Costing of <Project name and Country>

*Protocol for Data Collection and Analysis*

PI and co/PI Names

Collaborator Names

[Your Organization(s)]

Version: July 8, 2020

**Contents**

[**1**](#_heading=h.gjdgxs) **Investigators and Institutional Affiliations 3**

[**2**](#_heading=h.30j0zll) **Abstract 4**

[**3**](#_heading=h.1fob9te) **Background 5**

[**4**](#_heading=h.3znysh7) **Justification 5**

[**5**](#_heading=h.2et92p0) **Research Objectives 5**

[**5.1**](#_heading=h.3dy6vkm) **Summary Results 5**

[**5.2**](#_heading=h.1t3h5sf) **Costing methods 6**

[5.2.1 Scope of the costing 6](#_heading=h.4d34og8)

[5.2.2 Data collection 6](#_heading=h.2s8eyo1)

[5.2.3 Data analysis 9](#_heading=h.3rdcrjn)

[**5.3**](#_heading=h.26in1rg) **Study processes 9**

[5.3.1 Study Team and Roles 9](#_heading=h.lnxbz9)

[5.3.1 Dissemination 10](#_heading=h.1ksv4uv)

[**5.4**](#_heading=h.44sinio) **Study Populations and Sampling 10**

[5.4.1 Sampling 10](#_heading=h.2jxsxqh)

[**6**](#_heading=h.3j2qqm3) **Data Management 11**

[**6.1**](#_heading=h.1y810tw) **Data Quality Control 11**

[**6.2**](#_heading=h.2xcytpi) **Data Storage and Access 11**

[**6.3**](#_heading=h.2bn6wsx) **Data sharing 12**

[**7**](#_heading=h.qsh70q) **Ethical Considerations 12**

[i. Informed consent 12](#_heading=h.3as4poj)

[ii. Confidentiality 12](#_heading=h.1pxezwc)

[iii. Benefits and Risks 13](#_heading=h.49x2ik5)

[**Appendix 1: Time Frame and outputs 14**](#_heading=h.2p2csry)

[**Appendix 2: Study Organization 15**](#_heading=h.147n2zr)

[**Appendix 3: Data collection tools 16**](#_heading=h.3o7alnk)

[**Appendix 4: List of study sites 17**](#_heading=h.23ckvvd)

[**Appendix 5: Information Sheet 18**](#_heading=h.ihv636)

[**Appendix 6: Informed Consent 19**](#_heading=h.32hioqz)

[**References 20**](#_heading=h.1hmsyys)

# Investigators and Institutional Affiliations

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# Abstract

**Formal Title:**

**Lay Title:**

**Abstract:**

# Background

<Country-specific background, including description of burden of malnutrition, including determinants and drivers of malnutrition>

<Project-specific background, including description of multi-sector components>

Robust understanding of the costs and benefits of multi-sectoral nutrition strategies will be critical for priority setting and motivating ongoing donor investment and government partnership. Though the body of economic evidence supporting nutrition programs is growing, there is little evidence of the costs and benefits of nutrition programs incorporating both nutrition-specific and nutrition-sensitive interventions, and there is no evidence of the additive costs and benefits of the integration of activities across multiple sectors.

# Justification

This study will provide cost data for use by the (indicate who), governments of SUN countries, and external development partners, so that they can motivate, target, and focus investment in future multi-sector nutrition programs.

# Research Objectives

The **overall objective** is to estimate the total incremental costs and cost per beneficiary of delivering nutrition-specific and nutrition-sensitive interventions as part of the <PROGRAM NAME>.

**Secondary objectives** include:

# Study Design

## Summary Results

The primary result of this project will be information on the incremental costs of the suite of nutrition specific and nutrition-sensitive intervention implemented as part of <Project name>. Cost data will also be made available in a disaggregated form, to best facilitate future analysis and decision-making at the country level and by researchers. Where possible, breakdowns of data will include:

* Costs broken down by inputs, activity, and level
* Costs broken down by thematic area
* Costs broken down by program platform
* Economic and financial costs by payer (i.e. <list payers>)
* Cost-efficiency (e.g., cost per beneficiary contacted, cost per community event, etc.)

Secondary outputs will include (describe here).

## Cost-Efficiency Outputs

We will estimate the cost-efficiency of <Program name> by combining activity-, theme-, and platform-specific cost data with routine data on program outputs, in order to calculate the cost per output achieved. The list of specific outputs that will be used for this analysis have been derived from the <Program name> logic model, which outlines its theory of change and delineates the outputs that are critical to achieving its intended outcomes and impact. These outputs will include:

* Number of community events held
* Number of beneficiaries contacted
* Number of beneficiaries counseled
* Number of beneficiaries reached with full intervention package
* Number of beneficiaries reached with partial intervention package (defined by analyst)
* Etc. as relevant to <Program name>

Data on outputs will come from the program’s routine monitoring system, which tracks program outputs over time for the purpose of reporting to the program’s funder and tracking implementation progress. Where these data are incomplete, we will supplement the monitoring system by directly estimating program outputs as part of our costing data collection process, outlined below.

## Costing methods

### Scope of the costing

The cost data collected through this exercise will take payer and societal perspectives [or other perspectives depending on economic evaluation matrix]. This will include costs incurred by <Organization name, implementing agents, and beneficiaries>.

We will aim to collect both financial and economic costs. The financial cost estimates will track payments, focusing on the resources coming from Organization and implementing partners. Costs will be full <Project name> costs that are incremental to <existing situation/describe>. The time horizon for the costing will be <Specify time horizon here>. Where feasible we will disaggregate costs for different timeframes, including start-up vs. recurrent costs.

### Data collection

Resource use will be measured using financial expenditure data combined with micro-costing to allow for estimation of both financial and economic costs. Recurrent cost data collection will be for < time period of prospective data collection>. Start-up data collection will be retrospective from the launch of <PROJECT NAME> project. Additional costing through implementation tracking and observation will be explored and assessed.

We will design an activity based costing model that draws on multiple sources of information to estimate financial and economic costs. Our specific data collection steps will be to:

1. Identify <Project or intervention> activities.
2. Identify level at which each activity occurs (e.g. national, district) and indicate key stakeholders.
3. Indicate which activities are start-up or recurrent.
4. Obtain project expense report data.
5. Collect qualitative data via semi-structured interviews and guided focus group discussions with program staff at <Relevant organizations and implementing partners> to obtain information on time allocation, in addition to opportunity cost of <list beneficiaries> (e.g., time spent at trainings, other incurred out of pocket expenses) of participation in <PROJECT NAME>.
6. Use qualitative data to develop allocation rules for joint costs and shared program financial costs across activities.
7. Value and estimate the opportunity cost for government, volunteers and program beneficiaries <PROJECT NAME>.
8. Obtain information on the quantities of activities implemented and outputs achieved as part of on-going monitoring and evaluation for <Project name> (e.g. see Economic Evaluation matrix).
9. Estimate cost metrics such as total incremental financial and economic costs of delivering <Project name> intervention, including: cost per contact, cost per person trained, other from 6 above. Generate cost profiles (shares of costs by activity, input, time period).

We will use two types of primary data collection for resource use estimation:

1. Expenditure data from <PROJECT NAME> project expense reports
2. Semi-structured interviews, guided (focus) group discussions, structured questionnaires, and/or observation

 Table 1 summarizes key data sources and data collection methods, broken down by activity category and start-up/recurrent. The sampling strategy is presented in Section 6.5.

**Table 1: Activities, inputs, and data sources [EDIT based on PROJECT activities and available data sources]**

| **Activities** | **Resources/inputs** | **Source** |
| --- | --- | --- |
| *Start-up* |
| Materials development: SOPs, policy guidelines, training materials, BCC materials | Personnel time, supplies, consultancies | Expense reports (including line item details, where available), national-level interviews |
| Stakeholder meetings | Personnel time, venue, refreshments, per diem, travel, supplies | Expense reports (including line item details, where available), national/district-level interviews |
| Trainings of program staff | Personnel time, venue, refreshments, per diem, travel, supplies | Expense reports (including line item details, where available), national/district-level interviews |
| Procurement | Personnel time, supplies (seeds, animals, etc.), capital costs (vehicles) | Expense reports (including line item details, where available), national/district-level interviews |
| M&E start-up | Personnel time, supplies, consultancies, contracted services | Expense reports (including line item details, where available), national-level interviews |
| *Recurrent* |
| Management/oversight | Personnel time, per diem, travel, phone/internet, office space | Expense reports (including line item details, where available), national/district-level interviews |
| Trainings of front-line workers | Personnel time, venue, refreshments, per diem, travel, supplies | Expense reports (including line item details, where available), national/district-level interviews, observation |
| Behaviour change communication: radio, posters | Supplies, air time | Expense reports (including line item details, where available), national/district-level interviews |
| Extension: home counselling, community  | Personnel time, per diem, travel, supplies, equipment | Expense reports (including line item details, where available), national/district-level interviews, observation |
| Distribution and transport | Personnel time, supplies, fuel | Expense reports (including line item details, where available), national/district-level interviews |
| Enabling environment/integration (meetings/trainings with government partners) | Personnel time, venue, refreshments, per diem, travel, supplies | Expense reports (including line item details, where available), national/district-level interviews |
| M&E recurrent (e.g. process monitoring activities) | Personnel time, per diem, travel, phone/internet, office space, consultancies | Expense reports (including line item details, where available), national/district-level interviews |

To capture **start-up costs** from the mid-implementation phase, we will conduct semi-structured interviews and guided group discussions, and review project records to retrospectively build a record of materials developed and initial expenses associated with start-up of <Project name>. We will follow up with the implementing agents as needed to obtain supplementary information on all key activities essential for <Project name> start-up.

To understand use of staff time for both start up and recurrent activities, we will interview staff members about their time use, ask them to fill time sheets, and time some of their activities. Staff interviews will take approximately 60 minutes. Field staff will be observed conducting trainings, distributing educational material, and performing other direct service provision. Where individual interviews may be inefficient (e.g. at the sub-district, community, or household levels), we will conduct guided (focus) group discussions (FGDs) to understand time use, resource allocation, opportunity cost, and perceived benefit associated with participating in <PROJECT NAME>. FGDs will take approximately 90 minutes. Where available, we will review a set of program planning and progress reports for randomly selected program implementers and frontline workers.

Study tools and instruments (e.g. interview guides, focus group guides) will be developed by <Research Lead>. They will be informed by the SEEMS-Nutrition common approach to costing multi-sector nutrition programs, in line with standards outlined by the Reference Case for Estimating the Costs of Global Health Services and Interventions.

### Data analysis

Data from administrative financial records will be entered in excel worksheets and assigned cost category codes for activities, inputs, thematic areas, and timing of activities by implementation partner. For capital and start-up costs occurring at the start of the project, we will adjust financial records to reflect both financial and economic costs. Data obtained from interviews will be used to estimate averages and ranges of project-related time use by each type of government or volunteer implementing partner, and for project beneficiaries. We will estimate the total time for government, volunteer, and beneficiary time and value it with either the appropriate civil servant cost per minute (for government workers) or use a prevailing wage rate for rural or urban volunteers and beneficiaries. We will add in average costs of out of pocket expenses that have not been provided by the project. Labor and supply costs will then be coded (allocated) to the specific project activities and combined with the financial expenditure data to obtain total program financial and economic costs.

Where possible, we will use <country name> price data sources to value both traded and non-traded goods in the first instance, using international prices for tradable goods in a sensitivity analysis. If local price data is unavailable we will use national prices. Traded and non-traded goods will be clearly defined in the dataset to facilitate applicability across settings. Where price data is unavailable (for example to value the cost of volunteer time), we will estimate a shadow price to reflect the value of these resources using the average of multiple estimates of local market price. Volunteer salaries will be estimated using either their opportunity cost (the wage the volunteer’s qualification or experience level would secure in the labor market), or their replacement cost (i.e. a wage that would be paid for a typical worker in their role).

Capital and start up costs will be annuitized over their expected useful life. Economic costs will be depreciated using a 3% discount rate in the first instance and then with the local discount rate used in a sensitivity analysis. Financial costs will be depreciated using straight-line depreciation. The useful life of capital goods will be sourced in <country name> in the first instance, and standard values will be used where local estimates are unavailable.

Costs will be presented in the local currency and in US Dollars (USD). We will use the average exchange rate for the year of cost data collection to convert costs into USD. Any costs encountered in the past will be inflated using the local GDP deflator of <country name>, before converting to USD.

To estimate costs, we will first examine data completeness. Where necessary we will use imputation methods to fill data gaps.

We will first compute unit costs per relevant unit. We will also report on cost breakdowns, including:

* Cost-efficiency (e.g., cost per household contact)
* Costs broken down by inputs, activity and level (service-level vs. above-service level)
* Economic and financial costs by payer
* Where, possible prices and quantities of inputs by geographic setting and intervention package

## Study processes

### Study Team and Roles

The study will be led by <Lead research/implementation organization>, with technical support provided by <Technical Lead>. <Lead research/implementation organization> is responsible for overall program management and <Technical Lead> will provide technical leadership. <Lead research/implementation organization> will lead the adaptation of the protocol and instruments to the project context, as necessary, with significant input by the <Technical Lead>. <Technical Lead> will also participate in data collection activities, data entry and data analysis.

The study instruments be informed by comprehensive guidance on costing nutrition-specific and nutrition-sensitive interventions in <Country name>, in line with standards outlined by the Reference Case for Estimating the Costs of Global Health Services and Interventions [1]. We will pilot and adapt cost data collection instruments as part of cost data collection activities in the study regions—located in <Study sites>. In-country support from <Technical Lead> will be provided in the form of two or more data collection-oriented country visits. Data collection is estimated to take 10 days to 2 weeks (5 working days per region) for one <Technical Lead> researcher and one <Lead research/implementation organization> health economist plus up to 3 months of off-site follow-up data collection by the <Lead research/implementation organization> health economist.

### Dissemination

Results will be disseminated through a variety of avenues. The cost data will be an input into economic evaluations of <Project name> cost-efficiency, cost-effectiveness and benefit-cost analysis (for estimating the return on investment). The cost data will also be made available in a disaggregated form, so that it will be useful to those wishing to extrapolate costs to other settings or over time. As soon as data is available, we will allow access on a restricted (not to be submitted for peer-reviewed publications) basis to policy-makers, planners and analysts/modelers. All data will be made public by the end of the project.

We will also support dissemination workshops for national policy makers and advocates to ensure that they are aware of the data and its possible applications, and to support funding applications and <Lead research/implementation organization> strategic planning. Finally, results will be written up in a series of manuscripts presenting estimates of unit costs for nutrition-sensitive interventions in <Country>.

## Study Populations and Sampling

###  Sampling

| **Level** | **Sample** | **Issues to Explore** | **Instruments to use** | **Method**  | **N by level** |
| --- | --- | --- | --- | --- | --- |
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# Data Management

## Data Quality Control

<Technical Lead> will work closely with <Lead research/implementation organization> to input and code expenditure data collected into the appropriate Excel costing sheet. There will be one set of data entry sheets designed for entering administrative expense report data. Additional data entry forms will be developed to capture information obtained from interviews and focus group discussions. The Excel sheets will be cleaned regularly by the research assistant.

## Data Storage and Access

All data will be collected via extraction, structured interviews, time sheets and observation guides. The data will be inputted into Microsoft Excel spreadsheets. This will be done in secure password protected computers and servers and backed up in line with the <PARTNER> data governance policies and the data will be made accessible to the research team only. The anonymized, electronic data will also be stored on a <Technical Lead> server (where it will be automatically backed-up daily). These will be uploaded every week by the local <PARTNER> staff on a cloud server accessible to the study team.

All hard copies of consent forms, structured interviews and timesheets will be kept in a safe location, accessible to the research team only. Documentation with the participant IDs will be stored in a separate location. Data and all appropriate documentation will be stored for a minimum of five years after the completion of the study, including the follow-up period, after which all data will be safely destroyed to ensure no data breaches.

<Technical Lead> will control and oversee access to all documents, and ensure the documents are only used according to the following guidelines:

* + - 1. Permission to conduct data collection activities in the study sites will be secured by the local research team prior to data collection.
			2. Standardized forms approved by the ethics board will be used in extracting data.
			3. Physical copies of the documents or forms once submitted to the office will be kept and used only within the office of the local study team.
			4. Data analysis of the primary data or secondary data may be done using the personal computers of research associates or data analysts during the study period. Once the study is completed, no personal copies of the dataset remain with the analysts and associates.
			5. Computer Folders containing the datasets will be stored as .zip or .rar files with password protection. Passwords will be set by the principal investigator. The research associates and/or analysts will ensure that all submitted datasets are stored in this manner.
			6. Datasets or scanned copies of documents will not be sent through e-mail or intranet transfers.

All research team members will be instructed to follow this protocol. Compliance to this will be stipulated in all contracts.

## Data sharing

During the study data, and prior to publication, will be stored in secure servers that are password protected so that access will be limited to specific researchers. When the dataset is finalized, anonymized cost data may be used to contribute to publicly available international datasets of nutrition-specific and nutrition-sensitive intervention costs. As soon as cost data is available, we will allow access on a restricted (not to be submitted for peer-review publications) basis to policy-makers, planners, analysts and modelers.

# Ethical Considerations

Ethics approval will be sought from the <Name of country’s research review institute> as well as the <Technical Lead> ethics review board.

1. Informed consent

Upon arrival at the study site, the data collection team will give a letter of introduction and the information sheet to the head of the <project name> at the <study site>. Thereafter, the data collection team will meet with the target participants – <list participants here>– to sensitize them to the study. Information on the study and the data required will be relayed to potential participants using information sheets available in <appropriate language> (Appendix 5).

Written informed consent will be sought using the attached consent forms (see informed consent forms in Appendix 6), which will be translated into the local language where necessary.

1. Confidentiality

All data will be collected anonymously. Staff interview forms will not contain staff names. Any publication of this study will not contain individual staff data, and will not use individual names of staff or identify staff interviewed.

1. Benefits and Risks

There are no direct benefits of participating in this study. The results of this study will provide information that could be used to improve donor and country investment in nutrition programs.

This study poses no known physical or social risks to the participants.

1. Data Sharing

Data will be stored in secure <Your organization’s name> and <Technical lead> servers with password protected access limited to specific researchers. The cost data may be incorporated into international datasets of nutrition-related costs. As soon as cost data are available, we will allow access on a restricted (not to be submitted for peer-reviewed publications) basis to policy-makers, planners, analysts and modelers.

1. Community Engagement

Community engagement at the local level will involve seeking permission at the <indicate which level> level. Additionally, we will engage the <Project name> implementers, at all relevant levels, prior to the start of the study to explain the study procedure and seek permission. At the end of the study, findings of the study will be provided to all relevant stakeholders.Appendix 1: Time Frame and outputs

|  | **2019** | **2020** |
| --- | --- | --- |
|  | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| J | F | M | A | M | J | Jy | A | S | O | N | D | J | F | M | A | M | J | Jy | A | S | O |
| Protocol and tool development |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ethical review and approval |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Piloting and revising instruments |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Data collection  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Data cleaning/analysis and Report writing |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Draft report |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Dissemination of findings |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

# Appendix 2: Study Organization

|  | Project planning | Study coordination | Data collection | Data cleaning/data analysis | Report writing |
| --- | --- | --- | --- | --- | --- |
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# Appendix 3: Data collection tools

 < See Excel spreadsheet>

# Appendix 4: List of study sites

# Appendix 5: Information Sheet

(Information is given by a researcher and a copy of the form is delivered to the participant)

*Costing of Project name*

*[Name and contact details of project lead for study];*

*[Country IRB Committee contact details]*

[Greetings] I am from a research project supported by <Organization Name> and the <Technical Lead>. We are conducting a research project to study the costs delivering nutrition interventions as part of <Project name and country>. The study results will inform the design of nutrition services in the country, and inform those planning for nutrition in other countries.

You are being invited to participate in this study. We need to collect information on **intervention service delivery, personnel time and salary, transportation and other costs and contextual factors** such as how the intervention is implemented. **We shall collect information through interviewing you and your colleagues/other community members**. The questions may take up 40 minutes to complete. We also plan to observe you as you implement interventions associated with <Project Name>.

The study results will never identify your name. Collected data will be stored in a secured place and only researchers will have access to them. The results may be used for other studies related to nutrition, but your person information will never be shared publicly.

The study will last for <#> months, and our researchers will be in contact with you from time to time.

There are no direct benefits for you resulting from their participation in this study. Your community members and beneficiaries may potentially benefit in the sense that the findings may inform to better program management, policy implementation and quality of intervention service delivery.

Taking part is your choice; you can choose not to participate in the study, not to answer any of the questions that make you feel uncomfortable or tell us to stop at any time. If you decide not to participate in the study there will be no consequence for you, you will not lose any employee benefits that you normally get. If you have any questions on this study in the future or would like further information you can contact using the contact details at the top of this sheet. Thank you for your kind support and willingness.

# Appendix 6: Informed Consent

Study number: XXXX

Date of consent:

Site:

Participant initials:

Please initial box if you agree:

I have read/ been read the information sheet concerning the “Costing of <Project Name>. And I understand what will be required of me if I take part in the study.

My questions concerning this study have been answered by:

.....................................................................................................

I understand that participation in the study is voluntary.

I understand that at any time, I may withdraw from this study without giving a reason 

and without affecting my normal care and management.

I understand that there are no direct benefits for me from participation in this study.

I agree for the data from this study to be made public understanding that strict confidentiality will be maintained and there is no risk of linking the data to me.

I voluntarily agree to take part in the study.

**Participant name (print) Participant signature Date**

**Name of study staff conducting Study Staff signature Date**

**consent discussion (print)**

**NB One copy for participant and one for researcher**

**References**

1. Vassall, A., et al., *Reference Case for Estimating the Costs of Global Health Services and Interventions*. 2017, Global Health Cost Consortium.