

TOR Evaluation Study of Local Based School Meals Programme in NTT and Papua

2012-2015

(Kupang and TTS Sub-districts, NTT and Muaratami and Jayapura district in Papua)

A. INTRODUCTION

The school feeding programme was nationally launched by the government of Indonesia in 1997. The programme was called *Pemberian Makanan Tambahan Anak Sekolah* (PMT-AS) which was implemented in poor villages in 27 provinces in Indonesia covering 7.3 million kindergarten and primary school children. The main goal was to improve the physical endurance of public and private primary school students by improving their health, and their nutritional status. This would increase their interest in learning, and also their learning ability in relation to improvement in school performances, and eventually it would support the Compulsory 9 Year Primary Education (Ministry of Health of the Republic of Indonesia, 2000; Riyadi, 2006). The programme was to serve elementary school children supplemental meals to what they had already received from home. The programme also served additional purposes, which were: (1) to increase the nutritional status of public and private primary school students; (2) to increase the students' ability to concentrate on their school work; (3) to reduce absences and repeating classes, as well as the drop outs rates; (4) to support the diversification of food intake among students through socialization of nutritional value of locally available food; (5) to build healthy eating habits among the students; (6) to build good and healthy lifestyles from an early age; (7) to support the local economy through utilizing local agriculture produce by making the PMT-AS programme work; (8) to improve the community's participation in implementing childhood education in regards to nutrition and health; and (9) to increase the local community income by increasing the local agricultural production (Raharto, et al., 2008). The programme also was legally stipulated by the Presidential Instruction No. 1/1997. This was an inter-sectoral programme which involved many government institutions at the national, the provincial, and the district levels. Unfortunately this programme was discontinued and revitalized for one year in 2011-2012, then stopped again until now.

East Nusa Tenggara (NTT) is one of the provinces which continues to face a combination of acute and chronic food insecurity (especially in terms of food access and utilization), contributing to the serious under-nutrition situation in its population, particularly among women and young children. NTT Province has the highest level of stunting and underweight in Indonesia at 58% and 29% respectively (Risksedas 2010). Similar patterns of stunting and underweight were found in Timur Tengah Selatan (TTS) district – (57% and 40%) and Kupang (51% and 38%) district (Risksedas, 2010). The prevalence of thinness among women at reproductive age is also quite high in both districts (24% in TTS and 21% in Kupang) (Risksedas 2010). According to WHO criteria, this data confirms the seriousness of the food insecurity situation in TTS and Kupang.

As expected with such high rates of undernutrition, micronutrient deficiencies are also alarming. More than a half of children aged 3-59 months (51%) in TTS and 64% in Kupang suffer from anemia (Hb<11g/dL). Children aged 3-23 months are the most vulnerable where the prevalence of anemia is extremely high (80% or higher). The prevalence of anemia (Hb<12g/dL) among non-pregnant mothers is 26% in TTS and 48% in Kupang. Alarmingly high prevalence of anemia among under five children and women at reproductive

age indicate a low intake of micronutrient-rich foods, which is consistent with the very high prevalence of stunting among under five children.¹

World Food Programme through its expertise introduced the Local Food-based School meal/LFBSM programme in NTT in 2010 and Papua in 2013. Aligning to national guidelines of the PMTAS using local food in the feeding programme, WFP distribution of the fortified biscuits was replaced with locally developed menu, using maize and Mung bean, the main staples in NTT, as well as cassava in Papua, as the main ingredients. The menu was fortified with multiple micro-nutrient powder/MNP called VITAS (Vitamin untuk anak Sekolah).

The school feeding programmes, including the WFP LFBSM, in a broader context are an effort to achieve the MDGs (Millennium Development Goals) related to education, and health and sanitation. The programme does not exclusively serve supplemental meals for school children, it also educates students on basic health and hygiene, nutrition, and sanitation and at the same time promoted school childrens' ability to practice such knowledge in their daily lives. These activities are closely linked to the MDG's target, which among other things is to improve basic health and hygiene that ultimately could help reduce premature death.

LFBSM programme aimed to support the national movement on School Meals Programme (PMT-AS) with main objectives to improve the attendance and ability to learn, to improve knowledge and attitude of the children on good nutrition and personal hygiene , to encourage children to have balanced, nutritious, and diversified local food, to improve the healthy living style, to encourage community participation in preparing the local food, and to increase local community income through increased local agricultural production. A full integrated package of LFBSM included local school meals, improving hand washing habits, personal hygiene, use of latrine for defecation, immunization, nutrition education, balanced diet, deworming activity for school children and build community participation through farmer groups, cooking groups, etc.

In NTT, the LFBSM was initially implemented in 20 schools in Amanuban Barat sub-district (*Timor Tengah Selatan* – TTS district) and also 1 independent school in Kota Soe (funded by the local school with technical assistance from WFP) since October 2010. In 2011, the 20 schools were covered by the national PMT-AS and funded by the government of Indonesia, however the fund was not enough to cover all children. WFP school feeding programme was complementing the national PMTAS using WFP local recipe. In October 2011 the WFP expanded the LFBSM programme to 9 more schools in Amabi Oefeto sub-district (Kupang district). Starting 2012 the programme has covered 47 schools in TTS district, 24 schools in Kupang district covering 13,000 student and in 2014 the programme expanded to 23 new schools in Kupang city. Now the programme is covering 21,000 students in total.

WFP expands the Local School Meals (LSM) programme in 21 elementary schools in Jayapura district since August 2014 to date. WFP provides school meals to 2951 beneficiaries in Jayapura district, at least 3 times meals per week with 2 type of LSM recipes that contains of minimum 300 kilocalorie and 5 grams protein per each portion. In 2015 local government committed to pilot school programs in four additional Districts. Overall the programme covered 60 schools in Papua province, consisted of 10 schools in Kota Jayapura, 20 schools in Kab. Jayapura, 6 schools in Kab. Merauke, 8 schools Kab. Nabire, 7 schools Kab. Jayawijaya and 9 schools in Kab Biak Numfor.

The evaluation of the programme will only cover TTS and Kupang District in NTT that started the intervention in 2012 and Kota Jayapura and Jayapura district in Papua.

¹ Church World Service - CARE International Indonesia - Helen Keller International (2008). Nutrition and Health Survey of Under five Children and Women in West Timor 2007: Need for Immediate Action in West Timor. Jakarta, Indonesia: CWS/CARE/HKI

B. OBJECTIVES OF THE STUDY

- Assess the effectiveness and impacts on providing school meals and micronutrients powders (MNP) in Local Food Based School Meals (LFBSM); comparing the impacts on children's nutritional status between those in LFBSM schools and non LFBSM schools (no school feeding nor any other health, hygiene service delivery) in TTS and Kupang District, NTT.
- Assess impact of WFP's approach to LFBSM on attendance and ability to learn; improved knowledge and attitude of the children on good nutrition and personal hygiene, improved feeding practices, with emphasis on a balanced, nutritious, and diversified diet based on use of local foods, improved the healthy living style, improved community participation in preparing of the local food, and increased local community income through increased local agricultural production.
- Assess direct impact from use of MNP in LFBSM on objectives of LFBSM (described above) through solid statistical analysis.
- Assess key programmatic issues, achievement, challenge, opportunities and handover strategies of Local Food Based School Meals (LFBSM) in Kota Jayapura and Jayapura district in Papua. Describe linkages with local, provincial and national policies and institutional framework for successful handover.
- Collect key programmatic inputs for technical guidance that will support school feeding program

C. METHODOLOGY

The selected research agency need to prepare well and sound methodology that is appropriate for this evaluation, below methodology can be used as guidance. Methodology need to be approved by WFP.

C.1. Study design, area and population under study

The Study will be conducted in NTT (TTS and Kupang District) and Kota Jayapura and Jayapura in Papua. In NTT, data should be collected in WFP LFBSM area and non WFP areas without any food intervention. The variables and the indicators cover many aspects, such as the implementation of the school feeding programme, the students' and the parents' knowledge and practice on nutrition and health, and the community participation in the execution of the school feeding programme.

These variables should be reflected in the study instruments, raw data, result report and main study findings.

Table 1
Variables and Indicators

Variables		Indicators	Source/Method
I.	Implementation		
	1. Preparation	<ul style="list-style-type: none">- Availability of raw materials (maize, mung bean), cash provided by WFP and local food by community- Storage for raw materials- Availability of other food materials (sugar, coconut, spice, etc)- Availability of cooking utensils- Availability of other materials (firewood, water, etc)	Teachers, including school principals, caterers (qualitative)

		<ul style="list-style-type: none"> - Availability of cooking groups - Variety of food. - Food handling and food safety. - Administration of cash transfer management and report 	
	2. Execution		
	a. Food distribution	<ul style="list-style-type: none"> - Distribution of food from storage/kitchen to students (transferring, including food handling and safety). - Food availability (in every school on due day). - Quantity and quality of the food served. - Time of distribution (the first hours of the morning before school starts or during the first break). - Person in charge in distributing food and motivating students to finish the food in each class. 	Teachers, including school principals, cooking groups (qualitative)
	b. Health and nutrition education	<ul style="list-style-type: none"> - Availability of the IEC materials provided by WFP (quantity and quality). - Availability of IEC materials provided by other sources. - Teachers to be trained on IEC materials. - Time allocation on delivering the IEC materials (at least 5 minutes every day). - Method in delivering the IEC materials. - Students' participation in the IEC sessions. - The use of the IEC kit during extracurricular activities (such as Pramuka sessions). - Participation of stakeholders on the HNE campaigns. 	Teachers, including school principals, cooking groups (qualitative)
II.	Outcomes <ul style="list-style-type: none"> - School enrolment (2012-2015) - School attendance (secondary data) - Drop-out rates - Reduce short-term hunger - Improve concentration 	<ul style="list-style-type: none"> - Secondary data - Not feeling hungry during school hours. 	<p>Schools, Education Offices</p> <p>Survey</p>

		<ul style="list-style-type: none"> - Not feeling sleepy during school hours. - Enthusiasm in receiving lessons, ex. asking and answering questions in the classrooms, less disturbance of the lessons. - Frequency of leaving the classroom during the lessons. - Willingness to stay in school. 	Survey, FGD with teachers
III.	Students' awareness <ul style="list-style-type: none"> - Knowledge on balanced diet, basic hygiene and sanitation - Practice on balanced diet, basic hygiene and sanitation 	<ul style="list-style-type: none"> - Knowledge on balanced diet (healthy food): amount, composition, frequency of meals per day, junk food. - Knowledge on basic hygiene and sanitation: hand washing, the use of latrine, school canteen. - Practice on balanced diet at school and at home: amount, composition, frequency of meals per day, junk food. - Practice on basic hygiene and sanitation at school and at home (hand washing, the use of latrine). 	Survey (quantitative)
IV.	Community's participation		
	1. Preparing the food	Decision making process to determine persons in charge in each activity and also the schedule and the mechanism: <ul style="list-style-type: none"> - the provision of clean water - the provision of fire wood - the provision of additional raw materials - caterers - variety of food served every day. 	Qualitative
	2. Facilitating basic hygiene and sanitation	<ul style="list-style-type: none"> - Facilities of basic hygiene and sanitation (basin, water, soap, towel) 	Survey (quantitative)
	3. Monitoring School Feeding programme	<ul style="list-style-type: none"> - Parents' knowledge on the WFP-SF programme (goals, objectives and programme mechanisms). - Parents' attitude towards the WFP-SF programme. - Active participation on controlling the whole process of school feeding programme 	Survey (quantitative)
V.	Roles and responsibilities of each stakeholder	<ul style="list-style-type: none"> - District government (Education, Health, Agriculture offices) 	Stakeholders (qualitative)

	(government, schools, community) Mechanism of coordination and partnership	<ul style="list-style-type: none"> - Sub-district government (Education, Primary Health Care/Puskesmas) - Primary schools (headmasters, staffs, teachers, parents and teachers association/POMG, school committees) - Community leaders and supportive networks (head of villages, religious leaders, etc) 	
VI.	Household survey		Quantitative
	Socio demography	<ul style="list-style-type: none"> - Number of household members. - Socio-demographic characteristics of household members (age, sex, level of education) 	All categories
	Socio economy	<ul style="list-style-type: none"> - Number of working family members - Major sources of income - Approximate household income - Coping Strategy Index (CSI) 	As above
	Condition of house	<ul style="list-style-type: none"> - Main type of floor - Main type of wall - Main type of roof - Ventilation - Lighting 	As above
	Sanitation	<ul style="list-style-type: none"> - Availability of clean water - Sources and accessibility of clean water - Availability of latrine - Types of latrine - Distance of latrine/septic tank and source of clean water 	As above
	Knowledge on health and nutritions	<ul style="list-style-type: none"> - Knowledge on healthy food, including combination of the food. - Knowledge on the importance of clean water - Knowledge on healthy behaviour (ex. the importance of hand washing, the use of latrine) 	As above Questions for individual
	Dietary habits and practices	<ul style="list-style-type: none"> - Main staple food - Frequency of meals per day (whether family members have breakfast everyday or not) - Variety of food served in each meal time (including combination of staple food and the dishes) - Differences in variety and meal served among family members (children and adults, males and females) - Dietary Diversity Score (DDS) - Food Consumption Score (FCS) 	As above
VII	Students' survey		

Knowledge on health and nutritions	<ul style="list-style-type: none"> - Knowledge on healthy food, including combination of the food. - Knowledge on the importance of clean water - Knowledge on healthy behaviour (ex. hand washing, the use of latrine) - Practice of healthy behaviour (washing hands at school and home, take a bath) 	<p>All categories</p> <p>Students' questionnaire</p>
Dietary habits and practices	<ul style="list-style-type: none"> - Frequency of meals per day (with breakfast or without) - Food consumption score - Dietary diversity score - Variety of food taken in each meal time (including combination of staple food and the side dishes) - Meals and drinks to be brought to school (what kind of meals, frequency of bringing meals) - food and drink at vendors around schools' areas 	<p>All categories</p> <p>Students' questionnaire</p>
Knowledge and practice related to the SFP	<ul style="list-style-type: none"> - Distribution of meals at school (frequency, person in charged, time of distribution) - Students' preference of the meals (whether they like the meals or not and finish the meals at school) 	<p>Only for students' of schools in which school feeding programmes are implemented</p>
Information on nutritions and health and hygiene at school , School of five, little doctor initiative	<ul style="list-style-type: none"> - To deliver information on nutritions and health and hygiene (what kind of information, who deliver it and when) 	<p>All categories</p> <p>Students' questionnaire</p>
Nutritional status of primary school children	<ul style="list-style-type: none"> - Wasting, stunting, underweight - Hb (and maybe serum ferritin, CRP, and serum Retinol 	<p>Anthropometric measurement (weight, height), and age</p> <p>Biomarkers analysis</p>
Morbidity rate	<p># Illness experienced by school children in the past 2 weeks including diarrhea, acute respiratory infections (cough and runny nose) and fever</p> <p>-</p>	<p>Interview</p>
School attendance	<p># of school days lost due to illnesses</p>	<p>School records</p>
Concentration and cognition performance		<p>Test/assessment</p>
physical endurance		<p>Test/assessment</p>
De-worming and vaccination	<p>De-worming within the last 6 months, BIAS (Bulan Imunisasi</p>	<p>Interview</p> <p>Stool examination</p>

		Anak Sekolah – Immunization month for school children) #worm infestation	
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Note: Other indicators might be added in the detailed technical proposal, if needed.

C.2. Sample size

The subject under this study is WFP, local government, school children, teachers, local community (cooking groups, and other related stakeholders that has been participated in LFBSM program in WFP working areas and non-working areas. The sample of study will be divided into 2 groups: the first group in WFP areas and the second group in non-WFP area (that do not have any school feeding program and do not receive any food commodity from WFP) in TTS and Kupang. The study will be conducted by comparing WFP areas to non-WFP areas in the same district. A multistage cluster sampling will be used to obtain a random sample based on probability proportional to size (PPS). The schools that have been implementing local school meals programme since 2012 will be eligible to be selected in the evaluation. There are 71 schools in TTS and Kupang district that have join the intervention since 2012. 30 clusters/schools from WFP areas and 30 clusters/schools with similar characteristics from non-WFP areas in TTS district and Kupang district will be selected, 30 children in each clusters will be selected and their parents will be interviewed. Total samples approximately 900 school children and parents in each group (1800 children for both groups).

In Papua only qualitative data will need to be gathered from Kota Jayapura and Jayapura. The qualitative data should be able to capture key programmatic issues, achievement, challenge, opportunities as well as handover strategies. No quantitative impact evaluation will be conducted.

Sampling selection should be explained in detail, especially in determining non WFP area to be sampled in TTS and Kupang District. Informants selection and detailed qualitative methods to be performed in and Kota Jayapura and Jayapura district in Papua should also be explained in details. Criteria for selection and method of analysis should be defined clearly. WFP will share detailed data of the intervention area once the contractor has been selected. List of schools receiving the intervention can be found in the Annex.

Complete qualitative methodology and informants selection should also be described in detail in the technical proposal.

The design study, methodology, implementation management, biomarker collection procedure, ethical clearance and implementer's names for each area should be consulted and submitted for WFP approval prior to data collection implementation in the field.

C.3. Procedure of data collection

The study will be conducted by comparing schools in WFP areas to schools in non-WFP areas which have the similar characteristic in the same districts. A multistage cluster sampling will be used to obtain a random sample based on probability proportional to Size (PPS), school as cluster unit. 30 clusters from WFP areas and 30 clusters with similar characteristic from non-WFP areas with no food intervention in TTS and Kupang district will be selected, 30 children in grade 3-5 in each clusters will be selected and their parents will be interviewed. Hemoglobin concentration assessment will be assessed for all samples. The quality control will be done to 10% of the subjects by the quality control team. The quality control team will visit the same schools and redo the measurement (indicators that certain and anthropometric measurement) within 5 days of the first visit. WFP has authority to ask re-measurement if there is any findings of inappropriate measurement methodology, tools and results in the field. Therefore, close coordination and simultaneous progress update to WFP (Country Office and Sub-Office) would be needed and critical.

C.4. Anthropometric and biomarker assessment

The basic information and measurements that constitute anthropometric assessment include: age, sex, height and weight.

Anemia or hemoglobin measurements will be assessed using Hemocue, Angelhom, Sweden.. A drop of blood from finger prick will be taken by experienced and trained nurse/doctor. There are possibility the serum retinol, serum ferritin, and CRP will be analyzed, please prepare separate budget for additional biomarkers than Hemoglobin.

Detailed information of both anthropometric and biomarker assessment method, instruments used, complete field protocols of each procedures and profiles of team members (personnel CV) who conduct the assesment should be attached to the proposal. If any of the anthropometric and biomarker assesment involved other institution, detailed profile of the institution, personnel and credentials should also be included. Quality assurance method should also be described clearly.

WFP has authority to ask re-measurement if there are any findings of inappropriate measurement methodology, tools and forgery of data in the field. Any violations found may lead to termination of the contract. Therefore, close coordination and simultaneous progress update to WFP (Country Office and Sub-Office) would be needed and critical.

C.8. Statistical analysis

Data will be checked for its accuracy and consistency in the field by field supervisors from each team. Data analysis will be conducted under the following phases: multi-level data checking, data coding, data entry and cleaning. The cleaned and properly coded raw data would be submitted to WFP upon completion of the contract. If required, WFP could have access to the database during the analysis and reporting.

Data will be entered and analyzed using SPSS for Windows by research team. Anthropometric data will be computed using Anthro2005 software to obtain the nutritional status of children according to the WHO Child Growth Standards. Subsequently, data will be transferred to SPSS for further analysis.

Results for all parameters will be presented for all areas (total) as well as breakdown by intervention group and by other indicators (age, gender, etc.).

C.9. Ethical approval and permissions

The study will be conducted after approval by a local Ethical Committee (responsibility of the selected research institution). Permission will be obtained from the local authority (District Health Office/ Dinas Kesehatan), District Education Office, Puskesmas, school administration. Persons will be assessed only after they give their informed consent (responsibility of selected research institution). The participation of the person in the study is voluntary. All data will be treated confidentially and be used only for the study purposes.

Research team is responsible in obtaining the necessary approvals and clearances, either from health and local authorities as well as from study respondents before starting the data collection.

D. REQUIREMENTS OF PROPOSALS SUBMISSION

D.1. Technical Proposal

Should include the following:

1. Work plan and timeline of the evaluation activity
2. CV of recommended teams to conduct the evaluation, interview in the field, etc.
3. List of studies conducted by their organization/institution
4. Draft of the questionnaire or sample of questionnaire
5. Methodology of the evaluation

6. Methodology of analysis of data
7. Clear specification of instruments to be used (subject to WFP approval during evaluation of technical proposal)

D.2 Budget Proposal

Should include the following:

- Fee of the team (Researchers, field staff, data analysis staff, transcriber, evaluation coordinator/team leader, data management team, support staff, etc.)
- Flight tickets and transport to and from the airport of the team
- Perdiem/allowance for each of the staff (perdiem includes accommodation, communication allowance, meals)
- Car rental for the mobilization of the staff during the interview, assessment, etc.
- Instruments for blood samples, cost of the blood analysis, for Hb only and Hb plus other bio markers Serum Ferritin, Serum Retinol, CRP, etc. Other biomarkers will only be analyze when Hb results are inconclusive. Please separate cost for Hb only or Hb plus Serum Ferritin, Serum Retinol, CRP. Please refer to annex.
- Anthropometric instruments (rent or purchase)
- Enumerators/cadre/principal investigator fee or any other staff or involvement needed to conduct the evaluation overall activity
- Meeting package
- Report writing, stationeries, etc.
- Official translator fee for the final report writing, etc.
- Any other foreseen cost for the implementation of the evaluation

E. MILESTONES

- WFP will contact the institutions who submitted their proposal for technical discussion.
- After contract issued by WFP, the awarded institution can start the preparatory work and prepare for the inception report , template will be provided.
- Data collection should be finalized before the end of January 2016
- Draft of Final report should be presented to WFP before end of February 2016 and should be ready for final submission by the end of March 2016
- Presentation of final results by awarded institute to WFP and stakeholders: by third week of March 2016
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Deliverables

Deliverables during the execution of the activity should consist of:

- Ethical approval document before the study commencing
- Study instruments and protocol should be submitted to WFP for review and approval within 2 weeks upon the contract signed
- Weekly report of the progress of data collection
- Raw dataset, clean dataset within one month after data collection is finished (28 February 2016)
- Transcripts of interview & FGD after data collection is finished (28 February 2016)
- Complete report in Bahasa Indonesia and English (**professionally edited**) 30 March 2016
- Presentation files Mid March 2015

F.2. Final Report

The study report should answer all of the variables stated in the VIM.

The data should present:

- The effectiveness and impacts on providing school meals and micronutrients powders (MNP) in Local Food Based School Meals (LFBSM); comparing the impacts on children's nutritional status between those in LFBSM schools and non LFBSM schools
- The effectiveness of the Behavior Change campaign especially on the importance of hand washing, diet diversity, hygiene and sanitation and micronutrients.
- The effectiveness and participation of local government and related stakeholders on LFBSM program
- The impact of capacity development and community participation on LFBSM program to local economy (e.g. cooking groups, farmer groups, school cooperatives, etc.)
- Key programmatic inputs for technical guidance that will support school feeding program

F.3 Outline of final report:

Executive Summary

Chapter I Introduction

- Background of the Study
- The Intervention Programme
- Rationale of the Study
- Objective of the Study

Chapter II Materials and Methods

- Study Design, Area, and Population Under Survey
- Sample Size
- Sample Recruitment and Follow up
- Data Collection Procedure and Instrument
- Guidelines of Qualitative Data Collection
- Training of Enumerators
- Data Analyses
- Ethical Approval

Chapter III Result and Discussion

- Characteristic of Subject
- Nutritional Status
- Biochemical Indicators
- Dietary Intake, Knowledge of students, teachers, cooking groups and Compliance
- Qualitative results
- Key programmatic issues, achievement, challenge, opportunities and handover strategies
- Any other results necessary from the VIM variables
- Discussion

Chapter IV Conclusion and Recommendation

F. RISK AND MITIGATION

El Nino has the potential to destabilize the necessary conditions for good nutrition, resulting in a higher prevalence and burden of all forms of undernutrition, however this risk will be applied to both group.