

Nutrition Information Systems*:* Process of nutrition information system development and strength/challenges at national level and degree and challenge of integrating nutrition services into health systems.

[Effectiveness]

- What nutrition data has been collected at health facilities?
- How nutrition data compiled and analysed at province/district level?
- What were the major challenges for nutrition information systems

Sustainability:

- Can you briefly explain how the management and coordination of the program set up in the provinces/district?
- How CSO supported programs?
- How the key nutrition services integrated into the routine health services
  (Probe: especially monitoring and supervision and reporting?)
- How you worked with other sectors (Education, Agriculture. Social Protection, WASH) at province/district level?
  (Probe: in terms of regular coordination, training, M&E)
- What do you think are the lessons learnt from the provinces which can inform for other provinces?

GAPS/CHALLENGES Perceived enablers and inhibitors in the process of programme implementation

- What were the main challenge in implementation process of the program? (Probe: in terms of resource mobilization, nutrition information systems, coordination, others?)
- Other feedback (open question)

CLOSING

Thank you so much for sharing your thoughts with me. I have learned so much about the project. Is there anything else you would like to tell me about the topics we discussed today?

<u>Instructions:</u> Give participant a chance to say more and then thank the participant again. If she has nothing more to say, thank her and close.

KII question guide for health workers at hospitals

IDENTIFICATION

Name of respondent _____
Province _____
Interviewer's Name _____
Date of interview _____
Time taken for interview: _____

Introduction

Good morning. My name is _____. We are here to collect information to asses key stakeholders' perspectives on PNG Nutrition Program implementation. As part of our work, we would like you to share your experiences and opinions. We want to learn from you about your thoughts and feelings related to the PNG Nutrition Program so there are no right and wrong answers and please talk freely and openly. Before we begin, do you have any questions for me? Our talk should last about 60 minutes.

I would like to audio record the discussion to make sure we do not miss any information. The digital files of the recordings will be transcribed and then destroyed. We will not keep your name or other identifying information. Everything you say here is confidential and you may select a name by which we refer to you during the interview. Is that ok with you? There are no direct benefits to joining this interview. If you need additional information, we will assist you. Your participation is completely up to you. MAY I START NOW? If permission is given, begin the interview.

Key questions

Implementation of activities against plans Perception about fidelity to the project plan (activities/strategies/ approaches, input)

[Efficiency / process]

- How the training conducted (trainers, participants, venue, duration, topics, use of the national guideline or protocol)?
- What is current operation of SAM management at the hospital (caseload, no. of beds, treatment provided,
- Have you experienced any change of the planned activities over time particular during COVID-19?? (if yes, what were them and why?)
- Were there any activities or services not implemented against target? (if yes, what were those and why?)
- Were there any change or delay of necessary supplies and equipment?

Nutrition Information Systems*:* Process of nutrition information system development and strength/challenges at national level and degree and challenge of integrating nutrition services into health systems.

[Effectiveness]

- What nutrition data has been collected at health facilities?

GAPS/CHALLENGES Perceived enablers and inhibitors in the process of programme implementation

- What were the main challenge in implementation process of the program? (Probe: in terms of resource mobilization, nutrition information systems, coordination, others?)
- Other feedback (open question)

CLOSING

Thank you so much for sharing your thoughts with me. I have learned so much about the project. Is there anything else you would like to tell me about the topics we discussed today?

Instructions: Give participant a chance to say more and then thank the participant again. If she has nothing more to say, thank her and close.

KII question guide for health workers at health facilities

IDENTIFICATION

Name of respondent _____
Province _____
Interviewer's Name _____
Date of interview _____
Time taken for interview: _____

Introduction

Good morning. My name is _____. We are here to collect information to asses key stakeholders' perspectives on PNG Nutrition Program implementation. As part of our work, we would like you to share your experiences and opinions. We want to learn from you about your thoughts and feelings related to the PNG Nutrition Program so there are no right and wrong answers and please talk freely and openly. Before we begin, do you have any questions for me? Our talk should last about 60 minutes.

I would like to audio record the discussion to make sure we do not miss any information. The digital files of the recordings will be transcribed and then destroyed. We will not keep your name or other identifying information. Everything you say here is confidential and you may select a name by which we refer to you during the interview. Is that ok with you? There are no direct benefits to joining this interview. If you need additional information, we will assist you. Your participation is completely up to you. MAY I START NOW? If permission is given, begin the interview.

Key questions

Implementation of activities against plans Perception about fidelity to the project plan (activities/strategies/ approaches, input)

[Efficiency / process]

- How the training conducted (trainers, participants, venue, duration, topics, use of the national guideline or protocol)?

- What is current operation of nutrition interventions at health facility (activities, target beneficiaries, frequency)
- Have you experienced any change of the planned activities over time particular during COVID-19?? (if yes, what were them and why?)
- Were there any activities or services not implemented against target? (if yes, what were those and why?)
- Were there any change or delay of necessary supplies and equipment?

Nutrition Information Systems*:* Process of nutrition information system development and strength/challenges at national level and degree and challenge of integrating nutrition services into health systems.

[Effectiveness]

- What nutrition data has been collected at health facilities?

GAPS/CHALLENGES Perceived enablers and inhibitors in the process of programme implementation

- What were the main challenge in implementation process of the program? (Probe: in terms of training, service delivery, nutrition information systems, coordination, others?)
- Other feedback (open question)

CLOSING

Thank you so much for sharing your thoughts with me. I have learned so much about the project. Is there anything else you would like to tell me about the topics we discussed today?

Instructions: Give participant a chance to say more and then thank the participant again. If she has nothing more to say, thank her and close.

KII question guide for Other Nutrition-related institutions (FAO, CCS, WV, SC, CF, local NGOs, etc)

IDENTIFICATION

Name of respondent _____
Organization / Positions _____
Interviewer's Name _____
Date of interview _____
Time taken for interview: _____

Introduction

Good morning. My name is _____. We are here to collect information to asses key stakeholders' perspectives on PNG Nutrition Program implementation. As part of our work, we would like you to share your experiences and opinions. We want to learn from you about your thoughts and feelings related to the PNG Nutrition Program so there are no right and wrong answers and please talk freely and openly. Before we begin, do you have any questions for me? Our talk should last about 60 minutes.

I would like to audio record the discussion to make sure we do not miss any information. The digital files of the recordings will be transcribed and then destroyed. We will not keep your name or other identifying information. Everything you say here is confidential and you may select a name by which we refer to you during the interview. Is that ok with you? There are no direct benefits to joining this interview. If you need additional information, we will assist you. Your participation is completely up to you. MAY I START NOW? If permission is given, begin the interview.

Key questions

[Coherence]

- What nutrition interventions have you implemented? how is their approach, target, interventions similar to or different from UNICEF program?

- What do you think are potential complementarity with UNICEF nutrition programs?

CLOSING

Thank you so much for sharing your thoughts with me. I have learned so much about the project. Is there anything else you would like to tell me about the topics we discussed today?

Instructions: Give participant a chance to say more and then thank the participant again. If she has nothing more to say, thank her and close.

Focus Group Discussion (FGD) / Instructions

The FGD guide below provides questions for assessing mothers' perceptions about CBNP services / activities. There should be a facilitator and a person who takes notes but does not participate in the interview. The facilitator should cover all the topic areas in the discussion guide, but does not necessarily follow a particular sequence. The discussion should flow as naturally as possible and some topics may be raised by respondent.

Persons interviewed: Mothers of children 6-23 months

How to select samples: A total of 8-12 participants from the village should be included in a focus group discussion representing different families, ages, education level and economic conditions. Avoid selecting only good mothers/fathers but mix different persons with different background. Number of FGDs to be conducted is planned as below;

Duration: 60-90 minutes

Purpose

To understand mother`s perceptions about participation in program activities.

Guide to Interviewer

1. Objective of the discussion is to study and understand the situation (not test knowledge of women), so make sure the respondent speaks honestly.
2. It will take 60-90 minutes per discussion.
3. Ask participants if they are willing to participate in the discussion before starting it

Guide to note taker

1. Use voice record with permission of participants
2. Prepare note books before the session starts
3. Record all important ideas mentioned by participants (as details as possible)
4. Write down any observations made during the session.
5. Write the transcripts based on the notes and voice records.

FGD QUESTION GUIDE (Village Health Assistants)

IDENTIFICATION

Province/district: _____
Nearest health facility; _____
Name of Villages: _____
Facilitator's Name _____
Note taker's Name _____
Date of discussion _____
Time taken for discussion: _____
Number of participants: _____

Participants profile:

No.	Age	Sex	Year of experience

Introduction

Good morning. My name is _____. We are here to collect information to assess community perspectives on PNG nutrition program.

As part of our work, we have asked you here to share your experiences and opinions. Our discussion should last for about 60-90 minutes.

I will be helping to guide the discussion and make sure everybody has a chance to speak. ____ will be making notes during the discussion, but will not write down any names, so no one will know what you say. Is this okay? Please remember, we are here to learn from you and there are no right and wrong answers. Please tell us your views, whatever they may be.

I would like to audio record the discussion to make sure we do not miss any information. The digital files of the recordings will be transcribed and then destroyed. We will not keep your name or other identifying information. Everything you say here is confidential and you may select a name by which we refer to you during the interview. Is that ok with you?

There are no direct benefits to joining this interview. If you need additional information, we will assist you. Your participation is completely up to you. MAY I START NOW? If permission is given, begin the interview.

Before we go further, please introduce yourselves.

FGD Discussion topics

I would like you to share your experience or ideas about nutrition activities in your village.

Implementation of activities against plans Perception about fidelity to the project plan (activities/strategies/ approaches, input)

[Efficiency / process]

- Can you describe a bit more about your experience in your activities?
  (Probing: what services were provided, how they were done?)
- How the training conducted (trainers, participants, venue, duration, topics, use of the national guideline or protocol)?
- Do you remember anything you learnt from the activities?

Sustainability:

- Could you tell me how likely you would like to continue the activities?
- Could you tell us how your work experience impacted your lives?

GAPS/CHALLENGES

- What are the challenges you have had in your work?
- Other feedback?

CLOSING

Thank you so much for sharing your thoughts with me. I have learned so much about the project. Is there anything else you would like to tell me about the topics we discussed today?

Instructions: Give participant a chance to say more and then thank the participant again. If she has nothing more to say, thank her and close.

Annex-5: Evaluators biodata

CURRICULUM VITAE (CV)
Watanabe Koichiro

Nationality:

Japanese (Japanese passport holder)

Address:

1-21-1 Kamitakada, Nakano-ku, Tokyo 164-0002 Japan
Tel: +81-3-3385-2092
Email: watanabe.koichiro@nam.or.jp

Specialisations:

Designing/implementation/monitoring and evaluation of nutrition, food and nutrition survey and information system, community-based maternal and child nutrition, social behaviour change, infant and young child feeding, training and policy development for nutrition, health promotion approach, strategic planning, organizational management.

Education:

Institutions:	**Degree:**
Rolling School of Public Health, Emory University, USA, 2003–2004	M.P.H. degree in Public Health (Public Nutrition Concentration)
Agricultural Extension and Rural Development, Department, Reading University, 1993-1994	M.A. degree in Rural Social Development
Agriculture Department, Hokkaido University, 1979-1984	B.A. degree in Agronomy

Training:

- 5th Regional Course on Nutrition in Emergencies (NIE-5), (Bangkok), 2015
- Nutrition Specific Training (Level-2), Action Contre la Faim (ACF - Paris), 2013
- Nutrition Specific Training (Level-1), Action Contre la Faim (ACF – Paris), 2012
- Training for Dollo Nutrition Surveys for supervisor, UNHCR, Dollo Ado (Ethiopia), 2013
- Health and Development / Project Formulation. JICA, Tokyo. 2008
- Participatory Curriculum Development, FASID, Tokyo. 2007
- Risk Management, FASID, TOKYO. 2006
- Project Cycle Management (M&E), FASID, Tokyo. 2006
- Project Cycle Management (Planning), FASID, Tokyo. 2005

Language skills

Language	***Reading***	***Speaking***	***Writing***
Japanese	Native	Native	Native
English	Excellent	Excellent	Excellent
Vietnamese	Excellent	Excellent	Fair
Chinese	Fair	Fair	Fair

Other skills:

Use statistical software (ENA for SMART, SAS, Epi-info, Epi-NUT, Epi-Map, R, Excel, Word, Power Point, Max-QDA)
Facilitation at workshops and meetings
Training facilitator for the courses on Project Cycle Management and Strategic Planning

Years of professional experience: 23 years

Consultancy Experience of Public Health and Nutrition (19 years)

Date:	Oct to Dec 2021
Location	Nigeria
Company / Organisation	Save the Children
Position	Consultancy – Development of SBCC Strategy for improving the Minimum Diet Diversity of Women and Infant and Young Child Feeding
Job description	Developed a social and behavioural change communication strategy aimed at improving the nutrition status of women, infants and young children and their dietary diversity in the four states (Borno, Yobe, Adamawa and Gombe) of North-East Nigeria through literature review, formative research (barrier analysis), stakeholder workshop.

Date:	Aug 2021 - Jan 2022
Location	Myanmar (home-based)
Client Organisation	Action Contre la Faim (ACF)
Position	Consultancy for Analysis of Underlying Causes of Malnutrition in Northern Rakhine State of Myanmar
Job description	Conducted literature review, perform secondary data analysis, organized and facilitated expert workshop, analysed qualitative data collected through community consultations and proposed hypothesis of underlying causes of undernutrition in Northern Rakhine State of Myanmar.

Date:	Dec 2020 - Jun 2021
Location	Tanzania
Client Organisation	Nutrition International (NI)
Position	Consultant for Regional Nutrition Knowledge Sharing Platform
Job description	Provided technical support for East Central South Africa (ECSA) Health Community in Tanzania to establish and maintain Consultant for Regional Nutrition Knowledge Sharing Platform for nutrition

Date:	Nov. 2019 - Dec. 2020
Location	Myanmar
Client Organisation	Action Contre la Faim (ACF)
Position	Mother MUAC Study Consultant
Job description	Provided technical support for Mother MUAC study in Rakhine to evaluating feasibility, effectiveness and sustainability of mother MUAC approach which promotes active screening and referral of acute malnutrition by mothers through randomized cluster trial in 60 villages.in Rakhine State.

Date:	May -2019 - Mar 2020
Location	Afghanistan
Client Organisation	Unicef
Position	International Evaluation Consultant
Job description	Conduct a process evaluation of the Community-based Nutrition Package (CBNP) by gathering evidence on the programme's fidelity to design, delivery and uptake, and to identify operational gaps or barriers, plus potential strategies to mitigate with eventual aim of contributing to the UNICEF's and Ministry of Public Health efforts to promote evidence-based programming and decision making.

Date:	June. 2019
Location	Nigeria
Client Organisation	Save the Children
Position	KAP survey consultant
Job description	Conduct KAP survey for fathers on IYCF

Date:	Feb. 2019
Location	Liberia
Client Organisation	Oxfam GB

Position	Liberia WASH Consortium (LWC) Proposal Development for Irish Aid
Job description	Through landscape analysis and stakeholder consultations/workshop, draft and finalise a 5-years programme proposal which is nutrition focus/ sensitive with nutrition outcomes including Theory of Change.

Date:	From Dec 2018 to Feb 2019
Location	Japan (Home-based)
Client Organisation	Rise Against Hunger (RAH)
Position	Consultancy for Literature Review on School Feeding and Development of WASH/Nutrition/Gardening Behavior Change Communication promotion package
Job description	Conduct a literature review of school feeding programs and training manual for WASH/Nutrition/school gardening BCC promotion package (**Sample report enclosed**)

Date:	From Sep to Oct 2018
Location	Nigeria
Company / Organisation	Save the Children
Position	Carry out barrier analysis for four behaviours related to IYCF in Borno state, North East Nigeria (MMC, Jere, Konduga, and Mafa LGAs)
Job description	Analyse key barriers to behavioural change among target groups' practices associated with infant and young child feeding so that behaviour change communication messages and strategies can be tailored to optimize effectiveness, which will strengthen proposed community support activities (e.g. mother and father support groups). The analysis establish detailed information, identifying target groups' current behaviours as well as barriers to behaviour change related to the key determinants of IYCF practices and inform evidence-based behaviour change programming.

Date:	From May to July 2018
Location	Sierra Leone
Company / Organisation	Action Against Hunger
Position	Independent external evaluation of Action Against Hunger's project, Reinforcing Institutional Capacity for Treatment of Acute Malnutrition, Prevention of Malnutrition and National Sensitisation for Nutrition Security in Western Area, Sierra Leone
Job description	This two-year project aimed strengthening the capacities of the Ministry of Health and Sanitation of Sierra Leone at local and national level to ensure quality implementation of the Integrated Management of Acute Malnutrition (IMAM), with funding support of Irish Aid and Agence Francaise de Development (AFD). As the external evaluation consultant, assess the overall performance of the project and to determine if the intervention has reached its intended outputs and objectives. In particular, it will assess to what extent (and the reasons why) the project's outputs have contributed to the improvements in the nutritional security of children and mothers in Western Areas.

Date:	From Dec. 2017 to Feb. 2018
Location	Uganda
Company / Organisation	Eleanor Crook Foundation (ECF)
Position	Consolidated Baseline Evaluation and Formative Research Consultant
Job description	ECF is funding three local Ugandan NGO partners through its Uganda Grassroots Nutrition (UGN) grant program. As consultant, conduct the baseline survey for ECF's Uganda Grassroots Nutrition portfolio using a single methodological approach to measure each project. The survey include anthropometric measurement and IYCF survey (both quantitative and qualitative). More specifically, the main tasks include 1) finalize baseline evaluation planning (sampling, data collection tools, timeline, data collection and data processing quality control standards), 2) develop training materials and train data collection enumerators, data processors and any others involved in the baseline and formative research processes, 3) lead data collection and data processing; 4) conduct data analysis, complete reports and indicator performance tracking tables, including confidence intervals for each indicator and 5) provide recommendations to develop a social behaviour change communication (SBCC) strategy

Date:	From May. to Sep. 2017
Location	Ethiopia, Ghana, Nigeria, Malawi and Sudan
Company / Organisation	JICA
Position	Lead Consultant for IFNA preparatory survey
Job description	Initiative for Food and Nutrition Security in Africa (IFNA) was launched in 2016 by Japan government as a framework for collaboration with the 10 African governments to accelerate the implementation of their food and nutrition security policies and programs. As lead consultant for the preparatory survey of IFNA in 5 countries, conducted document review, stakeholder interviews with UN, related ministries, NGOs, other development partners and facilitation of a workshop to map out ongoing policy and programme efforts, identify potentially effective multi-sectoral packages of actions/linkages, and discuss critical gaps and key next steps for multi-sector nutrition focused on food security.

Date:	From Oct.2016 to Apr. 2017
Location	Myanmar
Company / Organisation	Save the Children
Position	Behaviour Change Communication (BCC) Consultancy
Job description	Part-1: Support the SCI Nutrition teams in Rakhine to develop Behaviour Change Communication Strategy through 1) reviewing document and secondary data, 2) identification of information gaps, 2) collection and analysis of primary data using Barrier Analysis, 3) testing and evaluating pilot interventions of appropriate approaches for changing behaviour linked to Nutrition and Antenatal Care Services. Part-2: To contribute to improving complementary feeding behaviours by determining barriers and facilitators to the behaviours of mothers who have under-2 children in Pauktaw Townships, Rakhine State, Myanmar. The project is LIFT supported by Save the Children.

Date:	From June. 2016 to May. 2017
Location	Ghana
Company / Organisation	JICA
Position	Expert on the study on multi-sector approach for nutrition in Ghana
Job description	Support 1) Social Behaviour Change Communication (SBCC) activities of Ghana Health Service at district level health workers through development of raining module and material (topics include Growth Monitoring, Continuum of Care (CoC), IYCF, diet diversity, etc), 2) coordination at regional level and 3) verify the effectiveness of the pilot project by measuring and analyzing the effectiveness of the project using baseline and end-line surveys

Date:	From May to July. 2016
Location	Japan (Home-based assignment)
Company / Organisation	Save the Children Australia
Position	Formative Research Study and Design for Social Behaviour Change Communication Strategy to improve maternal, infant and young child nutrition practices in Vanuatu
Job description	Conduct assessment of nutritional status and underlying factors affecting nutritional outcomes in pregnant women and lactating women and children under 5 years of age using qualitative and quantitative methods in selected locations in Vanuatu. Based on the assessment, develop a social behaviour change communication (SBCC) strategy and key communication messages with the aim of improving maternal and child nutritional practices (and thereby outcomes) based on the completed formative assessment study.

Date:	From Mar. to May. 2016
Location	Japan (Home-based assignment)
Company / Organisation	UNWOMAN
Position	International Consultant to conduct a desk review on gender in nutrition and food security policies and practices in Viet Nam
Job description	Responsible to conduct a desk review to provide an understanding of the current situation and a preliminary analysis of the existing gender gaps in existing policies and practices related to food security and nutrition in Viet Nam, including by highlighting gender differences in food production, marketing, distribution and consumption, assess the extent to which persisting gender inequalities hinder food security and nutrition for women and men, boys and girls and formulate recommendations for targeted policy action and for conducting further research on the topic, with a view to develop and strengthen gender responsive nutrition and food security policies and practices in Viet Nam.

Date:	From Dec. 2015 to January. 2016
Location	Myanmar
Company / Organisation	Action Contre la Faim (ACF)
Position	Health and Nutrition Project (Head of Department: gap filling)
Date:	From May to June. 2015
Location	India
Company / Organisation	Action Contre la Faim (ACF)
Position	Coach for Health and Nutrition Project (Head of Department)
Job description	Provide coaching for the ACF Head of Nutrition and Health Department for overall nutrition/health strategy and intervention in ACF India mission. Technical advice for nutrition assessment including SMART and SQUEAC methodologies.

Date:	From Feb to Apr 2015
Client Organisation	International Medical Corps (IMC)
Name of Project	Multi-sector Needs Assessment
Country	Afghanistan
Service rendered	In order to inform the design of a contextually appropriate, innovative, effective, multi-sector integrated program using Social Behaviour Change (SBC) approach designed to promote nutritional status of mothers and children, focusing on the first 1,000 days of a child's life in the target regions, 1) conducted a series of high-level meetings with key stakeholders (e.g., UN agencies, potential partners, government stakeholders, etc.) to gather key information on potential intervention strategies and partnerships, 2) trained IMC and its partners staff to conduct a qualitative and quantitative assessment including nutrition, WASH and food security, 3) carried out data analysis and 4) prepared a final report of findings.

Date:	From May. to Sep. 2014
Location	Afghanistan
Company / Organisation	Action Contre la Faim (ACF)
Position	Health and Nutrition Project (Head of Department)
Job description	Responsible for overall nutrition/health strategy and intervention in ACF Afghanistan mission. The assigned task included 1) strengthening of ACF Afghanistan Nutrition/health strategic positioning and programming, 2) building and strengthening ACF nutrition/health capacity in Afghanistan, 3) management of all nutrition/health interventions, 4) external coordination and representation and 5) reporting tasks and capitalization work. Also, co-lead the TWG on nutrition assessment. Facilitated workshop on SMART methodology for Nutrition Cluster.

Date:	From Feb to Apr 2014
Client Organisation	AmeriCares
Name of Project	Therapeutic Gardening Projects for Tohoku Great Earthquake Survivors
Country	Japan

Service rendered	As evaluation consultant, responsible for conducting the project evaluation by drafting a concept note, document review, developing instruments and collection quantitative data, review and analysis of data and drafting of a final report

Date:	From Nov. 2013 to Jan. 2014
Location	Sierra Leone
Company / Organisation	Action Contre la Faim (ACF)
Position	Evaluation on the Nutrition Surveillance System in Sierra Leone
Job description	Carry out the assessment of nutrition surveillance system by analysing the present status and planning integration of nutrition data into the health system, and to identify weaknesses and ways of improving the nutrition surveillance system. The findings were presented to and the recommendations were discussed with the Ministry of Health and Sanitation.

Date:	From Nov. 2013 to Sep. 2014 (1 month)
Client Organisation	IMC / USAID
Name of Project	SBC developer of the AGPLMD project
Country	Ethiopia
Service rendered	Responsible to develop a Social Behavior Change (SBC) Strategy approach for the Livestock Marketing Development project based on the Care Groups and Positive Deviance Approach by working with local and national stakeholders for reaching the objective of increasing local capacity in Nutrition SBC development and implementation.

Date:	From Jun. to Aug 2013
Client Organisation	UNDP/UNICEF/FAO
Name of Project	Systematic review and lesson learned from local complementary food production pilot project in the four regions supported by the MDG-F Nutrition Programme.
Country	Ethiopia
Service rendered	As consultant, analyze, document and systematically document lessons learnt from the local complementary food production pilot project in order to review the current models and make necessary recommendations for their improvement and assess under which conditions they could be scaled up

Date:	From Dec. 2012 to May 2013
Location	Ethiopia
Company / Organisation	Action Contre la Faim (ACF)
Position	Nutrition Expert for the project of Nutrition Response and Support to Somali Refugees and surrounding communities for Dollo Ado Refugee Response,
Job description	Coordinate CMAM programs currently being run in Hiloweyn camp, with a specific emphasis on integrating the various components including the outpatient therapeutic feeding, supplementary feeding and baby-friendly space to ensure that the overall program objectives are being met. The secondary goal is to strengthen the capacity of the national nutrition Program Managers, resulting in greater autonomy, independence, and improved program results. Analyzed CMAM data collected from OTP sites and community outreach workers and withdrew recommendations for improved performance. .Also, participated in SENS survey coordinated by UNHCR.

Date:	From Apr. to July 2012
Client Organisation	JICA
Name of Project	Preparatory study for nutrition products development
Country	India
Service rendered	As consultant, design a nutrition and health survey and collect and analyze data on availability and utilization of commercial nutrition products in Maharashutra province.

Date:	From Apr. 2011 to Mar. 2012
Client Organisation	JICA
Name of Project	Improving Maternal and Child Nutrition Status in Oromia
Country	Ethiopia
Service rendered	As Chief Advisor for the project, provided advices on overall management of the project and technical support for the issues and solutions of community-based nutrition (CBN) activities including promotion of supportive supervision, organization of CBN trainings, promotion of local production and utilization of complementary foods and experience sharing of the project with international and national stakeholders. Carried out assessment of referral linkage between OTP and TFU under IMAM. As part of the mid-term review of the project, carried out SAMRT survey to assess nutritional status and IYCF practices.

Date:	From Sept 2010 to Mar. 2011
Location	South Sudan
Company / Organisation	Save the Children
Position	Project Manager for Basic Health and Nutrition Promotion and Treatment for Children and Pregnant and Lactating Women in Kapoeta-North County, Eastern Equatoria State
Job description	Undertook overall management of the nutrition (CMAM) project and technical support for the project which aims to improve health and nutritional status of children under 5 years of age as well as pregnant and lactating women (PLW) in the local communities of Kapoeta North. Also, co-lead SAMRT survey to assess nutritional status and IYCF practices in Kapoeta North.
Date:	From Mar. to July. 2010
Client Organisation	JICA
Name of Project	Improving Maternal and Child Nutrition Status in Oromia
Country	Ethiopia
Service rendered	I provided consultancy to help the regional, zonal and woreda health offices developing a community-based sustainable model for nutrition improvement through collaboration with agriculture sector. Lessons learnt from this multi-sector collaboration were fed into the national and international stakeholders

Date:	From Jun. 2010 to Jul. 2010
Client Organisation	JICA
Name of Project	Project for Community Nutrition and Health for Mother and Child in Yemen
Country	Yemen
Service rendered	I provided consultancy on developing monitoring system for Community Health Volunteers (CHVs) and drafted necessary manuals for the project which aims at establishing and strengthening services delivery systems of health/nutrition through trained CHVs for mothers and children living in Sana'a, Hadrmout and Ibb, the areas with poor access to health facilities

Date:	From Dec. 2009 to Mar. 2010
Client Organisation	JETRO
Name of Project	BOP market assessment for nutrition sector in Ethiopia
Country	Ethiopia
Service rendered	I provided consultancy on assessment for the bottom of pyramid (BOP) market for nutrition sector through review of the country-wise nutrition products, program and strategy, profiling of supplementary foods/complementary foods used and rapid survey on livelihood and child care practices in Ethiopia.

Date:	From Nov. 2009 to Dec. 2009
Client Organisation	JICA –Nepal Office
Name of Project	School Health and Nutrition Project (SHNP)
Country	Nepal

Service rendered	I reviewed current situation of monitoring and evaluation of school health and nutrition activities at central, district and school levels, and to identify the issues/problems associated with them through interviews and document review. Also, discussed effective systems of monitoring and evaluation of implementation of the minimum school health services packages and helped develop the draft guideline and formats for monitoring and evaluation of school health.
Date:	From Mar. 2009 to Jun. 2009
Client Organisation	JICA – Evaluation Department
Name of Project	Analysis for measuring quantitative outcome indicators (maternal and child health)
Country	Japan
Service rendered	I provided consultancy on analysis of quantitative indicators and application of DALYs for measuring of cost-effectiveness of maternal and child health projects.
Date:	From Dec. 2008 to Jan. 2009
Client Organisation	JICA – Human Resource Development Department
Name of Project	The Project of Strengthening of Local Health System in the Province of Benguet
Country	Philippines
Service rendered	I provided consultancy on mid-term evaluation for the project which aimed to strengthen local health system to improve quality of health service in the Province of Benguet through establishing supporting system of providing quality health services by Rural Health Unit (RHU), strengthening health governance and financial system of healthcare of the Province, and improving drug supply system.
Date:	From May. 2008 to Oct. 2009 (5 months, intermittent)
Client Organisation	JICA – Sri Lanka
Name of Project	Project on Health Promotion and Preventive Care Measures of Chronic NCDs.
Country	Sri Lanka
Service rendered	I provided consultancy and technical assistance on health promotion and health information for the project which aimed to develops effective and efficient implementation strategies for controlling chronic NCDs and the resultant cardiovascular diseases through pursuing the evidence for chronic NCDs.
Date:	Mar. 2008
Client Organisation	Save the Children - Vietnam
Name of Project	Integrated Child Nutrition Project (ICNP)
Country	Vietnam
Service rendered	I was invited by the Save the Children to provide consultancy and technical assistance on designing, training, data collection and analysis for the project evaluation of ICNP which was community-based nutrition project in 5 communes of Luc Yen district, Yen Bai province using anthropometric survey and IYCF assessment. The evaluation areas covered nutrition, food security and microfinance.
Date:	From Feb. 2008 to Mar. 2008
Client Organisation	JICA - Ethiopia
Name of Project	Project for Improving Maternal and Child Nutrition status
Country	Ethiopia
Service rendered	I provided consultancy on formulation and ex-ante evaluation of the project which aimed to improve nutritional status of under-5 children and pregnant/lactating women in Ethiopia through strengthening of health and nutrition service by health extension workers at community level and management capacity at higher levels.
Date:	From Aug. 2007 to Sep. 2007
Client Organisation	JICA – Human Resource Development Department
Name of Project	Basic Health Staff Strengthening Project
Country	Myanmar

Service rendered	I provided consultancy on formulation and feasibility assessment of the project which aimed strengthening the system and capacity at central, division/state and township levels of management and implementation of in-service training for Basic Health Staff in Myanmar.

Date:	From Mar. 2006 to Mar. 2007 (1.5 months, intermittent)
Client Organisation	JICA - Philippines
Name of Project	Strengthening Health Delivery System in ARMM Region
Country	Philippines
Service rendered	I provided consultancy and technical assistance on monitoring and evaluation of the project which aimed to develop local health model in the ARMM region in Mindanao by providing training for health officials and medical equipment and promoting local health activities with community participation.

Date:	From Aug. 2004 to Aug. 2009 (4 months, intermittent)
Client Organisation	Save the Children in Myanmar
Name of Project	Child Health and Nutrition Project
Country	Myanmar
Service rendered	I was invited by the Save the Children in Myanmar to provide consultancy and technical assistance for local staff to design and implement for baseline surveys, monitoring review, evaluation and impact assessment surveys of the community-based nutrition project. I also provided technical review and make recommendations for the key messages of nutrition to be used for children during Nutrition Education Rehabilitation Sessions (NERS). I also provided training on BCC material (including media) development based on the finding of formative research.

Date:	From Jan. 2005 to Mar. 2005
Client Organisation	Save the Children
Name of Project	Emergency Program officer for Tsunami Relief in Sri Lank
Country	Sri Lanka
Service rendered	I was assigned by the Save the Children Japan as team leader of the post-Tsunami emergency operation in Sri Lanka to provide project management services (monitoring, evaluation, capacity building, etc) of distributing non-food items for the victims of Tsunami disaster which hit coastline of Sri Lanka

Date:	From Dec. 1995 to Dec. 1997
Client Organisation	Save the Children
Name of Project	Poverty Alleviation and Nutrition Project
Country	Vietnam
Service rendered	As project manager of the Save the Children, provided project management services (monitoring, evaluation, capacity building, etc) to promote improve community-based child health and nutrition in remote villages through community-based approach.

Other Consultancy Experience (6 years)

Date:	From Mar. 2010 to Mar. 2010
Client Organisation	JICA
Name of Project	The Project for Strengthening Child Support Network through Promotion of HelpLine
Country	Egypt
Service rendered	I provided consultancy on formulation and ex-ante evaluation of the project which aimed to establish a community-based model of supporting children and families with focus on street children in the pilot area

Date:	From Sep. 2006 to Oct. 2006
Client Organisation	JICA – Human Resource Development Department
Name of Project	Project for In-service Training of Community Health Nursing
Country	Fiji
Service rendered	I provided consultancy and technical assistance on review and improvement of the health information system with particular focus on records keeping procedures and formats. The project aimed to improve the health system particularly of planning, implementation and evaluation of in-service training for health workers through the provision of training and revision of job descriptions of health workers.

Date:	From Jun. 2005 to Aug. 2008 (8 months, intermittent)
Client Organisation	JICA - Vietnam
Name of Project	The Project on the Villager Support for Sustainable Forest Management in Central Highland
Country	Vietnam
Service rendered	I provided consultancy and technical assistance in community development and participatory development for the project which aimed to reduce the dependence of the villagers on the slash and burn activities through establishment of model villages promoting agriculture, forestry, animal husbandry and agro-forestry activities with community participation to improve productivity, promote diversification and marketing of crops
Date:	From May. 2004 to Jun. 2005 (4 months - intermittent)
Client Organisation	Save the Children – Vietnam Office
Name of Project	Early Childhood Development Project
Country	Vietnam
Service rendered	I was invited by the Save the Children to provide consultancy and technical assistance on designing, implementation and statistical data analysis of a series of surveys (baseline, evaluation, review and impact assessment) for the Early Childhood Development Project which aimed to improve knowledge, practice and facilities for families and communities to create favourable conditions for the holistic care and development of children under 6 years old

Date:	From Jan. 2002 to Jan. 2004
Client Organisation	Ministry of Foreign Affairs Japan
Name of Project	Microfinance Project
Country	Vietnam
Service rendered	As project manager of the Save the Children, provided project management services (monitoring, evaluation, capacity building, etc) to promote group savings, provide small loan to poor women and improve the management capacity for women's union at district and commune level through training with overall goal of improved nutrition.

Date:	From May. to Jun. 2000
Client Organisation	World Bank Vietnam Office
Name of Project	Northern Mountains Poverty Reduction Project
Country	Vietnam

Service rendered	Assigned as a member of feasibility study mission by the World Bank to make feasibility assessment of the project which aimed to provide assistance of livelihood for poor villagers in the northern mountainous to use a variety of improved and sustainable infrastructure and social services and to increase institutional capacity of upland communes and districts.

Date:	From Aug-1990 to Sep-1992
Location	The Solomon Islands.
Company / Organisation	Japan Overseas Cooperation Volunteers (JOCV)
Position	Community Development Coordinator
Job Description	As the field-based community development coordinator, I was dispatched by JOCV to Fiu Village, Malaita Island, the Solomon Islands and facilitated income generation projects with youth group in the village in coordination with local development authority and village committee. Main duties included project planning, training on accounting/budgeting, support in logistic and procurement of materials, monitoring/evaluation and regular reporting.

Seminars/Workshops:

- ***Co-Facilitator***: "Nutrition in Emergency - Short Introductory Course", UN University, Tokyo, 2017)
- ***Facilitator,*** "IFNA preparatory study workshop", Ghana, Nigeria, Malawi, 2017
- ***Facilitators,*** "M&E for Maternal and Child Nutrition" Training for participants from Ghana, Indonesia, Madagascar, Malawi, Mozambique, Myanmar, Nigeria, Sierra Leone, Timor-Leste, Zimbabwe", JOICEF, Tokyo, 2019
- ***Facilitators,*** "M&E for Maternal and Child Nutrition" Training for participants from Bangladesh, Botswana, Cambodia, Ghana, Kenya, Laos, Malawi, Pakistan, Uganda, Nigeria, Zimbabwe ", JOICEF, Tokyo, 2018
- ***Facilitators,*** "M&E for Maternal and Child Nutrition" Training for participants from Botswana, Cambodia, Bangladesh, Comoros, Ghana, Laos, Malawi, Mozambique, Sierra Leone, Sudan, Tomor-Leste, Zimbabwe", JOICEF, Tokyo, 2017
- ***Facilitators,*** "M&E for Maternal and Child Nutrition" Training for participants from Ghana, Laos, Malawi, Nigeria, Uganda, Zambia, Zimbabwe", JOICEF, Tokyo, 2016
- ***Facilitators,*** "M&E for Maternal and Child Nutrition" Training for participants from Ethiopia, Myanmar, Ghana, Laos, Malawi, Zimbabwe, Zambia", JOICEF, Tokyo, 2015
- ***Facilitators,*** "M&E for Maternal and Child Nutrition" Training for participants from Myanmar, Ghana, Zimbabwe, Ethiopia, Zambia, Laos, Malawi, Uganda, Yemen", JOICEF, Tokyo, 2014

- ***Co-Facilitator***, "Positive Deviance, methodology and practical application", Tokyo University, Tokyo, November, 2015.
- ***Facilitator***, "Social Behaviour Change Strategy approach for the Livestock Marketing Development project based on the Care Groups and Positive Deviance Approach", Addis Abeba, 2014
- ***Facilitator***, "Training Workshop on Facilitation Skill for NGO", FIDR Danang, Vietnam, November 2013.
- ***Facilitator,*** "Training Workshop on Project Cycle Management for Hospital Management" at Saint-Maria Hospital, Kurume, 2012 and 2013
- ***Facilitator***, "Training Workshop on Project Cycle Management for Sustainable Agriculture Development" at JICA Obihiro, Obihiro, 2012
- ***Facilitator***, "Training Workshop on Project Cycle Management for Environment Protection under Global Warming", at JICA Tokyo International Centre,, Tokyo, 2009
- ***Facilitator,*** "Training Workshop on Project Cycle Management for Rural Development", at JICA Tsukuba Centre, Tsukuba, 2008
- ***Facilitator***, "Training Workshop on Project Cycle Management for NGO", at JICA Hygo Centre, Kobe, 2007
- ***Facilitator***, "Training Workshop on Project Cycle Management for NGO", at JICA Hiroo Centre, Tokyo, 2007
- ***Facilitator***, "Strategic Planning Workshop", at Save the Children Japan, Tokyo,

Publications:

- **K. Watanabe**, R. Flores, J. Fujiwara†, LTH. Tran (2005) Early Childhood Development Interventions and Cognitive Development of Young Children in Rural Vietnam, The Journal of Nutrition, 135:pp1915-1925
- **K. Watanabe** (2004) Long-term Impact of Child Development Interventions on Physical and Cognitive Development of Young Children in Rural Vietnam. MPH thesis. Emory University, U.S.
- **K. Watanabe** (2003) Civil society participation in international assistance for education - role of NGOs. Save the Children Japan/ NGO network for education, Tokyo.
- **K. Watanabe**, M. Wada, A. Sharma, T. Hozumi (1998) Enabling Empowerment – from Experience of Nutrition Project of Save the Children, Lésprit Dáujourdhui, 38-45 (In Japanese).110-122, Shibundo, Tokyo.
- **K. Watanabe** (1984) Role of Change Agents in Enabling Participation through Rural People's Organizations: with case study in the Solomon Islands. M.A. Thesis at University of Reading, U.K.
- **K. Watanabe** (1984) Genetic Study on Leaf Characters of Maize. B.A. Thesis. Hokkaido University, Sapporo.

Annex-6: Ethical clearance letter

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Research Ethics Approval

03 June 2022

Koichiro Watanabe
1-21-1 Kamitakada, Nakano-ku, Tokyo 164-0002 Japan
Tel: +81-3-3385-2092
Email: watanabe.koichiro@nam.or.jp

RE: Ethics Review findings for: *Inception Report of the Reducing Stunting in Children under Five Years of Age - A Process Evaluation of UNICEF PNG's Strategies and Approaches*

Dear Koichiro Watanabe,

Protocols for the protection of human subjects in the above study were assessed by an independent Multi-Country Evaluation Specialist (MCES)[1]. This study's human subjects' protection protocols, as stated in the materials submitted, received **ethics review approval.**

You, the evaluation team lead, and your project staff remain responsible for ensuring compliance with the feedback provided to ensure full ethical compliance that is in line with UNICEF rules and regulations. Those responsibilities include, but are not limited to:

- ensuring prompt reporting to the MCES of proposed changes in this study's design, risks, consent, or other human protection protocols and providing copies of any revised materials;
- conducting the research activity in accordance with the terms of the approval until any proposed changes have been reviewed and approved by the MCES, except when necessary to mitigate hazards to subjects;
- promptly reporting any unanticipated problems involving risks to subjects or others in the course of this study;
- notifying MCES when your study is completed.

Sincerely,

Oscar Ernesto Huertas Diaz

Multi Country Evaluation Specialist

cc: Ali Safarnejad, Koorosh Raffii, Wassana Kulpisitthicharoen and Catalina Salazar Silva

[1] Multi Country Evaluation Specialist based in Thailand.

Annex-7: Results Framework of UNICEF PNG Nutrition Program

Plan			
Outcome Statement:	**By 2022, children under 5, adolescent girls and women, adopt improved nutrition and care practices and increase utilization of nutrition-specific and nutrition sensitive services, especially in the most disadvantaged and marginalized communities.**		
Outcome Indicators	**Baseline**	**Means of verification**	**Details**
Proportion of infants exclusively breastfed up to 6 months in selected provinces [B: 36 per cent (2015); T: 80%]	Baseline will be established using the new DHS data available in late 2017.	DHS and/or Household Income and Expenditure Survey (HIES)	Frequency of data would be a challenge as next DHS may only occur after 5 years. HIES survey may be conducted depending on WB's support available.
No. of provincial hospitals providing SAM treatment of SPHERE standards [B: 0 (2016); Target:19]	Baseline will be established using the hospital and health centre based in-patient and out-patient admission data annually analysed and reported by the PNG Paediatric Society	Hospital based admission data annually analysed and reported by the PNG Paediatric Society	Frequency and timing of data is a challenge since it doesn't coincide with UNICEF reporting and there is no mid-year data available from PNG Paediatric Society.
Proportion of children 6-59 months who received 2 vitamin A doses (B: 22% (2015); T: 80%)	NDOH Statistical Annual Performance Report (SAPR) of 2016 available in mid-2017.	NDOH Statistical Annual Performance Report (SAPR).	Reporting wouldn't be synchronised with UNICEF annual reporting cycle since SPAR data available almost after one year. Quality of data would also be a concern.
Output #1 Statement:	**National and provincial governments have improved capacity to formulate policy and strategy, plan, budget, manage and coordinate multi-sectoral nutrition-specific and nutrition-sensitive interventions for the most vulnerable and disadvantaged children, adolescents and women, including during emergencies.**		
Costed multi-sectoral national nutrition Strategic Action Plan (SAP) 2017–2021 endorsed by the government (B: 0; T: 1)	Since the measurement of this indicator is a Text document, baseline will be established after verifying the availability of the document with NDOH	The Nutrition SAP endorsed by the National Economic Council (NEC).	
Number of provinces with costed cross sectoral Nutrition Action plans (B: 0; T: 6)	Will be established after verifying with NDOH and PHA on the current status	NDOH and PHA Annual Report	
Number of provinces with budget allocation for nutrition (B: 0; T: 6).	There are fragmented data capture modalities for HIS. Will be established after verifying with NDOH, other sectors and PHA.	PHA Quarterly and Annual Report	
Output #2 Statement:	**National and provincial health authorities have improved capacity and necessary supplies to ensure the delivery of nutrition-specific interventions, including severe acute malnutrition (SAM) management, infant and young child feeding, micronutrient supplementation and maternal nutrition services, to prevent excess morbidity and mortality among girls, boys and women, including during emergencies**		

Emergency Preparedness Plan for nutrition in UNICEF selected provinces developed and in place (B: 0; T: 6)	Baseline will be established after verifying the availability of the document with PHAs/PHOs.	NDOH and PHA Annual Report	
Number and percentage of hospitals and health facilities in selected provinces equipped with at least one trained staff and have supplies to implement nutrition specific services (SAM management, maternal nutrition, adolescent nutrition, micronutrient supplementation and IYCF counselling services. (B: 0/0; T: /80 per cent).	Will be established after verifying with PHAs/PHOs on current status.	NDOH and PHA Annual Report	
In selected provinces, children aged 6-59 months with SAM in humanitarian situations admitted to SAM programmes and recover (B:X; T: 75 per cent)	Baseline will be established based on the province-wise estimation of SAM children using the 2016/17 DHS data on SAM prevalence	NiE interventions implementation report and Annual Report of PHA/PHOs	Regular and timely collection and compiling the data by the PHA/PHO; and the authenticity of data.
Output #3 Statement:	**Male and female caregivers and families, especially the most vulnerable and disadvantaged, have improved knowledge of appropriate feeding and caring practices for women, adolescent girls, infants and young children and to seek quality health and nutrition services, including in emergencies.**		
Adoption of the International Code on Marketing of Breastmilk substitutes as legislation by PNG, with a designated body carrying out going monitoring and translated to the population. (B:0 T:1)	There is a baby feeds and supplies Act endorsed in the 70s that is proposed for overhaul and replaced by the International Code on Marketing of Breastmilk substitutes	National Executive Council (NEC) records of approved laws and regulations and National Health Board reports of regulatory monitoring.	
Country has an endorsed training curriculum on 'infant and young child feeding' that includes training on 'early childhood stimulation and development' for community workers/health service providers for outreach and disseminated. (B:0, T:1)	The baseline records show that the country is currently developing the training package for infant and young child feeding' that includes training on 'early childhood stimulation and development' for community workers/health service providers for outreach. This must be submitted to Curriculum review board at the department of health for approval and endorsement will be subsequently sought from government.	NDoH/PHA/PHO Quarterly and Annual Report	Regular and timely collection and compiling the data by the NDoH/PHA/PHO; and the authenticity of data

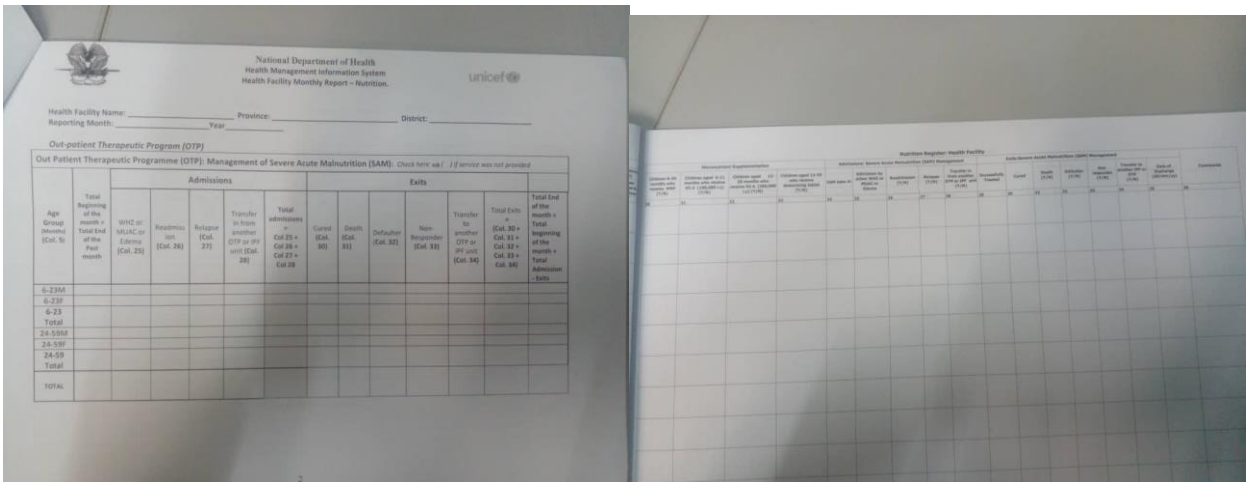
Number and percent of LLGs in selected provinces which have at least one trained community health workers on promotion of adolescent, maternal and IYCF practices. (B: 0/0, T: ??/75%).	Using the project implementation report supported by UNICEF.	PHA/PHO report on the implementation of the project.	Regular and timely collection and compiling the data by the PHA/PHO; and the authenticity of data

Annex-8: Photos

Observation of activities by VHA in Koki village (NCD)

Key Informant Interview with nurses at Rabiamul CCHS Health Center (WHP)

9 mile urban clinic (NCD)



National Department of Health
Health Management Information System
Health Facility Monthly Report – Nutrition.

unicef

Health Facility Name: _____ Province: _____ District: _____
Reporting Month: _____ Year _____

Out-patient Therapeutic Program (OTP)

Out Patient Therapeutic Programme (OTP): Management of Severe Acute Malnutrition (SAM): *Check here wa ( ) if service was not provided*

Age Group (Months) (Col. 5)	Total Beginning of the month + Total End of the Past month	Admissions					Exits						Total End of the month + Total beginning of the month + Total Admission - Exits
		WHZ or MUAC or Edema (Col. 25)	Readmission (Col. 26)	Relapse (Col. 27)	Transfer in from another OTP or IPF unit (Col. 28)	Total admissions = Col 25 + Col 26 + Col 27 + Col 28	Cured (Col. 30)	Death (Col. 31)	Defaulter (Col. 32)	Non Responder (Col. 33)	Transfer to another OTP or IPF unit (Col. 34)	Total Exits = (Col. 30 + Col. 31 + Col. 32 + Col. 33 + Col. 34)	
6-23M													
6-23F													
6-23 Total													
24-59M													
24-59F													
24-59 Total													
TOTAL													

Nutrition Registers Format

Visiting Yagaun Health Center (Madang)