Food Assistance Cost-Effectiveness Tool for Specialized Nutritious Foods (FACET4SNF)

A User Manual by the Food Aid Quality Review

Version 2.0

07/2021

ABOUT THE FOOD AID QUALITY REVIEW

The Food Aid Quality Review (FAQR) operates through a grant provided by the United States Agency for International Development (USAID) Bureau for Humanitarian Assistance (BHA), formerly the Office of Food for Peace (FFP),and seeks to provide USAID and its partners with actionable recommendations for improving nutrition among vulnerable people for whom the direct distribution of food aid can make a significant impact.
Website: https://foodaidquality.org/

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The Food Assistance Cost-Effectiveness Tool for Specialized Nutritious Foods (FACET4SNF) was developed under the technical direction of FAQR. The capabilities and layout of FACET4SNF were designed in extensive consultation with USAID BHA (formerly FFP) and various stakeholders over a 2-year period, from 2018 through 2019 (See Annex 1: Partner Consultations). By August 2021, FACET4SNF will be managed by point(s) of contact from the USAID BHA nutrition team.

This tool is made possible by the generous support of the American people through the USAID. The contents of this tool are the sole responsibility of the Gerald J and Dorothy R Friedman School of Nutrition Science and Policy at Tufts University and do not necessarily reflect the views of USAID or the United States Government.

The following individuals and team(s) have contributed to the development of the FACET4SNF interface and/or user manual:

Development: Ye Shen (interface and user manual), Kristine Caiafa (user manual), Kyle Monahan (interface)

FAQR Supervision: Beatrice Rogers (Co-Principal Investigator), Stephen Vosti (Senior Economist), Patrick Webb (Principal Investigator)

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Acronyms & Abbreviations

BHA	Bureau for Humanitarian Assistance
BPB	Barley Pigeon-Pea Blend
BSB	Barley Soy Blend
CSB+	Corn Soy Blend Plus
FACET4SNF	Food Assistance Cost-Effectiveness Tool for Specialized Nutritious Foods
FAQR	Food Aid Quality Review
FFP	Office of Food for Peace
FBF	Fortified Blended Flour
ITSH	In-Country (Internal) Transportation, Storage, and Handling
LNS	Lipid-based Nutrient Supplement
LNS-SQ	Lipid-based Nutrient Supplement-Small Quantity
LNS-MQ	Lipid-based Nutrient Supplement-Medium Quantity
g	grams
MAM	Moderate Acute Malnutrition
GAP	Global Action Plan
MT	Metric Ton(s)
POD	Program Operations Division
PP	Percentage Point
PPP	Purchasing Power Parity
REFINE	Research Engagement on Food Interventions for Nutritional Effectiveness website
RUSF	Ready-to-Use Supplementary Food
RUTF	Ready-to-Use Therapeutic Food
SAM	Severe Acute Malnutrition
SBCC	Social Behavior Change and Communication
SC+	Super Cereal Plus
SNF	Specialized Nutritious Food

Contents

Welcome to the FACET for Specialized Nutritious Foods User Manual

The Food Assistance Cost-Effectiveness Tool for Specialized Nutritious Foods (FACET4SNF): A User Manual is composed of four sections: an introduction/overview, instructions for getting started with FACET4SNF, step-by-step tutorials corresponding to the interface, and hypothetical demonstration examples. The Annexes provide definitions and formulas of the result indicators calculated by FACET4SNF and other supporting information.

Altogether, these sections describe how FACET4SNF can be used to inform cost-efficiency and cost-effectiveness comparisons among alternative supplemental nutritious food (SNF) product, procurement, and program design choices and to support relevant decision-makers in funding and implementation organizations.

FACET
for Specialized Nutritious Foods

Food Assistance Cost-Effectiveness Tool for Specialized Nutritious Foods (FACET4SNF) to Support Programming Decisions

USAID
FROM THE AMERICAN PEOPLE

Purpose

FACET4SNF is a web-based interactive tool to facilitate evidence-informed decision-making with the goal to improve the cost-effectiveness of nutrition programs using specialized nutritious foods (SNFs).

Relevant decision-makers in funding and implementation organizations can use FACET4SNF to compare cost-effectiveness among alternative SNF product, procurement, or program design choices.

Tasks

Ex-Ante Program Proposal

1. Proposal Development & Submission
2. Submitted Proposal Review

Ex-Post Program Learning

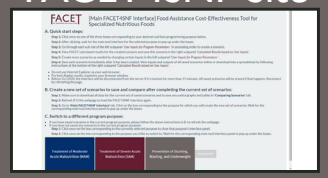
1. End-Line Reporting
2. End-Line Review

Other Decisions

1. Planning for Future Funded Activities
2. New Product Evaluation

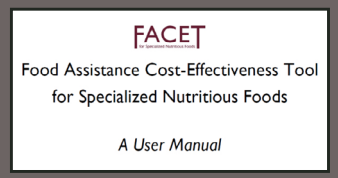
Resources

FACET4SNF Site



facet4snf.org

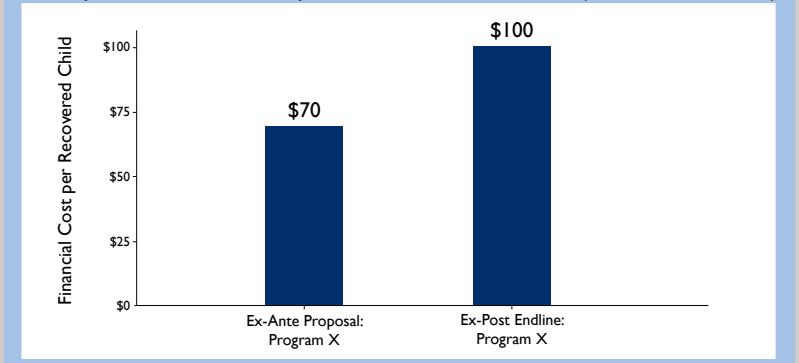
User Manual



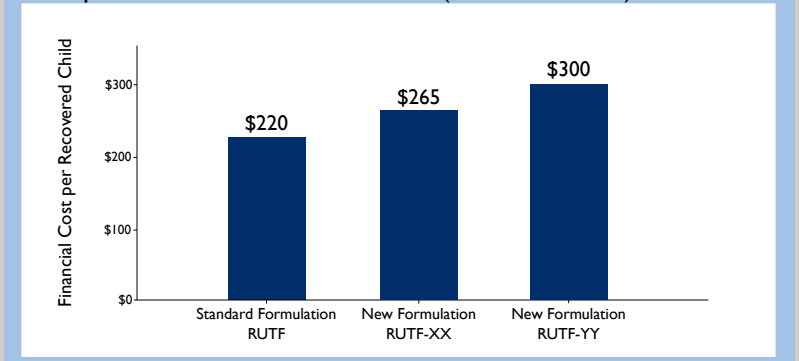
Click Here to Download

How to Apply this Tool

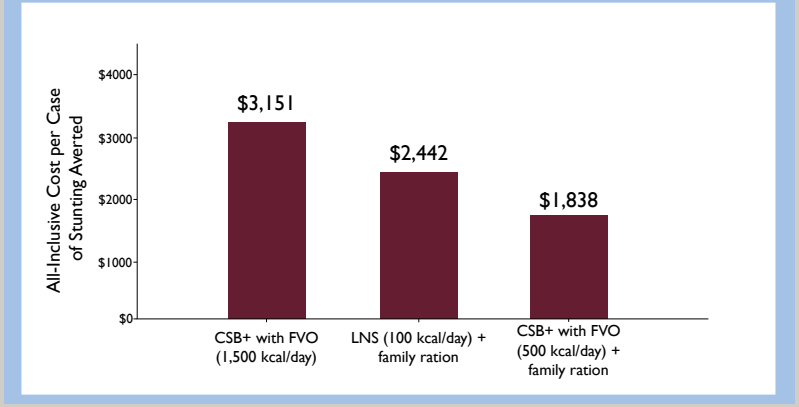
Example 1. Ex-Ante Proposal vs Ex-Post Endline (MAM Treatment)



Example 2. New Product Evaluation (SAM Treatment)



Example 3. Product Choice and Program Design (Prevention)



FACET for Specialized Nutritious Foods

Steps For Using The Tool

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1 Choose The Program Purpose

Treatment of Moderate Acute Malnutrition (MAM)	Treatment of Severe Acute Malnutrition (SAM)	Prevention of Stunting, Wasting, and Underweight

2 Set Up And Save First Scenario

Program Specifics
- product choice, dosage, eligible group, supplementation/ treatment duration, etc.

Cost Components
- product cost, supply chain costs, programming cost, economic cost to volunteers and recipients/caregivers, etc.

Nutrition Impact
- % recovery and % sustained recovery from MAM or SAM
- % reduction in stunting, wasting, and underweight

- Users may input their own data.
- FACET4SNF supplies default values, visualizations of data and scientific evidence, and other references.

3 View FACET4SNF-Calculated Results

- Total Cost And Total Quantity Indicators
- Cost-Efficiency Indicators
- Cost-Effectiveness Indicators
- Indicators Related To MAM/ SAM Burden (Treatment Only)

4 Change Inputs To Create And Save Alternative Scenarios

5 Compare Across Saved Scenarios By Viewing FACET4SNF-Generated Visualizations And Downloading All Data For Further Analyses

I. INTRODUCTION

What is FACET4SNF?

The Food Assistance Cost-Effectiveness Tool for Specialized Nutritious Foods (FACET4SNF) was developed by the United States Agency for International Development (USAID) funded Food Aid Quality Review (FAQR) project **to facilitate evidence-informed decision-making with the goal to improve the cost-effectiveness of nutrition programs using SNFs.**

FACET4SNF is a **web-based interactive tool** that estimates and compares the cost-efficiency and cost-effectiveness of international nutrition programs occurring **in contexts where SNF products are deemed an appropriate modality**. FACET4SNF applies to **development settings** as well as **protracted and complex emergency settings**. It was not particularly tailored to sudden onset emergencies.

FACET4SNF was created with extensive feedback from and conversation with organizational partners and stakeholders (**Annex 1: Partner Consultations**). It should be used by **funders and implementers who make product, procurement, and program design decisions** for the following types of nutrition activities:

- **Targeted supplementary feeding** *treating children <5 years of age with moderate acute malnutrition (MAM), defined as weight-for-height/length (WHZ/WLZ) between −2 and −3 standard deviations from median WHZ/WLZ for reference population or mid-upper arm circumference (MUAC) between 115 millimeters and <125 millimeters*
- **Therapeutic feeding** *treating children <5 years of age with severe acute malnutrition (SAM), defined as WHZ/WLZ < −3 standard deviations from median WHZ/WLZ for reference population or MUAC < 115 millimeters, or the presence of bilateral pitting edema, or both*
- **Preventive supplementary feeding** *for children 6 – 24 months and/or pregnant and lactating women with the goal to prevent stunting (< -2 standard deviations from median height for age of reference population), wasting (<-2 standard deviations from median weight for height of reference population), and/or underweight (<-2 standard deviations from median weight for age of reference population)*

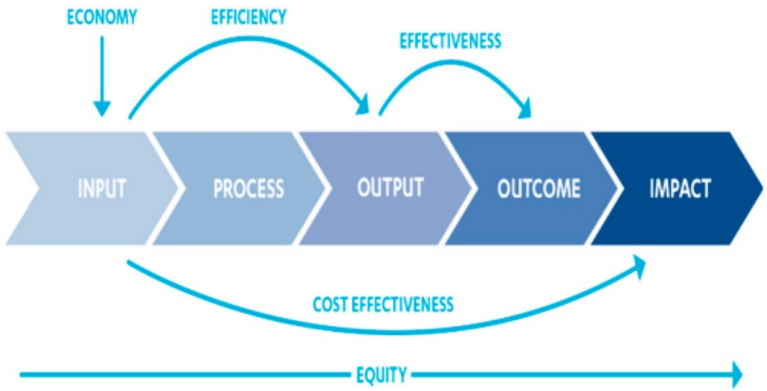
Why was FACET4SNF developed?

FACET4SNF was developed in response to the growing demand to maximize value (nutrition impact) for money when allocating limited resources for international nutrition programming.

In the past, programs have often been funded, designed, and evaluated based on basic indicators like cost per metric ton and number of people served. Now, development and humanitarian organizations increasingly recognize the need for additional measures of **cost-effectiveness** to incorporate both efficiency and effectiveness (**Figure 1**) in decision-making. For example, cost-effectiveness was a highlighted priority for prevention and treatment of wasting in the 2020 Global Action Plan on Child Wasting[1], a framework for action to accelerate progress in preventing and managing child wasting and the achievement of the Sustainable Development Goals.

The FACET4SNF framework was designed to guide **decision-makers in both funding and implementation organizations** to explicitly incorporate cost-effectiveness in their decision-making process. FACET4SNF walks users through specific information on **SNF program design, costs and nutrition impact** to compare cost-effectiveness among **alternative SNF product, procurement, and program design choices**. While FACET4SNF has a particular focus on cost-effectiveness, users should always keep in mind that **context-specific factors and equity issues should also be considered** when making decisions. Importantly, the current iteration of the FACET4SNF does not consider differences in future costs and benefits (except sustained recovery for treatment purposes) in cost-effectiveness comparisons.

Figure 1. "Four E" Value-for-Money Concept from DFID[2]



See Annex 2: Comparison and Contrast of Tools in Food Assistance for Nutrition a table summarizing tools related to international food assistance for nutrition programming. All of these tools have varied scopes and purposes that differ from FACET4SNF. Some of these tools may be used in addition to FACET4SNF to facilitate relevant decision-making

[1] Final version of the Global Action Plan on Child Wasting was endorsed by FAO, UNHCR, UNICEF, WFP, and WHO and released in March 2020. https://www.who.int/internal-publications-detail/global-action-plan-on-child-wasting-a-framework-for-action

[2] Adapted from "The International Rescue Committee (IRC) and United States Agency for International Development (USAID). 2019. Cost-Efficiency Analysis of Basic Needs Programs: Best Practice Guidance for Humanitarian Agencies. https://www.rescue.org/sites/default/files/document/4100/costefficiencybestpracticeguidance.pdf"

Why should FACET4SNF be used?

Increase Technical Understanding

Understand current options for nutrition programming, as well as different cost-efficiency and cost-effectiveness metrics.

Advance Program Learning

Gain knowledge on how product, procurement, or program design choices may influence cost-efficiency and cost-effectiveness.

Improve Decision-Making

Make informed decisions by comparing alternative scenarios. Identify evidence gaps and data needs. Motivate future data collection, data storage, and knowledge management.

Engage Across Disciplines

Create linkages and bring relevant expertise across disciplines (e.g. nutrition, logistics and operations, finance, monitoring & evaluation, knowledge management).

FACET4SNF exemplifies these

Fundamental Principles of Development for USAID Programs.[3]

Apply analytic rigor to support evidence-based decision-making.

Manage adaptively through continuous learning.

[3] Extracted from "USAID's Program Cycle: An Overview", a video produced by USAID Learning Lab. https://www.youtube.com/watch?v=7BzxXyy7PGg

How can FACET4SNF be used?

FACET4SNF can be used by **decision makers in implementation and funding organizations** in the following ways:

PROPOSAL DEVELOPMENT & SUBMISSION

- Simulate a variety of product procurement choices and program design scenarios using FACET4SNF.
- Compare anticipated costs, impacts, and cost-effectiveness of the scenarios to decide on the proposal to be submitted.
- Submit the program proposal with saved FACET4SNF inputs and outputs to the funder.

See Hypothetical Example A.

PROPOSAL REVIEW

- Evaluate program proposals using submitted FACET4SNF inputs and outputs from an implementer.
- Explore alternative scenarios in FACET4SNF based on past program learning, evidence from research advances, and contextual realities.
- Store saved FACET4SNF inputs and outputs of the final proposal in an internal database.

See Hypothetical Example B.

END-LINE REPORTING

- Create the end-line scenario of the completed program using FACET4SNF based on program data.
- Store saved FACET4SNF inputs and outputs of the end-line scenario in an internal database.
- Submit saved FACET4SNF inputs and outputs along with the end-line report to the funder.

See Hypothetical Example C.

END-LINE REVIEW

- Compare and contrast the FACET4SNF inputs and outputs for the end-line scenario submitted by the implementer with the original proposal scenario (which should have been saved prior to implementing the program).
- Examine what assumptions were met and not met, and why.
- Simulate "what if we had done Y" scenarios to explore alternative program designs that may improve cost-effectiveness.
- Store learning/knowledge generated in this exercise to inform future program cycles.

See Hypothetical Example D.

PLANNING FOR FUTURE FUNDED ACTIVITIES

- Review the expectations and outcomes of previous programs in contexts similar to the request at hand. (*relevant data for this review should have been stored in an internal database if FACET4SNF had been used in past program cycles)
- Apply past program learning to inform future funding decisions.
- Forecast budget needs.

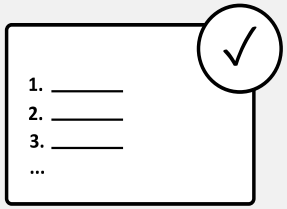
NEW PRODUCT EVALUATION

- **Comparing new products with existing products**
  - Simulate a specific program scenario for which the new SNF product is intended. Compare with scenarios under the same program specifics where standard SNF options are used.
  - Use nutrition impact from efficacy studies of the new SNF in the literature or submitted in the product proposal.
  - Determine whether the new SNF should be added to the food basket for what nutrition purpose(s), or whether more data (cost or impact) are needed to make such decision.
  - If evidence on nutrition impact for the new SNF is not yet available, determine the tipping point of possible nutrition impact for this new SNF to be equally or more cost-effective than standard SNF(s) for a certain nutrition purpose using FACET4SNF.
  - Consider whether the tipping point is within plausible ranges in order to decide whether to fund further research to evaluate actual nutrition impact using the new SNF for the respective nutrition purpose.
- **Comparing procurement channels for new products (also applicable to existing products)**
  - Simulate a variety of procurement channel scenarios for the new SNF product. Procurement location options could be USA, Europe, or local and regional procurement (LRP).
  - Compare how corresponding product prices and supply chain costs may influence cost and cost-effectiveness indicators in FACET4SNF.

See Hypothetical Example E.

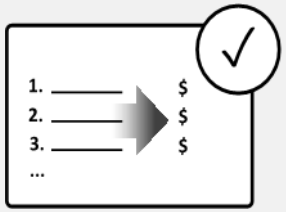
How does FACET4SNF work?

1. Set up one scenario



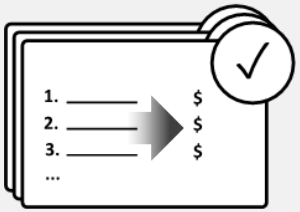
Select nutrition program purpose. Input data and information on program, cost, and impact in FACET4SNF to create a program scenario.

2. Review cost-efficiency and cost-effectiveness results



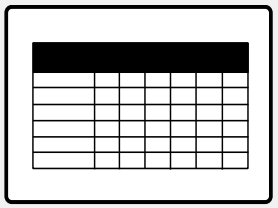
FACET4SNF's internal equations calculate the program's estimated costs and cost-effectiveness for the scenario.

3. Construct multiple scenarios



Change certain inputs to create additional scenarios in FACET4SNF. Save all scenarios that you would like to

4. Compare across scenarios



Download all saved scenarios for comparison. Conduct additional analyses and visualizations to support decision-making if needed.

II. GETTING STARTED WITH FACET4SNF

The Landing Page

Start Using FACET4SNF

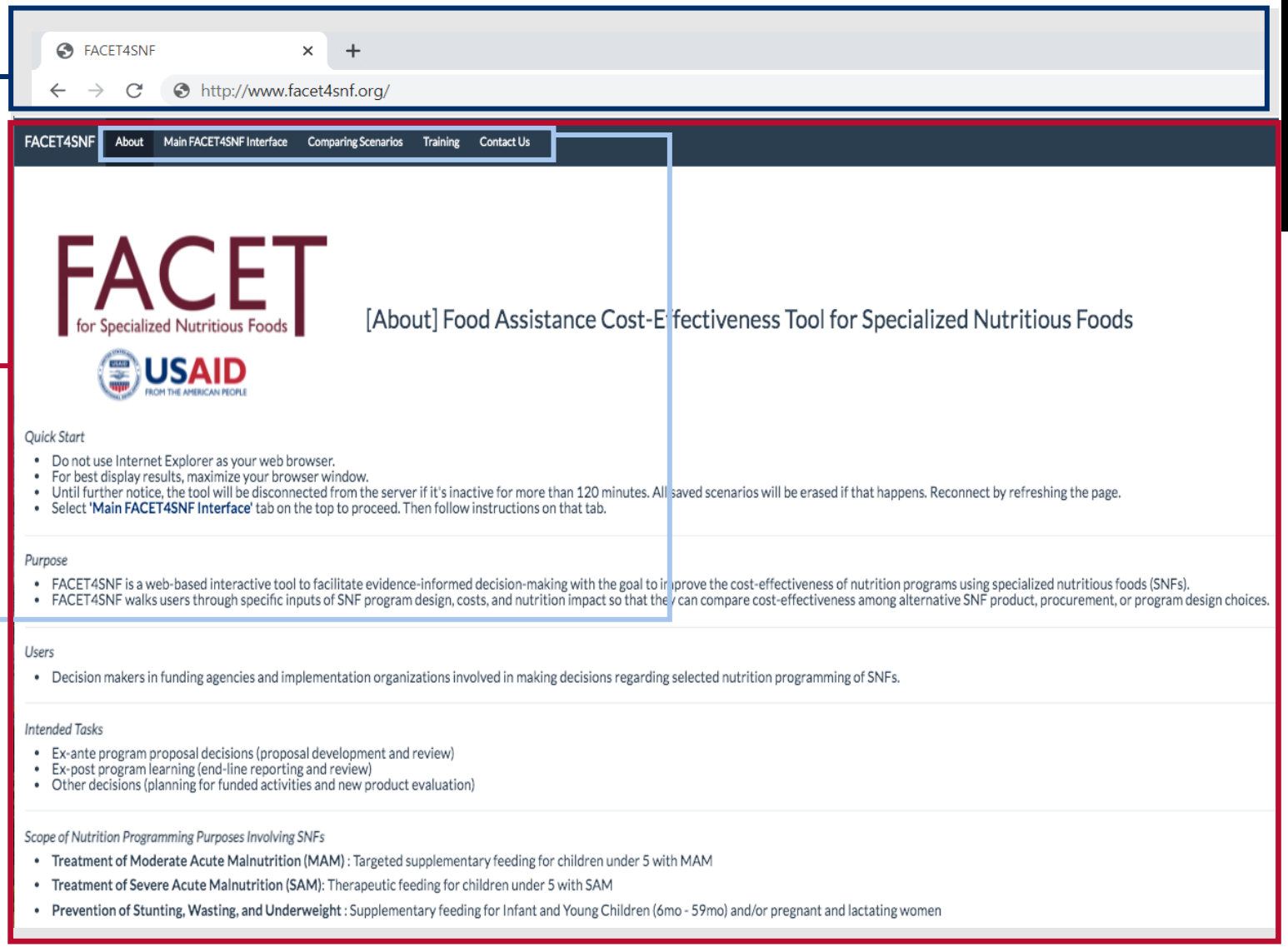
In the search bar of your internet browser, navigate to the FACET4SNF online interface: www.FACET4SNF.org.

View FACET4SNF Landing Page

The "About" tab is the landing page for FACET4SNF. This tab contains a brief overview and additional information on FACET4SNF.

Switch Tabs in the Navigation Header

The three tabs in the navigation header are briefly described in the next page.



Navigating the Tabs

"About" Tab

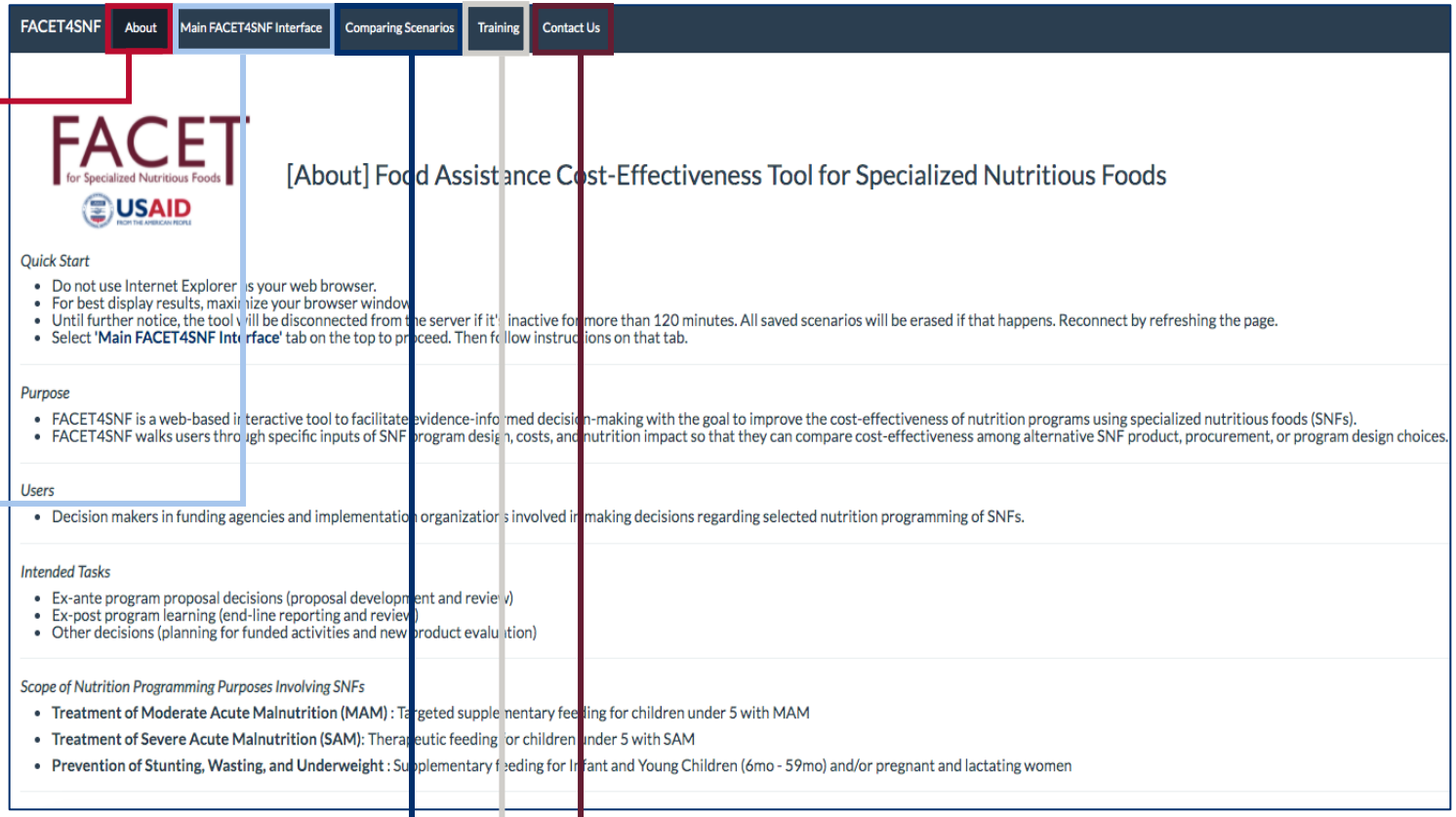
The "About" tab is the FACET4SNF homepage. It provides a quick overview and additional resources for using FACET4SNF.

"Main FACET4SNF Interface" Tab

This tab takes you to the main FACET4SNF interface where all analyses are performed. After selecting the program purpose on this tab, you can create and save one or more scenarios by entering program inputs and generating results for each scenario. You can also download all saved scenarios here.

"Comparing Scenarios" Tab

This tab shows interactive visualizations including bar plots and tables to compare all saved scenarios of the selected nutrition program purpose from the main FACET4SNF interface. You can also download data and results for all saved scenarios here.



"Training" Tab

This tab shows the recording of the training workshop led by USAID/BHA Trainers. Some features of the FACET4SNF interface were updated after the recording and are therefore not reflected in the videos. Translated versions are available in Spanish and French.

"Contact Us" Tab

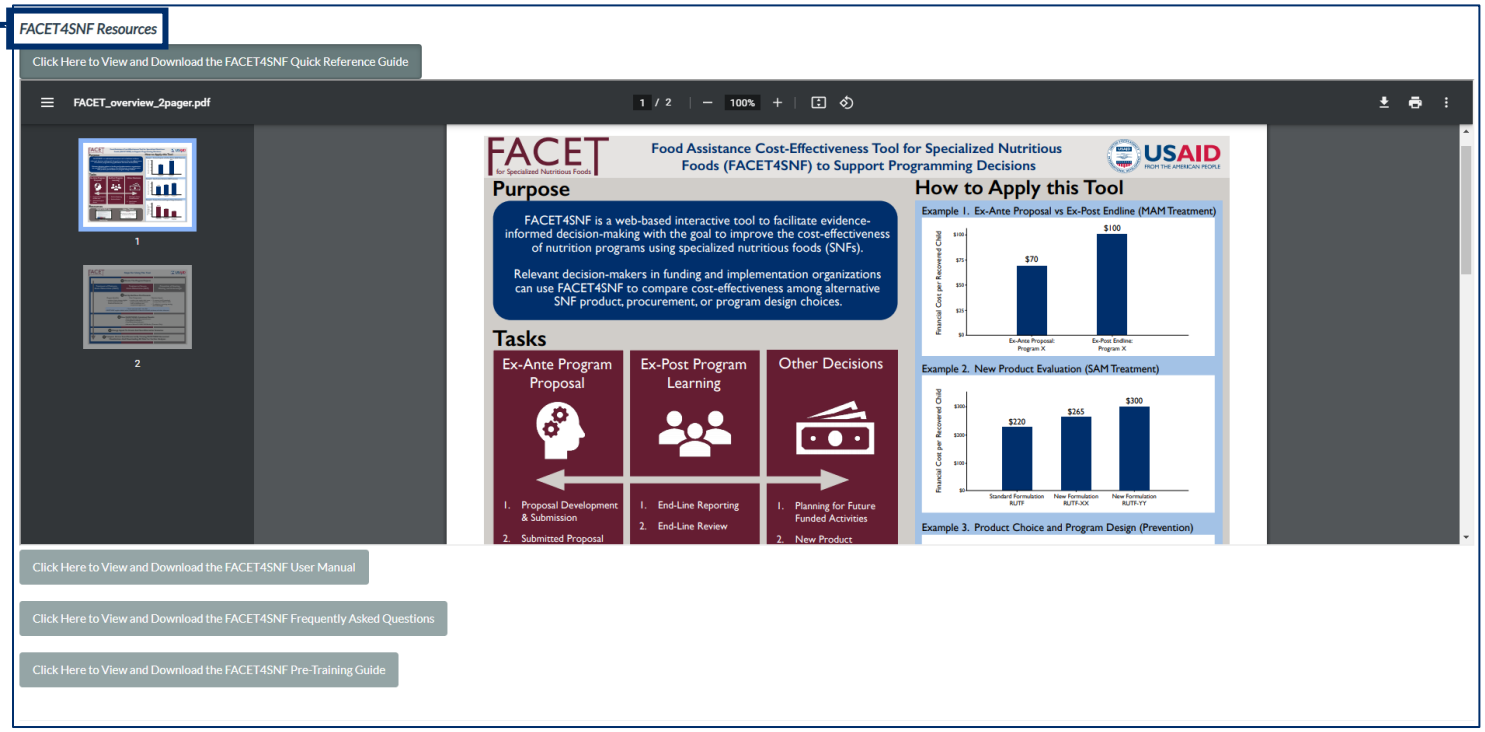
This tab shows the email address FACET4SNF@usaid.gov to contact the USAID/BHA team.

Resources in the About Tab

Click to view / download additional resources

Scroll down in the "About" tab to FACET4SNF Resources. Click on the buttons to view or download the following resources:

- Quick Reference Guide
- User Manual
- Frequently Asked Questions
- Training Guide



Features of the Main Interface

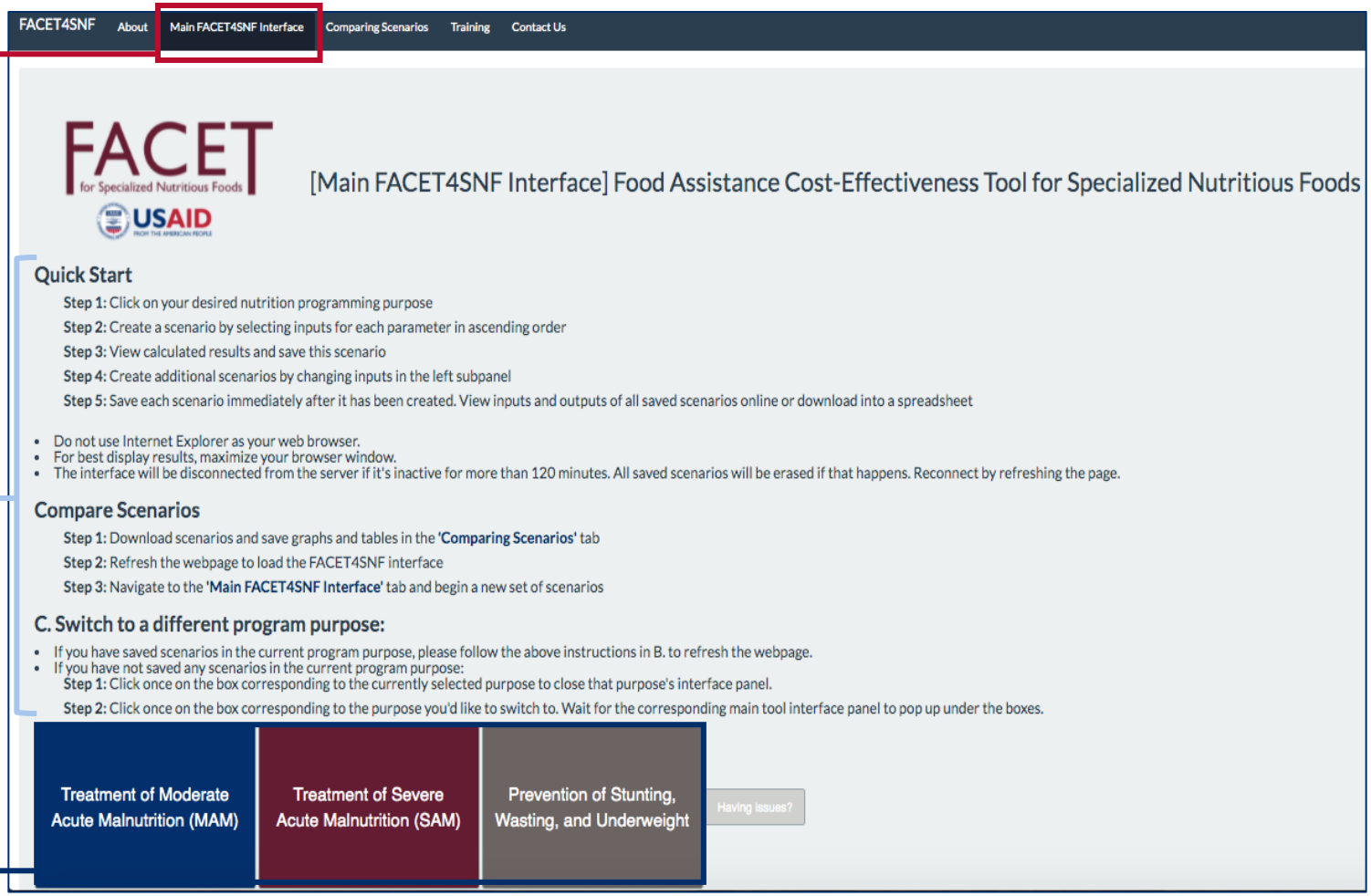
Select "Main FACET4SNF Interface"

Navigate to this page to perform and save FACET4SNF analyses.

Read the Instructions

Read the instructions carefully to use the main interface properly. Click one option box of a nutrition program purpose to view the corresponding interface. Once clicked, wait for this page to expand downward. In the expanded interface (shown on the next page), users will be able to create scenarios of program inputs and calculated results for the selected program purpose.

Option Boxes to Select a Program Purpose



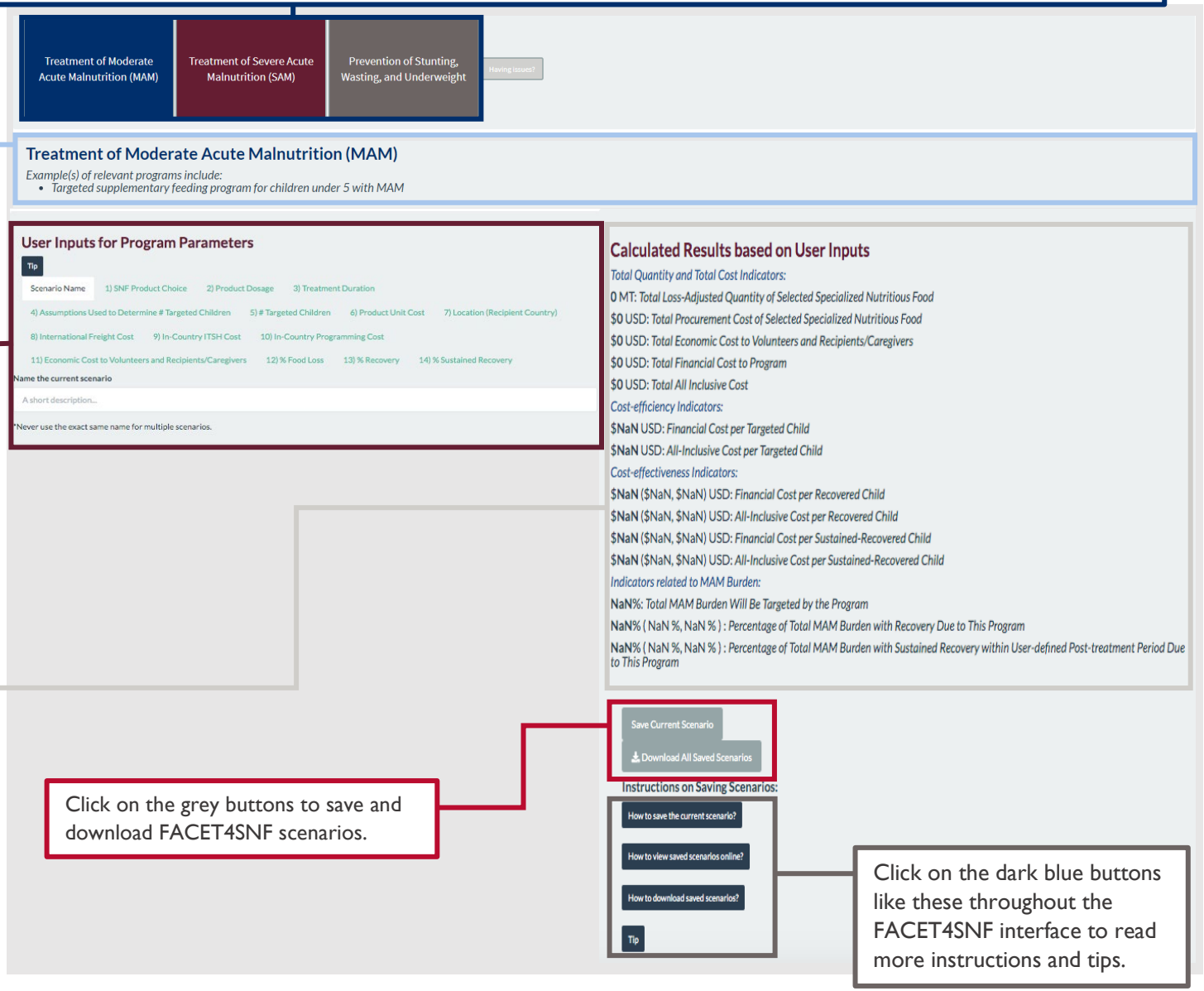
Main Interface Layout

After clicking one option box corresponding to the desired program purpose, scroll down and the Main FACET4SNF Interface for that purpose will expand below.

Program Purpose Header
Double check that the correct program purpose is selected.

User Inputs for Program Parameters
The left-side panel of the expanded interface contains program parameters that need to be populated by the user. Click through each one to input the information FACET4SNF needs to perform an analysis. See Step-by-Step Tutorials for details about each parameter.

Calculated Results based on User Inputs
As inputs of a scenario are provided on the left, FACET4SNF will auto-calculate a list of indicators. The right-side panel displays these results. See Annex 3: Glossary and Formulas for Treatment of MAM or SAM Programs and Annex 4: Glossary and Formulas for Prevention of Stunting, Wasting, or Underweight Programs for definitions and formulas.



Click on the grey buttons to save and download FACET4SNF scenarios.

Click on the dark blue buttons like these throughout the FACET4SNF interface to read more instructions and tips.

Comparing Scenarios

Select "Comparing Scenarios"

Navigate to this page to compare saved scenarios via interactive visualizations such as bar plots and tables.

Bar Plots of Key Results

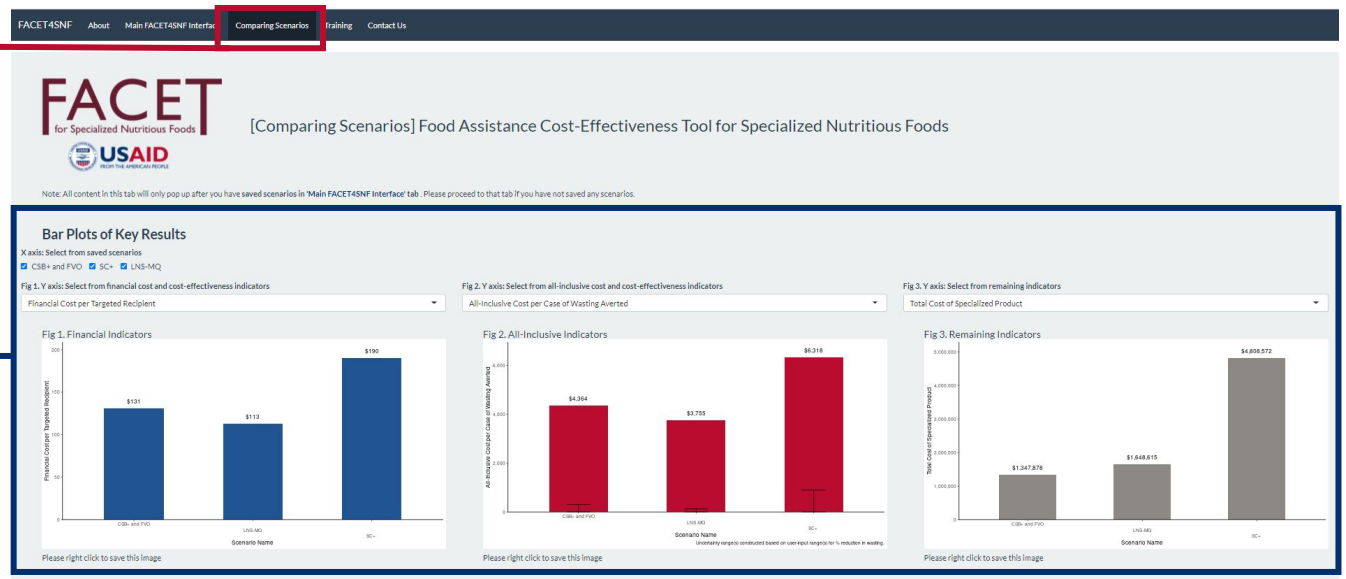
Using the checkboxes, deselect any unwanted saved scenarios. Then, choose one indicator from each selection menu to load the corresponding bar plot for scenario comparisons. Right-click to save these images.

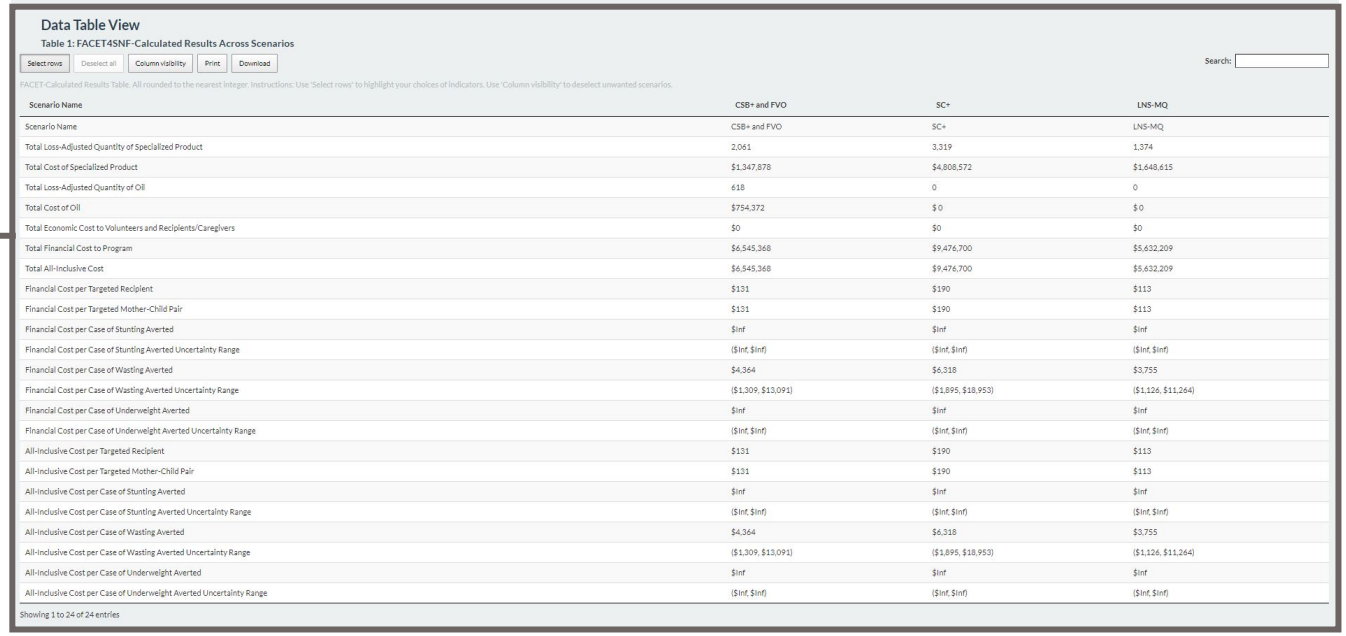
Data Table View

(Not fully displayed here) View two interactive tables for saved scenarios, one displaying FACET4SNF-calculated results and the other displaying user inputs. Use "Column visibility" button to deselect any unwanted saved scenarios. Use "Select rows" button to highlight indicators/inputs of interest and then use "Print" or "Download" to print or save tables with only those indicators in pdf or excel formats.

Download All Data

(Not displayed here) Scroll down to the end. Click on the button "Download All Saved Scenarios" to download all data into one Excel spreadsheet.





Data Table View

Table 1: FACET4SNF-Calculated Results Across Scenarios

Select rows | Deselect all | Column visibility | Print | Download

Search:

FACET-Calculated Results Table. All rounded to the nearest integer. Instructions: Use 'Select rows' to highlight your choices of indicators. Use 'Column visibility' to deselect unwanted scenarios.

Scenario Name	CSB+ and FVO	SC+	LNS-MQ
Scenario Name	CSB+ and FVO	SC+	LNS-MQ
Total Loss-Adjusted Quantity of Specialized Product	2,061	3,319	1,374
Total Cost of Specialized Product	$1,347,878	$4,808,572	$1,648,615
Total Loss-Adjusted Quantity of Oil	618	0	0
Total Cost of Oil	$754,372	$ 0	$ 0
Total Economic Cost to Volunteers and Recipients/Caregivers	$0	$0	$0
Total Financial Cost to Program	$6,545,368	$9,476,700	$5,632,209
Total All-Inclusive Cost	$6,545,368	$9,476,700	$5,632,209
Financial Cost per Targeted Recipient	$131	$190	$113
Financial Cost per Targeted Mother-Child Pair	$131	$190	$113
Financial Cost per Case of Stunting Averted	$inf	$inf	$inf
Financial Cost per Case of Stunting Averted Uncertainty Range	($inf, $inf)	($inf, $inf)	($inf, $inf)
Financial Cost per Case of Wasting Averted	$4,364	$6,318	$3,755
Financial Cost per Case of Wasting Averted Uncertainty Range	($1,309, $13,091)	($1,895, $18,953)	($1,126, $11,264)
Financial Cost per Case of Underweight Averted	$inf	$inf	$inf
Financial Cost per Case of Underweight Averted Uncertainty Range	($inf, $inf)	($inf, $inf)	($inf, $inf)
All-Inclusive Cost per Targeted Recipient	$131	$190	$113
All-Inclusive Cost per Targeted Mother-Child Pair	$131	$190	$113
All-Inclusive Cost per Case of Stunting Averted	$inf	$inf	$inf
All-Inclusive Cost per Case of Stunting Averted Uncertainty Range	($inf, $inf)	($inf, $inf)	($inf, $inf)
All-Inclusive Cost per Case of Wasting Averted	$4,364	$6,318	$3,755
All-Inclusive Cost per Case of Wasting Averted Uncertainty Range	($1,309, $13,091)	($1,895, $18,953)	($1,126, $11,264)
All-Inclusive Cost per Case of Underweight Averted	$inf	$inf	$inf
All-Inclusive Cost per Case of Underweight Averted Uncertainty Range	($inf, $inf)	($inf, $inf)	($inf, $inf)

Showing 1 to 24 of 24 entries

Frequently Asked Questions I

Q: What is the difference between "cost-efficiency" and "cost-effectiveness"?

A: In the context of FACET4SNF: cost-efficiency concerns with minimizing cost (i.e. use of resources) to deliver program outputs (e.g. number of program recipients). Cost-effectiveness concerns with minimizing cost (i.e. use of resources) per unit of "effect" (i.e. nutrition impact outcomes) achieved by a program. Cost-efficiency is a necessary but NOT sufficient part of cost-effectiveness. Cost-effectiveness additionally incorporates measures of effectiveness such as % recovery, %sustained recovery, and %reduction in stunting, wasting, or underweight. For example, a FACET4SNF scenario that is less cost-efficient (more expensive) with much better effectiveness can be more cost-effective if cost per unit of impact achieved is lower, compared to another scenario. Meanwhile, a FACET4SNF scenario that is more cost-efficient (less expensive) with slightly lower effectiveness can also be more cost-effective if cost per unit of impact achieved is lower, compared to another scenario.

Q: I just finished creating and comparing a set of scenarios for an analysis. How can I erase the saved scenarios to start a new analysis with a different set of scenarios?

A: Make sure that you have saved/ downloaded all data, images, and tables for your current set of scenarios. Then, refresh the webpage (F5 key) to reload FACET4SNF interface and start over.

Q: Will FACET4SNF store any of my data inputs permanently in the server?

A: No. All saved sceanrios are only temporarily stored in the server during the current user session. All data are erased as soon as the server is disconnected due to reaching user inactivity upper limit, refreshing the webpage, or closing the webpage.

Q: Can I edit a saved scenario?

A: No, saved scenarios cannot be edited in the current version of FACET4SNF. If you want to change something in a saved scenario, make the changes and save as a new scenario with a differentiable scenario name. You can deselect unwanted scenarios when viewing bar plots and interactive tables in the "Comparing Scenarios" tab.

Q: Can I download all the FACET4SNF inputs and outputs of the scenarios that I have created?

A: Yes. Save each scenario as you finish creating it. You can download all saved scenarios of the selected nutrition program purpose by clicking on the "Download All Saved Scenarios" button in "Calculated Results based on User Inputs" of the "Main FACET4SNF Interface" Tab, or in the "Comparing Scenarios" Tab.

Q: Can I upload a spreadsheet back to FACET4SNF interface to autofill the inputs?

A: No. You need to manually enter all the inputs on the FACET4SNF interface.

Frequently Asked Questions 2

Q: Can I use FACET4SNF for sudden/immediate onset emergency?

A: While FACET4SNF could be useful in some sudden/immediate onset emergencies, it was not designed to incorporate any instructions nor parameters particular to this setting.

Q: Can I use FACET4SNF for interventions addressing micronutrient deficiencies?

A: No. While the SNF products within the scope of FACET4SNF all contain mirconutrients, the current version of FACET4SNF does not apply to programs and products that only target micronutrient deficiencies.

Q: Can I use FACET4SNF if the funder of the program is not USAID?

A: Yes. Any entities funding one of the three included nutrition program purposes can use the FACET4SNF interface to calculate and compare cost-effectiveness, as long as appropriate data sources can be used for FACET4SNF inputs. Examples of "funder" include donor agencies and local governments. Due to limited amount of publicly available cost data, FACET4SNF currently only supplies USAID in-kind procurement data for SNF product and international freight costs.

Q: Can I use FACET4SNF for a SNF product that is not a widely-programmed product choice?

A: Yes. Select "User-Input Product" in the product choice menu and enter the name of the product in the corresponding input box. Remember to select a fortified vegetable oil packaging option if this product will be programmed with additional oil.

Q: At what geographical level can I use FACET4SNF to compare cost-effectiveness?

A: It can be used at any geographical level as long as you have cost and impact data at that level for FACET4SNF inputs.

Q: "Prevention of Stunting, Wasting, and/or Underweight" program goals may include other nutrition impact outcomes such as household food insecurity and dietary diversity. These outcomes are not covered by FACET4SNF. What should I do about them?

A: FACET4SNF was designed to address stunting, wasting, and underweight, and cost effectiveness estimates are based on those specific nutrition outcomes. In the case of programs with multiple outcomes, decision makers can incorporate the cost effectiveness information obtained from FACET4SNF along with other considerations on additional outcomes.

Frequently Asked Questions 3

Q: I notice in the calculated results that all the cost-effectiveness indicators and some treatment indicators related to burden reported with ranges. How does FACET4SNF calculate these ranges?

A: These are ranges constructed based on user-provided lower and upper bounds of the uncertainty ranges for the corresponding nutrition impact indicators (% Recovery, % Sustained Recovery, and Impact on Stunting, Wasting, and Underweight) in "User Inputs for Program Parameters".

Q: In FACET4SNF, ITSH cost and in-country programming cost are two separate components requiring two distinct inputs. What should I do if they are lumped together as one cost item in my data source?

A: If it is indeed impossible to separate the two using your data source, please directly input the sum of ITSH AND programming cost per recipient in the subtab for in-country programming cost. Make sure to enter what you did in the "data source(s) and assumption(s)" for both ITSH and programming cost subtabs.

Q: Will data sources, references, and default values in FACET4SNF get updated based on new reports, research, etc in the future?

A: While it has not been determined that data sources, references, and default values in FACET4SNF will be updated after 2020, users can always provide their own data sources to use FACET4SNF. Additional literature review and data updates can be conducted on top of existing FACET4SNF sources.

Q: Where can I find all the default value explanations?

A: They can be found in the "Step-by-Step Tutorial" sections for each program purpose on Treatment of MAM, Treatment of SAM, and Prevention of Stunting, Wasting, and/or Underweight.

Q: I want to do a tipping point analysis to identify the point at which meeting a nutrition goal under a specific scenario is more cost-effective than a reference scenario. How should I do that?

A: You can find step-by-step guidance to conduct a tipping point analysis on Pages 53-54 (Treatment of MAM), Pages 73-74 (Treatment of SAM), and Pages 93-94 (Prevention of Stunting, Wasting, or Underweight)

Q: What equations were used to come up with these estimated results?

A: See Annex 3: Glossary and Formulas for Treatment of MAM or SAM Programs and Annex 4. Glossary and Formulas for Prevention of Stunting, Wasting, and/or Underweight Programs for details on how estimated results are calculated.

III. INFORMATION NEEDED TO USE FACET4SNF

Before Using FACET4SNF: Warnings

- You will need a computer with reliable Internet access and an internet browser other than Internet Explorer (e.g. Chrome, Firefox, Safari, etc.).
- Maximize browser window for best display.
- Re-clicking on the option box of the currently selected program purpose will close the corresponding expanded panels and erase all inputs and saved scenarios without further warning.
- If FACET4SNF is inactive for more than 120 minutes, it disconnects from the server and all inputs and saved scenarios will be lost.

Before Using FACET4SNF: Data Preparation

- To provide the most accurate estimates, FACET4SNF asks users to input information relevant to the decision context.
- FACET4SNF provides default values and relevant additional references for a number of input parameters. However, the most appropriate sources could be internal to your organization or published after the literature review conducted for inclusion in FACET4SNF. The user is responsible for identifying and using most appropriate empirical sources of information.
- You can refer to the checklists of needed information in the next pages to prepare for inputting values and choices in FACET4SNF. While reading through the lists, pay attention to the **checkmarks (√)** describing what relevant materials FACET4SNF interface will provide for the respective needed information.
- If you are having trouble identifying data sources for some FACET4SNF inputs, the decision tree diagrams after the checklists provide guidance on how to think through the process of seeking relevant sources for cost components and nutrition impact, respectively.

(!) A note on "expected" versus "actual" input values:

- If you are using FACET4SNF for a program *ex ante* (i.e. prior to implementation), you will be estimating **expected** values.
- If you are using FACET4SNF for a program *ex post* (i.e. after completion), you will be referring to **actual** values of what happened in the program.

(!) Adjusting all cost input values to the same user-determined reference year in US dollars[4]:

- First, exchange the local currency to US$ using exchange rates of the incurred year using official exchange rate from World Bank database[5].
- Then, inflate to the user-determined reference year using US inflation rates using GDP implicit price deflator from World Bank database[6].

  Example: Say, one cost input for FACET4SNF was based on cost data in 2015 CFA, while the user would like to summarize all cost in 2019 USD (i.e. reference year is 2019). The user should exchange the value in 2015 CFA to 2015 USD and then inflate the value in 2015 USD to 2019 USD.

[4] Hugo C. Turner et al., "Adjusting for Inflation and Currency Changes Within Health Economic Studies," *Value in Health* 22, no. 9 (2019): 1026–32, https://doi.org/10.1016/j.jval.2019.03.021.
[5] Official exchange rate (LCU per US$, period average). World Bank. https://data.worldbank.org/indicator/PA.NUS.FCRF
[6] GDP deflator. World Bank. https://data.worldbank.org/indicator/NY.GDP.DEFL.ZS

Checklist of Information Needed to Use FACET4SNF for MAM or SAM Treatment

☐ **Program Specifics:** SNF product (and fortified vegetable oil packaging) choice appropriate for the context and the nutrition program purpose

- ✓ *FACET4SNF provides selection menu(s)*

☐ **Program Specifics:** SNF (and oil) dosage, measured in grams per day per recipient

- ✓ *FACET4SNF provides default values*

☐ **Program Specifics:** Treatment duration for each child, measured in weeks

- ✓ *FACET4SNF provides default values*

☐ **Program Specifics:** Burden of MAM / Burden of SAM in target area (number of children with MAM over program period)

If burden is not directly known, it can also be caculated using the following information (formula provided in FACET4SNF):

- ◊ Prevalence of MAM/ SAM
- ◊ Population size of eligible age group in the program catchment area
- ◊ Program period, measured in months

☐ **Program Specifics:** Program coverage %

- ✓ *FACET4SNF provides default values and a data table of reported coverage from past MAM/SAM treatment program in the selected program setting*

☐ **Program Specifics:** Choice of Program Setting (rural, semi-urban, urban, or camp)

☐ **Program Specifics:** Number of children with MAM targeted by the program

- ✓ *FACET4SNF calculates the default value based on "burden" and "program coverage" inputs from users*

☐ **Cost Component:** SNF (and oil) product unit cost, $US per MT

- ✓ *FACET4SNF provides an external link to the most recent quarterly price estimates and a historical data source for USAID in-kind procurement of available SNFs*
- ✓ *FACET4SNF asks users to enter data source(s) and assumption(s)*

☐ **Program Specifics:** Recipient country name

☐ **Program Specifics:** USAID Trading Route/ World Region

- ✓ *FACET4SNF provides a list of trading routes and the corresponding countries*

☐ **Cost Component:** International freight unit cost, $US per MT

- ✓ *FACET4SNF provides an external link to the most recent quarterly price estimates and a historical data source for USAID in-kind procurement shipping to available trading routes*
- ✓ *FACET4SNF asks users to enter data source(s) and assumption(s)*

☐ **Cost Component:** In-country internal food transportation, storage, and handling (ITSH) unit cost, $US per MT

- ✓ *FACET4SNF provides rough estimates from WFP publicly-available budgets for the selected program type from 2014 to 2016 for available countries in the selected trading route*
- ✓ *FACET4SNF asks users to enter data source(s) and assumption(s)*

☐ **Program Specifics:** List of complementary activities in addition to the SNF supplementation included in the program intervention pacakge

- ✓ The cost of all activities listed here should be included in the in-country programming cost
- ✓ If unsure about whether an activity should be included, try to determine if the goal of this activity directly contributes to the nutrition impact specified in FACET4SNF. If so, include this activity.

☐ **Cost Component:** In-country Programming cost, $US per enrolled child (excluding product, international freight, and ITSH costs for the SNF)

- ◊ Sum of program cost (e.g. Staff time, supplies, space, transport) for each included programming activity (operations of the SNF supplementation intervention AND any complementary activities)
- ◊ Total support/adminstrative costs, including shared costs and indirect cost recovery
- ◊ Number of enrolled children in the program (total cost divided by this to calculate average per enrolled child)
  - ✓ *FACET4SNF provides external links to costing guidance and references*
  - ✓ *FACET4SNF asks users to record data source(s) and assumption(s)*

☐ **Cost Component:** Economic Cost to Volunteers and Recipients/ Caregivers

- ✓ *FACET4SNF asks users to record data source(s) and assumption(s)*

☐ Average household out-of-pocket spending, $US per enrolled child

It can be calculated using the following information (formula provided in FACET4SNF):

- ◊ Average household out-of-pocket spending per clinic visit, $US per visit
- ◊ Average number of clinic visits per enrolled child

☐ Average program volunteer time spent on the program, hours per enrolled child

It can be calculated using the following information (formula provided in FACET4SNF):

- ◊ Total volunteer time over a time period, measured in hours
- ◊ Total number of enrolled children over the same time period

☐ Average caregiver time spent participating in the program, hours per enrolled child

It can be calculated using the following information (formula provided in FACET4SNF):

- ◊ Average caregiver time per clinic visit, hour per visit
- ◊ Average number of clinic visits per enrolled child
- ◊ Average caregiver preparation/feeding time per meal
- ◊ Average number of meals per enrolled child

☐ Average hourly valuation of uncompensated time for the local context, $US per hour

- ✓ *FACET4SNF provides default values and external data source on mandated minimum wage by country*

- ☐ **Program Specifics:** % food loss
  - ✓ *FACET4SNF provides default values*
  - ✓ *FACET4SNF asks users to record data source(s) and assumption(s)*
- ☐ **Nutrition Impact:** % recovery (with uncertainty ranges)
  - ✓ *FACET4SNF provides data extracted from published literature, but it is important to additionally check for any most recent research*
  - ✓ *FACET4SNF asks users to record data source(s) and assumption(s)*
- ☐ **Nutrition Impact:** Sustained Recovery
  - ☐ Length in months of the post-intervention period (over which the input value for % sustained recovery is defined)
  - ☐ % sustained recovery (with uncertainty ranges) over user specified post-intervention period
    - ✓ *FACET4SNF provides data extracted from published literature, but it is important to additionally check for any most recent research*
    - ✓ *FACET4SNF asks users to record data source(s) and assumption(s)*

Checklist of Information Needed to Use FACET4SNF for Prevention of Stunting, Wasting, and Underweight

- ☐ **Program Specifics:** Supplementation target group (infant and young children, pregnant and lactating women, or both)
- ☐ **Program Specifics:** SNF product (and fortified vegetable oil packaging) choice appropriate for the context and the nutrition program purpose
  - ✓ *FACET4SNF provides selection menu(s)*
- ☐ **Program Specifics:** SNF (and oil) dosage, measured in grams per day per recipient of each included eligible group
  - ✓ *FACET4SNF provides default values*
- ☐ **Program Specifics:** Supplementation duration for each recipient of each included eligible group, measured in months
  - ✓ *FACET4SNF provides default values*
- ☐ **Program Specifics:** Population size of each included eligible group in the target area
- ☐ **Program Specifics:** Program coverage % of each included eligible group
  - ✓ *FACET4SNF provides default values*
- ☐ **Program Specifics:** Number of recipients of each included eligible group targeted by the program
  - ✓ *FACET4SNF calculates the default value based on "population size" and "program coverage" inputs from users*
- ☐ **Program Specifics:** Eligible age range (infant and young children) and/or eligibility criteria (pregnant and lactating women)
- ☐ **Cost Component:** SNF (and oil) product unit cost, $US per MT
  - ✓ *FACET4SNF provides an external link to the most recent quarterly price estimates and a historical data source for USAID in-kind procurement of available SNFs*
  - ✓ *FACET4SNF asks users to record data source(s) and assumption(s)*
- ☐ **Program Specifics:** Recipient country name
- ☐ **Program Specifics:** USAID Trading Route/ World Region
  - ✓ *FACET4SNF provides a list of trading routes and the corresponding countries*
- ☐ **Cost Component:** International freight unit cost, $US per MT
  - ✓ *FACET4SNF provides an external link to the most recent quarterly price estimates and a historical data source for USAID in-kind procurement shipping to available trading routes*
  - ✓ *FACET4SNF asks users to record data source(s) and assumption(s)*
- ☐ **Cost Component:** In-country internal food transportation, storage, and handling (ITSH) unit cost, $US per MT
  - ✓ *FACET4SNF provides rough estimates from WFP publicly-available budgets for the selected program type from 2014 to 2016 for available countries in the selected trading route*
  - ✓ *FACET4SNF asks users to record data source(s) and assumption(s)*

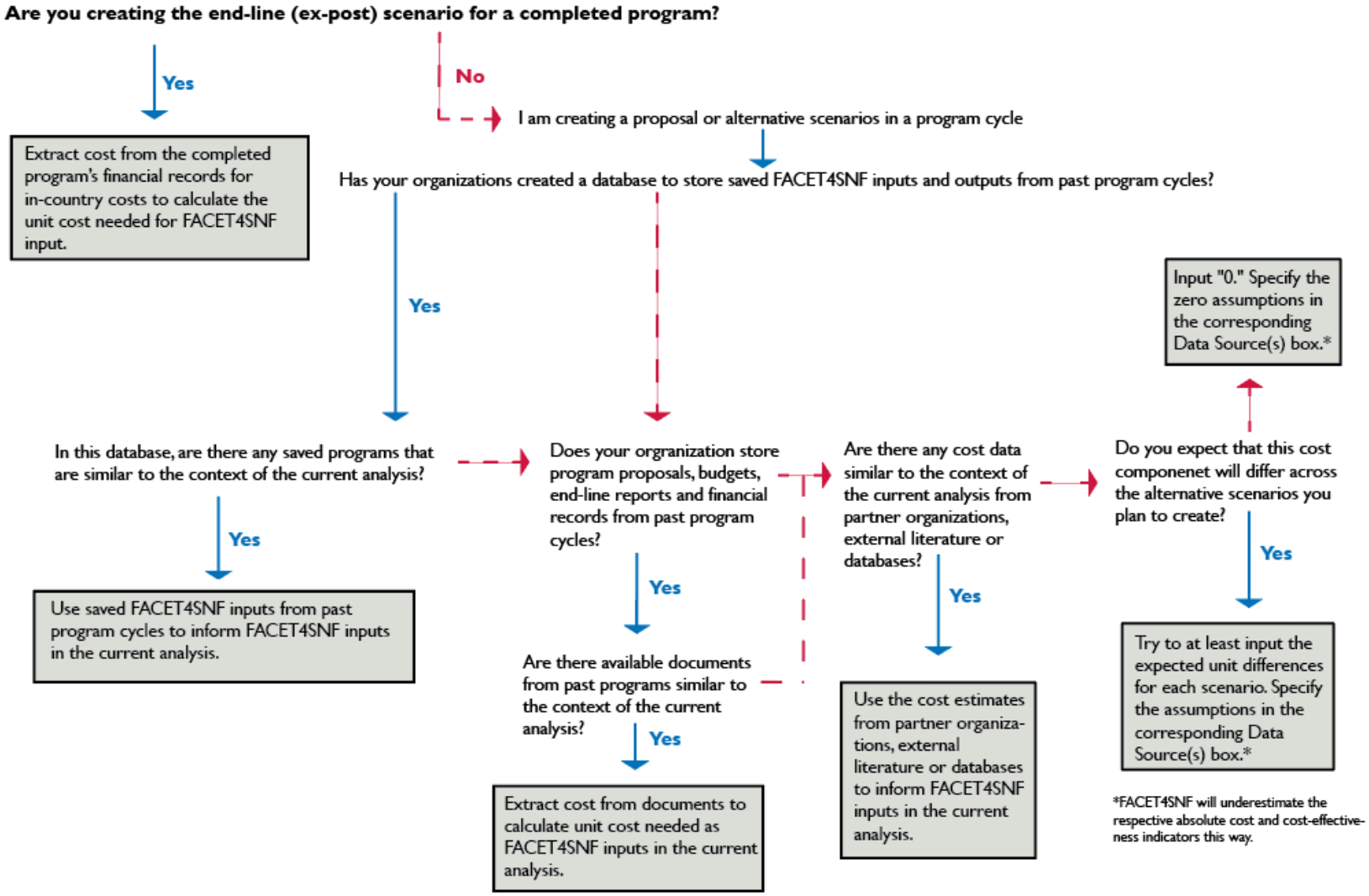
- ☐ **Cost Component:** In-country Programming cost, $US per enrolled recipient (excluding product, international freight, and ITSH costs for the SNF)
  - ◊ Sum of program cost (e.g. staff time, supplies, space, transport) for each included programming activity (operations of the SNF supplementation intervention AND any complementary activities)
  - ◊ Total support/adminstrative costs, including shared costs and indirect cost recovery
  - ◊ Number of enrolled recipients in the program (total cost divided by this to calculate average per enrolled recipeint)
    - ✓ *FACET4SNF provides external links to costing guidance and references*
    - ✓ *FACET4SNF asks users to record data source(s) and assumption(s)*
- ☐ **Program Specifics:** List of complementary activities in addition to the SNF supplementation included in the program intervention pacakge
  - ✓ *The cost of all activities listed here should be included in the in-country programming cost*
  - ✓ *If unsure about whether an activity should be included, try to determine if the goal of this activity directly contributes to the nutrition impact specified in FACET4SNF*
- ☐ **Cost Component:** Economic Cost to Volunteers and Recipients/ Caregivers
  - ✓ *FACET4SNF asks users to record data source(s) and assumption(s)*
  - ☐ Average household out-of-pocket spending, $US per enrolled recipient

    It can be calculated using the following information (formula provided in FACET4SNF):
    - ◊ Average household out-of-pocket spending per clinic visit, $US per visit
    - ◊ Average number of clinic visits per enrolled recipient
  - ☐ Average program volunteer time spent on the program, hours per enrolled recipient

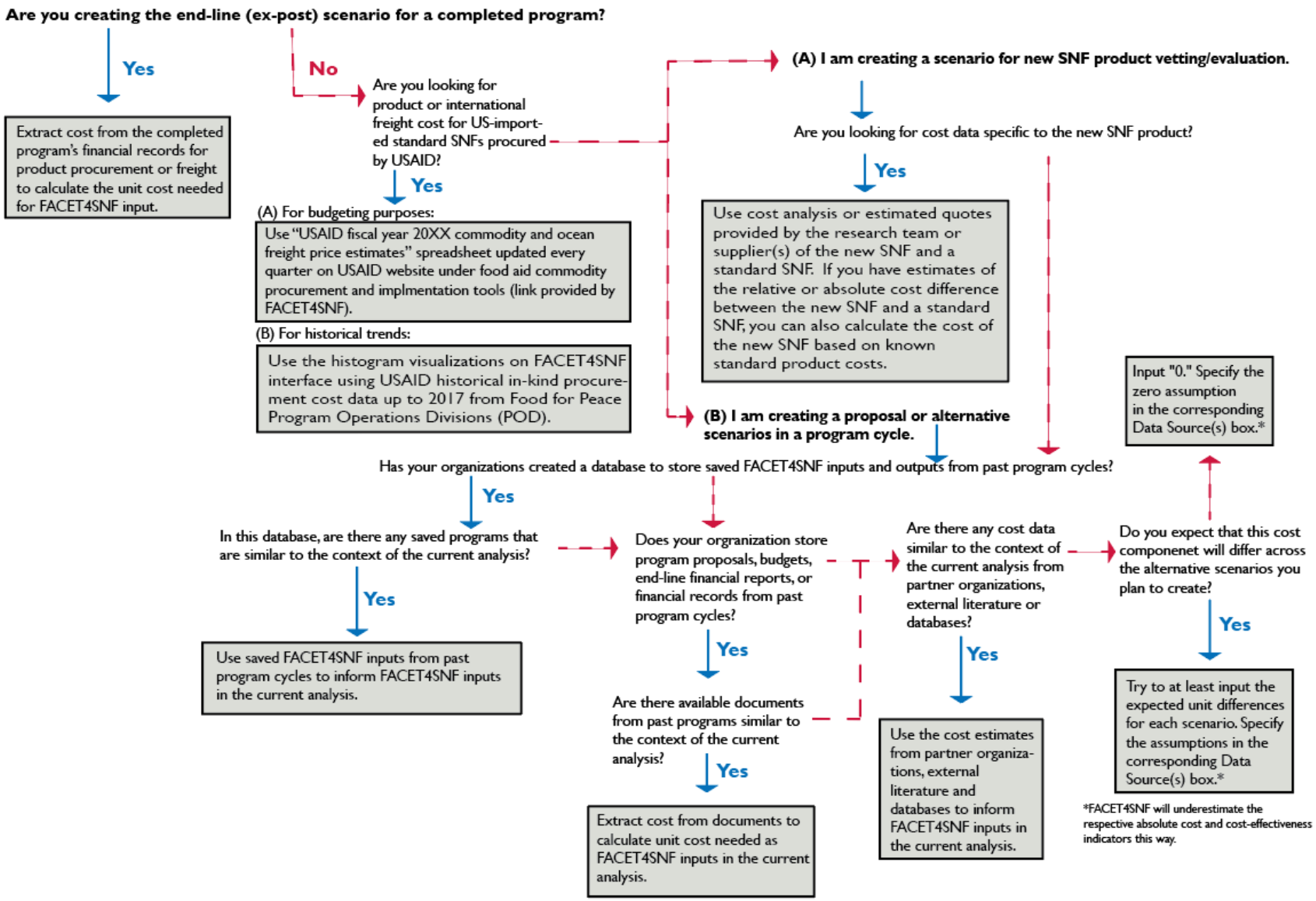
    It can be calculated using the following information (formula provided in FACET4SNF):
    - ◊ Total volunteer time over a time period, measured in hours
    - ◊ Total number of enrolled recipients over the same time period
  - ☐ Average caregiver time spent participating in the program, hours per enrolled recipient

    It can be calculated using the following information (formula provided in FACET4SNF):
    - ◊ Average caregiver time per clinic visit, hour per visit
    - ◊ Average number of clinic visits per enrolled recipient
    - ◊ Average caregiver/recipient preparation/feeding time per meal
    - ◊ Average number of meals per enrolled recipient
  - ☐ Average hourly valuation of uncompensated time for the local context, $US per hour
    - ✓ *FACET4SNF provides default values and external data source on mandated minimum wage by country*
- ☐ **Program Specifics:** % food loss
  - ✓ *FACET4SNF provides default values*
  - ✓ *FACET4SNF asks users to record data source(s) and assumption(s)*
- ☐ **Nutrition Impact:** Percentage Points (PP) reduction in stunting, wasting, and/or underweight (with uncertainty ranges)
  - ✓ *FACET4SNF provides data extracted from published literature, but it is important to additionally check for any most recent research*
  - ✓ *FACET4SNF asks users to record data source(s) and assumption(s)*

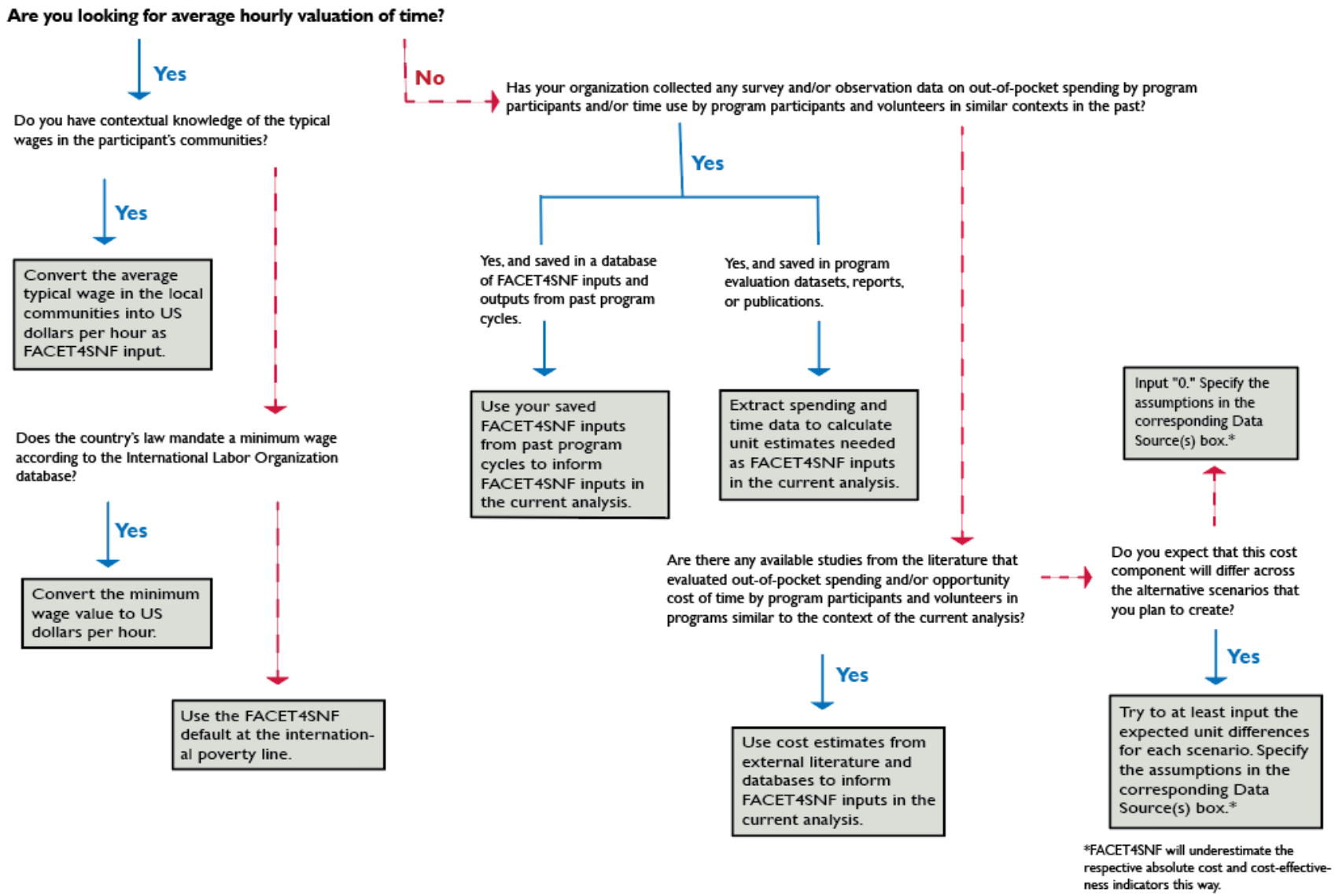
Locating Data Sources for Cost Components:
Product Cost and International Freight Cost



Locating Data Sources for Cost Components:
In-country ITSH Cost and Programming Cost

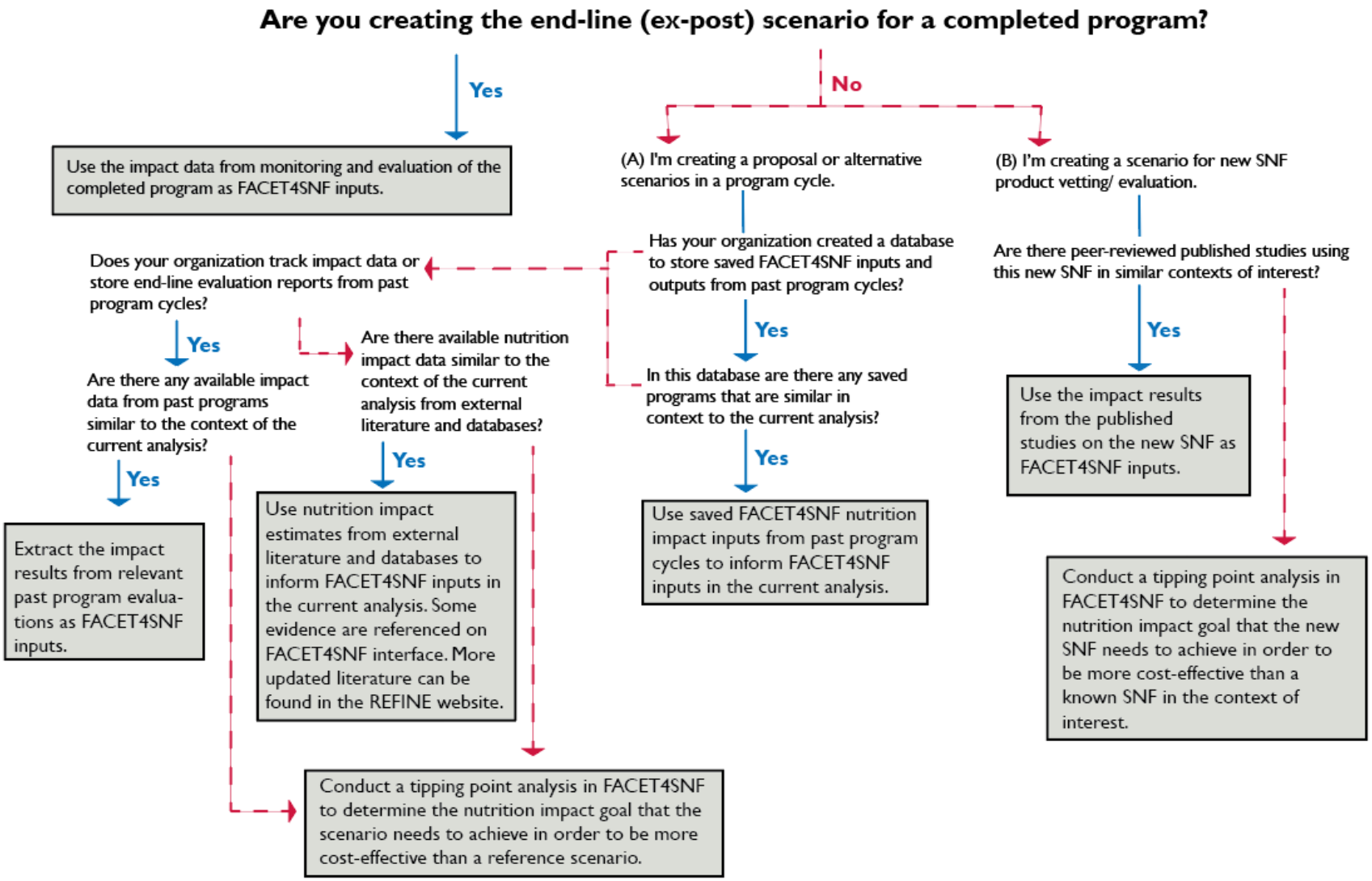


Locating Data Sources for Cost Components:
Economic Cost to Volunteers and Recipients/ Caregivers



Locating Data Sources for Nutrition Impact:

Percentage (%) Recovery from MAM/ SAM, Percentage Points (PP) Reduction in Stunting, Wasting, or Underweight



Locating Data Sources for Nutrition Impact:

Percentage (%) Sustained Recovery from MAM/ SAM (Treatment Purposes)

Has your organization started to collect relapse and other post-recovery data for your treatment programs?

Yes → Follow the previous diagram for % recovery from MAM/ SAM.

No → Use sustained recovery results from external literature referenced on the FACET4SNF interface or publications from a more updated literature review to inform current analysis. If unsure, use the FACET4SNF default values.

IV. STEP-BY-STEP TUTORIALS

The text in the screen shots of this user manual may be difficult to read because the user manual is intended for use in conjunction with the FACET4SNF interface. Furthermore, there could be minor modifications/updates to the FACET4SNF interface that are not reflected in the user manual screenshots. Therefore, we recommend that you locate each screenshot in the actual interface and refer to the details there.

ICONS

The pen indicates where you type out your inputs

The arrow indicates where you must make a selection

Red, circled numbers direct you through the examples

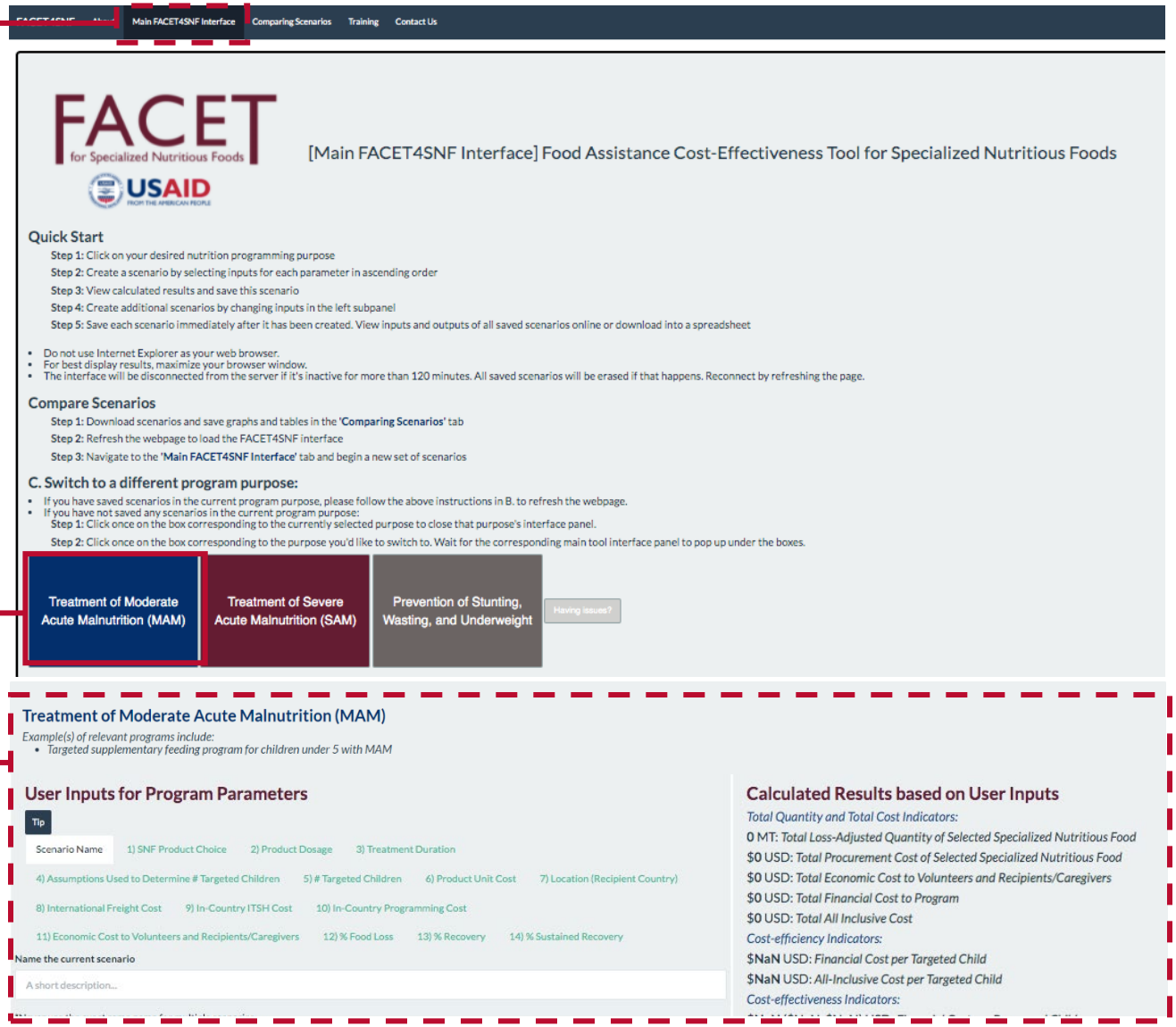
Step-by-Step Tutorial: MAM Treatment

STEP 1. IDENTIFY THE PROGRAM PURPOSE

1. Navigate to the FACET4SNF site and click on "Main FACET4SNF Interface" tab in the Header.

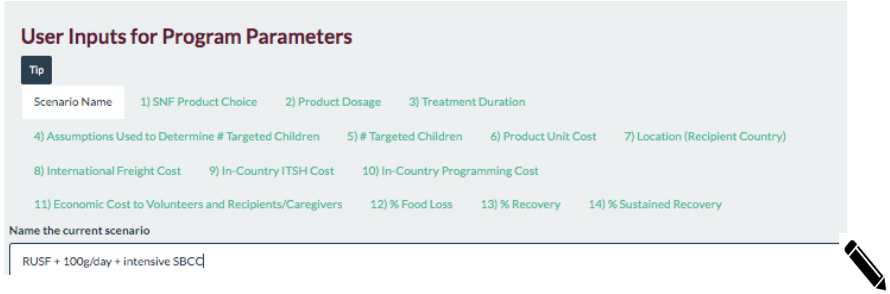
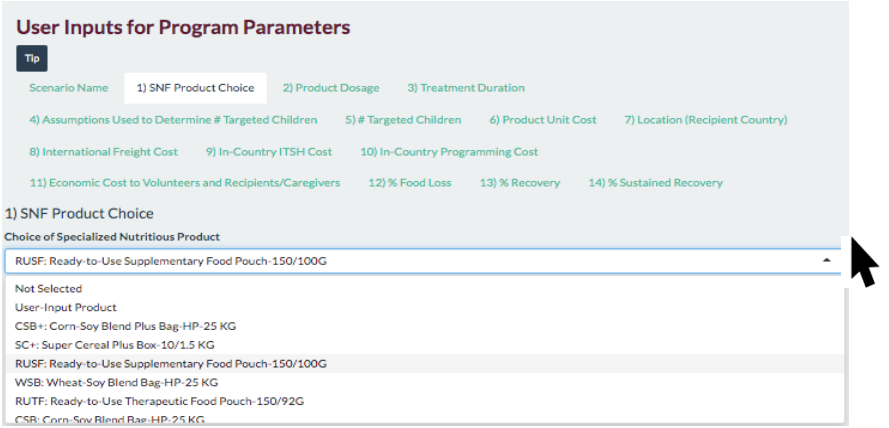
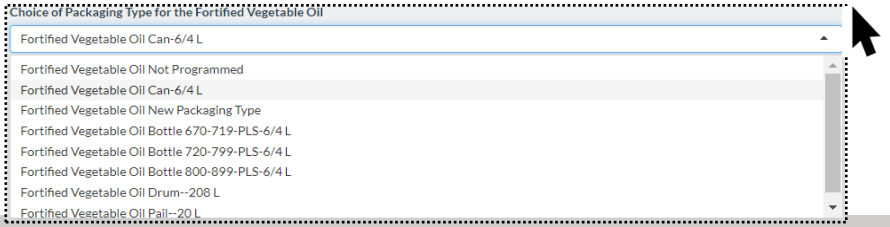
2. Select the program purpose option box for Treatment of MAM.

3. Scroll down to see the drop-down panels corresponding to entering user inputs (left) and viewing output results (right).

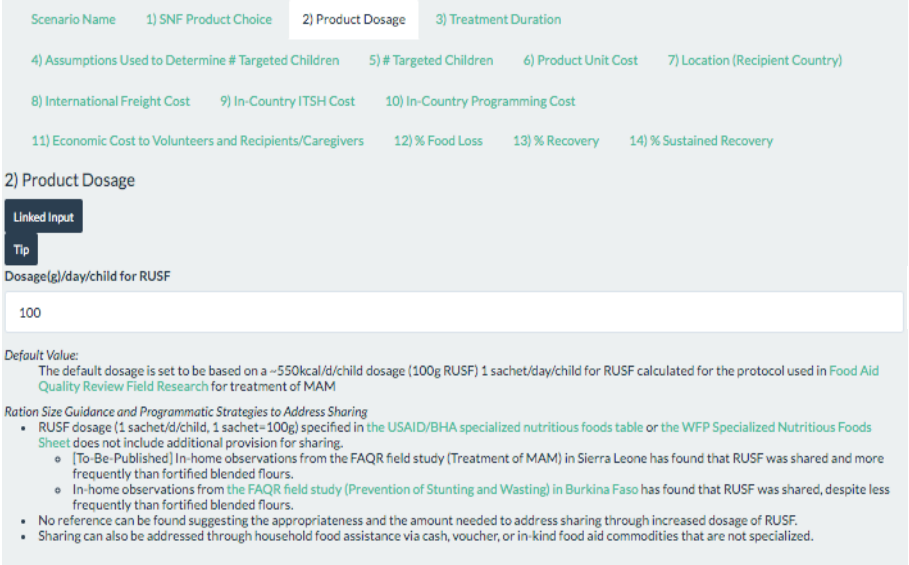
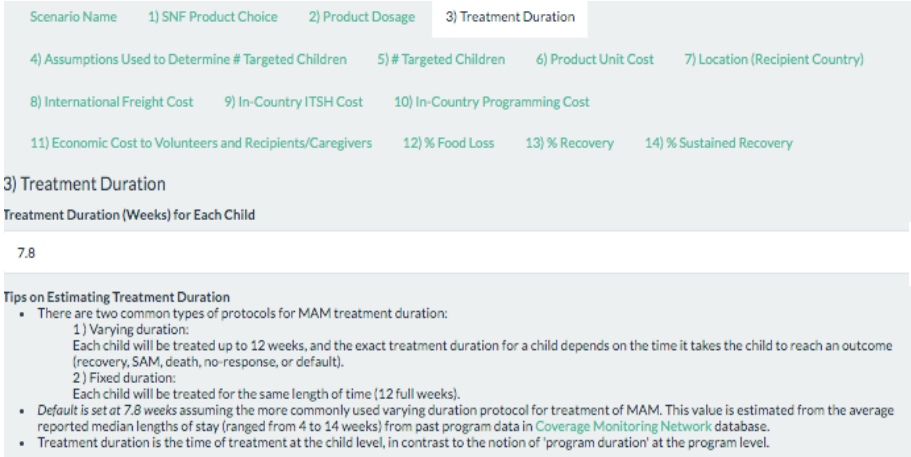


STEP 2. INPUT VALUES FOR PROGRAM PARAMETERS

Now that you've selected the program purpose, you are ready to create one scenario! In the left panel under the heading "**User Inputs for Program Parameters"**, you will go through a list of subtabs in ascending order because some FACET4SNF input choices depend on a prior selection.

VARIABLE	INSTRUCTIONS	SCREENSHOT
Scenario Name	Type a descriptive name to identify the current scenario. *Note: This is especially useful when multiple scenarios need to be saved and compared. You should only include keywords that would* ***differentiate*** *this scenario from other saved scenarios. Make sure that each saved scenario has a different name—this will help you remember which scenario is which and will also avoid bugs in viewing bar plots in the "Comparing Scenarios" Tab.*	
1) **Product Choice**	Expand the drop-down menu and select one of the available SNF product options (and a fortified vegetable oil packaging option if applicable). *Notes:* *- Consistent with USAID naming, SNFs on the menu with "XX/YY" number format means XX number of packages per box and YY unit weight per package.* *-Selecting "User-Input Product": Use this option to enter an appropriate MAM treatment that is not included in the list. Once "User-Input Product" is selected, an input box will appear for you to type in the name of this SNF.*  *-Selecting Oil: Only when CSB+, CSB, WSB, or user-input product is selected, another drop-menu will pop up for you to choose a fortified vegetable oil packaging option if additional oil is programmed with the SNF. There is an option to specify "New Packaging Type", if applicable.*	 

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
2)	**Product Dosage** (grams per recipient per day)	Input the numerical value of the delivered dosage per day per child for the selected SNF product (and additionally for fortified vegetable oil, if applicable). *Notes:* *- Default value: The default dosage in grams is equivalent to 550kcal/day regardless of SNF type. This default assumes no extra dosage to address sharing.* *- Sharing is commonly observed in programs regardless of which SNF is used. Some ways it can be addressed are by increasing SNF dosage in this subtab or adding an additional program component such as household general food aid ration, cash or voucher in subtab 10) In-Country Programming Cost.* *- Click on the links of "the USAID/BHA specialized Nutritious Foods Table" and "the WFP Specialized Nutritious Foods Sheet" to view commonly programmed dosages.*	
3)	**Treatment Duration** (weeks)	Input the numerical value of the duration (in weeks) of MAM treatment per child. *Notes:* *- Treatment duration is determined based on two types of MAM treatment protocols:* *1) For "Varying duration" protocols that treat each child until the child reaches an outcome up to 12 weeks, input median length of stay as a proxy.* *2) For "fixed duration" protocols that treat each child for a fixed number of weeks, input the fixed number.* *- Default value: The default is 7.8 weeks, assuming a "varying duration" treatment protocol. This value is derived from the average median of stay from past MAM treatment program data collected by Coverage Monitoring Network.*	

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

VARIABLE	INSTRUCTIONS	SCREENSHOT
4) **Assumptions Used to Determine # Targeted Children**	Input a numerical value for Burden of MAM, *defined as total number of children with MAM in the program catchment area over program period.* Slide to the percentage value of Program Coverage, *defined as percentage of MAM cases expected to be treated throughout the program.* Select from the menu to indicate whether the program setting (Rural, Semi-urban, Urban, or Camp). *Notes:* *- This subtab asks you to specify two key assumptions (burden of MAM and coverage) for FACET4SNF to calculate the default value of # Targeted Children calculated for the next subtab.* *- A formula to calculate "Burden of MAM" is provided on FACET4SNF interface. (methodology reference)* *- FACET4SNF default values:* • *No default is set for Burden of MAM (at zero).* • *The default % program coverage is set at 50%, the Sphere minimum standard in rural areas.* • *The default program setting is "Rural".* *- The Sphere minimum standard for MAM program coverage is 70% in urban areas, and 90% in formal camps.* *- If you do not have access to more appropriate data sources for coverage, FACET4SNF supplies summarized and individual data points (in your selected program setting) from a dataset collected by Coverage Monitoring Network.*	

Scenario Name | 1) SNF Product Choice | 2) Product Dosage | 3) Treatment Duration

4) Assumptions Used to Determine # Targeted Children | 5) # Targeted Children | 6) Product Unit Cost | 7) Location (Recipient Country)

8) International Freight Cost | 9) In-Country ITSH Cost | 10) In-Country Programming Cost

11) Economic Cost to Volunteers and Recipients/Caregivers | 12) % Food Loss | 13) % Recovery | 14) % Sustained Recovery

4) Assumptions Used to Determine # Targeted Children: Burden of MAM & Coverage

- In order to determine 'Number of Targeted Children' in the next subtab, users need to consider at least three factors:
  - Burden of MAM, defined as total number of children with MAM in the program catchment area over program period
  - Expected or actual program coverage: Coverage is defined as 'percentage of MAM cases expected to be treated throughout the program'. This definition is consistent with the Sphere Handbook .
  - Resource constraints of the intended program (if applicable)
- In this subtab, FACET4SNF asks users to explicitly state the assumptions used for burden of MAM and coverage.

Burden of MAM, defined as total number of children with MAM in the program catchment area over program period

1,000.00

$$\text{Burden of MAM} = \text{Prevalence of MAM among eligible age group} \times \text{Population Size of the eligible age group} \times \left(1 + \frac{\text{Program Period in months}}{\text{Average Duration of Untreated MAM} \cong 7.5 \text{ months}}\right)$$

- This formula is partially adapted from a methodology document to calculate targeted number of children called How do we estimate case load for SAM and or MAM in children 6 - 59 months in a given time period?

Linked Input Parameter for Burden

Program Coverage (%), defined as percentage of MAM cases expected to be treated throughout the program

0% 50% 100%

0 10 20 30 40 50 60 70 80 90 100

- *Default at 50%*, the minimum value in rural areas for the key indicator 'Percentage of moderate acute malnutrition (mam) cases with access to treatment services (coverage)' specified in the Sphere Handbook .
- In addition, Sphere standard is >70% in urban areas, and >90% in formal camps.
- Tables below provide reported coverage from past program data.

Publicly Available Coverage Data for MAM Treatment Programs:

1). **Summary statistics** of coverage data assessed by MAM treatment programs (2011-2016) from Coverage Monitoring Network are shown in the table below.

- For MAM Treatment, a total of 14 data points were in camp settings and 14 were in non-camp settings.
- The specific type of coverage indicator for each coverage data point varied, including Point, Period, Single, or Non-Specified Coverage Indicator.

Show 10 entries Search:

	Location.Setting	Mean(%)	Median(%)	Min(%)	Max(%)	SD(%)	Number.of.Countries
1	Camp	74.5	76.4	50.3	86.3	9.2	4
2	Rural	39.6	31.9	5.6	71.4	19.2	7
3	Semi-urban	58.6	58.6	58.6	58.6		1
4	Urban	32.1	32.1	32.1	32.1		1

Showing 1 to 4 of 4 entries Previous 1 Next

2). **Individual data points** for MAM treatment programs are shown in the table below.

Tip

Choice of Program Setting

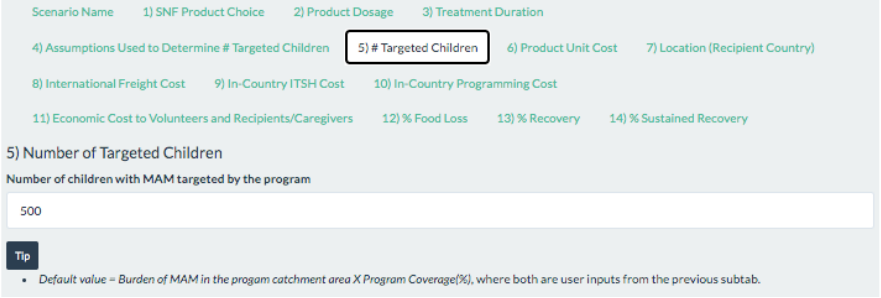
Rural

See below a table of all available data points for MAM Treatment in rural setting

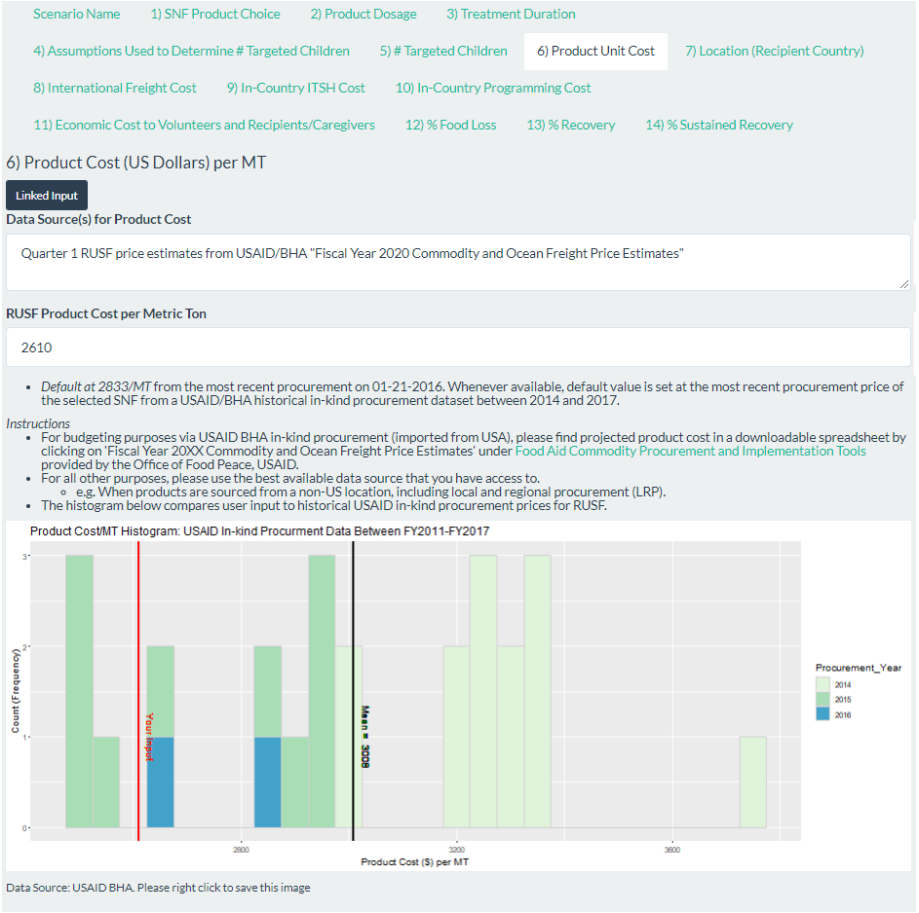
Show 10 entries Search:

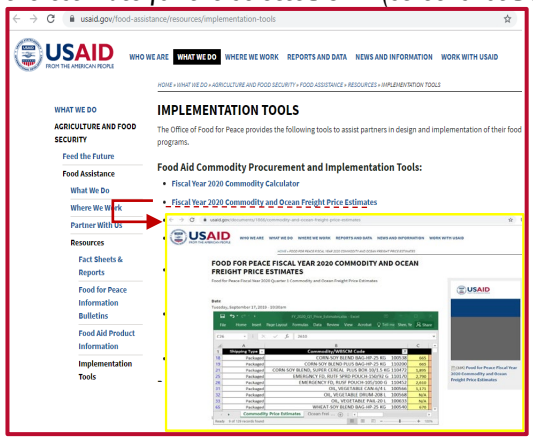
	Date	Country	Location.Setting	Coverage	Indicator.Type	URL
1	10/15/2013	Kenya	Rural	29.7	Point	http://www.coverage-monitoring.org/wp-content/uploads/2015/07/Chalbi_-Oct-2013_-Kenya_-SQUEAC.pdf
2	11/1/2013	Bangladesh	Rural	71.4	Point	http://www.coverage-monitoring.org/wp-content/uploads/2014/01/SQUEAC-Final-report-Kurigram-_B.desh-_Nov.-2013.pdf

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

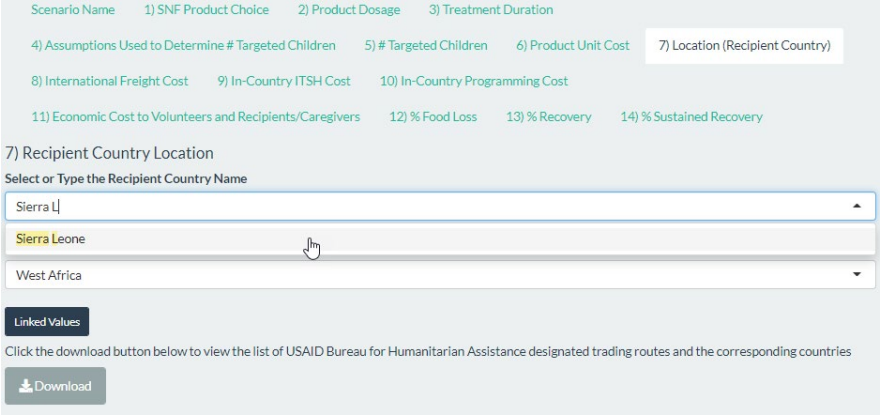
	VARIABLE	INSTRUCTIONS	SCREENSHOT
5)	**# Targeted Children**	Input a numerical value for the number of children with MAM targeted by the program. *Notes:* *- FACET4SNF default value: Based on the inputs specified for the two assumptions in the previous subtab, FACET4SNF automatically calculates:* *Default # Targeted Children = (Burden of MAM in the program catchment area) x Program Coverage (%)* *- If additional factors are used to determine number of targeted children for the program, you should input directly instead of using FACET4SNF default value.*	

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
6)	**Product Unit Cost** ($US per MT)	Type the data source(s) and/or assumptions that you are using for your inputs in this subtab. Input the numerical value(s) for product cost per Metric Ton (MT) of the selected SNF product (an additional section will expand for a selected fortified vegetable oil option, if applicable). *Notes:* *- Default value: Whenever available, default value is set at the most recent procurement price of the selected SNF (and oil) from a USAID/BHA historical in-kind procurement dataset (2014- 2017). The histogram(s) additionally provide the distribution(s) of the historical data.* *- For end-line reporting, use the average procurement price incurred in the completed program.* *- For budgeting purposes via USAID/BHA in-kind procurement, the "Fiscal Year 20XX Commodity and Ocean Freight Price Estimates" is updated by USAID quarterly and uploaded as an excel file at USAID's website [Food Aid Commodity Procurement and Implementation Tools](). Download the excel file and find the estimate for the selected SNF (screenshot below).*	



STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
7)	**Location (Recipient Country)**	Type or select the name of the recipient country. Select from the menu the standard USAID trading route (region) for international freight. *Note:* *- If unsure of the trading route, click the "Download" button to view a list of countries and their corresponding USAID/BHA designated trading routes.*	

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

VARIABLE	INSTRUCTIONS	SCREENSHOT

8) **International Freight Cost**

($US per MT)

Type the data source(s) and/or assumptions that you are using for your inputs in this subtab.

Input the numerical value for international freight cost per MT to deliver the selected SNF product to the first point of arrival at the recipient country. (If oil is also selected, an additional input box will pop up for the value of the international freight cost per MT to deliver oil).

Notes:

- Default value: Whenever available, default value(s) are set at the most recent international freight price of the trading route from a USAID/BHA historical in-kind procurement dataset between 2014 and 2017.

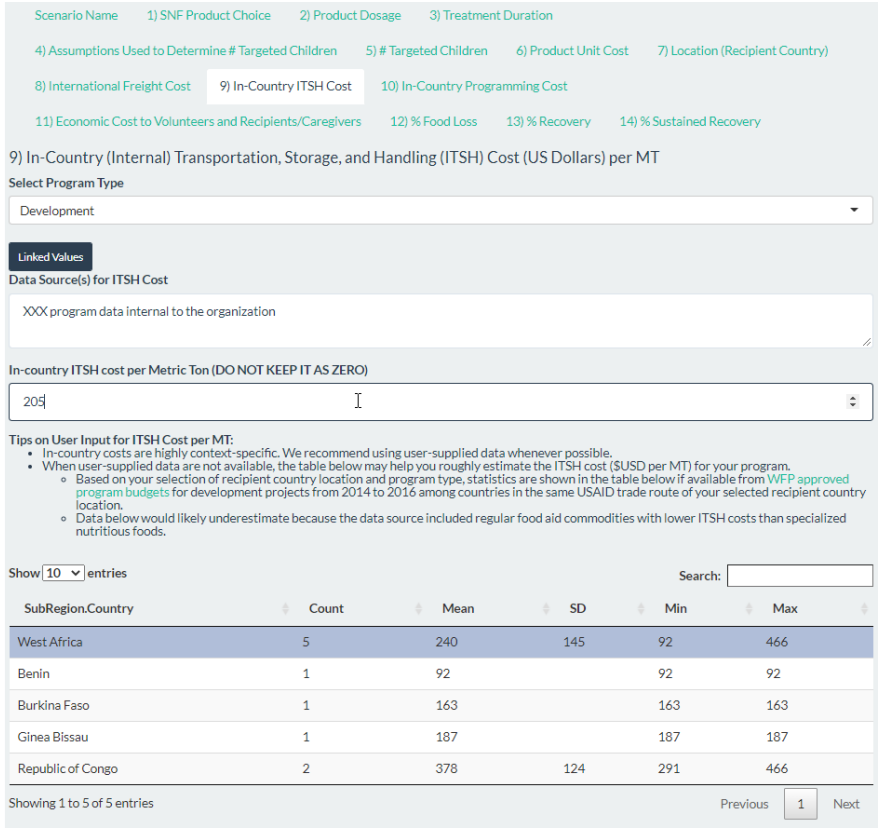
- For budgeting purposes via USAID/BHA in-kind procurement (imported from USA), the "Fiscal Year 20XX Commodity and Ocean Freight Price Estimates" is updated by USAID quarterly and uploaded as an excel file in USAID's website [Food Aid Commodity Procurement and Implementation Tools](). Download the excel file and find the freight estimate for the selected trading route. (Same file as shown in the screenshot for Product Unit Cost)

- For end-line reporting, use the average international freight cost incurred in the completed program

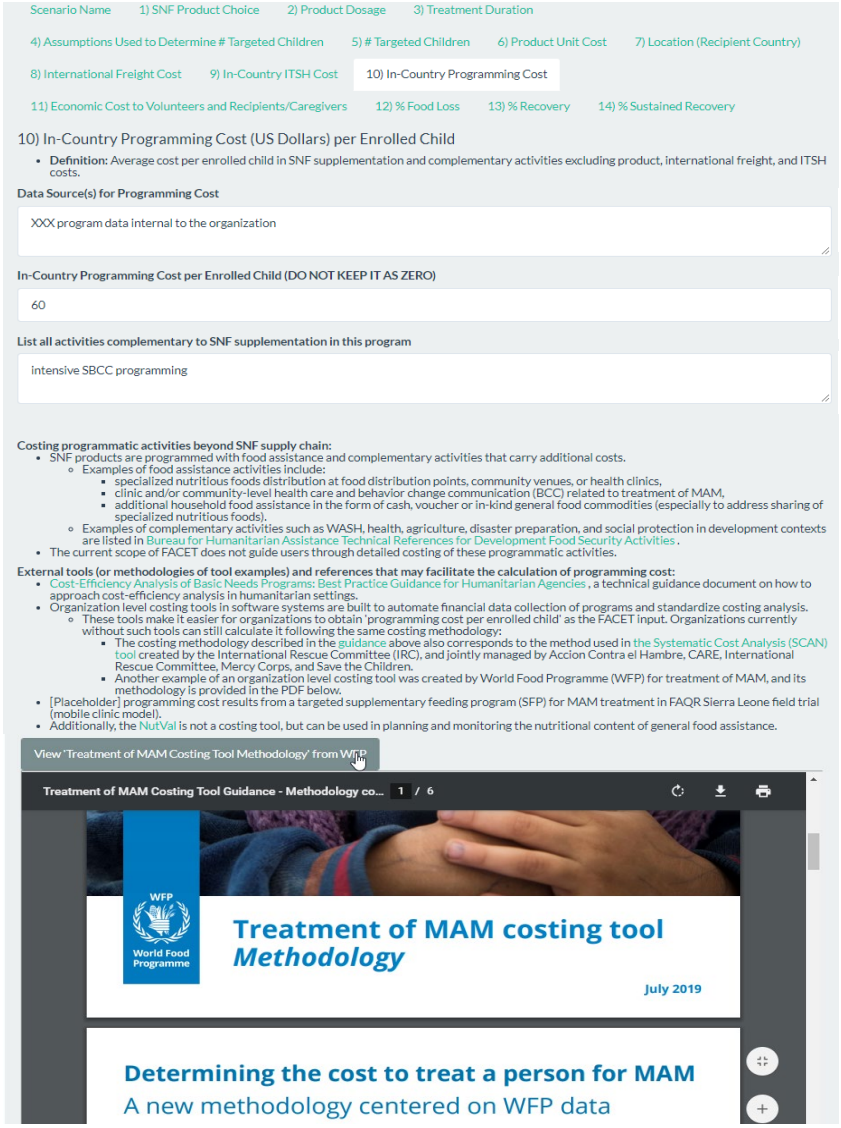
- For local procurement within the recipient country, enter 0. For all other purposes (e.g. regional or other non-US procurement), use your best available data source.

- International freight cost data for USAID in-kind procurement supplied in FACET4SNF is by geography only, not by specific SNF (i.e. all transactions of SNFs and fortified vegetable oil were included to maximize freight data availability by region). Therefore, you will need to provide inputs based on your own sources if there is reason to believe that international freight cost will differ by food types.

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
9)	**In-Country ITSH Cost** ($US per MT)	Type the data source(s) and/or assumptions that you are using for your inputs in this subtab. Select the program type to indicate whether it is a development or an (protracted) emergency program. Input the numerical value of the ITSH cost per MT. *Notes:* *- Default value: No default is set for ITSH cost per MT (at zero) due to the highly context-specific nature of this input. However, in reality, ITSH cost per metric ton should never be zero. You should justify in the "Data Source(s) for ITSH Cost" if you keep this input as zero.* *- If you do not have access to more appropriate data sources for ITSH cost, FACET4SNF supplies rough estimates from WFP approved budgets from 2014 to 2016. The data table corresponds to the program type specified above and the USAID trading route (region) specified in subtab 7) Location (Recipient Country).*	

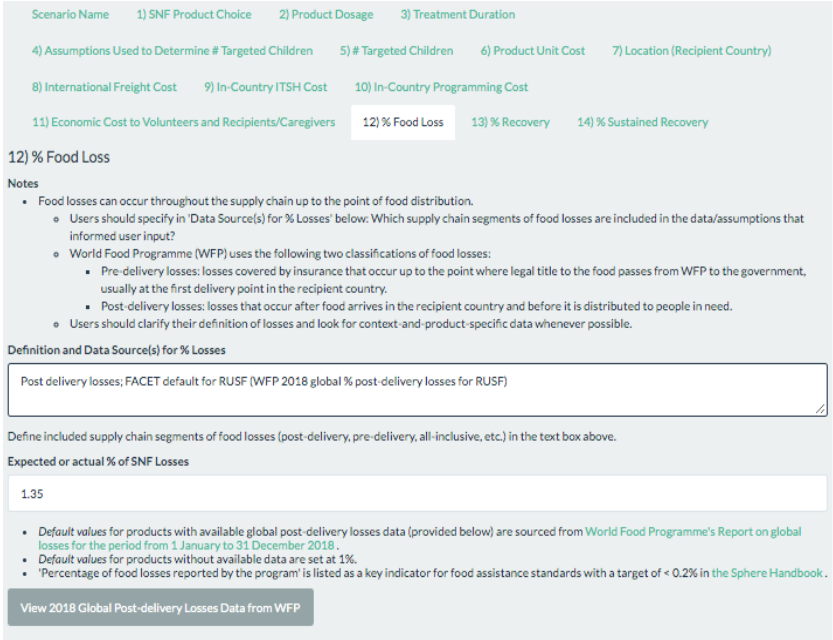
STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
10)	**In-Country Programming Cost** ($US per enrolled child)	Type the data source(s) and/or assumptions that you are using for your inputs in this subtab. Input the numerical value for in-country programming cost per enrolled child, *which can be estimated from dividing total programming cost by total number of enrolled children.* List all the program activities complementary to delivery of the SNF in the programming cost. *Notes:* *- Default value: No default is set for programming cost per child (at zero) due to the highly context-specific nature of this input. However, in reality, this should never be zero. You should justify in the "Data Source(s) for Programming Cost" if you keep this input as zero.* *- Think through the cost of various program activities, excluding the SNF supply chain. This may include activities related to the SNF supplementation AND other activities complementary to supplementation. If unsure about whether an activity should be included, try to determine if the goal of this activity directly contributes to the nutrition impact specified in FACET4SNF.* *- While FACET4SNF doesn't provide step-by-step guidance to estimate the programming cost input, relevant guidance and complementary costing tool examples are referenced to facilitate the calculation of programming cost per enrolled child:* • *Guidance on program costing methodology: [Cost-Efficiency Analysis of Basic Needs Programs: Best Practice Guidance for Humanitarian Agencies]* • *Two examples of organization-level costing tools that systematically use financial data internal to the organization to calculate program cost outputs:* 1. *International Rescue Committee: [Systematic Cost Analysis (SCAN) tool]* 2. *World Food Programme: Treatment of MAM Costing Tool (Click the grey button on the interface to view the methodology document)*	

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
11)	**Economic Cost to Volunteers and Recipients/ Caregivers**	Type the data source(s) and/or assumptions that you are using for your inputs in this subtab. Input the numerical values for the following parameters that will allow FACET4SNF to calculate economic cost to volunteers and recipients/caregivers: 1. Average Household Out-of-pocket Spending per Enrolled Child ($US) = *Average Household Out-of-pocket Spending per Clinic Visit X Average Number of Clinic Visits per Enrolled Child* - *Example: transportation cost to attend the clinic* 2. Average Program Volunteer Time per Enrolled Child (hours) = $\frac{Total\ Volunteer\ Time}{Total\ Number\ of\ Enrolled\ Children}$, *where the numerator and denominator should be over the same program time period* - *Examples: food distribution, lead mother activities for social & behavior change communication (SBCC) peer groups* 3. Average Caregiver Time per Enrolled Child (hours) = *(Average Caregiver Time per Clinic Visit X Average Number of Clinic Visits per Enrolled Child) + (Average Caregiver Preparation/Feeding Time per Meal X Average Number of Meals per Enrolled Child)* - *Examples: travel, clinic visit, and SNF preparation and feeding by caregivers (exclude children's self-feeding time)* 4. Average Hourly Valuation of Time ($US per hour) *- Default value: Default is set at $0.24 per hour as the bare minimum based on international poverty line (2015) of $1.9 PPP per day.* *- FACET4SNF provides links to mandated minimum wage (formal sector) data for available countries. If possible, try to find context-specific wage information that matches the profile of the population.* *- Default values: No default is set for the first three parameters (at zero) due to their highly context-specific nature. For non-budgeting purposes, justify zero values in the "Data Source(s)".*	 Scenario Name · 1) SNF Product Choice · 2) Product Dosage · 3) Treatment Duration · 4) Assumptions Used to Determine # Targeted Children · 5) # Targeted Children · 6) Product Unit Cost · 7) Location (Recipient Country) · 8) International Freight Cost · 9) In-Country ITSH Cost · 10) In-Country Programming Cost · 11) Economic Cost to Volunteers and Recipients/Caregivers · 12) % Food Loss · 13) % Recovery · 14) % Sustained Recovery 11) Economic Cost to Volunteers and Recipients/Caregivers Notes • Participation in the program may pose economic cost to volunteers and recipients/caregivers. This subtab can be left as default values (zero) for budgetary purposes. • Economic cost to volunteers and recipients/caregivers may include household out-of-pocket spending as well as opportunity cost of uncompensated time spent by volunteers and recipients/caregivers in relevant activities. ∘ *'Opportunity Cost of Uncompensated Time' = 'Time (hours) Spent in Relevant Activities' X 'Hourly Valuation of Time'* ∘ FACET assumes that volunteers for supplementary feeding programs are recruited from the same community to help with activities of low skill level, such as food distribution and social & behavior change communication (SBCC) peer groups. Therefore, FACET assumes the same valuation of time for program volunteers and recipients/caregivers. Highly skilled activities should be performed by compensated staff (e.g. health workers) and included in *Subtab 10) In-Country Programming Cost.* Data Source(s) for Economic Cost to Volunteers and Recipients/Caregivers Time-use survey data from XXX; Sierra Leone minimum wage (Le 500,000 per month) Caution: • *Default zero values* below should only be used for budgeting purposes as economic cost to volunteers and recipients/caregivers is not part of the financial cost to program. • Economic cost to volunteers and recipients/caregivers is never zero when running actual programs. Therefore, for non-budgeting purposes, users should justify in the 'Data Source(s) for Economic Cost to Volunteers and Recipients/Caregivers' if they keep the input values in this subtab as zero. Average Household Out-of-pocket Spending (US dollars) per Enrolled Child 1.2 *'Average Household Out-of-pocket Spending per Enrolled Child' =* *'Average Household Out-of-pocket Spending per Clinic Visit' X 'Average Clinic Visits per Enrolled Child'* Average Program Volunteer Time (hours) per Enrolled Child 5 *'Program Volunteer Time per Enrolled Child' =* *'Total Volunteer Time' / 'Total Number of Enrolled Children' over the same program time period* Average Caregiver Time (hours) per Enrolled Child 25 *'Caregiver Time per Enrolled Child' =* *'Average Caregiver Time per Clinic Visit' X 'Average Clinic Visits per Enrolled Child'+ 'Average Caregiver Preparation/Feeding Time per Meal' X 'Average Number of Meals per Enrolled Child'* Average Hourly Valuation of Time (US dollars per hour) 0.38 • Default set at $0.24 per hour as the bare minimum based on international poverty line (2015) at US$1.9PPP per day. • To obtain a rough estimate for hourly valuation of uncompensated time, users can refer to the Visualization 'Which country has the highest minimum wage?' (in 2018 US Dollars) or International Labor Organization Data on Minimal Monthly Wage (in local currency, which requires conversion to US dollars)for available countries. The minimum monthly wage value can then be divided by the number of working hours per month typical of the local context.

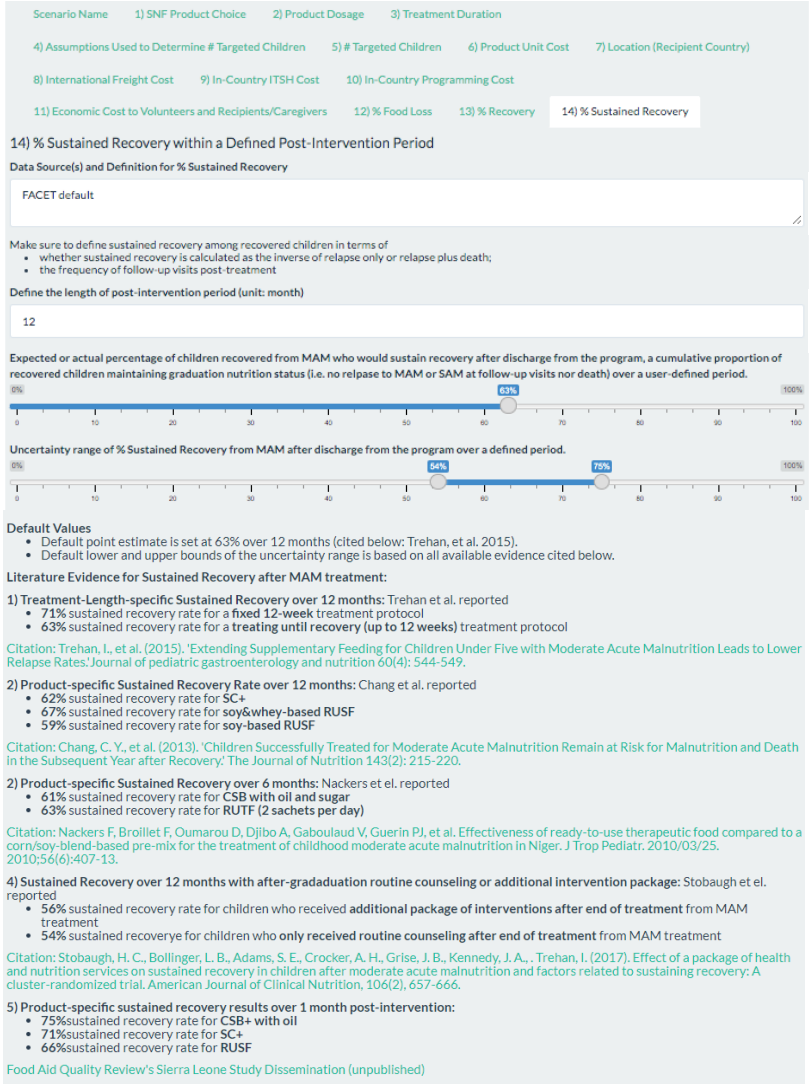
STEP 2. INPUT PROGRAM INFORMATION *(continued)*

VARIABLE	INSTRUCTIONS	SCREENSHOT
12) **% Food Loss** (%)	Type the definition of food losses, and data source(s) and/or assumptions that you are using for your inputs in this subtab. Input the numerical percent value(s) for % food losses for the selected SNF (and additionally for oil, if applicable). For example, the value "1.35" in the input box implies that 1.35% of the total procured quantity is lost. *Notes:* *- In "Data Source(s) for %Losses", you should specify the supply chain segments of the food losses included in the data or assumptions that inform your input. For example, the World Food Programme uses the following classification of food losses:* • *Pre-delivery losses: losses covered by insurance that occur up to the point where legal title to the food passes from WFP to the government, usually at the first delivery point in the recipient country.* • *Post-delivery losses: losses that occur after food arrives in the recipient country and before it is distributed to people in need.* *- FACET4SNF default value: default values are product-specific global %post-delivery losses based on available data from World Food Programme's Report on global losses for the period from 1 January to 31 December 2018. For unavailable products, default is set at 1%.* *- Click on the grey button, "View 2018 Global Post-delivery Losses Data from WFP" to view on the interface the appendix table in WFP's report used to set default values.*	

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
13)	% **Recovery**	Type the data source(s) and/or assumptions that you are using for your inputs in this subtab. Slide to the point estimate in percentage value of % Recovery from MAM at program discharge. Slide to the lower and upper bounds in percentage value of the uncertainty range of % Recovery from MAM. *Notes:* *- Default value: Default value for recovery from MAM is set at point estimate of 75% based on [the Sphere minimum standard]() with an uncertainty range of 65% to 85%. You should change this input based on available program or literature data appropriate to your product choice, treatment protocol specifics, and context of interest.* *- FACET4SNF provides a scatter plot of recovery outcomes reported in the MAM treatment research literature for the user-selected SNF product. In addition, some key details (recovery definition, publication reference link, dosage, treatment duration, median length of stay etc.) of these research studies are provided in a data table below the scatter plot.* • *The literature review used for the visualizations was conducted in 2017 using a food aid research repository website called [Research Engagement on Food Interventions for Nutritional Effectiveness (REFINE)]().* • *For most-up-to-date published results, conduct additional literature search in the REFINE website. Follow the respective instructions on the interface.* *- The uncertainty range input for % recovery will be used to construct the ranges for the financial and all-inclusive cost per recovered child indicators.*	

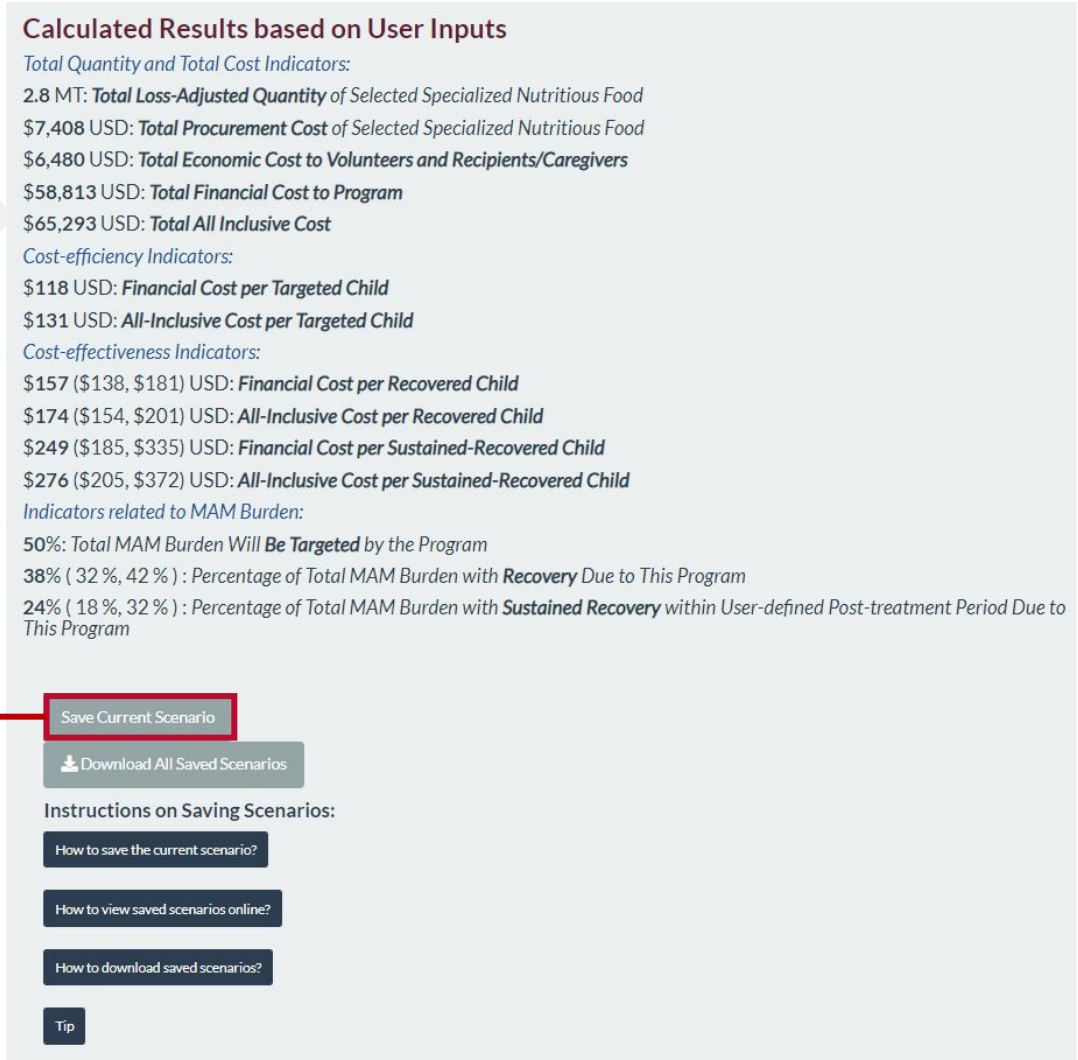
STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
14)	% **Sustained Recovery**	Type the data source(s) and/or assumptions that you are using for your inputs in this subtab. Input the length of the post-intervention period in months. Slide to the point estimate in percentage value of % Sustained Recovery from MAM over the defined post-intervention period after program discharge. Slide to the lower and upper bounds in percentage value of the uncertainty range of % Sustained Recovery from MAM. *Notes:* *- % Sustained Recovery is defined as the cumulative proportion of recovered children maintaining graduation nutrition status (no relapse to acute malnutrition at follow-up visits nor death) over a user-defined post-intervention period. Describe your definition of sustained recovery used in "Data Source(s) and Definition".* *- Sustained recovery or relapse data are scarce. FACET4SNF provides a list of research literature (up to 2019) on sustained recovery from MAM treatment.* *- Default value: Default value for sustained recovery is set at point estimate of 63% over 12 months based on Trehan et.al. (as cited on the interface). Default uncertainty range of 54% to 75% is based on the minimum and maximum values reported by all evidence cited on the interface.* *- The uncertainty range input for % sustained recovery will be used to construct the ranges for the financial and the all-inclusive cost per sustained-recovered child indicators.*	

STEP 3. REVIEW CALCULATED RESULTS & SAVE THE COMPLETED SCENARIO

Now you are done inputting values for all the required parameters in one scenario!

Based on your inputs, FACET4SNF calculates a list of indicators related to total quantity, total cost, cost-efficiency, cost-effectiveness, and MAM burden. These are shown in the right-hand panel of the page under "**Calculated Results based on User Inputs**".

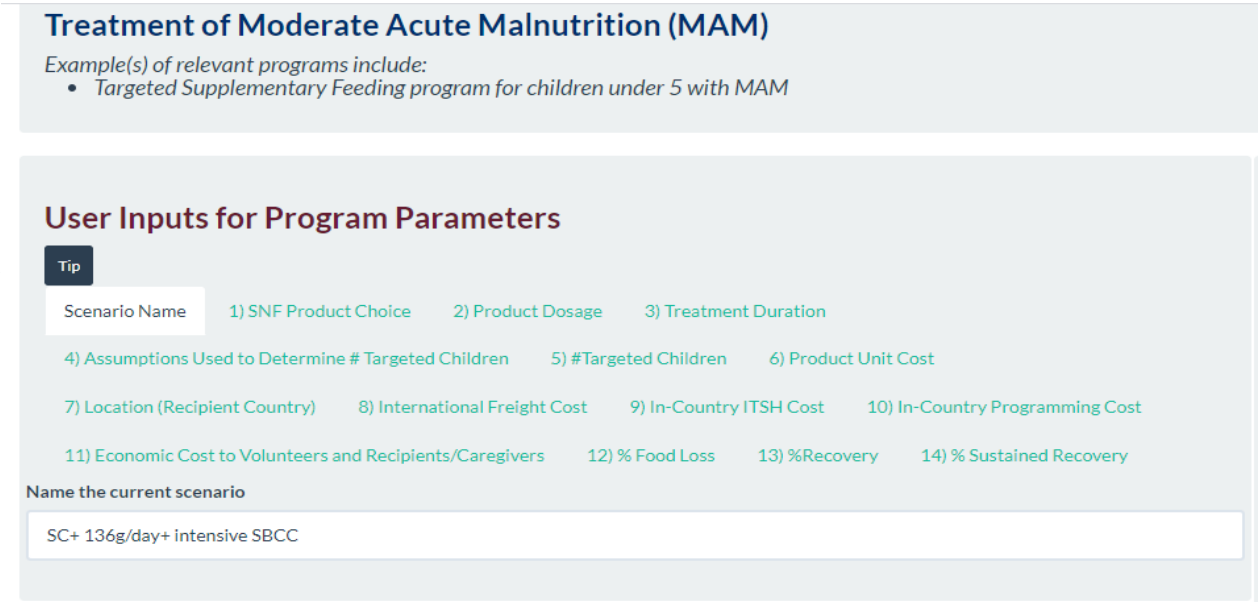


Make sure you **save this scenario!**

A message will show up below this button notifying you of the number of saved scenarios.

STEP 4. CREATE AND SAVE MORE SCENARIOS

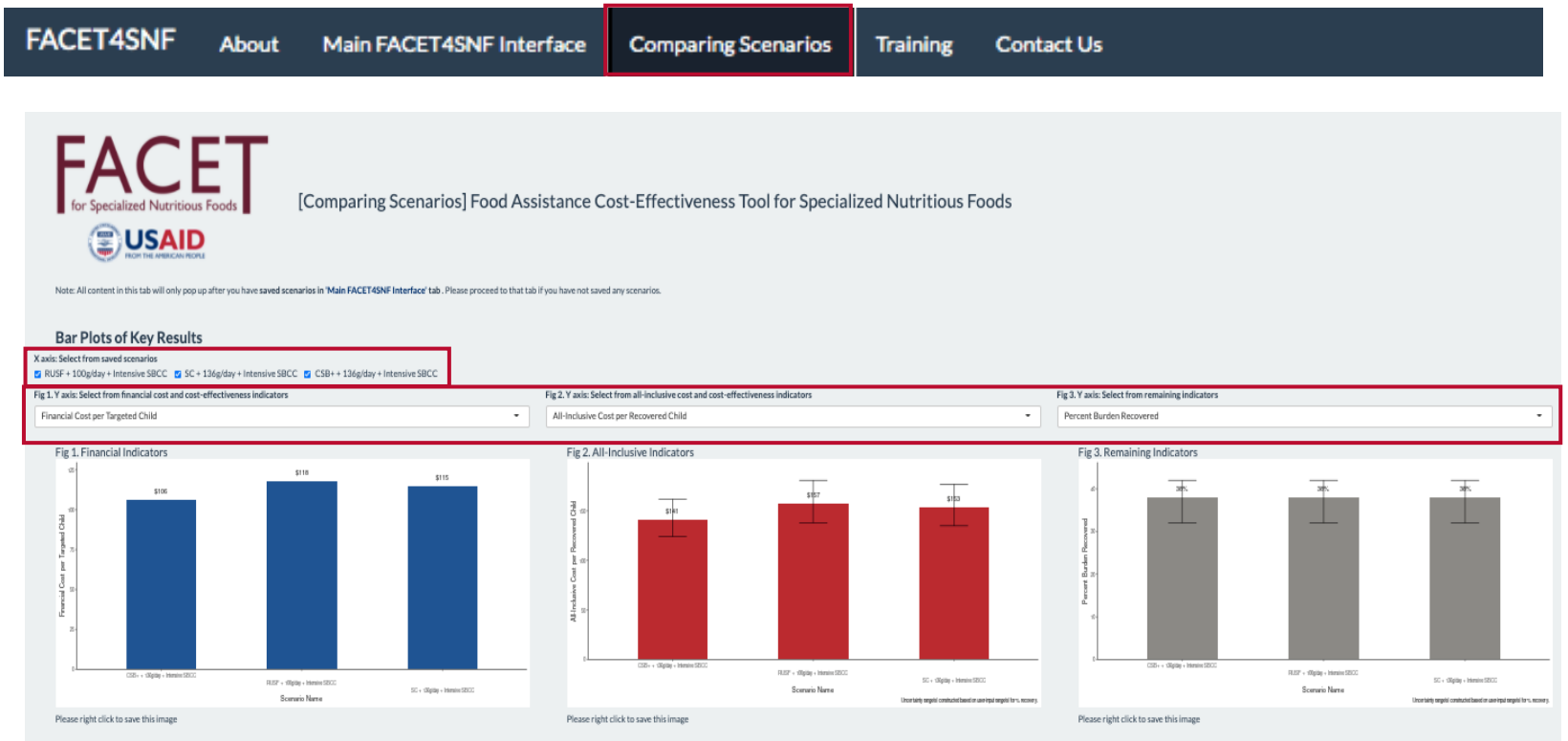
Now you can go back and change some of your inputs in the left-side panel "**User Inputs for Program Parameters**" as demonstrated in Step 2 and create another scenario. Save the scenario once completed and repeat until you have created and saved all the scenarios that you would like to compare!



STEP 5.1 COMPARE SCENARIOS VIA BAR PLOTS

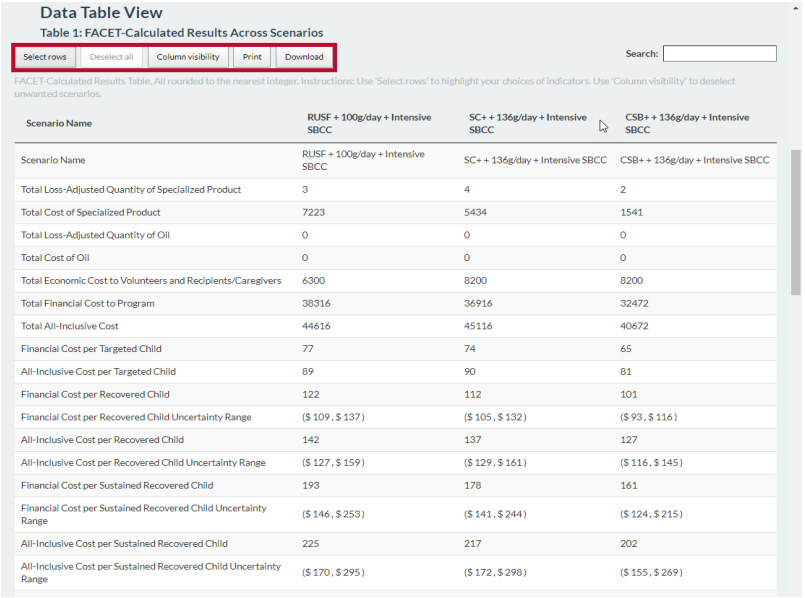
Navigate to the "Comparing Scenarios" tab. To view the bar plots:

1) Make sure that only the scenarios that you would like to compare are selected in the checkboxes under "X axis: Select from saved scenarios".
2) Select one indicator of interest from the menu for each figure under "Y axis: Select from … indicators". The first figure shows indicators that only include financial cost to program. The second figure shows indicators that include both financial cost to program and economic cost to volunteers and recipients/ caregivers (i.e. all-inclusive cost).



STEP 5.2 COMPARE VIA INTERACTIVE TABLES & DOWNLOAD SAVED SCENARIOS

Below the bar plots, you can also compare the scenarios by viewing two interactive tables: one displaying FACET4SNF-calculated results and the other displaying user inputs. Use the "Column visibility" button to deselect any unwanted saved scenarios. Use the "Select rows" button to highlight indicators/inputs of interest and then use "Print" or "Download" to print or save tables with only those indicators in pdf or excel formats.



Data Table View

Table 1: FACET-Calculated Results Across Scenarios

Select rows | Deselect all | Column visibility | Print | Download

Search:

FACET-Calculated Results Table. All rounded to the nearest integer. Instructions: Use 'Select rows' to highlight your choices of indicators. Use 'Column visibility' to deselect unwanted scenarios.

Scenario Name	RUSF + 100g/day + Intensive SBCC	SC+ + 136g/day + Intensive SBCC	CSB+ + 136g/day + Intensive SBCC
Scenario Name	RUSF + 100g/day + Intensive SBCC	SC+ + 136g/day + Intensive SBCC	CSB+ + 136g/day + Intensive SBCC
Total Loss-Adjusted Quantity of Specialized Product	3	4	2
Total Cost of Specialized Product	7223	5434	1541
Total Loss-Adjusted Quantity of Oil	0	0	0
Total Cost of Oil	0	0	0
Total Economic Cost to Volunteers and Recipients/Caregivers	6300	8200	8200
Total Financial Cost to Program	38316	36916	32472
Total All-Inclusive Cost	44616	45116	40672
Financial Cost per Targeted Child	77	74	65
All-Inclusive Cost per Targeted Child	89	90	81
Financial Cost per Recovered Child	122	112	101
Financial Cost per Recovered Child Uncertainty Range	($ 109, $ 137)	($ 105, $ 132)	($ 93, $ 116)
All-Inclusive Cost per Recovered Child	142	137	127
All-Inclusive Cost per Recovered Child Uncertainty Range	($ 127, $ 159)	($ 129, $ 161)	($ 116, $ 145)
Financial Cost per Sustained Recovered Child	193	178	161
Financial Cost per Sustained Recovered Child Uncertainty Range	($ 146, $ 253)	($ 141, $ 244)	($ 124, $ 215)
All-Inclusive Cost per Sustained Recovered Child	225	217	202
All-Inclusive Cost per Sustained Recovered Child Uncertainty Range	($ 170, $ 295)	($ 172, $ 298)	($ 155, $ 269)

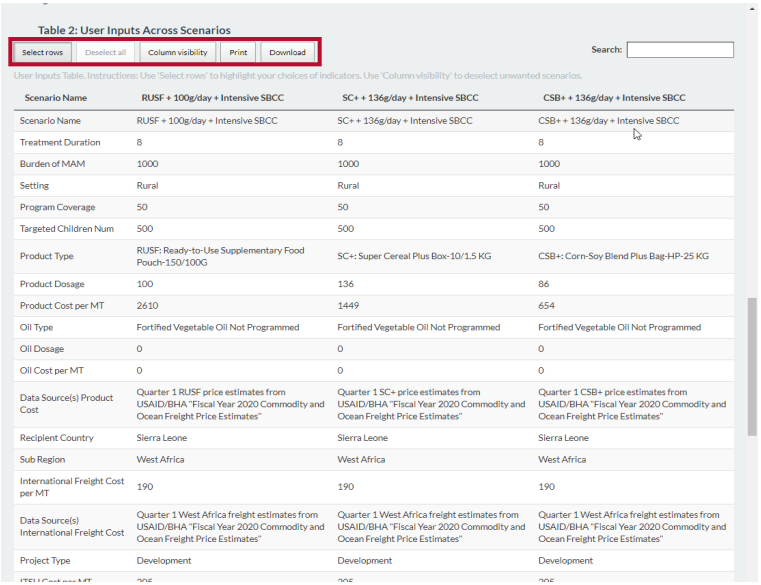


Table 2: User Inputs Across Scenarios

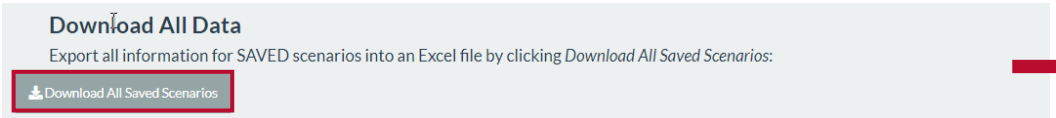
Select rows | Deselect all | Column visibility | Print | Download

Search:

User Inputs Table. Instructions: Use 'Select rows' to highlight your choices of indicators. Use 'Column visibility' to deselect unwanted scenarios.

Scenario Name	RUSF + 100g/day + Intensive SBCC	SC+ + 136g/day + Intensive SBCC	CSB+ + 136g/day + Intensive SBCC
Scenario Name	RUSF + 100g/day + Intensive SBCC	SC+ + 136g/day + Intensive SBCC	CSB+ + 136g/day + Intensive SBCC
Treatment Duration	8	8	8
Burden of MAM	1000	1000	1000
Setting	Rural	Rural	Rural
Program Coverage	50	50	50
Targeted Children Num	500	500	500
Product Type	RUSF: Ready-to-Use Supplementary Food Pouch-150/100G	SC+: Super Cereal Plus Box-10/1.5 KG	CSB+: Corn-Soy Blend Plus Bag-HP-25 KG
Product Dosage	100	136	86
Product Cost per MT	2610	1449	654
Oil Type	Fortified Vegetable Oil Not Programmed	Fortified Vegetable Oil Not Programmed	Fortified Vegetable Oil Not Programmed
Oil Dosage	0	0	0
Oil Cost per MT	0	0	0
Data Source(s) Product Cost	Quarter 1 RUSF price estimates from USAID/BHA "Fiscal Year 2020 Commodity and Ocean Freight Price Estimates"	Quarter 1 SC+ price estimates from USAID/BHA "Fiscal Year 2020 Commodity and Ocean Freight Price Estimates"	Quarter 1 CSB+ price estimates from USAID/BHA "Fiscal Year 2020 Commodity and Ocean Freight Price Estimates"
Recipient Country	Sierra Leone	Sierra Leone	Sierra Leone
Sub Region	West Africa	West Africa	West Africa
International Freight Cost per MT	190	190	190
Data Source(s) International Freight Cost	Quarter 1 West Africa freight estimates from USAID/BHA "Fiscal Year 2020 Commodity and Ocean Freight Price Estimates"	Quarter 1 West Africa freight estimates from USAID/BHA "Fiscal Year 2020 Commodity and Ocean Freight Price Estimates"	Quarter 1 West Africa freight estimates from USAID/BHA "Fiscal Year 2020 Commodity and Ocean Freight Price Estimates"
Project Type	Development	Development	Development

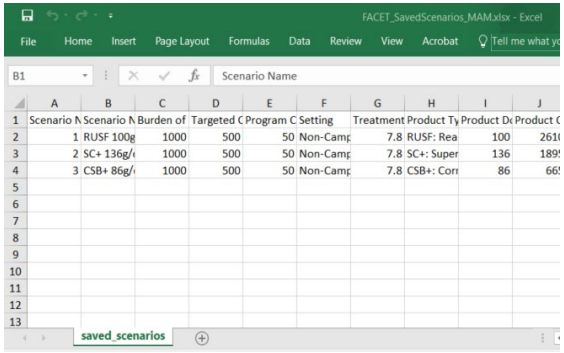
Download all saved scenarios to an excel spreadsheet using the "Download All Saved Scenarios" button. This button can be found in the right panel of the "Main Interface" tab as well as the end of the "Comparing Scenarios" tab. Data in the excel sheet can be used for further analyses, visualizations, and reporting. They can also be added to your organization's designated databases to track all programs.



Download All Data

Export all information for SAVED scenarios into an Excel file by clicking *Download All Saved Scenarios*:

Download All Saved Scenarios



FACET_SavedScenarios_MAM.xlsx - Excel

File | Home | Insert | Page Layout | Formulas | Data | Review | View | Acrobat | Tell me what yo

B1 | Scenario Name

	A	B	C	D	E	F	G	H	I	J
1	Scenario N	Scenario N	Burden of	Targeted C	Program C	Setting	Treatment	Product Ty	Product Do	Product C
2	1	RUSF 100g	1000	500	50	Non-Camp	7.8	RUSF: Rea	100	261
3	2	SC+ 136g/	1000	500	50	Non-Camp	7.8	SC+: Super	136	189
4	3	CSB+ 86g/	1000	500	50	Non-Camp	7.8	CSB+: Corn	86	66
5										
6										
7										
8										
9										
10										
11										
12										
13										

saved_scenarios

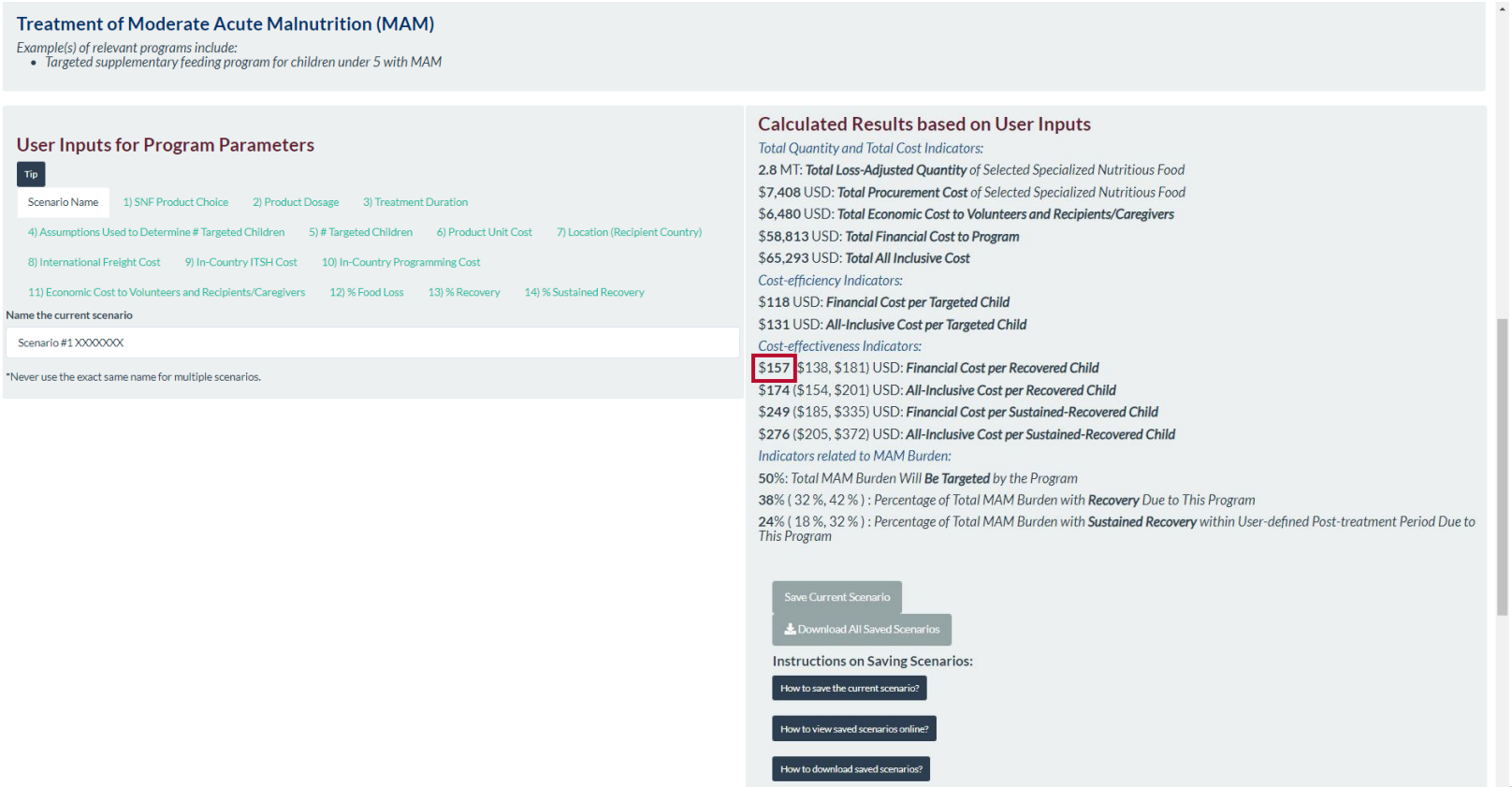
OPTIONAL STEP. CONDUCT A TIPPING POINT ANALYSIS (IF NEEDED)

Example: Assume that you have saved a complete set of inputs and outputs for Scenario #1 (63% recovery from MAM). Now you want to construct another scenario and explore how Scenario #2 compares with Scenario #1 for cost-effectiveness in financial cost per recovered child.

However, there is no available nutrition impact data (% recovery from MAM) for Scenario #2 in the context of interest to inform your % recovery input in subtab 13) of the "User Inputs for Program Parameter" panel.

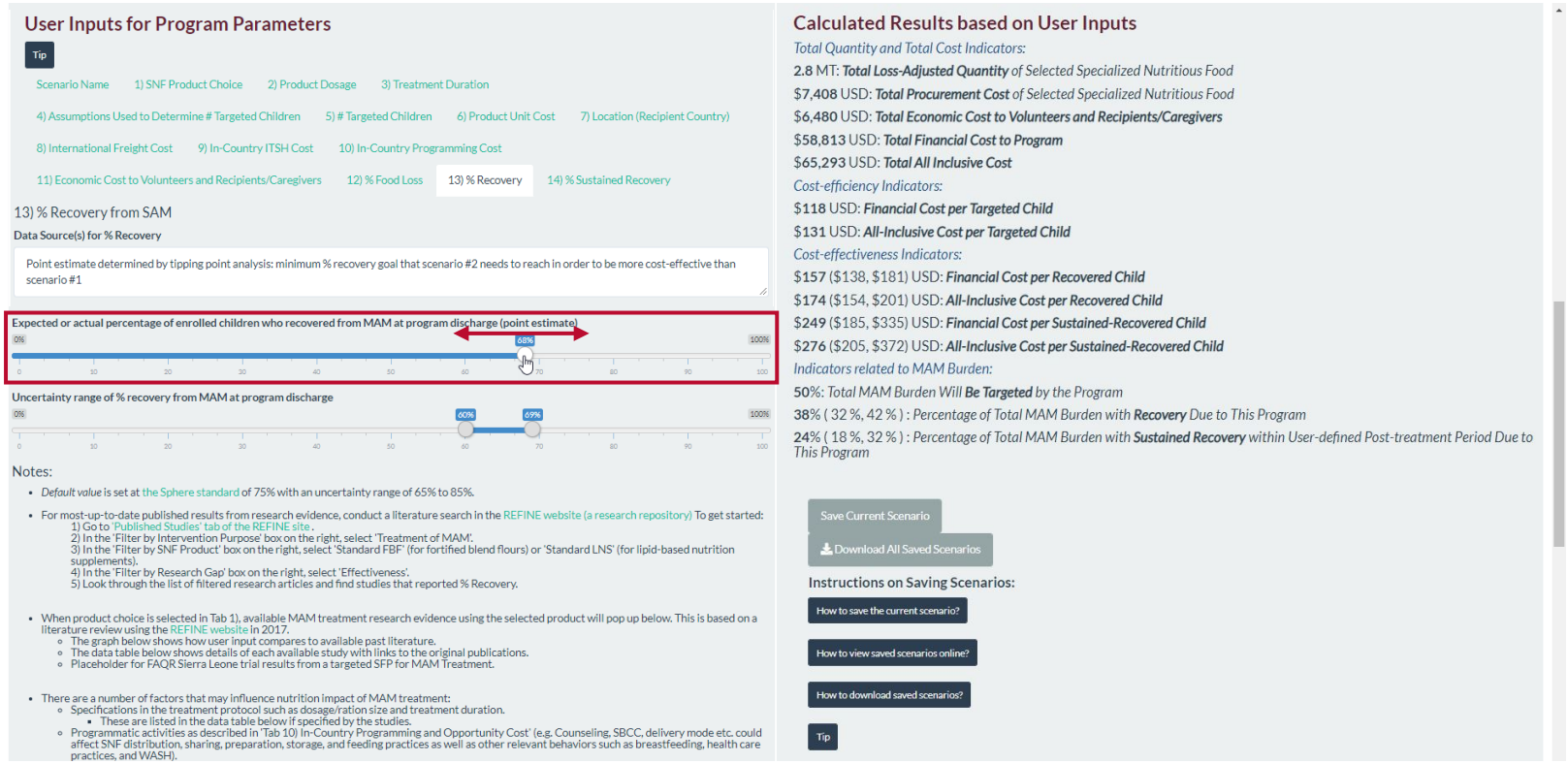
In this situation, a tipping point analysis would be useful to determine the nutrition impact goal in % recovery that Scenario #2 needs to achieve in order to be equally or more cost-effective than Scenario #1 in financial cost per recovered child.

1 Find the ***Financial Cost per Recovered Child*** for Scenario #1: **$157**



2 Construct Scenario #2 by going through all subtabs except 13) % Recovery

3 In subtab 13) % Recovery from MAM of Scenario #2, adjust the sliding cursor (point estimate) until ***Financial Cost per Recovered Child*** on the right panel "Calculated Results based on User Inputs" is ≤ **$157**. In this example, the tipping point for % Recovery in Scenario #2 is determined to be **68%**. Therefore, Scenario #2 needs to achieve **a minimum nutrition impact goal of 68% recovery or above** in order to be more cost-effective in financial cost per recovered child than Scenario #1.



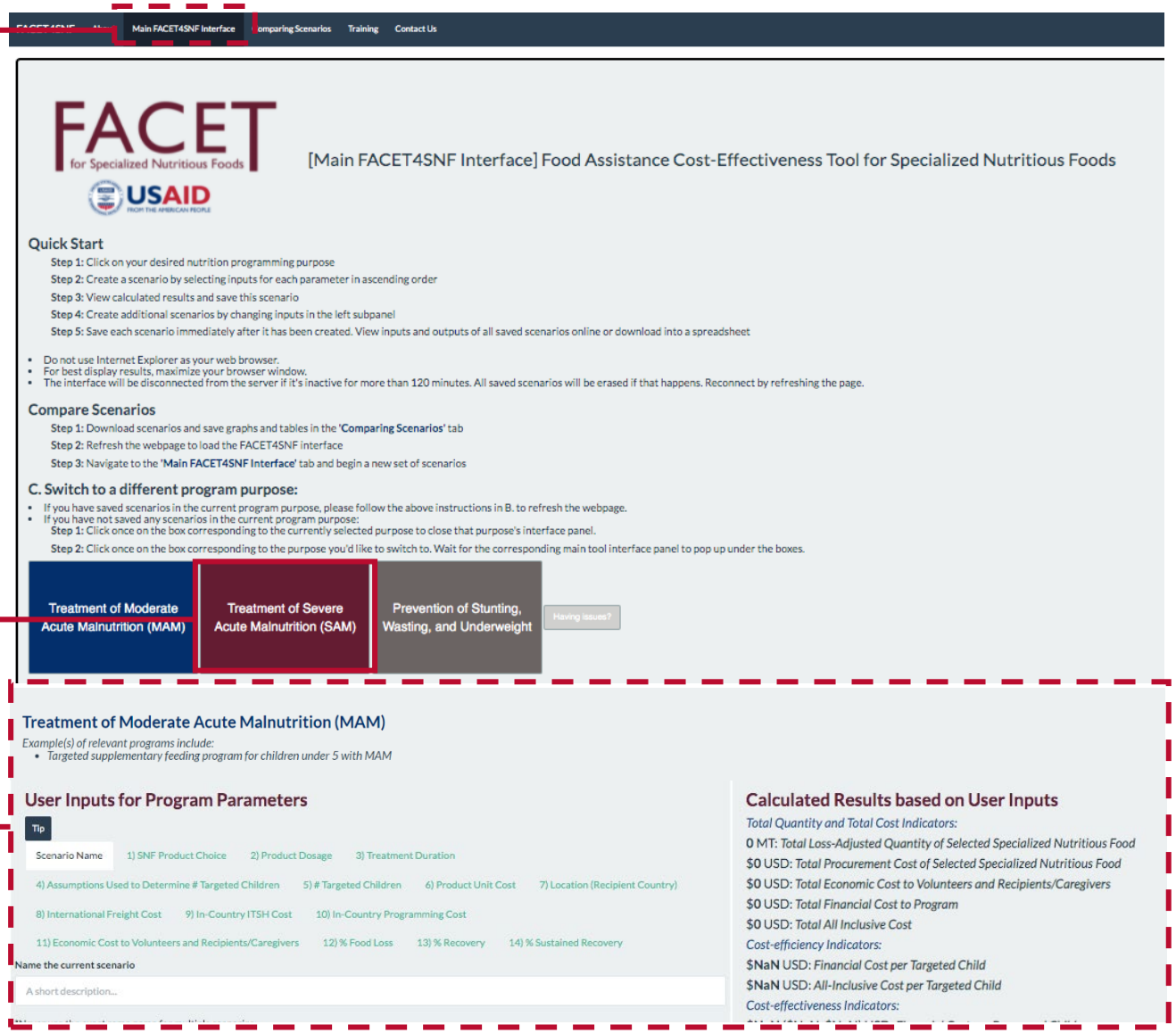
Step-by-Step Tutorial: SAM Treatment

STEP 1. IDENTIFY THE PROGRAM PURPOSE

1. Navigate to the FACET4SNF site and click on "Main FACET4SNF Interface" tab in the Header.

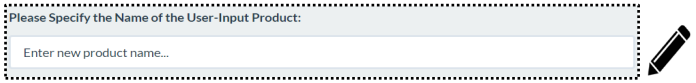
2. Select the program purpose option box for Treatment of SAM.

3. Scroll down to see the drop-down panels corresponding to entering user inputs (left) and viewing output results (right).

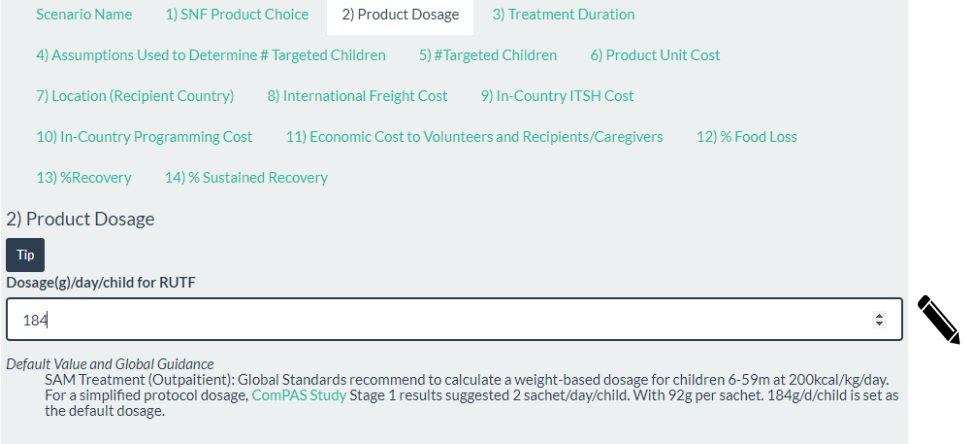
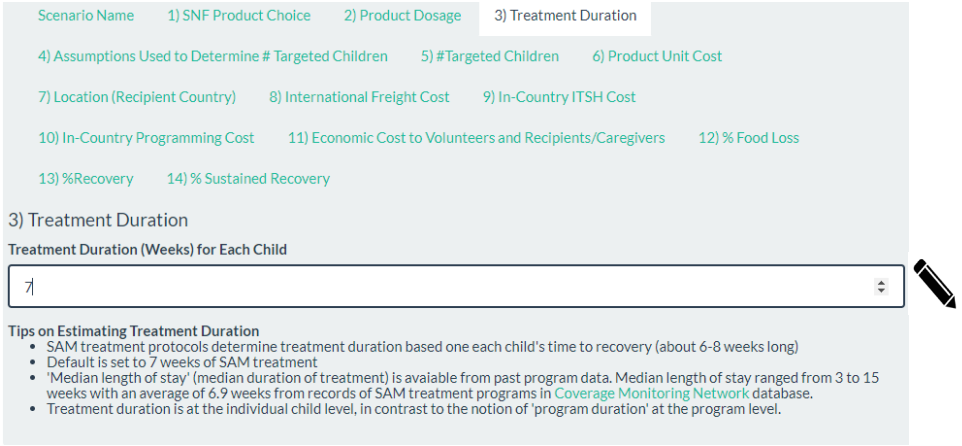


STEP 2. INPUT VALUES FOR PROGRAM PARAMETERS

Now that you've selected the program purpose, you are ready to create one scenario! In the left panel under the heading "**User Inputs for Program Parameters**", you will go through a list of subtabs in ascending order because some FACET4SNF input choices depend on a prior selection.

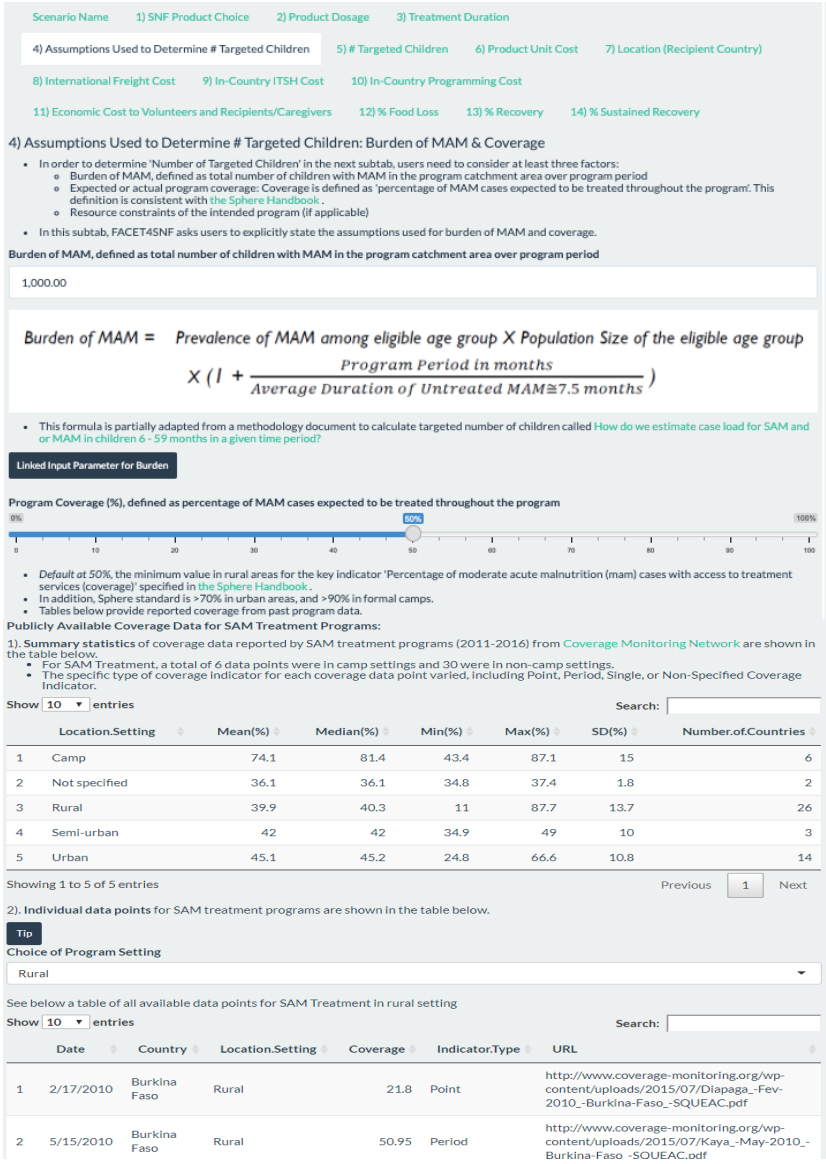
VARIABLE	INSTRUCTIONS	SCREENSHOT
Scenario Name	Type a descriptive name to identify the current scenario. *Note: This is especially useful when multiple scenarios need to be saved and compared. You should only include keywords that would **differentiate** this scenario from other saved scenarios. Make sure that each saved scenario has a different name—this will help you remember which scenario is which and will also avoid bugs in viewing bar plots in the "Comparing Scenarios" Tab.*	
1) **Product Choice**	Expand the drop-down menu for "Choice of Specialized Nutritious Product" and select either "RUTF" or "User-Input Product". *Notes:* *- RUTF is the only product option currently programmed for outpatient SAM treatment. The format "150/92" means 150 sachets per box and 92g per sachet.* *- Selecting "User-Input Product": make sure that it is appropriate for SAM treatment. Once "User-Input Product" is selected, an input box will appear for you to type in the name of this SNF.* 	

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
2)	**Product Dosage** (grams per recipient per day)	Input the numerical value of the delivered dosage per day per child. *Notes:* *- Most SAM treatment protocols use a child-weight-based dosage at 200kcal/kg/day. You should calculate and input the average dosage per child per day based on the population characteristics of the targeted children with SAM for your program.* *- Default value: The default RUTF dosage in grams is equivalent to 2 sachets/day.*	
3)	**Treatment Duration** (weeks)	Input the numerical value of the duration (in weeks) of SAM treatment per child. *Notes:* *- The treatment duration in a SAM treatment protocol is usually determined by the individual child's time to recovery* *- Default value: The default treatment duration is 7 weeks. This value is derived from the average treatment duration from past SAM treatment program data collected by Coverage Monitoring Network.*	

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
4)	**Assumptions Used to Determine # Targeted Children**	Input a numerical value for Burden of SAM, *defined as total number of children with SAM in the program catchment area over program period.* Slide to the percentage value of Program Coverage, *defined as percentage of SAM cases expected to be treated throughout the program.* Select from the menu to indicate whether the program setting (Rural, Semi-urban, Urban, or Camp).	



Notes:

- This subtab asks you to specify two key assumptions (burden of SAM and coverage) for FACET4SNF to calculate the default value of # Targeted Children in the next subtab.

- A formula to calculate "Burden of SAM" is provided on FACET4SNF interface (methodology reference).

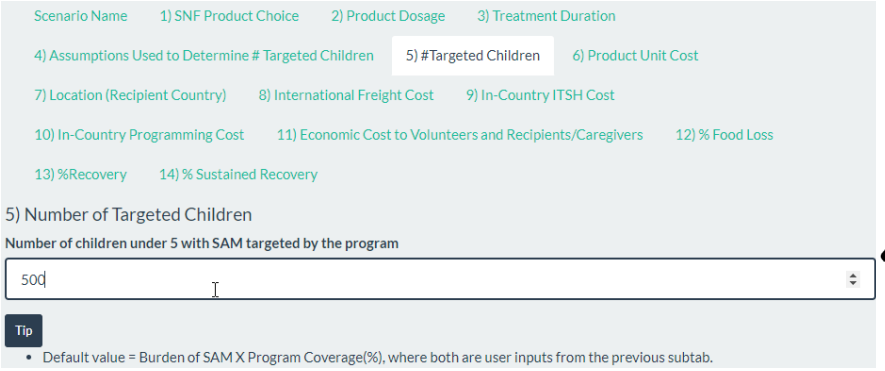
- FACET4SNF default values:

- *No default is set for Burden of SAM (at zero).*
- *The default % program coverage is set at 50%, the Sphere minimum standard in rural areas.*
- *The default program setting is "Rural".*

- The Sphere minimum standard for SAM program coverage is 70% in urban areas, and 90% in formal camps.

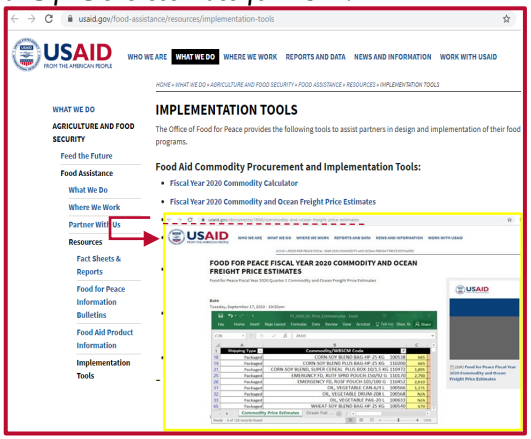
- If you do not have access to more appropriate data sources for coverage, FACET4SNF supplies summarized and individual data points (in your selected program setting) from a dataset collected by Coverage Monitoring Network.

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

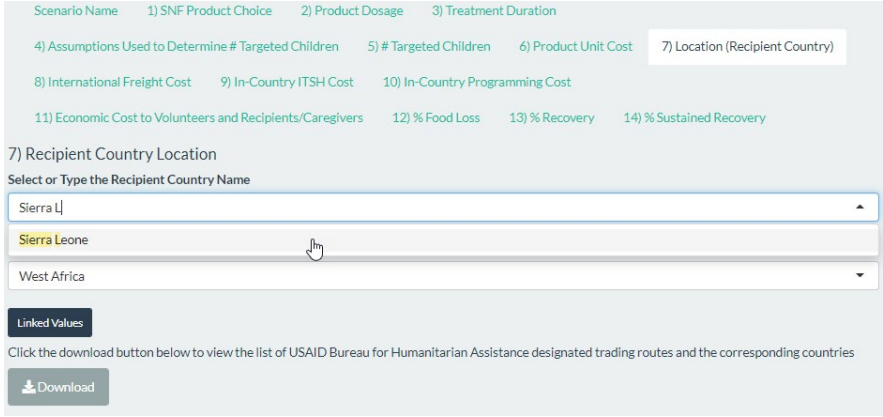
	VARIABLE	INSTRUCTIONS	SCREENSHOT
5)	**# Targeted Children**	Input a numerical value for the number of children with SAM targeted by the program. *Notes:* *- FACET4SNF default value: Based on the inputs specified for the two assumptions in the previous subtab, FACET4SNF automatically calculates:* *Default # Targeted Children = (Burden of SAM in the program catchment area) x Program Coverage (%)* *- If additional factors are used to determine number of targeted children for the program, you should input directly instead of using FACET4SNF default value.*	

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
6)	**Product Unit Cost** ($US per MT)	Type the data source(s) and/or assumptions that you are using for your inputs in this subtab. Input the numerical value(s) for product cost per Metric Ton (MT) of RUTF or user-input product. *Notes:* *- Default value: Whenever available, default value is set at the most recent procurement price of the selected SNF (and oil) from a USAID/BHA historical in-kind procurement dataset (2014-2017). The histogram(s) additionally provide the distribution(s) of the historical data.* *- For end-line reporting, use the average procurement price incurred in the completed program.* *- For budgeting purposes via USAID/BHA in-kind procurement (RUTF only), the "Fiscal Year 20XX Commodity and Ocean Freight Price Estimates" is updated by USAID quarterly and uploaded as an excel file at USAID's website Food Aid Commodity Procurement and Implementation Tools. Download the excel file and find the estimate for RUTF.*	



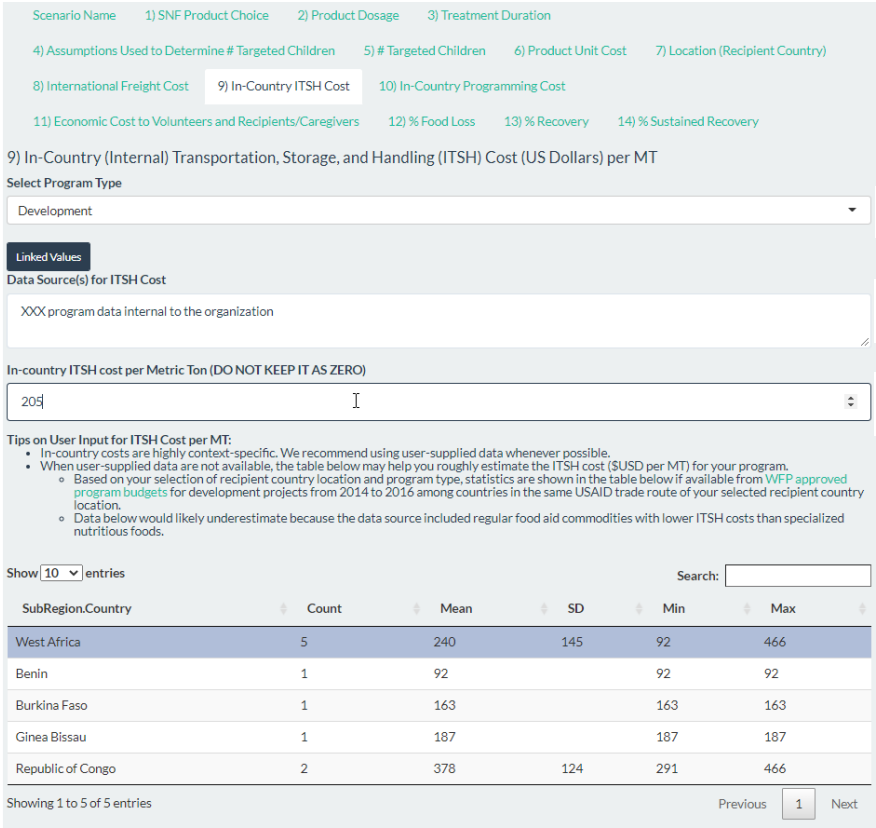
STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
7)	**Location (Recipient Country)**	Type or select the name of the recipient country. Select from the menu the standard USAID trading route (region) for international freight. *Note:* *- If unsure of the trading route, click the "Download" button to view a list of countries and their corresponding USAID/BHA designated trading routes.*	

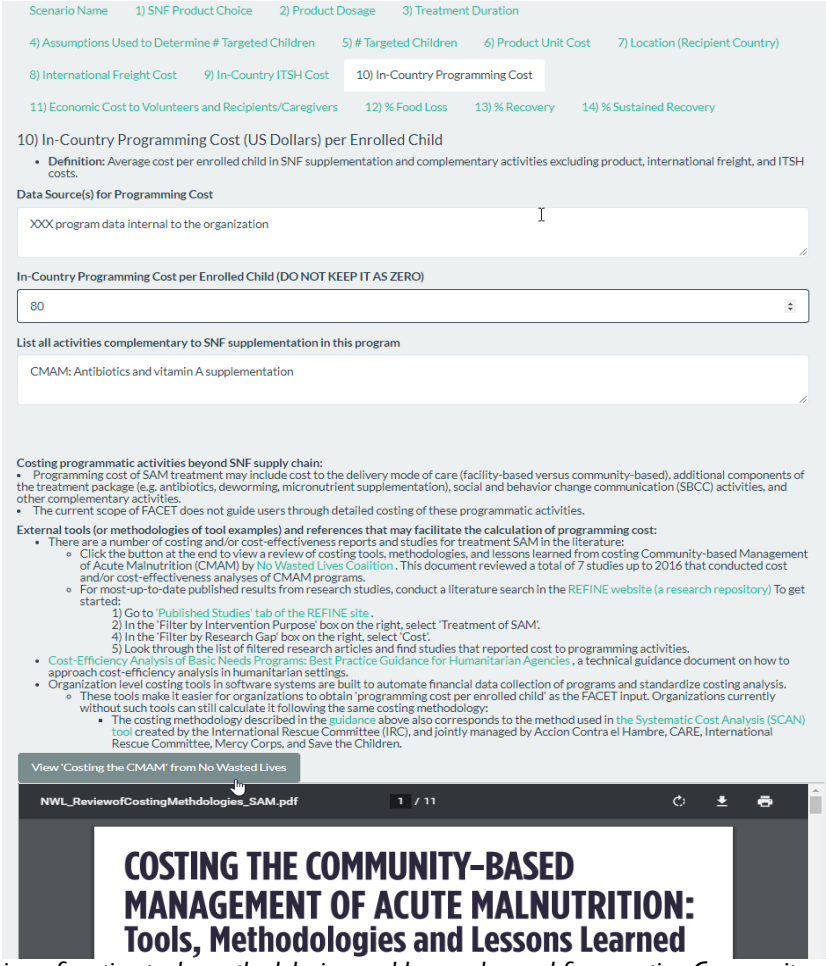
STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
8)	**International Freight Cost** ($US per MT)	Type the data source(s) and/or assumptions that you are using for your inputs in this subtab. Input the numerical value for international freight cost per MT to deliver the SNF products to the first point of arrival at the recipient country. *Notes:* *- Default value: Whenever available, default value is set at the most recent international freight price of the trading route from a USAID/BHA historical in-kind procurement dataset between 2014 and 2017.* *- For budgeting purposes via USAID/BHA in-kind procurement (imported from USA), the "Fiscal Year 20XX Commodity and Ocean Freight Price Estimates" is updated by USAID quarterly and uploaded as an excel file in USAID's website [Food Aid Commodity Procurement and Implementation Tools](). Download the excel file and find the freight estimate for the selected trading route. (Same file as shown in the screenshot for Product Unit Cost)* *- For end-line reporting, use the average international freight cost incurred in the completed program* *- For local procurement within the recipient country, enter 0. For all other purposes (e.g. regional or other non-US procurement), use your best available data source.* *- International freight cost data for USAID in-kind procurement supplied in FACET4SNF is by geography only, not by specific SNF (i.e. all transactions of SNFs and fortified vegetable oil were included to maximize freight data availability by region). Therefore, you will need to estimate based on your own sources if there is reason to believe that international freight cost will differ by SNF option.*	

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

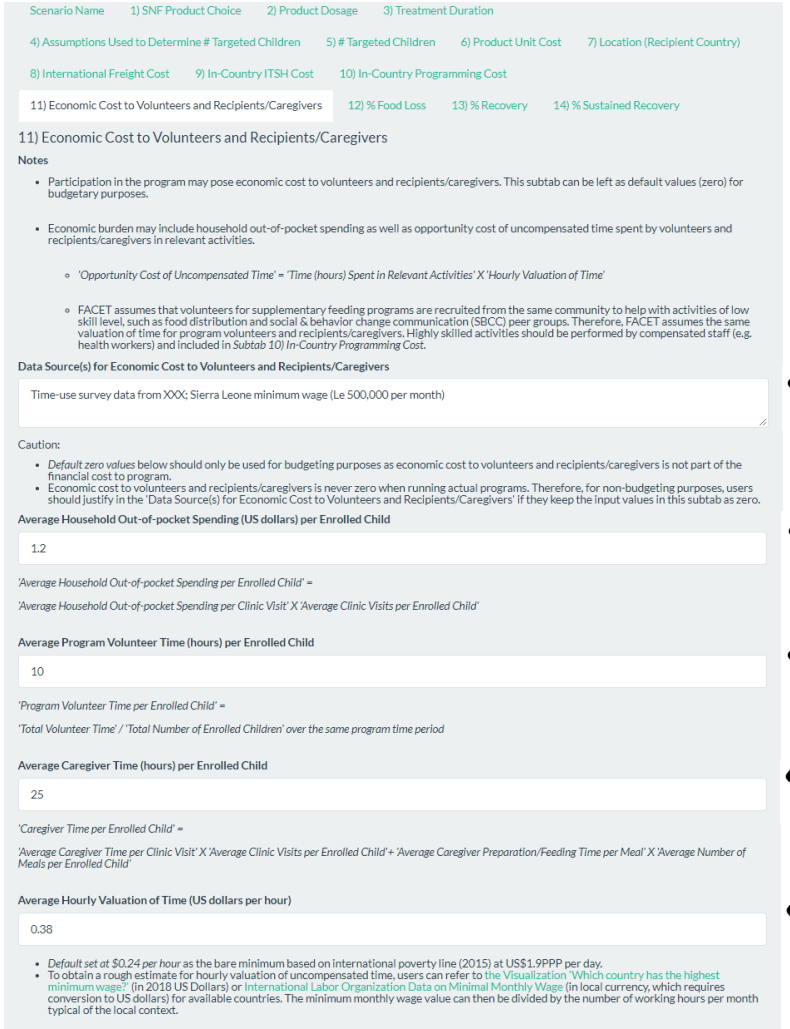
	VARIABLE	INSTRUCTIONS	SCREENSHOT
9)	**In-Country ITSH Cost** ($US per MT)	Type the data source(s) and/or assumptions that you are using for your inputs in this subtab. Select the program type to indicate whether it is a development or an (protracted) emergency program. Input the numerical value of the ITSH cost per MT. *Notes:* *- Default value: No default is set for ITSH cost per MT (at zero) due to the highly context-specific nature of this input However, in reality, ITSH cost per metric ton should never be zero. You should justify in the "Data Source(s) for ITSH Cost" if you keep this input as zero.* *- If you do not have access to more appropriate data sources for ITSH cost, FACET4SNF supplies rough estimates from WFP approved budgets from 2014 to 2016. The data table corresponds to the program type specified above and the USAID trading route (region) specified in subtab 7) Location (Recipient Country).*	

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

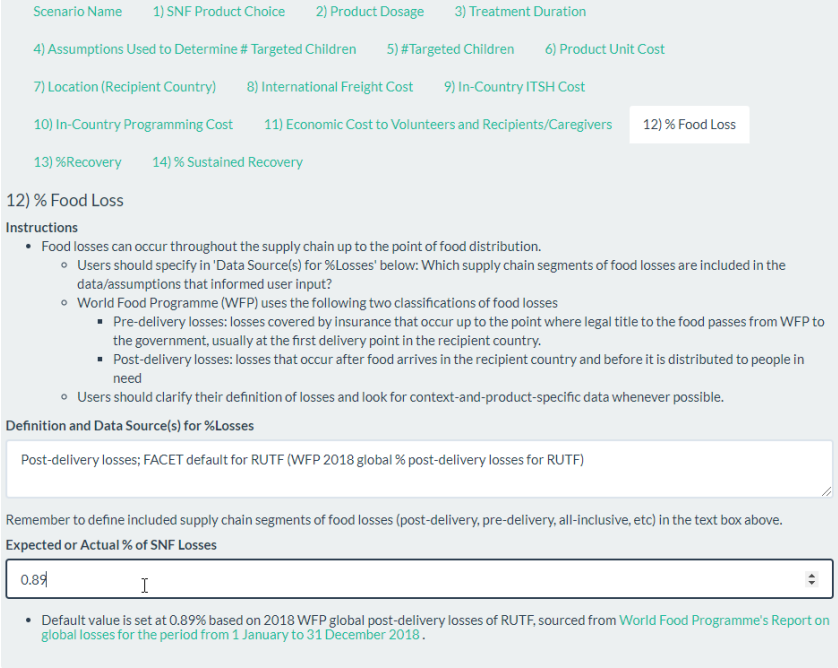
	VARIABLE	INSTRUCTIONS	SCREENSHOT
10)	**In-Country Programming Cost** ($US per child)	Type the data source(s) and/or assumptions that you are using for your inputs in this subtab. Input the numerical value for in-country programming cost per enrolled child, *which can be estimated from dividing total programming cost by total number of enrolled children.* List all program activities complementary to delivery of the SNF in the programming cost. *Notes:* *- Default value: No default is set for programming cost per child (at zero) due to the highly context-specific nature of this input. However, in reality, this should never be zero. You should justify in the "Data Source(s) for Programming Cost" if you keep this input as zero.* *- Think through the cost of various programmatic activities in addition to the SNF supply chain. This may include cost due to the delivery mode of care (facility-based versus community-based), additional components of the treatment package such as antibiotics, deworming, micronutrient supplement, social behavior change communication (SBCC), etc. If unsure about whether an activity should be included, try to determine if the goal of this activity directly contributes to the nutrition impact specified in FACET4SNF.* *- While FACET4SNF doesn't provide step-by-step guidance to estimate the programming cost input, relevant guidance and complementary costing tool examples are referenced to facilitate the calculation of programming cost per enrolled child:*	

- *Click on "View 'Costing the CMAM' from No Wasted Lives" button to read a review of costing tools, methodologies, and lessons learned from costing Community-based Management of Acute Malnutrition (CMAM), including 7 costing/cost-effectiveness studies up to 2016.*
- *Research Engagement on Food Interventions for Nutritional Effectiveness (REFINE) for most-up-to-date published results on cost/cost-effectiveness of SAM programs.*
- *Guidance on program costing methodology:*
  Cost-Efficiency Analysis of Basic Needs Programs: Best Practice Guidance for Humanitarian Agencies
  - *This guidance also describes the methodology of an organization-level costing tools that systematically use financial data internal to the organization to calculate program cost outputs: Systematic Cost Analysis (SCAN) tool*

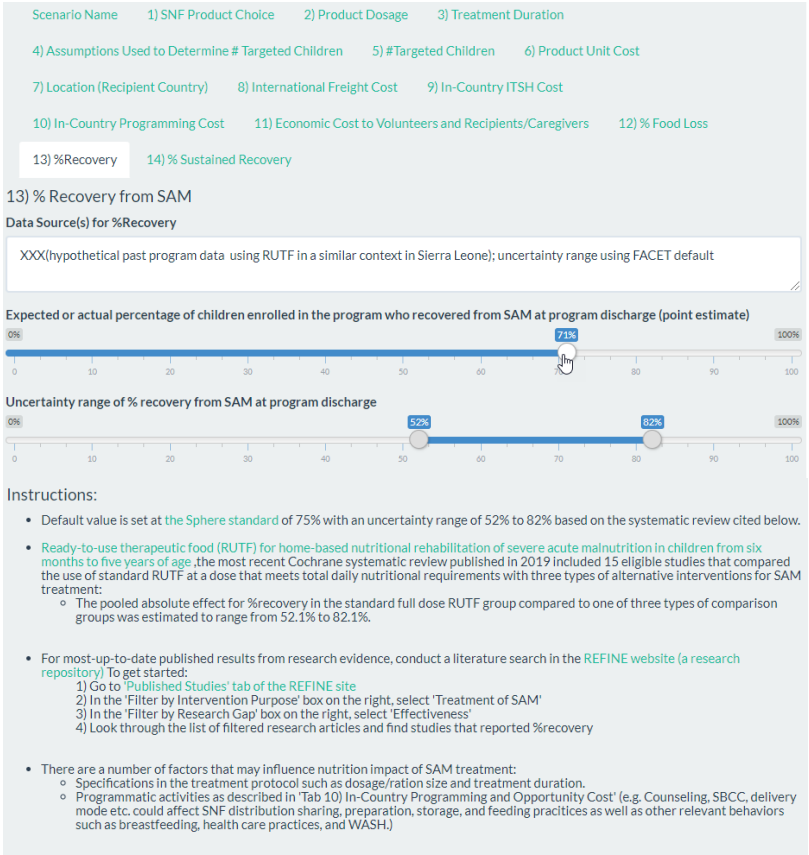
STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
11)	**Economic Cost to Volunteers and Recipients/ Caregivers**	Type the data source(s) and/or assumptions that you are using for your inputs in this subtab. Input the numerical values for the following parameters that will allow FACET4SNF to calculate economic cost to volunteers and recipients/ caregivers: 1. Average Household Out-of-pocket Spending per Enrolled Child ($US) = *Average Household Out-of-pocket Spending per Clinic Visit X Average Number of Clinic Visits per Enrolled Child* - *Example: transportation cost to attend the clinic* 2. Average Program Volunteer Time per Enrolled Child (hours) = $\frac{Total\ Volunteer\ Time}{Total\ Number\ of\ Enrolled\ Children}$, *where the numerator and denominator should be over the same program time period* - *Example: CMAM community-based activities* 3. Average Caregiver Time per Enrolled Child (hours) = *(Average Caregiver Time per Clinic Visit X Average Number of Clinic Visits per Enrolled Child) + (Average Caregiver Preparation/Feeding Time per Meal X Average Number of Meals per Enrolled Child)* - *Example: travel, clinic visits, and SNF preparation and feeding by caregivers (exclude children self-feeding)* 4. Average Hourly Valuation of Time ($US per hour) - Default values: default is set at $0.24 per hour as the bare minimum based on international poverty line (2015) of $1.9 PPP per day. - *FACET4SNF provides links to mandated minimum wage (formal sector) data for available countries. If possible, try to find context-specific wage information that matches the profile of the population.* *Notes:* *- Some cost/cost-effectiveness studies of SAM programs also included cost estimates from non-financial perspectives. See instructions in the previous subtab to find these references.* *- Default values: No default is set for the first three parameters (at zero) due to their highly context-specific nature. For non-budgeting purposes, justify zero values in "Data Source(s)".*	

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
12)	**% Food Loss** (%)	Type the definition of food losses, and data source(s) and/or assumptions that you are using for your inputs in this subtab. Input the numerical percent value(s) for % food losses for the selected SNF (and additionally for oil, if applicable). For example, the value "0.89" in the input box implies that 0.89% of the total procured quantity is lost. *Notes:* *- In "Data Source(s) for % Losses", you should specify the supply chain segments of the food losses included in the data or assumptions that inform your input. For example, the World Food Programme uses the following classification of food losses:* • *Pre-delivery losses: losses covered by insurance that occur up to the point where legal title to the food passes from WFP to the government, usually at the first delivery point in the recipient country.* • *Post-delivery losses: losses that occur after food arrives in the recipient country and before it is distributed to people in need.* *- FACET4SNF default value: Default value is set at 0.89% global % post-delivery losses based on available data for RUTF from [World Food Programme's Report on global losses for the period from 1 January to 31 December 2018](#).* *- Click on the grey button, "View 2018 Global Post-delivery Losses Data from WFP" to view on the interface the appendix table in [WFP's report](#) used to set default values.*	

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
13)	% **Recovery**	Type the data source(s) and/or assumptions that you are using for your inputs in this subtab. Slide to the point estimate in percentage value of % Recovery from SAM at program discharge. Slide to the lower and upper bounds in percentage value of the uncertainty range of % Recovery from SAM.	

Notes:

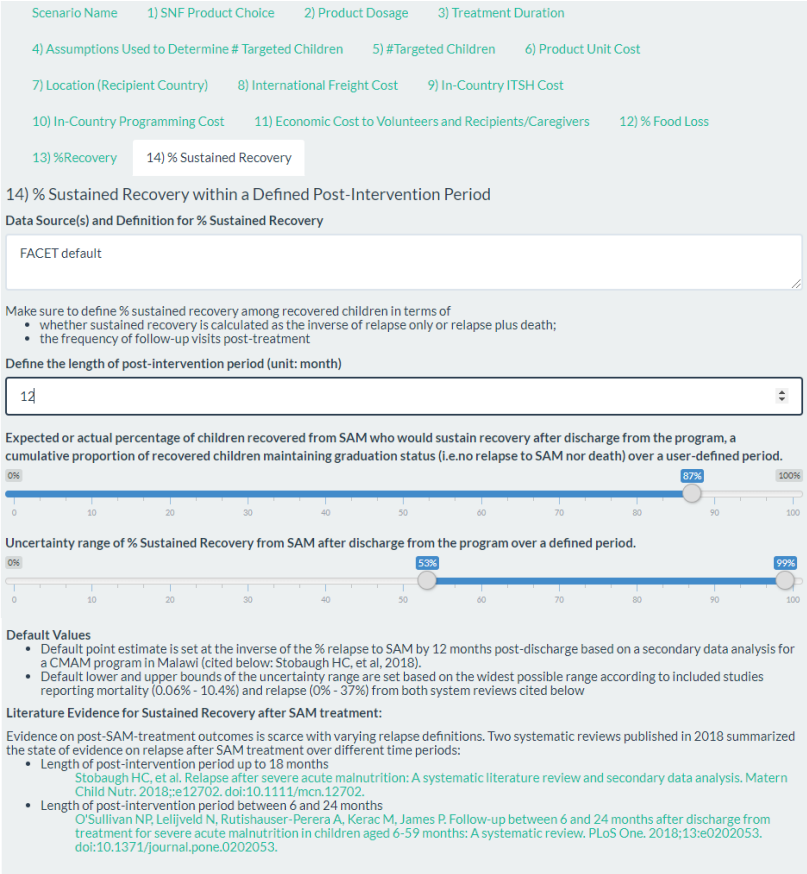
- Default value: Default value for recovery from SAM is set at point estimate of 75% based on the Sphere minimum standard with an uncertainty range of 52% to 82% based on the systematic review described below. You should change this input based on available program or literature data appropriate to your product choice, treatment protocol specifics, and context of interest.

- FACET4SNF provides the link to the 2019 Cochrane systematic review Ready-to-use therapeutic food (RUTF) for home-based nutritional rehabilitation of severe acute malnutrition in children from six months to five years of age, which included 15 studies that compared standard RUTF at a dose that meets total daily nutritional requirements with three types of alternative interventions.

- *For most-up-to-date published results, conduct additional literature search in the REFINE website. Follow the respective instructions on the interface.*

- The uncertainty range input for % recovery will be used to construct the ranges for the financial and the all-inclusive cost per recovered child indicators.

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
14)	% **Sustained Recovery**	Type the data source(s) and/or assumptions that you are using for your inputs in this subtab. Define the length of the post-intervention period in months. Slide to the point estimate in percentage value of % Sustained Recovery from SAM over the defined post-intervention period after program discharge. Slide to the lower and upper bounds in percentage value of the uncertainty range of % Sustained Recovery from SAM. *Notes:* *- % Sustained Recovery is defined as the cumulative proportion of recovered children maintaining graduation nutrition status (no relapse to SAM at follow-up visits nor death) over a user-defined post-intervention period. Describe your definition of sustained recovery used in "Data Source(s) and Definition".* *- Evidence on post-SAM treatment outcomes is scarce with varying relapse definitions. FACET4SNF provides links to two systematic reviews published in 2018 on some outcomes of sustained recovery from SAM treatment on the interface.* *- Default values:* • *Default value for sustained recovery is set at point estimate of 87%, the inverse of the % relapse to SAM by 12 months post-discharge based on a secondary data analysis for a CMAM program in Malawi (cited in FACET4SNF: Stobaugh HC, et al, 2018).* • *Default lower and upper bounds of the uncertainty range are set based on the widest possible range according to included studies reporting mortality (0.06% - 10.4%) and relapse (0% - 37%) from two system reviews cited on the interface.* *- The uncertainty range input for % sustained recovery will be used to construct the ranges for the financial and the all-inclusive cost per sustained-recovered child indicators.*	

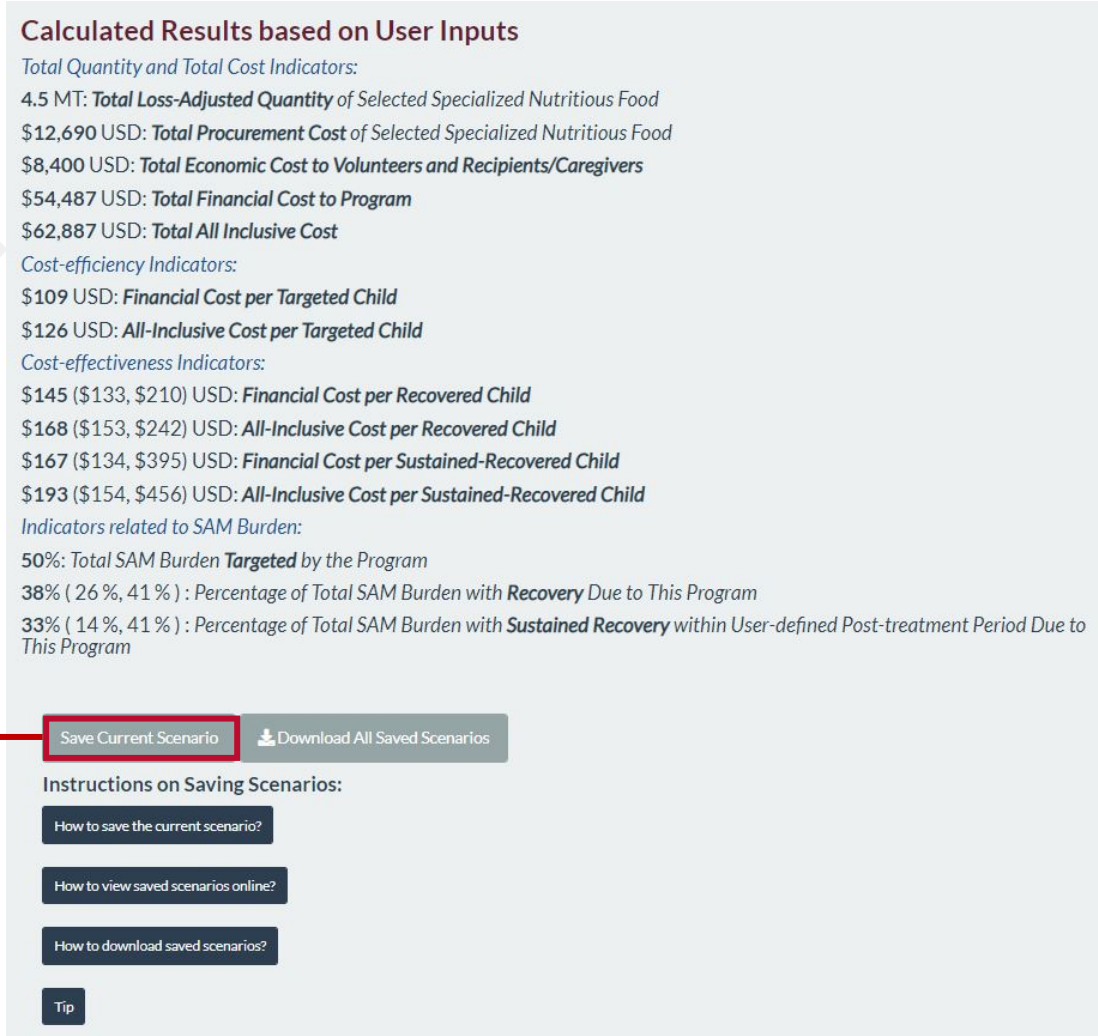
STEP 3. REVIEW CALCULATED RESULTS & SAVE THE COMPLETED SCENARIO

Now you are done inputting values for all the required parameters in one scenario!

Based on your inputs, FACET4SNF calculates a list of indicators related to total quantity, total cost, cost-efficiency, cost-effectiveness, and SAM burden. These are shown in the right-hand panel of the page under "**Calculated Results based on User Inputs**".

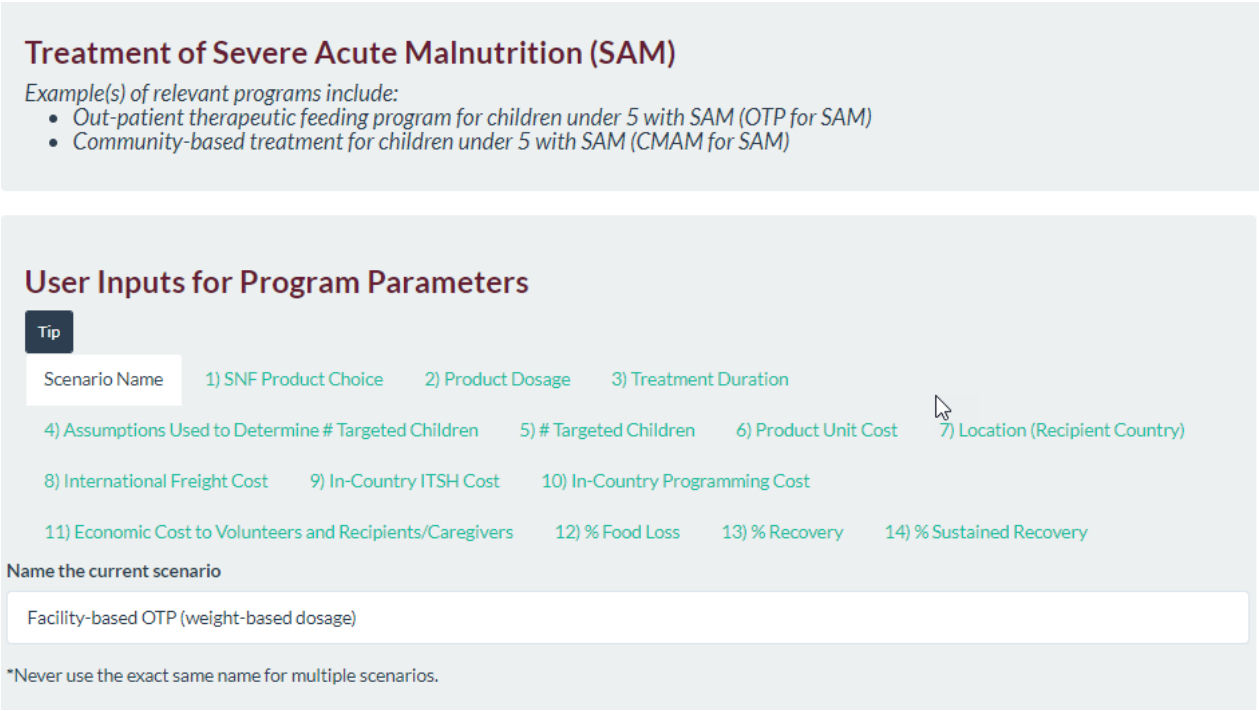
Make sure you **save this scenario!**

A message will show up below this button notifying you of the number of saved scenarios.



STEP 4. CREATE AND SAVE MORE SCENARIOS

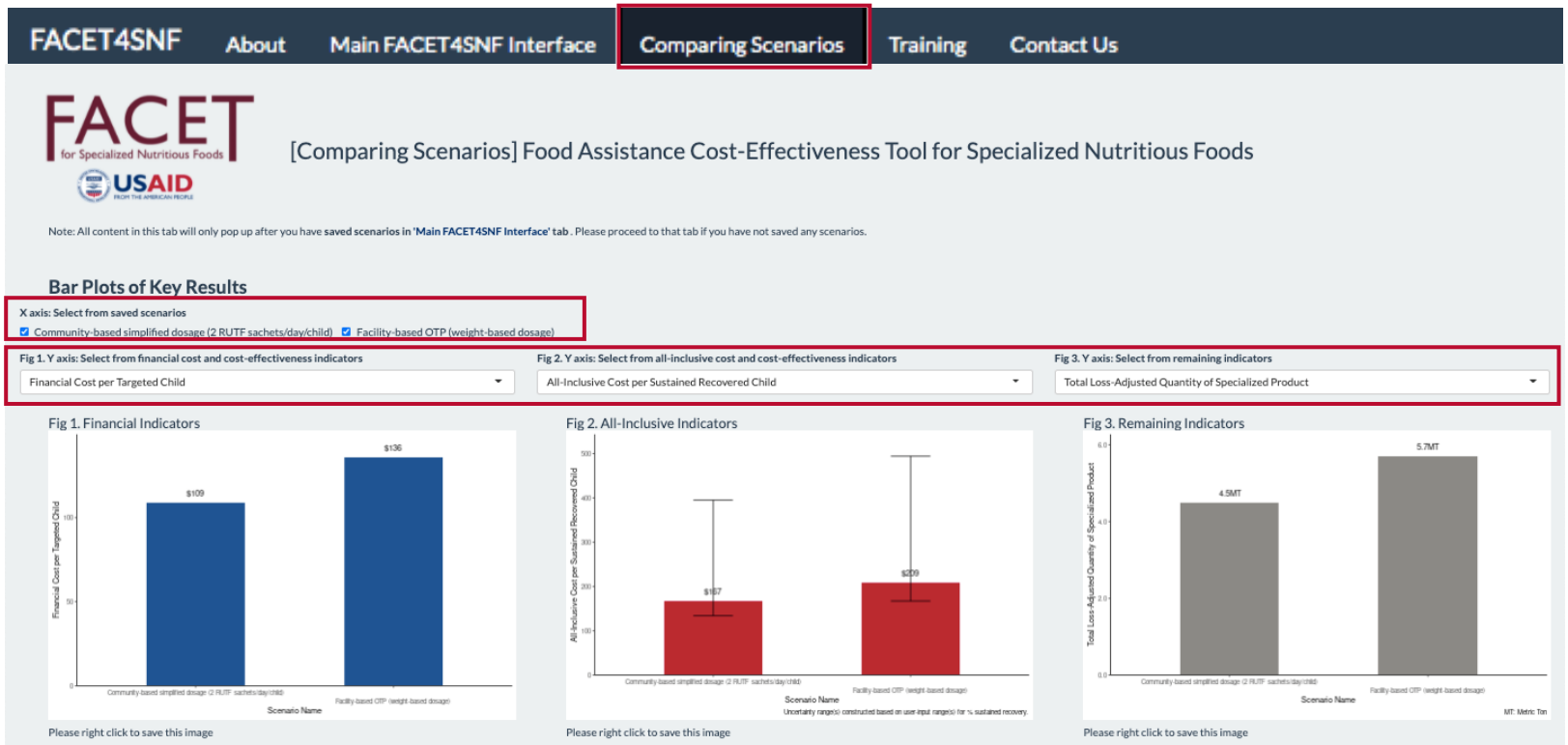
Now you can go back and change some of your inputs in the left-side panel "**User Inputs for Program Parameters**" as demonstrated in Step 2 and create another scenario. Save and repeat until you have created and saved all the scenarios that you would like to compare!



STEP 5.1 COMPARE SCENARIOS VIA BAR PLOTS

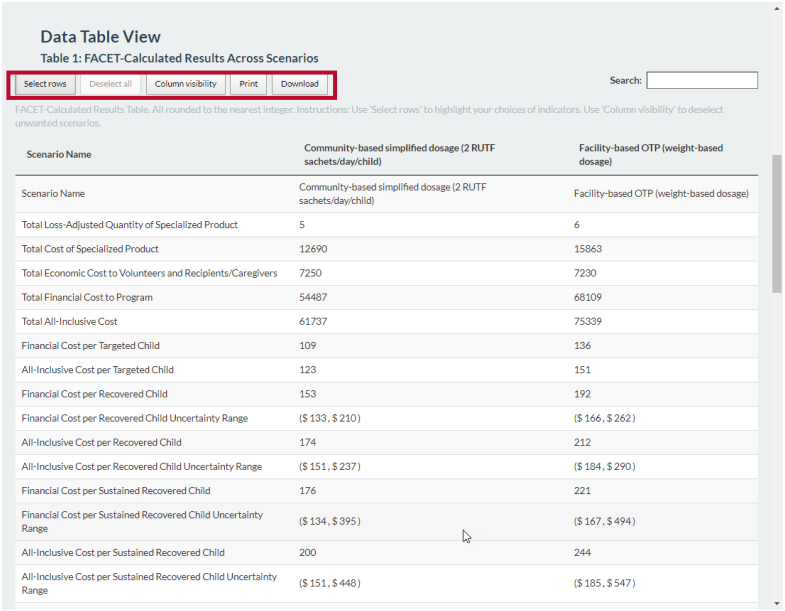
Navigate to the "Comparing Scenarios" tab. To view the bar plots:

1) Make sure that only the scenarios that you would like to compare are selected in the checkboxes under "X axis: Select from saved scenarios".
2) Select one indicator of interest from the menu for each figure under "Y axis: Select from … indicators". The first figure shows indicators that only include financial cost to program. The second figure shows indicators that include both financial cost to program and economic cost to volunteers and recipients/ caregivers (i.e. all-inclusive cost).



STEP 5.2 COMPARE VIA INTERACTIVE TABLES & DOWNLOAD SAVED SCENARIOS

Below the bar plots, you can also compare the scenarios by viewing two interactive tables: one displaying FACET4SNF-calculated results and the other displaying user inputs. Use the "Column visibility" button to deselect any unwanted saved scenarios. Use the "Select rows" button to highlight indicators/inputs of interest and then use "Print" or "Download" to print or save tables with only those indicators in pdf or excel formats.



Data Table View

Table 1: FACET-Calculated Results Across Scenarios

Select rows | Deselect all | Column visibility | Print | Download

Search:

FACET-Calculated Results Table. All rounded to the nearest integer. Instructions: Use 'Select rows' to highlight your choices of indicators. Use 'Column visibility' to deselect unwanted scenarios.

Scenario Name	Community-based simplified dosage (2 RUTF sachets/day/child)	Facility-based OTP (weight-based dosage)
Scenario Name	Community-based simplified dosage (2 RUTF sachets/day/child)	Facility-based OTP (weight-based dosage)
Total Loss-Adjusted Quantity of Specialized Product	5	6
Total Cost of Specialized Product	12690	15863
Total Economic Cost to Volunteers and Recipients/Caregivers	7250	7230
Total Financial Cost to Program	54487	68109
Total All-Inclusive Cost	61737	75339
Financial Cost per Targeted Child	109	136
All-Inclusive Cost per Targeted Child	123	151
Financial Cost per Recovered Child	153	192
Financial Cost per Recovered Child Uncertainty Range	($ 133 , $ 210)	($ 166 , $ 262)
All-Inclusive Cost per Recovered Child	174	212
All-Inclusive Cost per Recovered Child Uncertainty Range	($ 151 , $ 237)	($ 184 , $ 290)
Financial Cost per Sustained Recovered Child	176	221
Financial Cost per Sustained Recovered Child Uncertainty Range	($ 134 , $ 395)	($ 167 , $ 494)
All-Inclusive Cost per Sustained Recovered Child	200	244
All-Inclusive Cost per Sustained Recovered Child Uncertainty Range	($ 151 , $ 448)	($ 185 , $ 547)

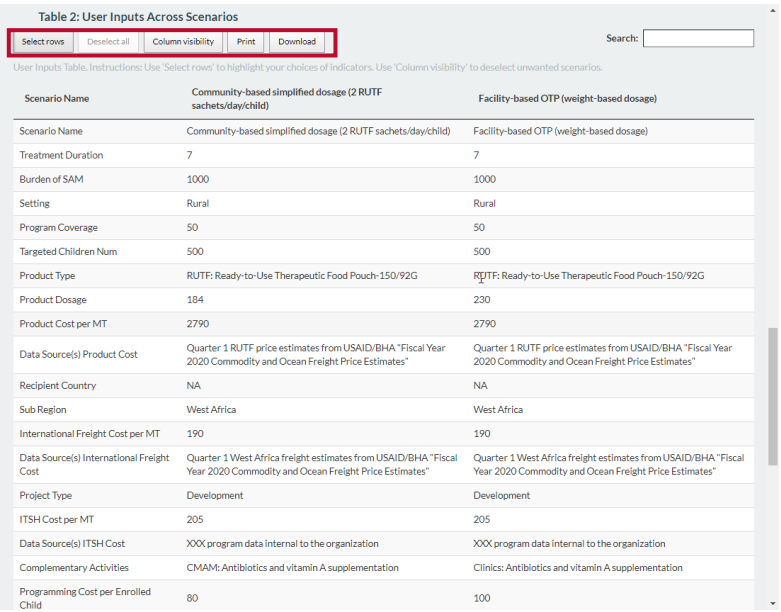


Table 2: User Inputs Across Scenarios

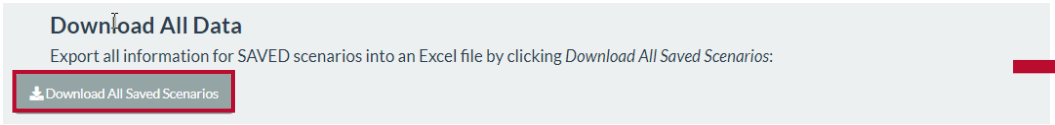
Select rows | Deselect all | Column visibility | Print | Download

Search:

User Inputs Table. Instructions: Use 'Select rows' to highlight your choices of indicators. Use 'Column visibility' to deselect unwanted scenarios.

Scenario Name	Community-based simplified dosage (2 RUTF sachets/day/child)	Facility-based OTP (weight-based dosage)
Scenario Name	Community-based simplified dosage (2 RUTF sachets/day/child)	Facility-based OTP (weight-based dosage)
Treatment Duration	7	7
Burden of SAM	1000	1000
Setting	Rural	Rural
Program Coverage	50	50
Targeted Children Num	500	500
Product Type	RUTF: Ready-to-Use Therapeutic Food Pouch-150/92G	RUTF: Ready-to-Use Therapeutic Food Pouch-150/92G
Product Dosage	184	230
Product Cost per MT	2790	2790
Data Source(s) Product Cost	Quarter 1 RUTF price estimates from USAID/BHA "Fiscal Year 2020 Commodity and Ocean Freight Price Estimates"	Quarter 1 RUTF price estimates from USAID/BHA "Fiscal Year 2020 Commodity and Ocean Freight Price Estimates"
Recipient Country	NA	NA
Sub Region	West Africa	West Africa
International Freight Cost per MT	190	190
Data Source(s) International Freight Cost	Quarter 1 West Africa freight estimates from USAID/BHA "Fiscal Year 2020 Commodity and Ocean Freight Price Estimates"	Quarter 1 West Africa freight estimates from USAID/BHA "Fiscal Year 2020 Commodity and Ocean Freight Price Estimates"
Project Type	Development	Development
ITSH Cost per MT	205	205
Data Source(s) ITSH Cost	XXX program data internal to the organization	XXX program data internal to the organization
Complementary Activities	CMAM: Antibiotics and vitamin A supplementation	Clinics: Antibiotics and vitamin A supplementation
Programming Cost per Enrolled Child	80	100

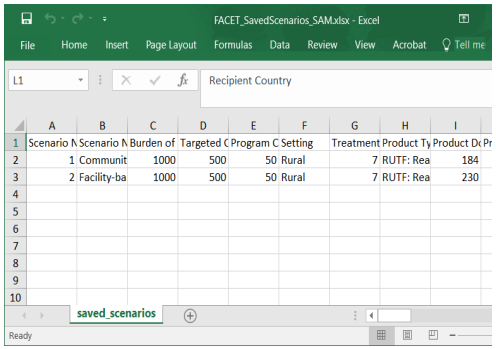
Download all saved scenarios to an excel spreadsheet using the "Download All Saved Scenarios" button. This button can be found in the right panel of the "Main Interface" tab as well as the end of the "Comparing Scenarios" tab. Data in the excel sheet can be used for further analyses, visualizations, and reporting. They can also be added to your organization's designated databases to track all programs.



Download All Data

Export all information for SAVED scenarios into an Excel file by clicking *Download All Saved Scenarios*:

Download All Saved Scenarios



FACET_SavedScenarios_SAM.xlsx - Excel

File | Home | Insert | Page Layout | Formulas | Data | Review | View | Acrobat | Tell me

L1 | Recipient Country

	A	B	C	D	E	F	G	H	I
1	Scenario N	Scenario N	Burden of	Targeted C	Program C	Setting	Treatment	Product Ty	Product Do Pr
2	1	Communit	1000	500	50	Rural	7	RUTF: Rea	184
3	2	Facility-ba	1000	500	50	Rural	7	RUTF: Rea	230

saved_scenarios

Ready

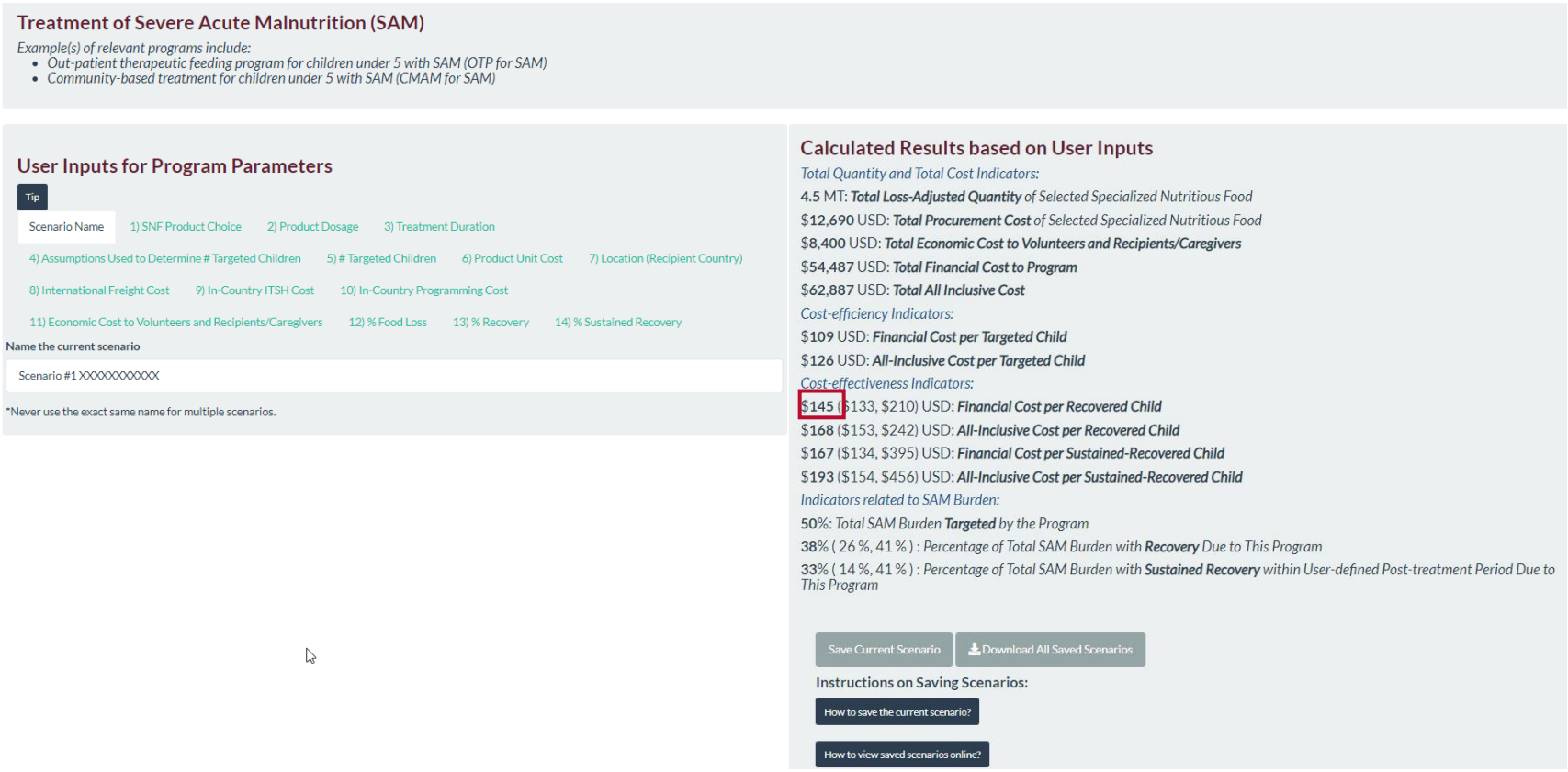
OPTIONAL STEP. CONDUCT A TIPPING POINT ANALYSIS (IF NEEDED)

Example: Assume that you have saved a complete set of inputs and outputs for Scenario #1 (71% recovery from SAM). Now you want to construct another scenario and explore how Scenario #2 compares with Scenario #1 for cost-effectiveness in financial cost per recovered child.

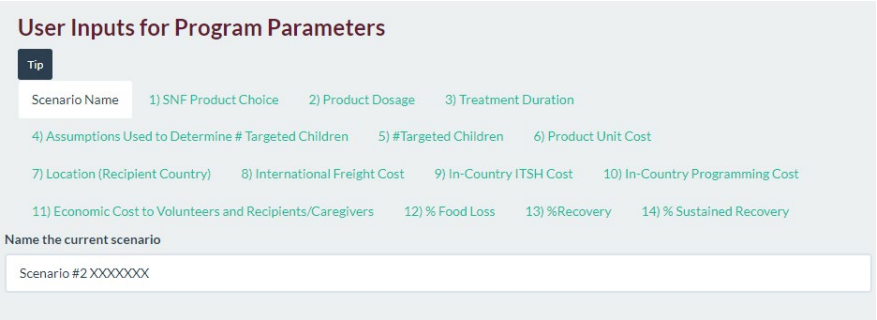
However, there is no available nutrition impact data (% recovery from SAM) for Scenario #2 in the context of interest to inform your % recovery input in subtab 13) of the "User Inputs for Program Parameter" panel.

In this situation, a tipping point analysis would be useful to determine the nutrition impact goal in % recovery that Scenario #2 needs to achieve in order to be equally or more cost-effective than Scenario #1 in financial cost per recovered child.

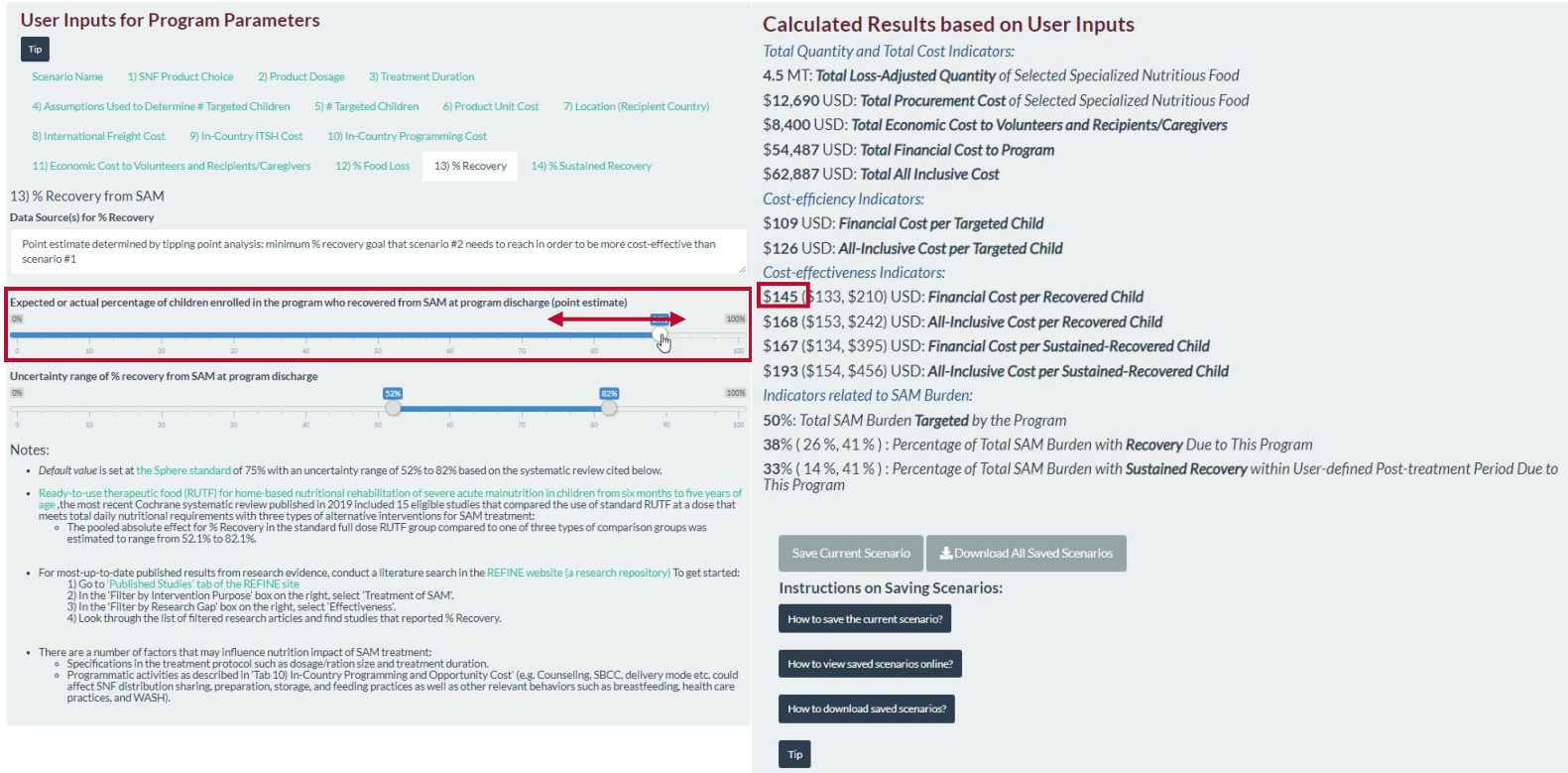
1 Find the ***Financial Cost per Recovered Child*** for Scenario #1: **$145**



2 Construct Scenario #2 by going through all subtabs except 13) % Recovery



3 In Subtab 13) % Recovery from SAM of Scenario #2, adjust the sliding cursor (point estimate) until as soon as ***Financial Cost per Recovered Child*** on the right panel "Calculated Results based on User Inputs" is ≤ **$145**. In this example, the tipping point for % Recovery in Scenario #2 is determined to be **89%**. Therefore, Scenario #2 needs to achieve **a minimum nutrition impact goal of 89% recovery or above** in order to be more cost-effective in financial cost per recovered child than Scenario #1 (71% recovery).



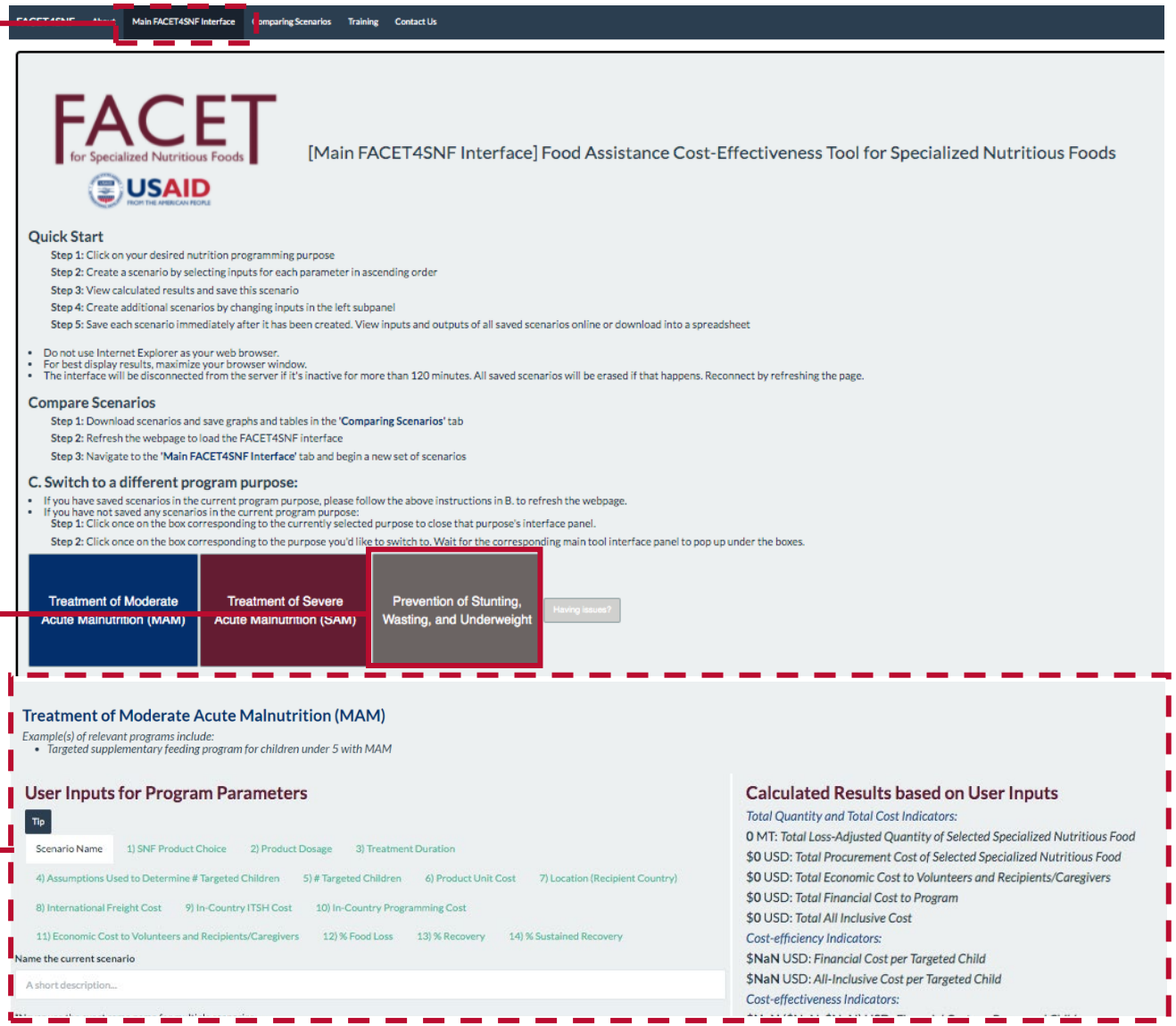
Step-by-Step Tutorial: Prevention of Stunting, Wasting, and/or Underweight

STEP 1.
IDENTIFY THE PROGRAM PURPOSE

1. Navigate to the FACET4SNF site and click on "Main FACET4SNF Interface" tab in the Header.

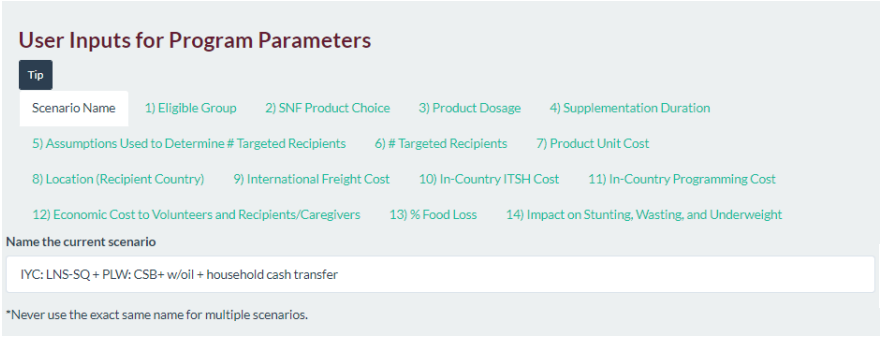
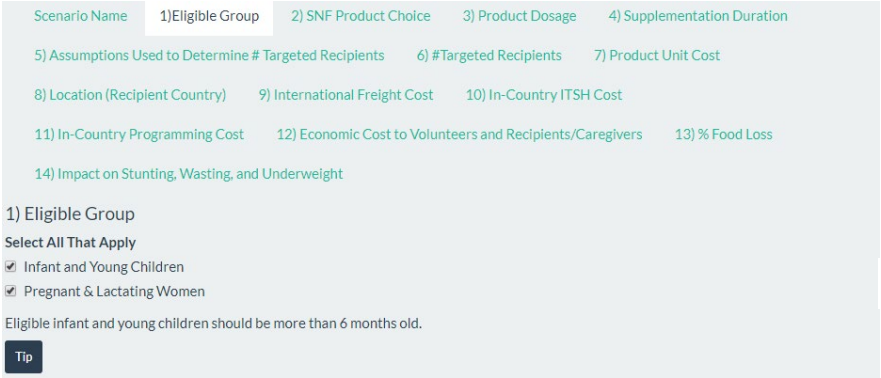
2. Select the program purpose option box for Prevention of Stunting, Wasting, and Underweight.

3. Scroll down to see the drop-down panels corresponding to entering user inputs (left) and viewing output results (right).

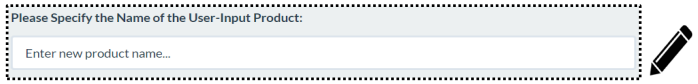
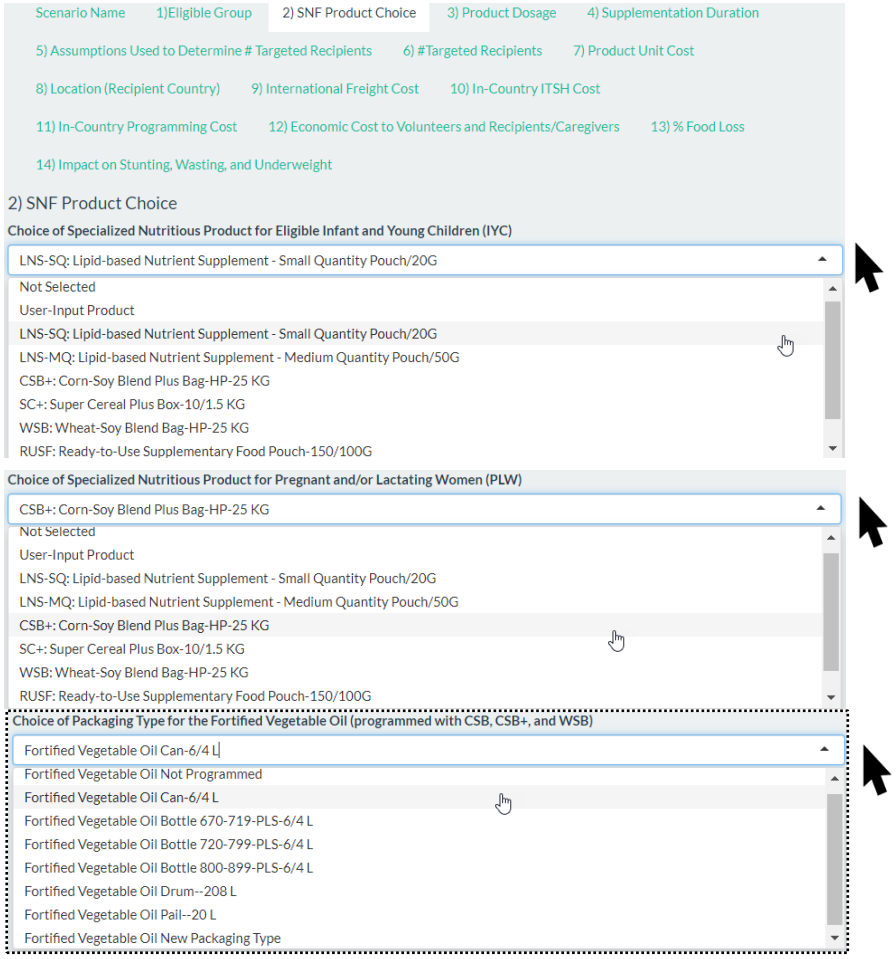


STEP 2. INPUT VALUES FOR PROGRAM PARAMETERS

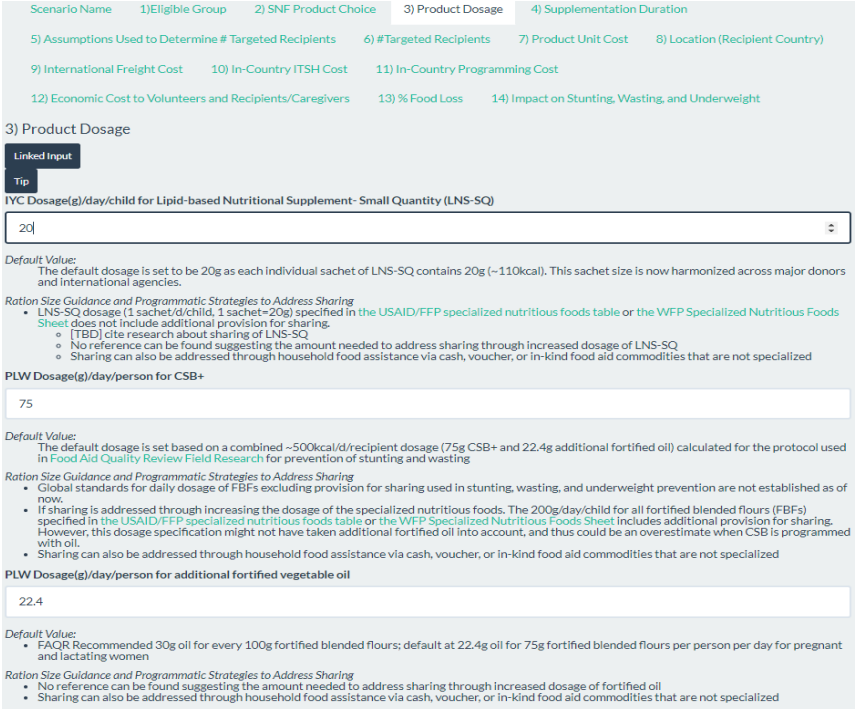
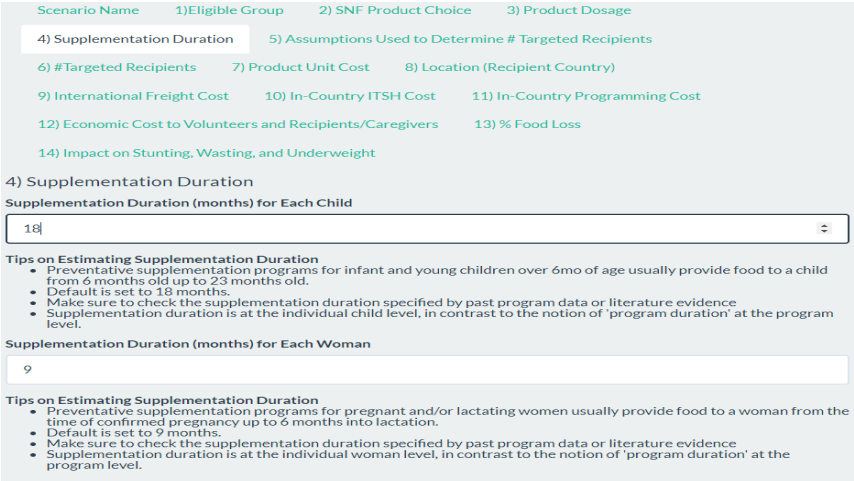
Now that you've selected the program purpose, you are ready to create one scenario! In the left panel under the heading "**User Inputs for Program Parameters**", you will go through a list of subtabs in ascending order because some FACET4SNF input choices depend on a prior selection.

VARIABLE	INSTRUCTIONS	SCREENSHOT
Scenario Name	Type a descriptive name to identify the current scenario. *Note: This is especially useful when multiple scenarios need to be saved and compared. You should only include keywords that would **differentiate** this scenario from other saved scenarios. Make sure that each saved scenario has a different name—this will help you remember which scenario is which and will also avoid bugs in viewing bar plots in the "Comparing Scenarios" Tab.*	
1) **Eligible Group**	Select the eligible group(s) that the SNF supplementation program is designed to target. *Notes:* *- Eligible infant and young children should be more than 6 months old.* *- The current scope of FACET4SNF excludes preventative supplementation programs with main goals related to birth outcomes and/or women's nutrition status.*	

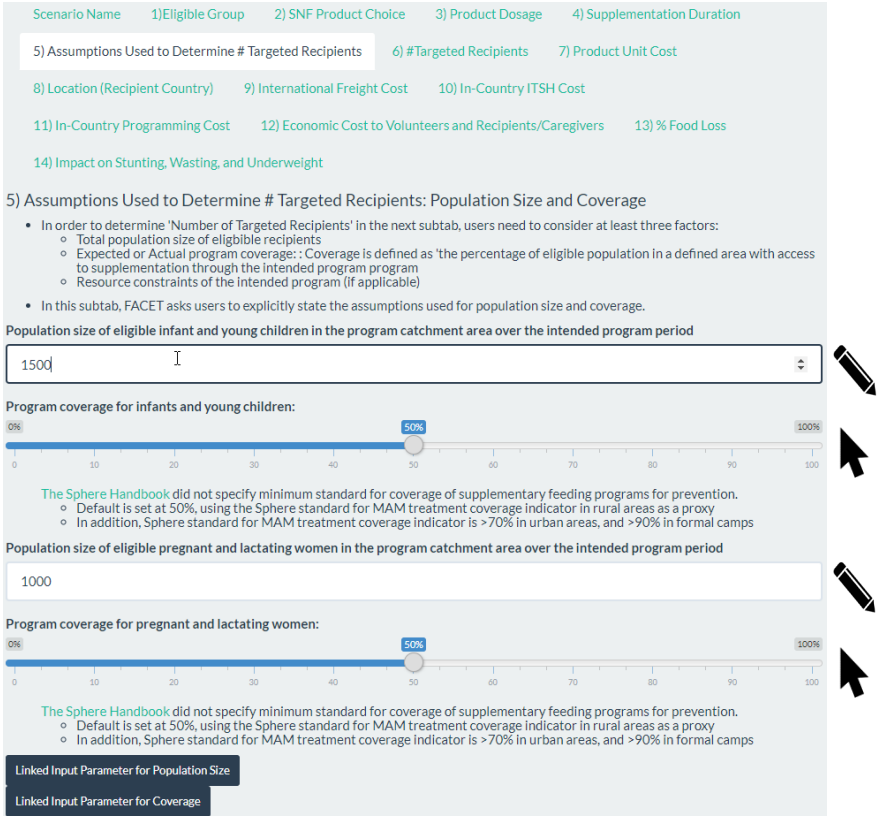
STEP 2. INPUT PROGRAM INFORMATION *(continued)*

VARIABLE	INSTRUCTIONS	SCREENSHOT
2) **SNF Product Choice**	For each selected eligible group, expand the drop-down menu and select one of the available SNF product options (and a fortified vegetable oil packaging option if applicable). *Notes:* *- Consistent with USAID naming, SNFs on the menu with "XX/YY" number format means XX number of packages per box and YY unit weight per package.* *-Selecting "User-Input Product": Use this option to enter an appropriate MAM treatment that is not included in the list. Once "User-Input Product" is selected, an input box will appear for you to type in the name of this SNF.*  *-Selecting Oil: Only when CSB+, CSB, WSB, or user-input product is selected, another drop-menu will pop up for you to choose a fortified vegetable oil packaging option if additional oil is programmed with the SNF. There is an option to specify "New Packaging Type", if applicable.*	

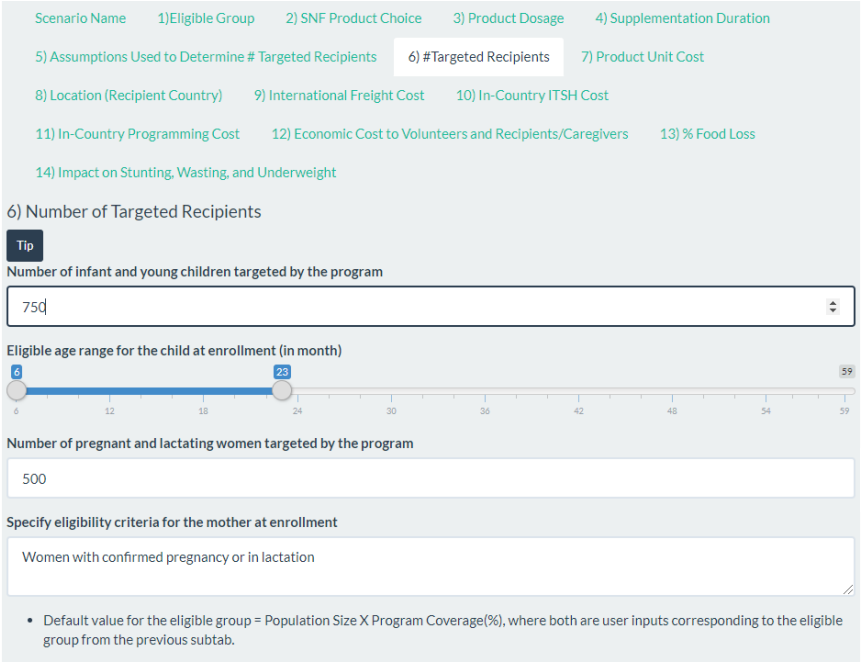
STEP 2. INPUT PROGRAM INFORMATION *(continued)*

VARIABLE	INSTRUCTIONS	SCREENSHOT
3) **Product Dosage** (grams per recipient per day)	Input the numerical value of the delivered dosage per day per recipient for the selected SNF product (and additionally for fortified vegetable oil, if applicable) for the selected eligible group(s). *Notes:* *- Default value: The default dosage in grams is equivalent to 500kcal/day for CSB+ with oil, SC+, WSB, and RUSF, 110kcal/day for LNS-SQ, and 275kcal/day for LNS-MQ. All default values assume no extra dosage to address sharing.* *- Sharing is commonly observed in programs for SNFs. Some ways it can be addressed is by increasing SNF dosage in this subtab or adding an additional program component such as household general food aid ration, cash or voucher in subtab 10) In-Country Programming Cost.* *- Click on the links of "the USAID/BHA specialized Nutritious Foods Table" and "the WFP Specialized Nutritious Foods Sheet" to view commonly programmed dosages.*	
4) **Supplementation Duration** (months)	Input the numerical value of the supplementation duration (in months) for the selected eligible group(s) *Notes:* *- For infant and young children, the supplementation commonly starts no earlier than 6-month-old and stops at up to 23-month-old.* *- For pregnant and lactating women, the supplementation commonly starts at some point during pregnancy and stops at up to 6 months into lactation.*	

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

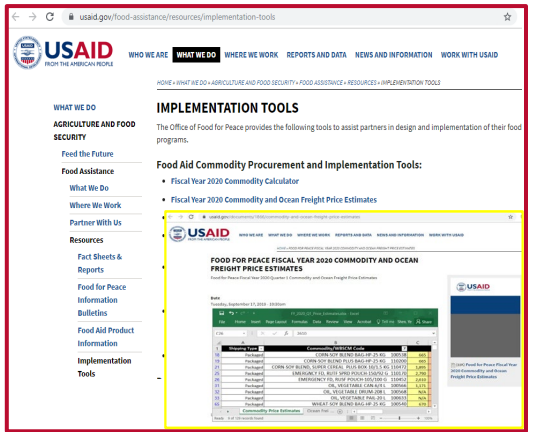
	VARIABLE	INSTRUCTIONS	SCREENSHOT
5)	**Assumptions Used to Determine # Targeted Recipients**	Input a numerical value for Population Size(s) of selected eligible group(s), *defined as total number of eligible infant young children or pregnant and lactating women in the program catchment area over the intended program period.* Slide to the percentage value(s) of Program Coverage for selected eligible group(s), *defined as percentage of eligible population(s) with access to supplementation through the program.* *Notes:* *- This subtab asks you to specify two key assumptions (population size and coverage) for FACET4SNF to calculate the default value of # Targeted Recipients in the next subtab.* *- Default values:* • *No default is set for population size for each eligible group (at zero).* • *The default % program coverage is set at 50%, the Sphere minimum standard in rural areas. Due to the lack of Sphere minimum standard for preventive programs, this default value uses the Sphere minimum standard of program coverage for MAM treatment in urban areas.* *- The Sphere minimum standard (for coverage of MAM programs) is 70% in urban areas, and 90% in formal camps.*	

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

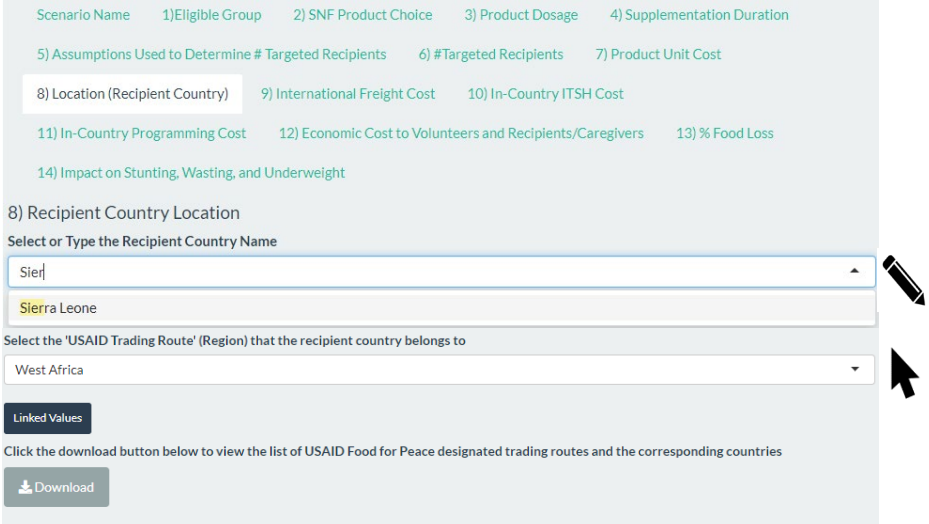
	VARIABLE	INSTRUCTIONS	SCREENSHOT
6)	**# Targeted Recipients**	Input the numerical value(s) for the number of recipients in selected eligible group(s) targeted by the program. Slide to the lower and upper bounds of the eligible age range (in months) for infant and young children, if this eligible group is selected. Type the eligibility criteria for pregnant and lactating women, if this eligible group is selected Notes: - Default values: Based on the inputs specified for the two assumptions in the previous subtab, *For each selected eligible group,* *Default # Targeted Recipients = (Population Size of eligible recipients in the program catchment area) x Program Coverage (%)* - If additional factors are used to determine number of targeted recipients for the program, you should input directly instead of using FACET4SNF default value.	

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
7)	**Product Unit Cost** ($US per MT)	Type the data source(s) and/or assumptions that you are using for your inputs in this subtab. Input the numerical value(s) for product cost per Metric Ton (MT) of the selected SNF product (an additional section will expand for a selected fortified vegetable oil option, if applicable). *Notes:* *- Default value: Whenever available, default value is set at the most recent procurement price of the selected SNF (and oil) from a USAID/BHA historical in-kind procurement dataset (2014- 2017). The histogram(s) additionally provide the distribution(s) of the historical data.* *- For end-line reporting, use the average procurement price incurred in the completed program.* *- For budgeting purposes via USAID/BHA in-kind procurement, the "Fiscal Year 20XX Commodity and Ocean Freight Price Estimates" is updated by USAID quarterly and uploaded as an excel file at USAID's website [Food Aid Commodity Procurement and Implementation Tools](). Download the excel file and find the estimate for the selected SNF (screenshot below).*	



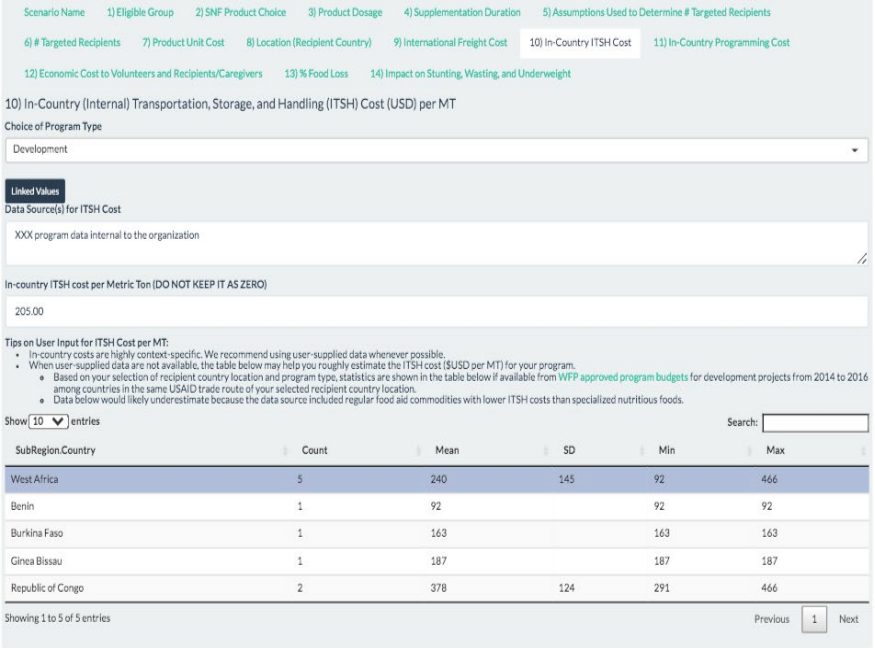
STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
8)	**Location (Recipient Country)**	Type or select the name of the recipient country. Select from the menu the standard USAID trading route (region) for international freight. *Note:* *- If unsure of the trading route, click the "Download" button to view a list of countries and their corresponding USAID/BHA designated trading routes.*	

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
9)	**International Freight Cost** ($US per MT)	Type the data source(s) and/or assumptions that you are using for your inputs in this subtab. Input the numerical value(s) for international freight cost per MT to deliver all selected food products to the first point of arrival at the recipient country. *Notes:* *- Default value: Whenever available, default value(s) are set at the most recent international freight price of the trading route from a USAID/BHA historical in-kind procurement dataset between 2014 and 2017.* *- For budgeting purposes via USAID/BHA in-kind procurement (imported from USA), the "Fiscal Year 20XX Commodity and Ocean Freight Price Estimates" is updated by USAID quarterly and uploaded as an excel file in USAID's website [Food Aid Commodity Procurement and Implementation Tools](). Download the excel file and find the freight estimate for the selected trading route. (Same file as shown in the screenshot for Product Unit Cost)* *- For end-line reporting, use the average international freight cost incurred in the completed program* *- For local procurement within the recipient country, enter 0. For all other purposes (e.g. regional or other non-US procurement), use your best available data source.* *- International freight cost data for USAID in-kind procurement supplied in FACET4SNF is by geography only, not by specific SNF (i.e. all transactions of SNFs and fortified vegetable oil were included to maximize freight data availability by region). Therefore, you will need to estimate based on your own sources if there is reason to believe that international freight cost will differ by food types.*	

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
10)	**In-Country ITSH Cost** ($US per MT)	Type the data source(s) and/or assumptions that you are using for your inputs in this subtab. Select the program type to indicate whether it is a development or an (protracted) emergency program. Input the numerical value of the ITSH cost per MT. *Notes:* *- Default value: No default is set for ITSH cost per MT (at zero) due to the highly context-specific nature of this input. However, in reality, ITSH cost per metric ton should never be zero. You should justify in the "Data Source(s) for ITSH Cost" if you keep this input as zero.* *- If you do not have access to more appropriate data sources for ITSH cost, FACET4SNF supplies rough estimates from WFP approved budgets from 2014 to 2016. The data table corresponds to the program type specified above and the USAID trading route (region) specified in subtab 7) Location (Recipient Country).*	

Scenario Name | 1) Eligible Group | 2) SNF Product Choice | 3) Product Dosage | 4) Supplementation Duration | 5) Assumptions Used to Determine # Targeted Recipients | 6) # Targeted Recipients | 7) Product Unit Cost | 8) Location (Recipient Country) | 9) International Freight Cost | 10) In-Country ITSH Cost | 11) In-Country Programming Cost | 12) Economic Cost to Volunteers and Recipients/Caregivers | 13) % Food Loss | 14) Impact on Stunting, Wasting, and Underweight

10) In-Country (Internal) Transportation, Storage, and Handling (ITSH) Cost (USD) per MT

Choice of Program Type

Development

Linked Values

Data Source(s) for ITSH Cost

XXX program data internal to the organization

In-country ITSH cost per Metric Ton (DO NOT KEEP IT AS ZERO)

205.00

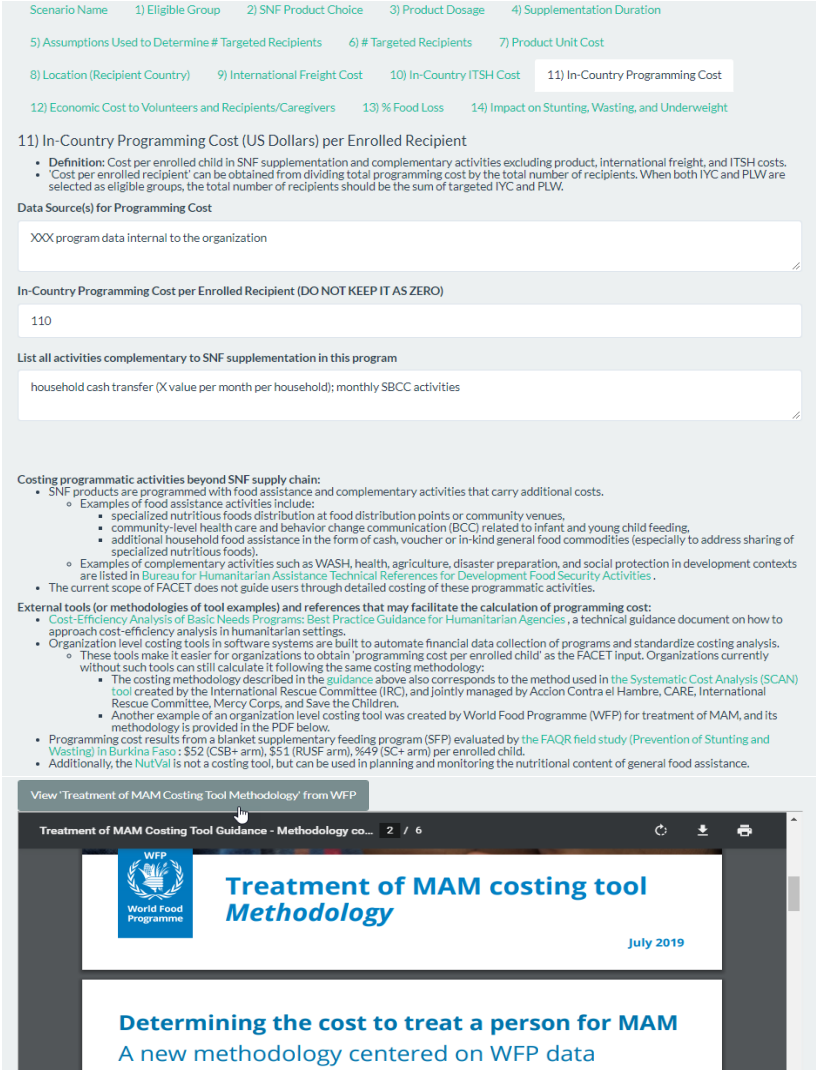
Tips on User Input for ITSH Cost per MT:
- In-country costs are highly context-specific. We recommend using user-supplied data whenever possible.
- When user-supplied data are not available, the table below may help you roughly estimate the ITSH cost ($USD per MT) for your program.
  - Based on your selection of recipient country location and program type, statistics are shown in the table below if available from WFP approved program budgets for development projects from 2014 to 2016 among countries in the same USAID trade route of your selected recipient country location.
  - Data below would likely underestimate because the data source included regular food aid commodities with lower ITSH costs than specialized nutritious foods.

Show 10 entries Search:

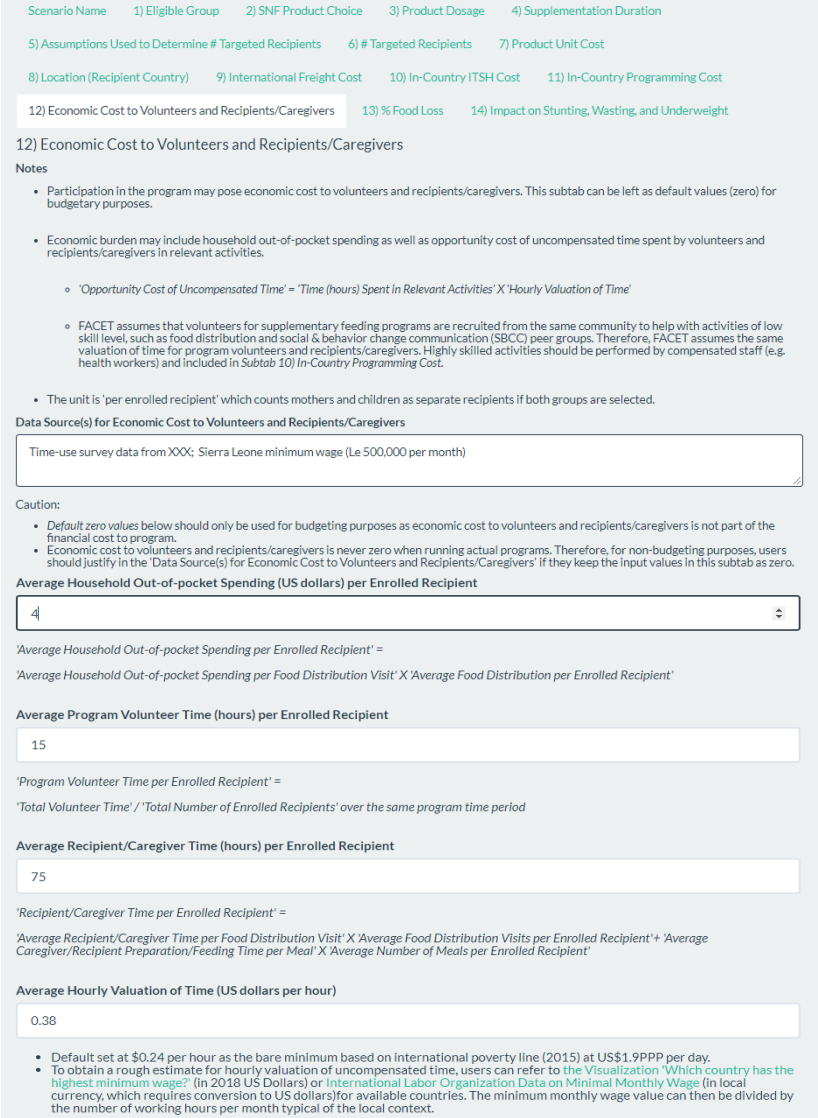
SubRegion.Country	Count	Mean	SD	Min	Max
West Africa	5	240	145	92	466
Benin	1	92		92	92
Burkina Faso	1	163		163	163
Ginea Bissau	1	187		187	187
Republic of Congo	2	378	124	291	466

Showing 1 to 5 of 5 entries Previous 1 Next

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
11)	**In-Country Programming Cost** ($US per recipient)	Type the data source(s) and/or assumptions that you are using for your inputs in this subtab. Input the numerical value for in-country programming cost per enrolled recipient, *which can be estimated from dividing total programming cost by total number of enrolled recipients.* List all program activities complementary to delivery of the SNF in the programming cost. *Notes:* *- Default value: No default is set for programming cost per child (at zero) due to the highly context-specific nature of this input. However, in reality, this should never be zero. You should justify in the "Data Source(s) for Programming Cost" if you keep this input as zero.* *- Think through the cost of various program activities, excluding the SNF supply chain. This may include activities related to the SNF supplementation AND other activities complementary to supplementation. If unsure about whether an activity should be included, try to determine if the goal of this activity directly contributes to the nutrition impact specified in FACET4SNF.* *- While FACET4SNF doesn't provide step-by-step guidance to estimate the programming cost input, relevant guidance and complementary costing tool examples are referenced to facilitate the calculation of programming cost per enrolled recipient:* • *Guidance on program costing methodology:* *[Cost-Efficiency Analysis of Basic Needs Programs: Best Practice Guidance for Humanitarian Agencies]* • *Two examples of organization-level costing tools that systematically use financial data internal to the organization to calculate program cost outputs:* *1. International Rescue Committee: [Systematic Cost Analysis (SCAN) tool]* *2. World Food Programme: Treatment of MAM Costing Tool (Click the grey button on the interface to view the methodology document)*	

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
12)	**Economic Cost to Volunteers and Recipients/ Caregivers**	Type the data source(s) and/or assumptions that you are using for your inputs in this subtab. Input the numerical values for the following parameters that will allow FACET4SNF to calculate economic cost to volunteers and recipients/caregivers: 1. Average Household Out-of-pocket Spending per Enrolled Recipient ($US) = *Average Household Out-of-pocket Spending per Distribution X Average Number of Distributions per Enrolled Recipient* - *Example: transportation cost for the caregiver/recipient to reach the food distribution point* 2. Average Program Volunteer Time per Enrolled Recipient (hours) = $\frac{Total\ Volunteer\ Time}{Total\ Number\ of\ Enrolled\ Recipients}$, *where enumerator and denominator should be over the same program time period* - *Examples: food distribution, lead mother activities for social & behavior change communication (SBCC) peer groups* 3. Average Caregiver/Recipient Time per Enrolled Recipient (hours) = *(Average Caregiver/Recipient Time per Distribution X Average Number of Distributions per Enrolled Recipient) + (Average Caregiver/Recipient Preparation/Feeding Time per Meal X Average Number of Meals per Enrolled Recipient)* - *Examples: travel, distribution visit, preparation and feeding of SNFs (exclude children's self-feeding time)* 4. Average Hourly Valuation of Time ($US per hour) - Default values: default is set at $0.24 per hour as the bare minimum based on international poverty line (2015) of $1.9 PPP per day. - *FACET4SNF provides links to mandated minimum wage (formal sector) data for available countries. If possible, try to find context-specific wage information that matches the profile of the population.* *- Default values: No default is set for the first three parameters (at zero) due to their highly context-specific nature. For non-budgeting purposes, justify zero values in the "Data Source(s)".*	

Scenario Name | 1) Eligible Group | 2) SNF Product Choice | 3) Product Dosage | 4) Supplementation Duration | 5) Assumptions Used to Determine # Targeted Recipients | 6) # Targeted Recipients | 7) Product Unit Cost | 8) Location (Recipient Country) | 9) International Freight Cost | 10) In-Country ITSH Cost | 11) In-Country Programming Cost | 12) Economic Cost to Volunteers and Recipients/Caregivers | 13) % Food Loss | 14) Impact on Stunting, Wasting, and Underweight

12) Economic Cost to Volunteers and Recipients/Caregivers

Notes

- Participation in the program may pose economic cost to volunteers and recipients/caregivers. This subtab can be left as default values (zero) for budgetary purposes.
- Economic burden may include household out-of-pocket spending as well as opportunity cost of uncompensated time spent by volunteers and recipients/caregivers in relevant activities.
  - *'Opportunity Cost of Uncompensated Time' = 'Time (hours) Spent in Relevant Activities' X 'Hourly Valuation of Time'*
  - FACET assumes that volunteers for supplementary feeding programs are recruited from the same community to help with activities of low skill level, such as food distribution and social & behavior change communication (SBCC) peer groups. Therefore, FACET assumes the same valuation of time for program volunteers and recipients/caregivers. Highly skilled activities should be performed by compensated staff (e.g. health workers) and included in *Subtab 10) In-Country Programming Cost.*
- The unit is 'per enrolled recipient' which counts mothers and children as separate recipients if both groups are selected.

Data Source(s) for Economic Cost to Volunteers and Recipients/Caregivers

Time-use survey data from XXX; Sierra Leone minimum wage (Le 500,000 per month)

Caution:

- *Default zero values* below should only be used for budgeting purposes as economic cost to volunteers and recipients/caregivers is not part of the financial cost to program.
- Economic cost to volunteers and recipients/caregivers is never zero when running actual programs. Therefore, for non-budgeting purposes, users should justify in the 'Data Source(s) for Economic Cost to Volunteers and Recipients/Caregivers' if they keep the input values in this subtab as zero.

Average Household Out-of-pocket Spending (US dollars) per Enrolled Recipient

4

'Average Household Out-of-pocket Spending per Enrolled Recipient' =

'Average Household Out-of-pocket Spending per Food Distribution Visit' X 'Average Food Distribution per Enrolled Recipient'

Average Program Volunteer Time (hours) per Enrolled Recipient

15

'Program Volunteer Time per Enrolled Recipient' =

'Total Volunteer Time' / 'Total Number of Enrolled Recipients' over the same program time period

Average Recipient/Caregiver Time (hours) per Enrolled Recipient

75

'Recipient/Caregiver Time per Enrolled Recipient' =

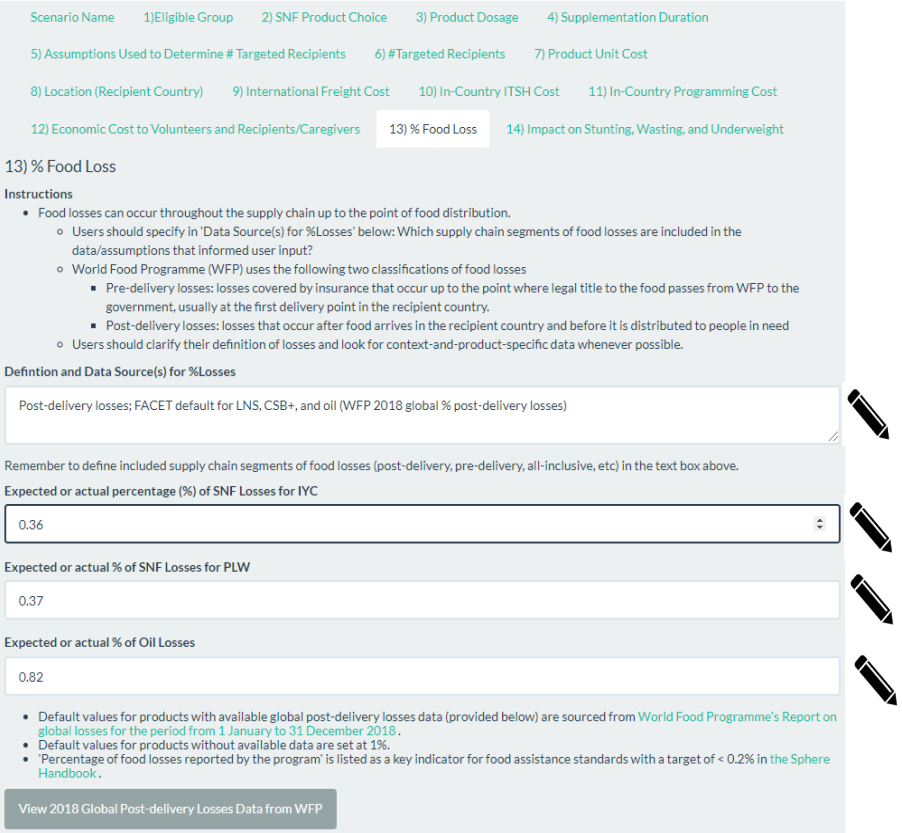
'Average Recipient/Caregiver Time per Food Distribution Visit' X 'Average Food Distribution Visits per Enrolled Recipient' + 'Average Caregiver/Recipient Preparation/Feeding Time per Meal' X 'Average Number of Meals per Enrolled Recipient'

Average Hourly Valuation of Time (US dollars per hour)

0.38

- Default set at $0.24 per hour as the bare minimum based on international poverty line (2015) at US$1.9PPP per day.
- To obtain a rough estimate for hourly valuation of uncompensated time, users can refer to the Visualization 'Which country has the highest minimum wage?' (in 2018 US Dollars) or International Labor Organization Data on Minimal Monthly Wage (in local currency, which requires conversion to US dollars)for available countries. The minimum monthly wage value can then be divided by the number of working hours per month typical of the local context.

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

	VARIABLE	INSTRUCTIONS	SCREENSHOT
13)	**% Food Loss** (%)	Type the definition of food losses, and data source(s) and/or assumptions that you are using for your inputs in this subtab. Input the numerical percent value(s) for % food losses for the selected SNF (and additionally for oil, if applicable). For example, the value "1.35" in the input box implies that 1.35% of the total procured quantity is lost. *Notes:* *- In "Data Source(s) for % Losses", You should specify the supply chain segments of the food losses included in the data or assumptions that inform your input. For example, the World Food Programme uses the following classification of food losses:* • *Pre-delivery losses: losses covered by insurance that occur up to the point where legal title to the food passes from WFP to the government, usually at the first delivery point in the recipient country.* • *Post-delivery losses: losses that occur after food arrives in the recipient country and before it is distributed to people in need.* *- FACET4SNF default value: default values are product-specific global % post-delivery losses based on available data from [World Food Programme's Report on global losses for the period from 1 January to 31 December 2018](). For unavailable products, default is set at 1%.* *- Click on the grey button, "View 2018 Global Post-delivery Losses Data from WFP" to view on the interface the appendix table in [WFP's report]() used to set default values.*	

STEP 2. INPUT PROGRAM INFORMATION *(continued)*

VARIABLE	INSTRUCTIONS	SCREENSHOT
14) **Impact on Stunting, Wasting, and Underweight**	Type the data source(s) and/or assumptions that you are using for your inputs in this subtab. Specify your program goals; include the focus of Stunting, Wasting, and/or Underweight Check the boxes corresponding to the relevant nutrition outcome(s) for the intended program scenario Slide to the relevant point estimate(s) in percentage points (pp) reduction in Stunting, Wasting, and/or Underweight Slide to the relevant lower and upper bounds of the uncertainty range(s) in percentage points (pp) reduction in Stunting, Wasting, and/or Underweight *Notes:* *- Default value: Default values for percentage points reduction in stunting, wasting, and underweight are set at point estimate of 0 pp with an uncertainty range of 0 pp to 10 pp. You should change this input based on available program or literature data appropriate to your product choice, treatment protocol specifics, and context of interest.* *- Whenever available, FACET4SNF supplies research evidence data table(s) summarizing relevant research literature (up to 2019) corresponding to the selected eligible group(s) and the selected SNF(s). These tables contain data on study info, nutrition impact, program specifics, and complementary activities.* *- For most-up-to-date published results, conduct additional literature search in the REFINE website. Follow the respective instructions on the interface.* *- The uncertainty range inputs for percentage points reduction in stunting, wasting, or underweight will be used to construct the ranges for the financial and all-inclusive cost per case of stunting, wasting, or underweight indicators.*	

STEP 3. REVIEW CALCULATED RESULTS & SAVE THE COMPLETED SCENARIO

Now you are done inputting values for all the required parameters in one scenario!

Based on your inputs, FACET4SNF calculates a list of indicators related to total quantity, total cost, cost-efficiency, and cost-effectiveness. These are shown in the right-hand panel of the page under "**Calculated Results based on User Inputs**".

Hover over the "**Tip**" buttons for a better understanding of concepts including "cost per case averted", "mother-child pair", "how to calculate number of cases averted".

Make sure you **save this scenario!**

A message will show up below this button notifying you of the number of saved scenarios.

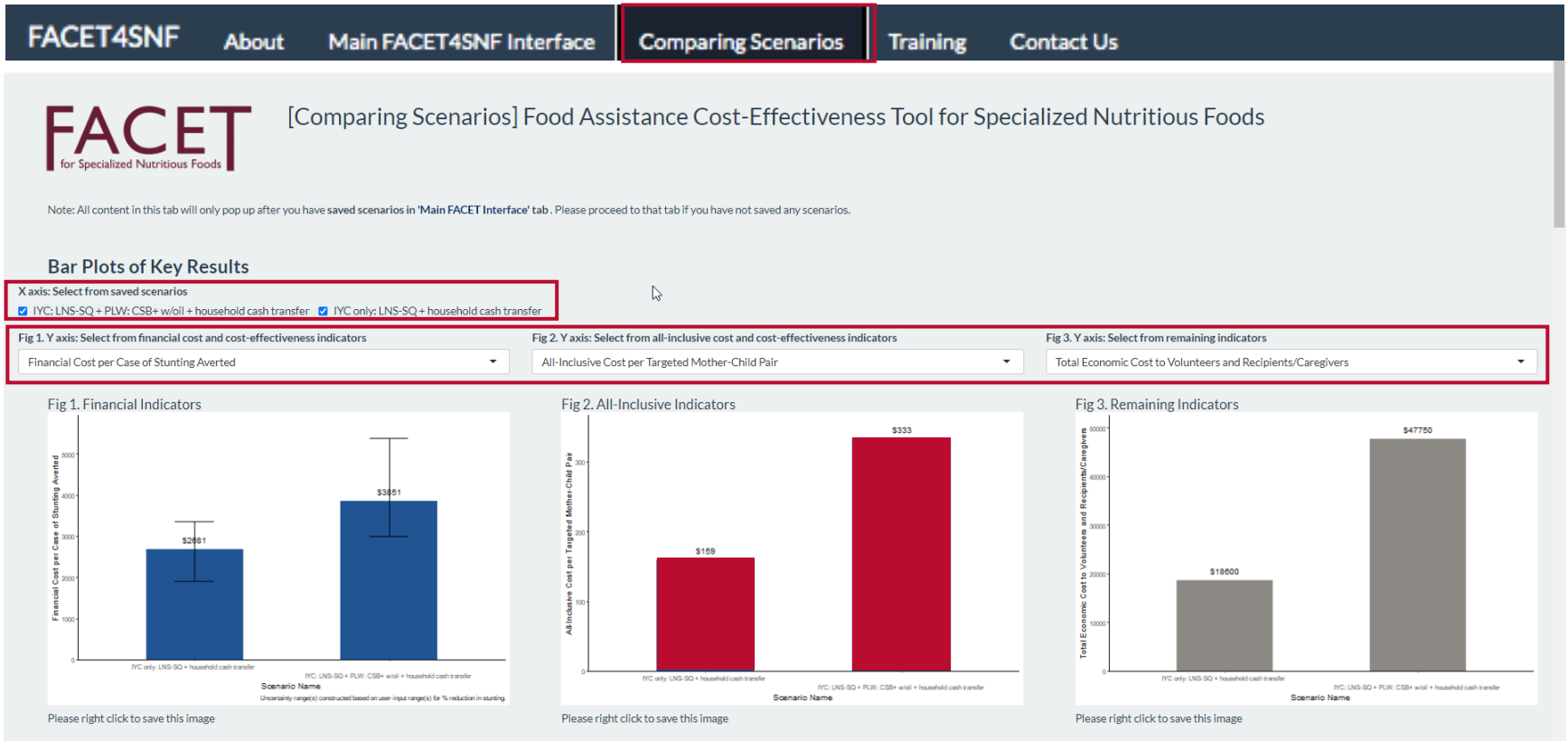
STEP 4. CREATE AND SAVE MORE SCENARIOS

Now you can go back and change some of your inputs in the left-side panel "**User Inputs for Program Parameters**" as demonstrated in Step 2 and create another scenario. Save and repeat until you have created and saved all the scenarios that you would like to compare!

STEP 5.1 COMPARE SCENARIOS VIA BAR PLOTS

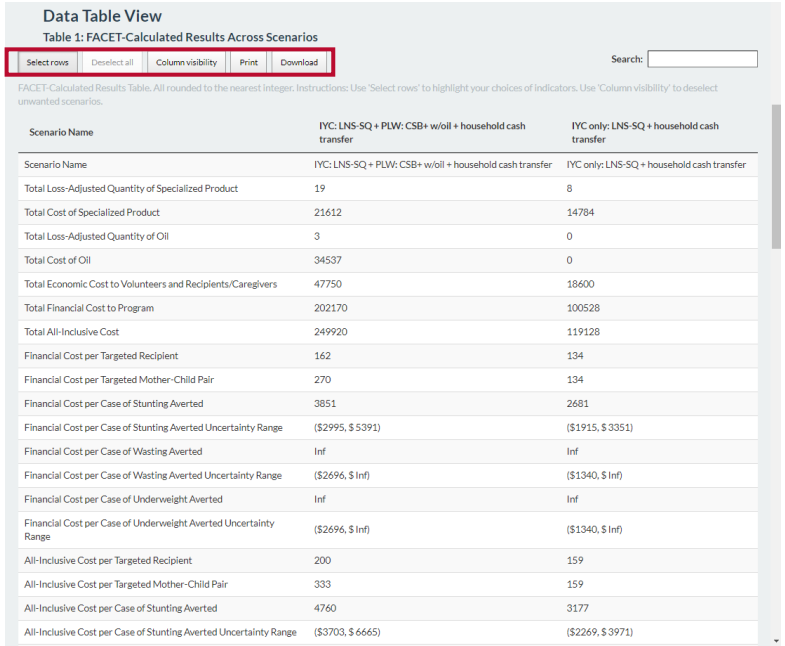
Navigate to the "Comparing Scenarios" tab. To view the bar plots:

1) Make sure that only the scenarios that you would like to compare are selected in the checkboxes under "X axis: Select from saved scenarios".
2) Select one indicator of interest from the menu for each figure under "Y axis: Select from … indicators". The first figure shows indicators that only include financial cost to program. The second figure shows indicators that include both financial cost to program and economic cost to volunteers and recipients/ caregivers (i.e. all-inclusive cost).



STEP 5.2 COMPARE VIA INTERACTIVE TABLES & DOWNLOAD SAVED SCENARIOS

Below the bar plots, you can also compare the scenarios by viewing two interactive tables: one displaying FACET4SNF-calculated results and the other displaying user inputs. Use "Column visibility" button to deselect any unwanted saved scenarios. Use "Select rows" button to highlight indicators/inputs of interest and then use "Print" or "Download" to print or save tables with only those indicators in pdf or excel formats.



Data Table View

Table 1: FACET-Calculated Results Across Scenarios

Select rows | Deselect all | Column visibility | Print | Download

Search:

FACET-Calculated Results Table. All rounded to the nearest integer. Instructions: Use 'Select rows' to highlight your choices of indicators. Use 'Column visibility' to deselect unwanted scenarios.

Scenario Name	IYC: LNS-SQ + PLW: CSB+ w/oil + household cash transfer	IYC only: LNS-SQ + household cash transfer
Scenario Name	IYC: LNS-SQ + PLW: CSB+ w/oil + household cash transfer	IYC only: LNS-SQ + household cash transfer
Total Loss-Adjusted Quantity of Specialized Product	19	8
Total Cost of Specialized Product	21612	14784
Total Loss-Adjusted Quantity of Oil	3	0
Total Cost of Oil	34537	0
Total Economic Cost to Volunteers and Recipients/Caregivers	47750	18600
Total Financial Cost to Program	202170	100528
Total All-Inclusive Cost	249920	119128
Financial Cost per Targeted Recipient	162	134
Financial Cost per Targeted Mother-Child Pair	270	134
Financial Cost per Case of Stunting Averted	3851	2681
Financial Cost per Case of Stunting Averted Uncertainty Range	($2995, $ 5391)	($1915, $ 3351)
Financial Cost per Case of Wasting Averted	Inf	Inf
Financial Cost per Case of Wasting Averted Uncertainty Range	($2696, $ Inf)	($1340, $ Inf)
Financial Cost per Case of Underweight Averted	Inf	Inf
Financial Cost per Case of Underweight Averted Uncertainty Range	($2696, $ Inf)	($1340, $ Inf)
All-Inclusive Cost per Targeted Recipient	200	159
All-Inclusive Cost per Targeted Mother-Child Pair	333	159
All-Inclusive Cost per Case of Stunting Averted	4760	3177
All-Inclusive Cost per Case of Stunting Averted Uncertainty Range	($3703, $ 6665)	($2269, $ 3971)

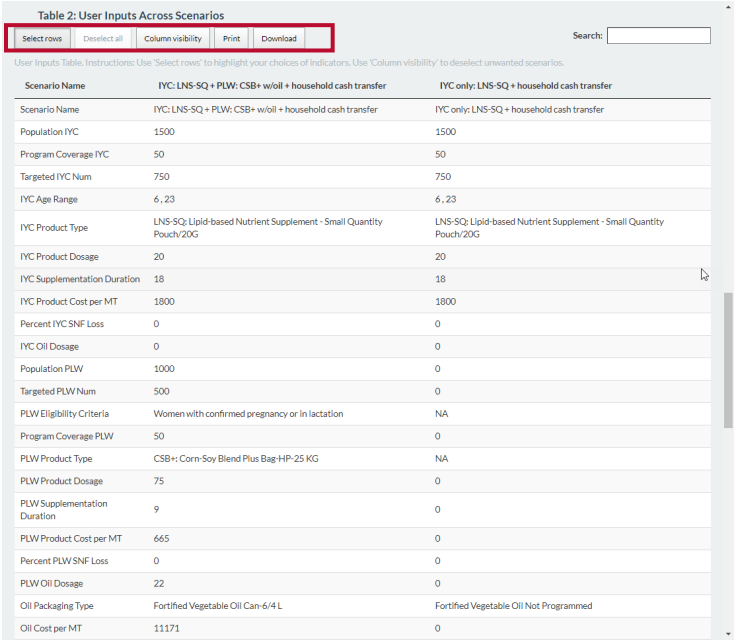


Table 2: User Inputs Across Scenarios

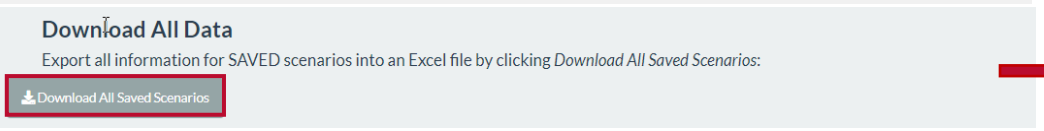
Select rows | Deselect all | Column visibility | Print | Download

Search:

User Inputs Table. Instructions: Use 'Select rows' to highlight your choices of indicators. Use 'Column visibility' to deselect unwanted scenarios.

Scenario Name	IYC: LNS-SQ + PLW: CSB+ w/oil + household cash transfer	IYC only: LNS-SQ + household cash transfer
Scenario Name	IYC: LNS-SQ + PLW: CSB+ w/oil + household cash transfer	IYC only: LNS-SQ + household cash transfer
Population IYC	1500	1500
Program Coverage IYC	50	50
Targeted IYC Num	750	750
IYC Age Range	6 , 23	6 , 23
IYC Product Type	LNS-SQ: Lipid-based Nutrient Supplement - Small Quantity Pouch/20G	LNS-SQ: Lipid-based Nutrient Supplement - Small Quantity Pouch/20G
IYC Product Dosage	20	20
IYC Supplementation Duration	18	18
IYC Product Cost per MT	1800	1800
Percent IYC SNF Loss	0	0
IYC Oil Dosage	0	0
Population PLW	1000	0
Targeted PLW Num	500	0
PLW Eligibility Criteria	Women with confirmed pregnancy or in lactation	NA
Program Coverage PLW	50	0
PLW Product Type	CSB+: Corn-Soy Blend Plus Bag-HP-25 KG	NA
PLW Product Dosage	75	0
PLW Supplementation Duration	9	0
PLW Product Cost per MT	665	0
Percent PLW SNF Loss	0	0
PLW Oil Dosage	22	0
Oil Packaging Type	Fortified Vegetable Oil Can-6/4 L	Fortified Vegetable Oil Not Programmed
Oil Cost per MT	11171	0

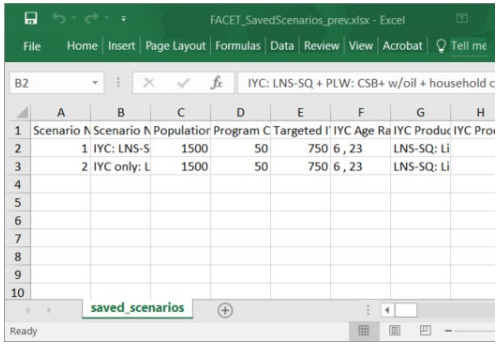
Download all saved scenarios to an excel spreadsheet using the "Download All Saved Scenarios" button. This button can be found in the right panel of the "Main Interface" tab as well as the end of the "Comparing Scenarios" tab. Data in the excel sheet can be used for further analyses, visualizations, and reporting. They can also be added to your organization's designated databases to track all programs.



Download All Data

Export all information for SAVED scenarios into an Excel file by clicking *Download All Saved Scenarios*:

Download All Saved Scenarios



FACET_SavedScenarios_prev.xlsx - Excel

File | Home | Insert | Page Layout | Formulas | Data | Review | View | Acrobat | Tell me

B2 | IYC: LNS-SQ + PLW: CSB+ w/oil + household c

	A	B	C	D	E	F	G	H
1	Scenario N	Scenario N	Populatior	Program C	Targeted I'	IYC Age Ra	IYC Produc	IYC Pro
2	1	IYC: LNS-S	1500	50	750	6 , 23	LNS-SQ: Li	
3	2	IYC only: L	1500	50	750	6 , 23	LNS-SQ: Li	
4								
5								
6								
7								
8								
9								
10								

saved_scenarios

Ready

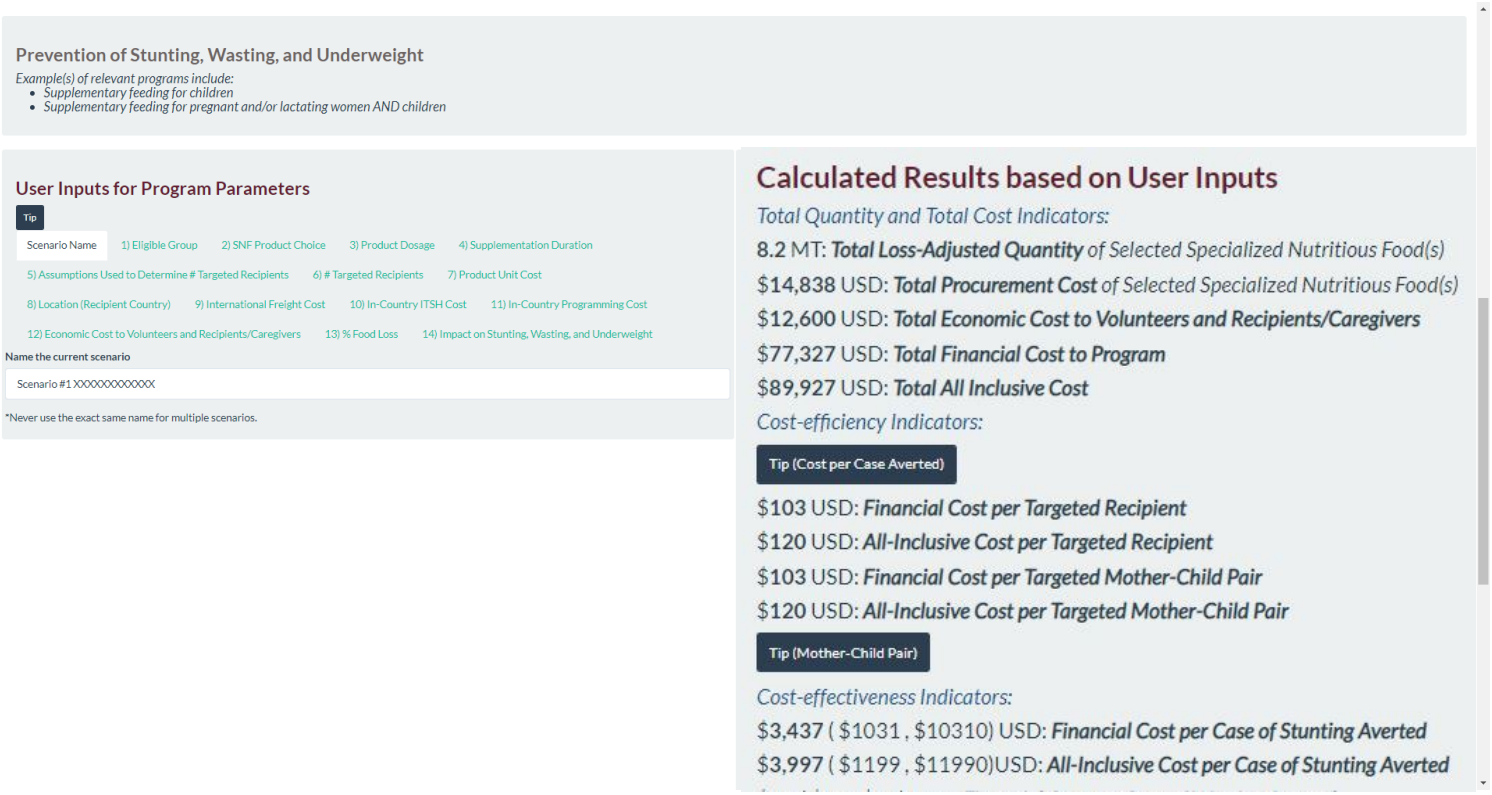
OPTIONAL STEP. CONDUCT A TIPPING POINT ANALYSIS (IF NEEDED)

Example: Assume that you have saved a complete set of inputs and outputs for Scenario #1 (**5 pp** reduction in stunting). Now you want to construct another scenario and explore how Scenario #2 compares with Scenario #1 for cost-effectiveness in financial cost per case of stunting averted.

However, there is no available nutrition impact data (% reduction in stunting) for Scenario #2 in the context of interest to inform your pp reduction in stunting input in subtab 14) of the "User Inputs for Program Parameter" panel.

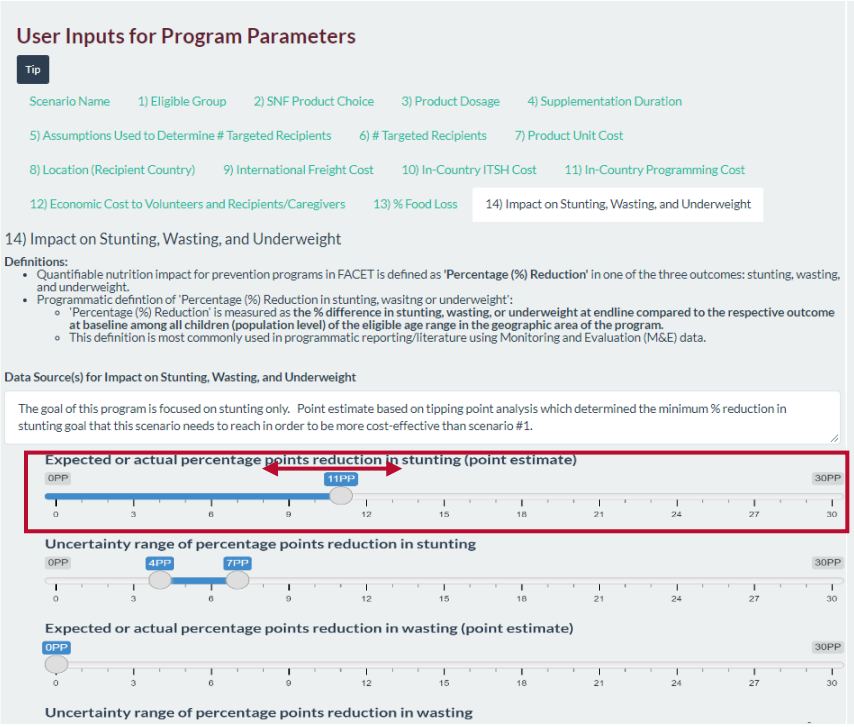
In this situation, a tipping point analysis would be useful to determine the nutrition impact goal (pp reduction in stunting) that Scenario #2 needs to achieve in order to be equally or more cost-effective than Scenario #1 in financial cost per case of stunting averted.

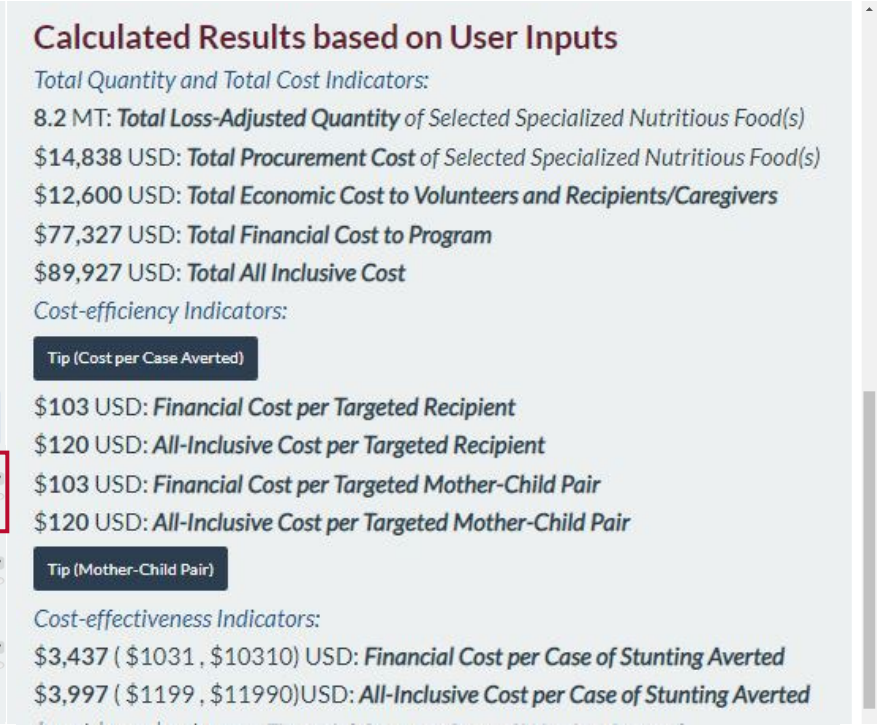
1. Find the ***Financial Cost per*** Case of Stunting Averted for Scenario #1: **$3,437**



2 Construct Scenario #2 by going through all subtabs except 14) Impact on Stunting, Wasting, and Underweight

3 In subtab 14) Impact on Stunting, Wasting, and Underweight of Scenario #2, adjust the "Expected or actual percentage points reduction in stunting" cursor (point estimate) until ***Financial Cost per Case of Stunting Averted*** on the right panel "Calculated Results based on User Inputs" is ≤ **$3,437**. In this example, the tipping point for pp reduction in stunting in Scenario #2 is determined to be **11 pp**. Therefore, Scenario #2 needs to achieve **a minimum nutrition impact goal of 11 pp reduction or above in stunting** in order to be more cost-effective in financial cost per case of stunting averted than Scenario #1.





V. Hypothetical Examples

The examples provided in this section are based on *hypothetical* scenarios and numbers. They demonstrate the use of FACET4SNF by **decision makers in implementation and funding organizations** of SNF-based nutrition programs. Specifically, users can compare **program designs**, **SNF product, and procurement choices** throughout **program cycles** or during **new product evaluation.** You can use these examples as templates for how you draw insights to inform your work from using FACET4SNF.

	Demo Use/ Purpose	**Ex-ante or Ex-post**
Example A Pages 98-102	Developing and submitting a proposal	Ex-ante
Example B Pages 103-106	Reviewing a proposal	Ex-ante
Example C Pages 107-109	End-line reporting for a completed program	Ex-post
Example D Pages 110-116	End-line program review	Ex-post and Ex-ante
Example E Pages 117-120	Comparing procurement channels for (new) SNF products	Ex-ante

Example A: Developing and submitting a proposal

1 START HERE : HYPOTHETICAL BACKGROUND

Your organization, Project Nourish, has worked on SNF-based nutrition programs in Nigeria for many years. A funding agency XYZ recently issued a Call for Proposals for Moderate Acute Malnutrition (MAM) treatment programs in the region of Nigeria where your organization has existing programs. Project Nourish's Regional Advisor asks you to identify the organization's programming options.

Working with your network of local partners, you identify an area with high rates of MAM and is located within 10 miles of a health clinic. You know that SC+ was provided to target children at 200g/day in past treatment programs to address possible sharing among household members. You have endline results from past program impact data on recovery from MAM, but not relapse/sustained recovery.

Using the FACET4SNF interface, you **set up an initial scenario** using the following information as FACET4SNF inputs:

PROGRAM PARAMETERS	2 Scenario #1 Inputs	Example Data Sources & Assumptions
Scenario Name	SC+ (200g per day)	
1) Product Choice	SC+: Super Cereal Plus Box – 10/1.5 kg	
2) Product Dosage	200 g/day/child	
3) Treatment Duration	7.8 weeks	
4) Assumptions Used to Determine # Targeted Children	Burden of MAM: 2,000 children with MAM; Program coverage: 50%; Rural	
5) # Targeted Children	1,000 children	
6) Product Unit Cost*	$1,895/MT	USAID FY20 Q1 Commodity & Freight Price Estimates
7) Location (Recipient Country)	Nigeria; West Africa Trade Route	
8) International Freight Cost*	$190/MT	
9) In-Country ITSH Cost*	Context: Development; $200/MT	Past program cost data
10) In-Country Programming Cost*	$55 per child; no complementary activities	
11) Economic Cost to Volunteers and Recipients/Caregivers*	$1.2/child out-of-pocket; 0 volunteer time; 25 hours/child caregiver time; $0.66/hour	Time-use survey from M&E; ILO minimum wage for Nigeria
12) % Food Loss*	1%	FACET4SNF default
13) % Recovery	70% (60% - 80%)	Past program impact data (range) from M&E
14) % Sustained Recovery	6 months post-intervention; 63% (54% - 75%)	FACET4SNF default

* Indicates that the subtab also asks the user to add data sources and assumptions for the input(s) entered.

FACET4SNF calculates results for Scenario #1 based on the provided

3

CALCULATED RESULTS

Total Quantity and Total Cost Indicators	
SNF Quantity Needed	11 MT
SNF Procurement Cost	$20,902
Oil Quantity Needed	0 MT
Oil Procurement Cost	$0
Total Economic Cost to Volunteers and Recipients/Caregivers	$17,700
Total Financial Cost	$80,204
Total All-Inclusive Cost	$97,904
Cost Efficiency Indicators	
Financial Cost Per Targeted Child	$80
All-Inclusive Cost Per Targeted Child	$98
Cost Effectiveness Indicators	
Financial Cost Per Recovered Child	$115 ($100, $134)
All-Inclusive Cost Per Recovered Child	$140 ($122, $163)
Financial Cost Per Sustained Recovered Child	$182 ($134, $248)
All-Inclusive Cost Per Sustained-Recovered Child	$222 ($163, $302)
Indicators Related to MAM Burden	
Total MAM Burden Targeted	75%
% Recovered from MAM	56% (49%, 64%)
% Sustained Recovery from MAM	35% (25%, 46%)

4

CREATE SCENARIO #2

Now that you have an understanding of the expected program results from "Scenario #1 – SC+ 200g/day", you want to take into account additional field knowledge, which has shown high household food insecurity despite access to functioning food market in the area. Previously in Scenario #1, the 200g/day dosage accounted for sharing through providing higher amount of SC+. Now, you want to consider an alternative program design to address sharing and household food insecurity **(Scenario #2):**

136g/day SC+ dosage to meet 550kcal/day needs of the targeted child
+ SBCC programming (treatment food preparation and use and infant and young child feeding)
+ a voucher ($15 per child) to purchase nutritious foods for the household.

Since this is a new program design that has not been tested before in this context, you would like to determine **the tipping point of the % Recovery goal that Scenario #2 needs to achieve in order to be more cost-effective in financial cost per recovered child than Scenario #1 (i.e. <$115).**

5

PROGRAM PARAMETERS	Scenario #2 Inputs	Example Data Sources & Assumptions
Scenario Name	SC+ (136g per day)+ SBCC+ voucher	
1) Product Choice	Same as Scenario #1 - Super Cereal Plus Box – 10/1.5 kg	
2) Product Dosage	136 g/day/child	
3) Treatment Duration	Same as Scenario #1 - 7.8 week	
4) Assumptions Used to Determine # Targeted Children	Same as Scenario #1 - Burden of MAM: 2,000 children with MAM; Program coverage: 50%; Rural	
5) # Targeted Children	Same as Scenario #1 - 1,000 children	
6) Product Unit Cost*	Same as Scenario #1 - $1,895/MT	
7) Location (Recipient Country)	Same as Scenario #1 - Nigeria; West Africa Trade Route	
8) International Freight Cost*	Same as Scenario #1 - $190/MT	+ $10 voucher + $5 SBCC
9) In-Country ITSH Cost*	Same as Scenario #1 - Context: Development; $200/MT	
10) In-Country Programming Cost*	$70/child; household voucher & SBCC	
11) Economic Cost to Volunteers and Recipients/Caregivers*	$1.2/child out-of-pocket; 5 hours/child volunteer time; 25 hours/child caregiver time; $0.66/hour	+ Projected time use of volunteers for SBCC activities
12) % Food Loss*	Same as Scenario #1 – 1%	
13) % Recovery	76% (70% - 85%)	Point estimate: Tipping point for financial cost per recovered child to more cost-effective than Scenario #1 (<$115); Uncertainty range based on past literature of similar contexts
14) % Sustained Recovery	Same as Scenario #1 - 63% (54% - 75%)	

* Indicates that the subtab also asks the user to add data sources and assumptions for the input(s) entered.

6

COMPARE RESULTS ACROSS SCENARIOS

After saving and downloading the inputs and outputs from Scenario #1 and Scenario #2, you can examine how Scenario #2's tipping point in % recovery and the FACET4SNF-calculated results compare to Scenario #1.

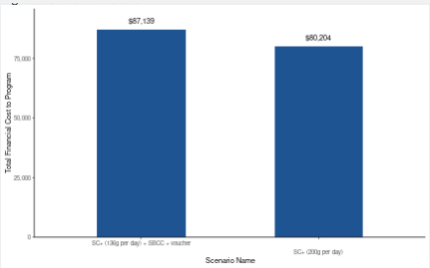
	Scenario #1 – SC+ (200g per day)	Scenario #2 – SC+ (136g per day)+ SBCC+ voucher
Minimum Program Goal in % Recovery (Tipping Point)	**70%**	**77%**
Total Quantity and Total Cost Indicators		
SNF Quantity Needed	11 MT	7.5 MT
SNF Procurement Cost	$20,902	$14,214
Oil Quantity Needed	0 MT	0 MT
Oil Procurement Cost	$0	$0
Total Economic Cost to Volunteers and Recipients/Caregivers	$17,700	$21,000
Total Financial Cost to Program	$80,204	$87,139
Total All-Inclusive Cost	$97,904	$108,139
Cost Efficiency Indicators		
Financial Cost Per Targeted Child	$80	$87
All-Inclusive Cost Per Targeted Child	$98	$108
Cost-Effectiveness Indicators		
Financial Cost Per Recovered Child	$115 ($100, $134)	$113 ($103, $124)
All-Inclusive Cost Per Recovered Child *	$140 ($122, $163)	$140 ($127, $154)
Financial Cost Per Sustained Recovered Child *	$182 ($134, $248)	$180 ($137, $231)
All-Inclusive Cost Per Sustained-Recovered Child *	$222 ($163, $302)	$223 ($170, $286)
Indicators Related to MAM Burden		
Total MAM Burden Targeted	50%	50%
% Recovered from MAM *	35% (30%, 40%)	38% (35%, 42%)
% Sustained Recovery from MAM *	22% (16%, 30%)	24% (19%, 32%)

* Uncertainty ranges for all cost-effectiveness results and burden related results are constructed based on user-provided lower and upper bounds of the uncertainty range inputs for the corresponding nutrition impact indicators.

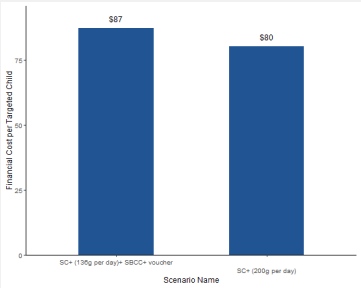
7

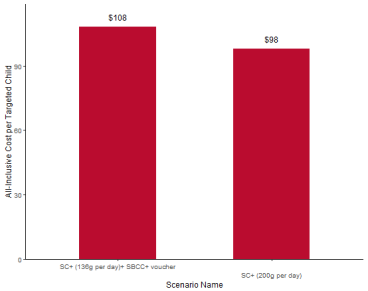
INSIGHTS FROM EXAMPLE A : Developing and submitting a proposal

- *Budgeting*



- *Tipping point analysis*
  - If the proposed program with the new program design achieves a minimum of 77% recovery, Scenario #2 would be more cost-effective than Scenario #1 in financial cost per recovered child, and the two scenarios would be almost the same in all-inclusive cost per recovered child.
  - Consider whether this minimum % recovery value is a reasonable program goal for the treatment of MAM program if using the Scenario #2 program design.
- *Comparing financial cost per targeted child v.s. all-inclusive cost per targeted child*





8

Use these insights to inform the proposal that Project Nourish plans to submit to the funding agency XYZ.

9

Submit the saved FACET4SNF inputs and outputs of the final proposal scenario along with the actual proposal to the funding agency XYZ for proposal review.

Example B. Reviewing a proposal

START HERE : HYPOTHETICAL BACKGROUND

The funding agency XYZ recently issued a Call for Proposals for Moderate Acute Malnutrition (MAM) treatement programs in the region of Nigeria. You are XYZ's Nutrition Advisor who is reviewing proposals responding to this in Nigeria. You review a promising proposal from Project Nourish. The program will treat MAM among children under five in a rural and food-insecure area of the country using SC+, plus household voucher and SBCC for the targeted families. Your regional team has shared with you an additional factor that may influence SNF product procurement:

- Suppose a hypothetical food safety incident of SC+ occurred recently in the region, and the local acceptability of SC+ has dropped drastically as a result. As the funding agency, you would like to consider other appropriate SNF options including RUSF and CSB+ with fortified vegetable oil. These SNF products were found to have similar recovery rates in MAM treatment research conducted in other contexts.

  → **Due to the lack of existing nutrition impact data in the context of interest, you want to use tipping point analyses to determine the minimum % recovery goal for each SNF option to be equally or more cost-effective in financial cost per recovered child than the original proposal**.

2

CREATE SCENARIOS

Scenario #1 is based on the proposal submitted by Project Nourish.
Scenario #2 and #3 use alternative SNF product options, RUSF and CSB+ with fortified vegetable oil, respectively. To determine the tipping points in 13) % Recovery for Scenario #2 and #3, refer to the FACET4SNF-caluclated result ($113) for "Financial Cost per Recovered Child" in Scenario #1. See pg 53-54 (MAM), 73-74 (SAM), and 93-94 (Prevention) for step-by-step tutorials on how to conduct tipping point analyses for a selected nutrition purposes.

Scenario Name	Program as Proposed	RUSF (Tipping point)	CSB+ with oil (Tipping point)
1) Product Choice	Super Cereal Plus Box – 10/1.5 kg	RUSF: Ready-to-Use Supplementary Food Pouch-150/100g	CSB+: Corn-Soy Blend Plus Bag-HP-25 kg Oil: Oil, Vegetable Can-6/4 L
2) Product Dosage	136 g/day/child	100 g/day/child	CSB+ : 86 g/day/child Oil: 26 g/day/ child
3) Treatment Duration	7.8 week	Same as Base Scenario #1	Same as Base Scenario #1
4) Assumptions Used to Determine # Targeted Recipients	Burden of MAM: 2,000 children with MAM; Program coverage: 50%; Rural	Same as Base Scenario #1	Same as Base Scenario #1
5) # Targeted Recipients	1,000 children	Same as Base Scenario #1	Same as Base Scenario #1
6) Product Unit Cost*	$1,895/MT	$2,810 / MT	CSB+: $665/MT Oil: $1,171/MT
7) Location (Recipient Country)	Nigeria; West Africa Trade Route	Same as Base Scenario #1	Same as Base Scenario #1
8) International Freight Cost*	$190/MT	Same as Base Scenario #1	Same as Base Scenario #1
9) In-Country ITSH Cost*	Context: Development; $200/MT	Same as Base Scenario #1	Same as Base Scenario #1
10) In-Country Programming Cost*	$70/child; household voucher & SBCC	Same as Base Scenario #1	$75/child*; household voucher & SBCC *due to programming of additional oil
11) Economic Cost to Volunteers and Recipients/Caregivers*	$1.2/child out-of-pocket; 5 hours/child volunteer time; 25 hours/child caregiver time; $0.66/hour	$1.2/child out-of-pocket; 5 hours/child volunteer time; 15 hours/child caregiver time; $0.66/hour	Same as Base Scenario #1
12) % Food Loss*	1%	1.35%	CSB+: 0.37%; Oil: 0.82%
13) % Recovery (range)	77% (70% - 85%)	78%* (70% - 85%) *tipping point to be more cost-effective than Scenario #1	73%* (70% - 85%) *tipping point to be more cost-effective than Scenario #1
14) % Sustained Recovery (range)	63% (54% - 75%)	Same as Base Scenario #1	Same as Base Scenario #1

* Indicates that the subtab also asks the user to add data sources and assumptions for the input(s) entered.

3

COMPARE RESULTS ACROSS SCENARIOS

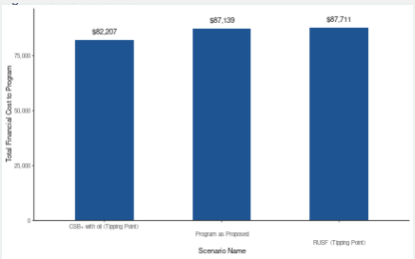
After saving and downloading the inputs and outputs from all created scenarios, you can then examine how tipping points in % recovery and the FACET4SNF-calculated results compare across these scenarios.

	Program as Proposed	RUSF (Tipping point)	CSB+ with oil (Tipping point)
Minimum Program Goal in % Recovery (Tipping Point)	77%	78%	73%
Total Quantity and Total Cost Indicators			
SNF Quantity Needed	7.5 MT	5.5 MT	4.7 MT
SNF Procurement Cost	$14,214	$15,553	$3,134.00
Oil Quantity Needed	0 MT	0 MT	1.4 MT
Oil Procurement Cost	$0	$0	$1,676
Total Economic Cost to Volunteers and Recipients/Caregivers	$21,000	$14,400	$21,000
Total Financial Cost to Program	$87,139	$87,711	$82,207
Total All-Inclusive Cost	$108,139	$102,111	$103,207
Cost Efficiency Indicators			
Financial Cost Per Targeted Child	$87	$88	$82
All-Inclusive Cost Per Targeted Child	$108	$102	$103
Cost Effectiveness Indicators			
Financial Cost Per Recovered Child*	$113 ($103, $124)	$112 ($103, $125)	$113 ($97, $117)
All-Inclusive Cost Per Recovered Child*	$140 ($127, $154)	$131 ($120 $146)	$141 ($121, $147)
Financial Cost Per Sustained Recovered Child*	$180 ($137, $231)	$178 ($138, $232)	$179 ($129, $217)
All-Inclusive Cost Per Sustained-Recovered Child*	$223 ($170, $286)	$208 ($160, $270)	$224 ($162, $273)
Total MAM Burden Targeted	50%	50%	50%
% Recovered from MAM *	38% (35%, 42%)	39% (35%, 42%)	36% (35%, 42%)
% Sustained Recovery from MAM *	24% (19%, 32%)	25% (19%, 32%)	23% (19%, 32%)

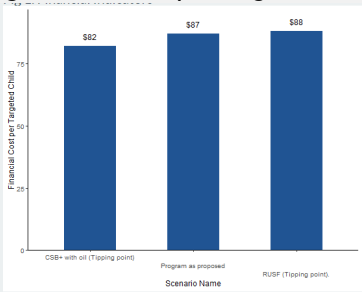
4

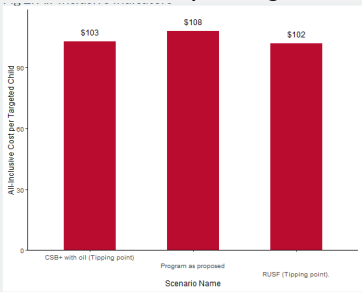
INSIGHTS FROM EXAMPLE B : Reviewing a proposal

- Budgeting



- *Tipping point analysis*
  - If using CSB+ with oil achieves a minimum goal of 73% recovery, it would be more cost-effective in both financial cost per recovered child and all-inclusive cost per recovered child than the scenario that assumes a 77% recovery for using SC+.
  - If using RUSF achieves a minimum goal of 78% recovery, it would be more cost-effective in both financial cost per recovered child and all-inclusive cost per recovered child than the scenario that assumes a 77% recovery for using SC+.
- *Comparing financial cost per targeted child v.s. all-inclusive cost per targeted child*





*Uncertainty ranges for all cost-effectiveness results and burden related results are constructed based on user-provided lower and upper bounds of the uncertainty range inputs for the corresponding nutrition impact indicators.

5

Use these insights to decide on the final proposal: Will you award Project Nourish to implement the treament of MAM program? If so, can Project Nourish's proposal be approved as is after switching the ship route, or will you choose to fund the program using a different SNF product?

6

Store the saved FACET4SNF inputs and outputs of the final proposal scenario in a designated internal database at XYZ for future access. Share this data along with the final proposal decision with the implementation organization that you decide to award.

Example C: End-line reporting for a completed program

1 START HERE : HYPOTHETICAL BACKGROUND

Your organization, Project Nourish, has just completed a blanket supplementary feeding program funded by XYZ to reduce stuting among infant and young children in Burundi. The program provided 100g/day of CSB+ and 10g/day of oil to infants and young children (IYC) aged 6 months old to 23 months old. The end-line result found a 2 pp reduction in prevalence of stunting among all children 24 to 42 months old in the geographic area.

Using the FACET4SNF interface, you **set up the end-line scenario** using data collected from the completed program:

2

PROGRAM PARAMETERS	Scenario #1	Example Data Sources & Assumptions
Scenario Name	End-line reporting: IYC 6-23mo+ household general ration + BCC	
1) Eligible Group	IYC	
2) Product Choice	-CSB+: Corn-Soy Blend Plus Bag-HP-25 kg -Oil: Oil, Vegetable Can-6/4 L	
3) Product Dosage	-CSB+: 100 g/day/IYC -Oil: 10g/day/IYC	
4) Treatment Duration	18 months	
5) Assumptions Used to Determine # Targeted Recipients	Population Size: 5,000 eligible IYC; Program coverage: 65%; Rural	Actual program coverage and population size.
6) # Targeted Recipients	3,250 children	Actual number of enrollees.
7) Product Unit Cost*	- CSB+: $680/MT - Oil: $1,230/MT	Billing information from the completed program.
8) Location (Recipient Country)	Burundi; South East Africa Trade Route	
9) International Freight Cost*	$205/MT	Billing information from the completed program.
10) In-Country ITSH Cost*	Development; $250/MT	Billing information from the completed program.
11) In-Country Programming Cost*	$110 per recipient; household general ration + BCC	Accounting records from the completed program.
12) Economic Cost to Volunteers and Recipients/Caregivers*	$5.4 out-of-pocket; 9 hours volunteer time; 100 hours caregiver time; $0.05/hour	Out-of-pocket spending from program survey; time data from past studies (reference); Local wage information.
13) % Food Loss*	CSB+: 3%; Oil: 1.5%	
14) Impact on Nutrition* (range)	2 pp (0 pp – 10 pp) reduction in stunting	Difference in 6-23-month-old population-level prevalence of stunting at end-line compared to baseline from M&E; FACET4SNF default range.

* Indicates that the subtab also asks the user to add data sources and assumptions for the input(s) entered.

CALCULATED RESULTS

3

Total Quantity and Total Cost Indicators	
SNF Quantity Needed	183.5 MT
SNF Procurement Cost	$121,011
Oil Quantity Needed	18.1 MT
Oil Procurement Cost	$22,222
Total Economic Cost to Volunteers and Recipients/Caregivers	$35,263
Total Financial Cost to Program	$589,924
Total All-Inclusive Cost	$625,186
Cost Efficiency Indicators	
Financial Cost Per Targeted Recipient	$182
All-Inclusive Cost Per Targeted Recipient	$192
Financial Cost Per Targeted Mother-Child Pair	$182
All-Inclusive Cost Per Targeted Mother-Child Pair	$193
Cost Effectiveness Indicators	
Financial Cost Per Case of Stunting Averted*	$9,076 ($1,815, +∞)
All-Inclusive Cost Per Case of Stunting Averted*	$9,618 ($1,924, +∞)

* Uncertainty ranges for all cost-effectiveness results are constructed based on user-provided lower and upper bounds of the uncertainty range inputs for the corresponding nutrition impact indicators.

4

Now that you have set up the end-line FACET4SNF scenario using data from the completed blanket supplementary feeding program, submit the FACET4SNF inputs and outputs of this scenario along with the end-line report to the funder (XYZ).

You are ready for internal end-line review. You can compare it with the *ex-ante* FACET4SNF scenario that was saved from the final proposal before this program was implemented — What are the differences and why? You can also consider other alternative "what-if" scenarios that might improve cost-effectiveness based on the knowledge that you have gained from implementing the program or new evidence from literature. Make sure to store inputs and outputs of this *ex-post* scenario into your organization's designated database for tracking and for future uses.

Example D on the next page demonstrates the use of FACET4SNF during end-line review of a completed program as a funder, but implementation organizations are encouraged to conduct internal end-line review following the same principles in this next example.

Example D: End-line program review

START HERE : HYPOTHETICAL BACKGROUND

You are the funding agency XYZ's Nutrition Advisor who is reviewing the end-line report along with the FACET4SNF scenario submitted by Project Nourish for a completed supplementary feeding program to reduce stunting in Burundi.

Because FACET4SNF was previously used during proposal development and review phases of this program, FACET4SNF inputs and outputs of **the final proposal scenario** had already been saved in your agency's designated database before the program was implemented.

You would like to recreate the final proposal scenario alongside the end-line reporting scenario in order to **compare what was proposed with what actually happened in order to gain insights that can inform future program cycles**.

2

CREATE SCENARIOS

Scenario #1 is based on completed program using ex-post parameters and results.
Scenario #2 is based on the proposal finalized before the start of the program with saved FACET4SNF ex-ante inputs and outputs in the internal designated database.

Scenario Name	**Scenario #1 – (ex-post) End-line reporting: IYC 6-23mo + household general ration+BCC**	**Scenario #2 – (ex-ante) Final proposal prior to implementation**
1) Eligible Group	IYC	Same as Scenario #1
2) Product Choice	- CSB+: Corn-Soy Blend Plus Bag-HP-25 kg - Oil: Oil, Vegetable Can-6/4 L	Same as Scenario #1
3) Product Dosage	-CSB+: 100 g/day/IYC -Oil: 10g/day/IYC	Same as Scenario #1
4) Supplementation Duration	18 months IYC	Same as Scenario #1
5) Assumptions Used to Determine # Targeted Recipients	Population Size: 5,000 eligible IYC; Program coverage: 65%; Rural	Population Size: 4,000 eligible IYC; Program coverage: 70%; Rural
6) # Targeted Recipients	3,250 IYC	2,800 IYC
7) Product Unit Cost*	- CSB+: $680/MT - Oil: $1,230/MT	- CSB+: $665/MT - Oil: $1,171/MT
8) Location (Recipient Country)	Burundi; South East Africa Trade Route	Same as Scenario #1
9) International Freight Cost*	$205/MT	$185 / MT
10) In-Country ITSH Cost*	Development; $250/MT	Development; $200/MT
11) In-Country Programming Cost*	$110 per recipient; household general ration + BCC	$100 per recipient; Same as Scenario #1
12) Economic Cost to Volunteers and Recipients/Caregivers*	$5.4 out-of-pocket; 9 hours volunteer time; 100 hours caregiver time; $0.5/hour	$3; 8 hours; 100 hours; $0.5/hour
13) % Food Loss*	CSB+: 0.37%; Oil: 0.82%	CSB+: 0.37%; Oil: 0.82%
14) Impact on Nutrition* (range)	2 pp (1pp – 8pp) reduction in stunting	5 pp (3 pp – 8 pp) reduction in stunting

* Indicates that the subtab also asks the user to add data sources and assumptions for the input(s) entered.

3

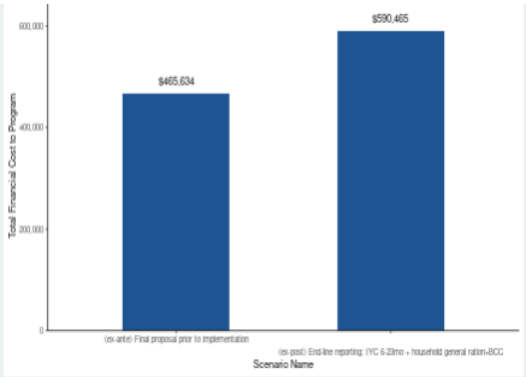
COMPARE RESULTS ACROSS SCENARIOS

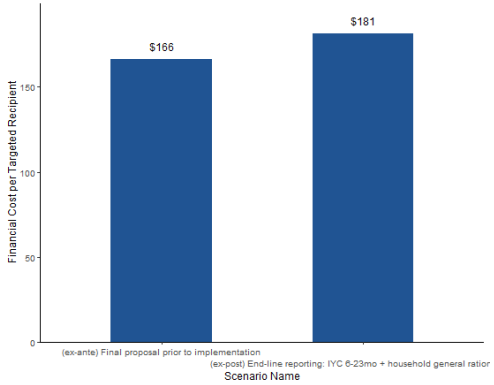
After saving and downloading the inputs and outputs from both scenarios, you can then examine how FACET4SNF-calculated results compare between ex-ante and ex-post scenarios before and after a program was completed.

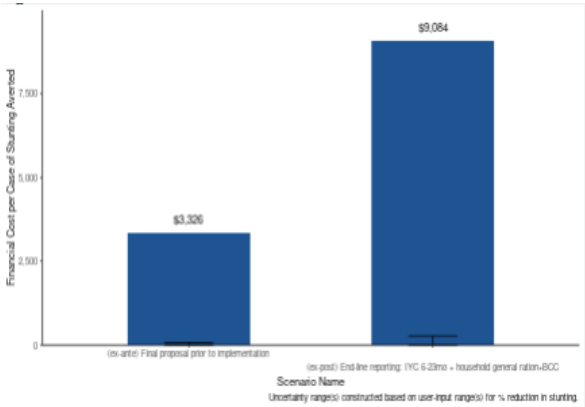
	Scenario #1 –(ex-post) End-line reporting: IYC 6-23mo + household general ration+BCC	Scenario #2 – (ex-ante) Final proposal before implementation
Total Quantity and Total Cost Indicators		
SNF Quantity Needed	178.6 MT	153.9 MT
SNF Procurement Cost	$121,011	$101,956
Oil Quantity Needed	17.9 MT	15.5 MT
Oil Procurement Cost	$22,070	$18,102
Total Economic Cost to Volunteers and Recipients/Caregivers	$194,675	$159,600
Total Financial Cost to Program	$589,715	$465,036
Total All-Inclusive Cost	$784,390	$624,636
Cost Efficiency Indicators		
Financial Cost Per Targeted Recipient	$181	$166
All-Inclusive Cost Per Targeted Recipient	$241	$223
Financial Cost Per Targeted Mother-Child Pair	$181	$166
All-Inclusive Cost Per Targeted Mother-Child Pair	$241	$223
Cost-Effectiveness Indicators		
Financial Cost Per Case of Stunting Averted *	$9,073 ($2,268, $18,145)	$3,322 ($2,076, $5,536)
All-Inclusive Cost Per Case of Stunting Averted *	$12,068 ($3,017, $24,135)	$4,462 ($2,789, $7,436)

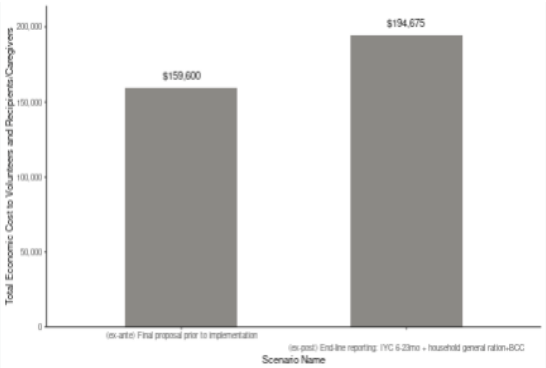
* Uncertainty ranges for all cost-effectiveness results are constructed based on user-provided lower and upper bounds of the uncertainty range inputs for the corresponding nutrition impact indicators.

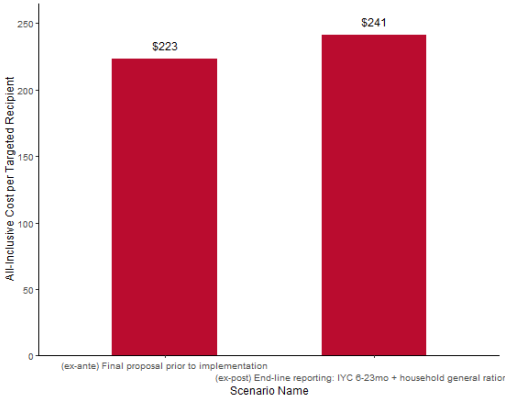
- *Comparing what was proposed with what actually happened (ex-ante v.s. ex-post)*
  - Compared to the final proposal (Scenario #2), the completed program (Scenario #1) is more expensive for all indicators of total cost and cost efficiency. Try to understand the contextual knowledge that explains why the cost of actual implementation is higher than expected.
  - Compared to the expected nutrition impact in the final proposal, the completed program also saw a lower reduction in stunting, and therefore resulted in a much higher cost per case of stunting averted for both financial and all-inclusive cost. **Are there any alternative program designs that might improve nutrition impact for future program cycles?**

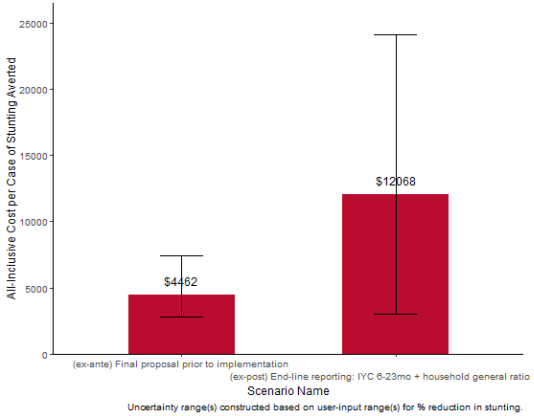












4

CREATE ADDITIONAL "WHAT-IF" SCENARIOS BASED ON LATEST EVIDENCE

Suppose that research (hypothetically: **ABC, et. al., 2019**) published recently provided relevant new evidence on stunting reduction using varied program designs of supplementary feeding in Burundi. The study arms in this research used varied supplementation durations and expanded eligible target groups during the first 1000 days. The research team reported higher pp stunting reduction than the end-line results of the completed program.

You would like to create two more "what-if" scenarios based on program design parameters and stunting impact findings reported in this recent research and compare their cost-effectiveness with the completed program to inform future program cycles.

5

Scenario Name	**Scenario #1 – (ex-post) End-line reporting: IYC 6-23mo + household general ration + BCC**	**Scenario #3 – (ABC, et. al. 2019) IYC 6-18mo & PLW pregnancy & lactation + household general ration + BCC**	**Scenario #4 – (ABC, et. al., 2019) IYC 6-23mo & PLW pregnancy & lactation + household general ration + BCC**
1) Eligible Group	IYC	**IYC; PLW**	**IYC; PLW**
2) Product Choice	- CSB+: Corn-Soy Blend Plus Bag-HP-25 kg - Oil: Oil, Vegetable Can-6/4 L	Same as Scenario #1 (for IYC and PLW)	Same as Scenario #1 (for IYC and PLW)
3) Product Dosage	- CSB+: 100 g/day/IYC - Oil: 10g/day/IYC	**- CSB+: 100 g/day/IYC; 200g/day/PLW - Oil: 10g/day/IYC; 20g/day/PLW**	**- CSB+: 100 g/day/IYC; 200g/day/PLW - Oil: 10g/day/IYC; 20g/day/PLW**
4) Supplementation Duration	18 months IYC	**12months IYC; 11 months PLW**	**18 months IYC; 11 months PLW**
5) Assumptions Used to Determine # Targeted Recipients	Population Size: 5,000 eligible IYC; Program coverage: 65%; Rural	**Population Size: 5,000 IYC & 4,000 PLW ; Program coverage: 65% for IYC and PLW; Rural**	**Population Size: 5,000 IYC & 4,000 PLW ; Program coverage: 65% for IYC and PLW; Rural**
6) # Targeted Recipients	3,250 IYC	**3,250 IYC; 2,600 PLW**	**3,250 IYC; 2,600 PLW**
7) Product Unit Cost*	- CSB+: $680/MT - Oil: $1,230/MT	Same as Scenario #1	Same as Scenario #1
8) Location (Recipient Country)	Burundi; South East Africa Trade Route	Same as Scenario #1	Same as Scenario #1
9) International Freight Cost*	$205/MT	Same as Scenario #1	Same as Scenario #1
10) In-Country ITSH Cost*	Development; $250/MT	Same as Scenario #1	Same as Scenario #1
11) In-Country Programming Cost*	$110 per recipient; household general ration + BCC	**$75 per recipient;** Same as Scenario #1	**$90 per recipient;** Same as Scenario #1
12) Economic Cost to Volunteers and Recipients/Caregivers*	$5.4 out-of-pocket; 9 hours volunteer time; 100 hours caregiver time; $0.5/hour	**$3.6; 6 hours; 66 hours; $0.05/hour**	**$4.4; 7 hours; 80 hours; $0.05/hour**
13) % Food Loss*	CSB+: 0.37%; Oil: 0.82%	Same as Scenario #1	Same as Scenario #1
14) Impact on Nutrition* (range)	2 pp (1 pp – 8 pp) reduction in stunting	**6 pp (3 pp – 9 pp)** reduction in stunting	**7pp (5 pp – 10 pp)** reduction in stunting

* Indicates that the subtab also asks the user to add data sources and assumptions for the input(s) entered.

6

COMPARE RESULTS ACROSS SCENARIOS

After saving and downloading the inputs and outputs from all created scenarios, you can then examine how the FACET4SNF-calculated results compare across these scenarios.

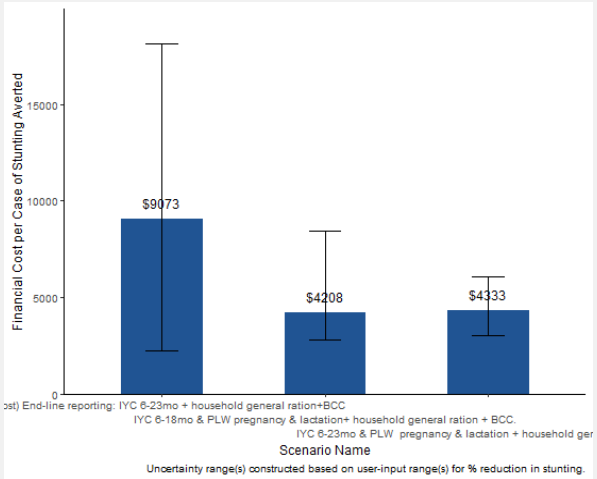
	Scenario #1 – (ex-ante) End-line reporting: IYC 6-23mo + household general ration + BCC	Scenario #3 - IYC 6-18mo & PLW pregnancy & lactation + household general ration + BCC	Scenario #4 - IYC 6-23mo & PLW pregnancy & lactation + household general ration + BCC
Total Quantity and Total Cost Indicators			
SNF Quantity Needed	178.6 MT	293.7 MT	353.3 MT
SNF Procurement Cost	$121,011	$198,995	$239,332
Oil Quantity Needed	17.9 MT	29.5 MT	35.5 MT
Oil Procurement Cost	$22,070	$36,292	$43,649
Total Economic Cost to Volunteers and Recipients/Caregivers	$194,675	$231,660	$280,215
Total Financial Cost to Program	$589,715	$820,614	$985,769
Total All-Inclusive Cost	$784,390	$1,052,274	$1,265,984
Cost Efficiency Indicators			
Financial Cost Per Targeted Recipient	$181	$140	$169
All-Inclusive Cost Per Targeted Recipient	$241	$180	$216
Financial Cost Per Targeted Mother-Child Pair	$181	$252	$303
All-Inclusive Cost Per Targeted Mother-Child Pair	$241	$324	$390
Cost-Effectiveness Indicators			
Financial Cost Per Case of Stunting Averted*	$9,073 ($2,268, $18,145)	$4,208 ($2,806, $8,417)	$4,333 ($3,033, $6,066)
All-Inclusive Cost Per Case of Stunting Averted*	$12,068 ($3,017, $24,135)	$5,396 ($3,598, $10,793)	$5,565 ($3,895, $7,791)

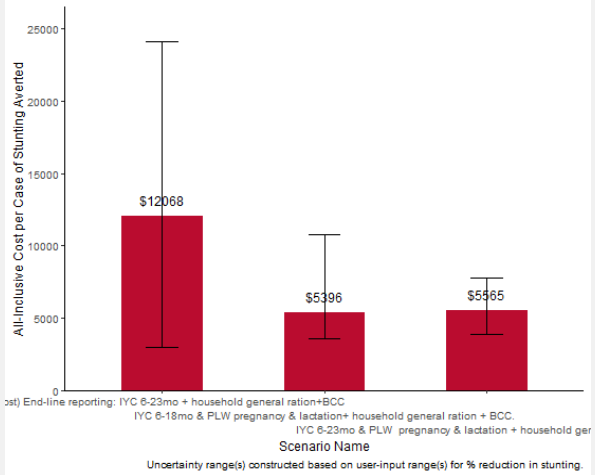
* Uncertainty ranges for all cost-effectiveness results are constructed based on user-provided lower and upper bounds of the uncertainty range inputs for the corresponding nutrition impact indicators.

7

INSIGHTS FROM EXAMPLE D : End-line program review

- Comparing what actually happened with "what-if" scenarios based on recent research evidence:
  - In this hypothetical example, new research evidence in a similar context was published towards the end of the program. The research evidence examined a supplementary feeding program that supplements both infant and young children and pregnant and lactating women. As the research results showed higher reduction in stunting compared to the completed program, you can compare how switching to the intervention designs used in that research for your program's context could affect your program's cost and cost-effectiveness in the future.
  - Compared to the completed program, the research intervention scenarios (Scenario #3 and #4) have much higher total cost and and cost per targeted mother-child pair. However, due to the higher expected reduction in stunting, the research scenarios are much more cost-effective in cost per case of stunting averted than the completed program. Consider whether there may be sufficient overall budget for future program cycles to support the more cost-effective program design strategies demonstrated in the research scenarios.





8

Use these insights to draw contextual learnings from the completed program and to inform decisions in future program cycles.

9

Make sure to store the FACET4SNF inputs and outputs as well as the knowledge generated in this exercise for future access.

Example E: Comparing procurement channels for (new) SNF products

1 START HERE : HYPOTHETICAL BACKGROUND

You are the funding agency XYZ's Nutrition Advisor who is considering the inclusion of two new barley-based SNFs in the food basket. These two SNF products are barley soy blend (BSB) and barley pigeon-pea blend (BPB). They are barley-based fortified blended flours (FBF) using improved food processing techniques which enhance nutrient absorption in the body.

Suppose that the research team that proposed these two products has provided results from a published study in Mozambique which evaluated the pp reduction in prevalence of wasting for an 18-month blanket supplementary feeding program targeting children 6-18 months old using either barley-based FBF, as compared to the control group. The two products were found to be comparable with overlapping 95% confidence intervals for pp reduction in wasting:

- BSB: 3 pp (95% Confidence Interval: 1pp – 5 pp)
- BPB: 4 pp (95% Confidence Interval: 2 pp – 6 pp)

Suppose that you have previously used FACET4SNF to compare BSB and BPB with existing standard SNFs in blanket supplementary feeding and have found the new products to be similar or higher cost-effectiveness in reducing child wasting in areas that prefer barley in the local diets. Now, you would like to understand procurement decisions between the two types of barley-based products, given different procurement constraints (e.g. imported versus local procurement).

Suppose you have requested the team that proposed these products to provide relevant product and supply chain cost estimates by two producer locations (USA versus Mozambique). You can now construct FACET4SNF scenarios using Mozambique as the example recipient country and compare the cost-effectiveness of the new products via different procurement channels.

2

Scenario Name	**Scenario #1 – BSB from USA**	**Scenario #2 – BSB from Mozambique**	**Scenario #3 -- BPB from USA**	**Scenario #4 – BPB from Mozambique**
1) Eligible Group	IYC	Same as Scenario #1	Same as Scenario #1	Same as Scenario #1
2) Product Choice	User-Input Product; BSB: Barley Soy Blend Bag 20 kg	Same as Scenario #1	User-Input Product; **BPB: Barley Pigeon-pea Blend Bag 20 kg**	User-Input Product; **BPB: Barley Pigeon-pea Blend Bag 20 kg**
3) Product Dosage	100 g/day/IYC	Same as Scenario #1	Same as Scenario #1	Same as Scenario #1
4) Supplementation Duration	18 months IYC	Same as Scenario #1	Same as Scenario #1	Same as Scenario #1
5) Assumptions Used to Determine # Targeted Recipients	Population Size: 5,000 eligible IYC; Program coverage: 50%; Rural	Same as Scenario #1	Same as Scenario #1	Same as Scenario #1
6) # Targeted Recipients	2,500 IYC	Same as Scenario #1	Same as Scenario #1	Same as Scenario #1
7) Product Unit Cost*	$1,584/MT	**$1,824/MT**	**$1,974/MT**	**$1,874/MT**
8) Location (Recipient Country)	Mozambique; South East Africa Trade Route	Same as Scenario #1	Same as Scenario #1	Same as Scenario #1
9) International Freight Cost*	$239/MT	**$0/ MT**	Same as Scenario #1	**$0/ MT**
10) In-Country ITSH Cost*	Development; $181/MT	**Development; $148/MT**	Same as Scenario #1	**Development; $148/MT**
11) In-Country Programming Cost*	$60 per recipient; no complementary activities	Same as Scenario #1	Same as Scenario #1	Same as Scenario #1
12) Economic Cost to Volunteers and Recipients/Caregivers*	$5 out-of-pocket; 9 hours volunteer time; 75 hours caregiver time; $0.63/hour	Same as Scenario #1	Same as Scenario #1	Same as Scenario #1
13) % Food Loss*	1%	Same as Scenario #1	Same as Scenario #1	Same as Scenario #1
14) Impact on Nutrition (range)*	3 pp (1 pp – 5 pp) reduction in wasting	Same as Scenario #1	**4 pp (2 pp – 6 pp)** reduction in wasting	**4 pp (2 pp – 6 pp)** reduction in wasting

* Indicates that the subtab also asks the user to add data sources and assumptions for the input(s) entered.

3

COMPARE RESULTS ACROSS SCENARIOS

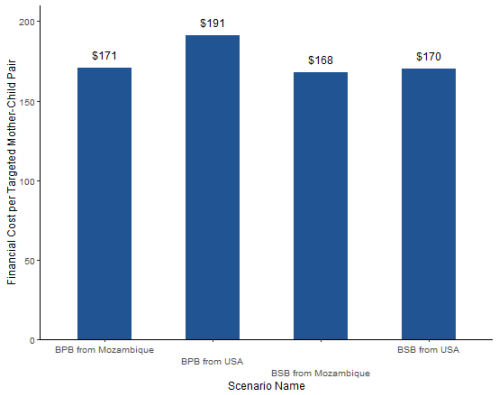
After saving and downloading the inputs and outputs from all created scenarios, you can then examine how the FACET4SNF-calculated results compare across these scenarios.

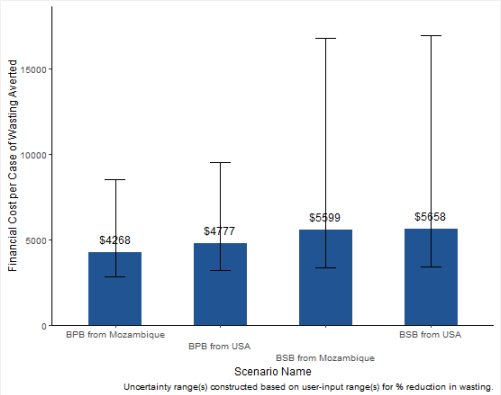
	Scenario #1 – BSB from USA	Scenario #2 – BSB from Mozambique	Scenario #3 -- BPB from USA	Scenario #4 – BPB from Mozambique
Total Cost and Total Quantity Indicators				
SNF Quantity Needed	138.3 MT	138.3 MT	138.3 MT	138.3 MT
SNF Procurement Cost	$216,834	$249,687	$270,221	$256,532
Oil Quantity Needed	0 MT	0 MT	0 MT	0 MT
Oil Procurement Cost	$0	$0	$0	$0
Total Economic Cost to Volunteers and Recipients/Caregivers	$144,800	$144,800	$144,800	$144,800
Total Financial Cost to Program	$424,328	$419,947	$477,715	$426,792
Total All-Inclusive Cost	$569,128	$564,747	$622,515	$571,592
Cost Efficiency Indicators				
Financial Cost Per Targeted Recipient	$170	$169	$191	$171
All-Inclusive Cost Per Targeted Recipient	$228	$226	$249	$229
Financial Cost Per Targeted Mother-Child Pair	$170	$168	$191	$171
All-Inclusive Cost Per Targeted Mother-Child Pair	$228	$226	$249	$229
Cost-Effectiveness Indicators				
Financial Cost Per Case of Wasting Averted*	$5,658 ($3,395, $16,973)	$5,599 ($3,360, $16,798)	$4,777 ($3,185, $9,554)	$4,267 ($2,845, $8,535)
All-Inclusive Cost Per Case of Wasting Averted*	$7,588 ($4,553, $22,765)	$7,530 ($4,518, $22,590)	$6,225 ($4,150, $12,450)	$5,716 ($3,811, $11,432)

* Uncertainty ranges for all cost-effectiveness results are constructed based on user-provided lower and upper bounds of the uncertainty range inputs for the corresponding nutrition impact indicators.

INSIGHTS FROM EXAMPLE E: Comparing procurement channels for new SNF products

4





- *Comparing procurment channel for each product:*
  - Scenario #1 and #2: For barley soy blend (BSB), choice of procurement channel (United States Government "USG" versus Mozambique) does not make much difference (~$2 budegtary or all-inclusive cost per targeted recipient). Therefore, either USG or Mozambique (local) can be chosen as the procurement location for BSB in a similar setting.
  - In contrast, barley pigeon-pea blend (BPB) procured locally in Mozambique is ~$20 less expensive in financial or Scenario #3 and #4: All-inclusive cost per targeted recipient than imported from USG. This is equivalent to $50,000 cost savings for 2,500 targeted participents in the scnearios. With even more targeted number of participants, the cost savings can be substantial. Therefore, Mozambique (local) may be a more cost-efficient procurement location for BPB in a similar setting.
- *Comparing SSB and SCB:*
  - Scenario #2 and #4: When it is possible to procure locally, BSB and BPB have very similar financial or all-inclusive cost per targeted recipient (~$1 difference). The cost-effectiveness uncertainty ranges for financial or all-inclusive cost per case of wasting averted overlap between the two scenarios. Therefore, either product can be procured in a similar setting when local procurement is feasible.
  - Scenario #1 and #3: When it is required to import SNFs from USG, BSB is ~$21 less expensive in financial or all-inclusive cost per targeted recipient than BPB. The cost-effectiveenss uncertainty ranges for financial or all-inclusive cost per case of wasting averted overlap between the two scenarios. Therefore, BSB may be a more cost-efficient product choice than BPB in a similar setting, but BSB and BPB are similarly cost-effective in cost per case of wasting averted.

5

Use these insights to inform procurement decisions between the two types of new SNFs given different context constraints.

Annexes

Annex 1. Partner Consultations

Date	Activity	Organizations with Participating Representatives
July 20, 2017	TOPS	Save the Children, World Vision, Catholic Relief Services, United States Department of Agriculture (USDA), Edesia, etc,
June 6, 2018	Core Group Conference	World Vision, Catholic Relief Services, Adventist Development and Relief Agency, John Snow International, World Relief, etc.
June 27, 2018	Round Table event held at the Food Assistance for Nutrition Evidence Summit in Washington, DC	USAID, World Food Programme, UNICEF, Doctors without Borders, USDA, Action Against Hunger, Edesia, Nutriset, etc.
May 15, 2019	FACET4SNF beta testing day at USAID	Various teams from USAID Bureau for Democracy, Conflict and Humanitarian, including Nutrition, GEO, Monitoring & Evaluation, Food Security & Market, Product Operations Division, etc.
July 25, 2019	Meeting with World Food Programme to discuss potential synergies of costing tools	Costing consultant from Nutrition's Knowledge Management team and a few field staff.
July 30, 2019	FACET4SNF beta testing webinar for international partners	Action Against Hunger, Doctors without Borders, World Food Programme, USAID
August 19, 2019	FACET4SNF beta testing webinar and recordings for BHA (formerly FFP)'s implementation partners	Catholic Relief Services, World Vision, and Food For Hungry

Annex 2. Comparison and Contrast of Tools in Food Assistance for Nutrition

Tool	Purpose	Capabilities					
		Openly available	Calculates program costs	Calculates program cost-effectiveness	Allows for side-by-side scenario comparison	Tool-supplied data and research evidence	Allows user to download analysis results
Food Assistance Cost-Effectiveness Tool (FACET4SNF) for SNF	Help technical advisors and program design teams quantify and compare the cost-effectiveness of nutrition programming approaches involving SNFs	✓	✓	✓	✓	✓Cost ✓ Impact	✓
CMAM Costing Tool by FANTA	Estimate the costs of establishing, maintaining, and/or expanding services for community-based management of acute malnutrition (CMAM) at the national, sub-national, and district levels	✓	✓	X	X	✓Cost	✓
MAM Decision Tool for Emergencies by Global Nutrition Cluster	Provide guidance on program strategies to address MAM in a particular emergency context	✓	X	X	X	X	X
Modality Decision Tool by USAID/ BHA (formerly FFP)	Provide harmonized guidance to select among modalities (cash, vouchers, in-kind) across United States Government humanitarian assistance programs.	✓	X	X	X	X	X
Multiple Micronutrient Supplementation (MMS) Cost-Benefit Tool by Nutrition International	Calculate the incremental benefits and costs of transitioning from iron and folic acid supplementation (IFAS) to MMS in various countries	✓	✓	✓ Cost-benefit	✓	✓	✓
Nutrition Program Design Assistant: A Tool for Program Planners (NPDA) by CORE Group	Help program design teams plan the most appropriate community-based nutrition approaches for their target area	✓	X	X	X	?	X

Tool (Continued)	Purpose	Capabilities					
		Openly available	Calculates program costs	Calculates program cost-effectiveness	Allows for side-by-side scenario comparison	Tool-supplied data and research evidence	Allows user to download analysis results
NutVal Application by UNHCR / WFP / Global Nutrition Cluster / USAID/OFDA / ENN / UCL	Help plan, calculate, and monitor the nutritional content of general food aid rations	✓	X	X	X	✓ Nutrition	✓
Optima Nutrition model by Optima Consortium for Decision Science, Burnet Institute, & World Bank	Provide practical advice to governments to assist with the allocation of current or projected budgets that minimize stunting, wasting, anemia or under-five mortality at both the national and regional levels across nutrition programs (a variety of vitamin supplementation programs, infant and young child feeding education, treatment of severe acute malnutrition, treatment and prevention of diarrhea, fortification of foods, water sanitation and hygiene (WASH), family planning and malaria prevention interventions)	✓	✓	✓	✓	✓	✓
Systematic Cost Analysis Tool (SCAN) by International Rescue Committee's (IRC)	Help IRC calculate program cost outputs using internal financial data system	X	✓	X	✓	✓Cost	✓
Treatment of MAM Costing Tool by World Food Program (WFP)	Help WFP calculate MAM treatment program cost outputs using internal financial data system	X	✓	X	?	✓Cost	✓

Annex 3. Glossary and Formulas for Treatment of MAM or SAM Programs

Total Loss-Adjusted Quantity of Selected Specialized Nutritious Food - Total quantity in Metric Ton (MT) of the selected specialized nutritious food, adjusted for food losses from user input.

$$= \frac{N\ Targeted \times SNF\ Dosage_{grams\ per\ child\ per\ day} \times (Treatment\ Duration_{weeks\ per\ child} \times 7_{days\ per\ week})}{(1 - \%SNF\ Losses) \times 1{,}000{,}000_{grams\ per\ MT}}$$

where N Targeted (Number of Children Targeted), SNF Dosage, Treatment Duration, and % SNF Losses are user inputs

Total Loss-Ajusted Quantity of Fortified Vegetable Oil - Total quantity in Metric Ton (MT) of fortified vegetable oil (if applicable), adjusted for food losses from user input.

$$= \frac{N\ Targeted \times Oil\ Dosage_{grams\ per\ child\ per\ day} \times (Treatment\ Duration_{weeks\ per\ child} \times 7_{days\ per\ week})}{(1 - \%Oil\ Losses) \times 1{,}000{,}000_{grams\ per\ MT}}$$

where N Targeted (Number of Children Targeted), Oil Dosage, Treatment Duration, and % Oil Losses are user inputs

Total Procurement Cost of Selected Specialized Nutritious Food - Total product cost in $US of the selected specialized nutritious food, adjusted for food losses from user input.

$$= Total\ Loss\ Adjusted\ Quantity\ of\ Selected\ SNF_{MT} \times SNF\ Product\ Unit\ Cost_{\$US\ per\ MT}$$

where SNF Product Unit Cost is user input

Total Procurement Cost of Fortified Vegetable Oil - Total product cost in $US of the selected specialized nutritious food, adjusted for food losses from user input.

$$= Total\ Loss\ Adjusted\ Quantity\ of\ Fortified\ Vegetable\ Oil_{MT} \times Oil\ Unit\ Cost_{\$US\ per\ MT}$$

where Oil Unit Cost is user input

Total Financial Cost to Program – Total financial cost to the program, including SNF (and oil, if applicable) product procurement, supply chain, and in-country programming cost, adjusted for food losses from user input.

$$= \left(SNF\ Product\ Unit\ Cost_{\$US\ per\ MT} + SNF\ International\ Freight\ Unit\ Cost_{\$US\ per\ MT} + ITSH\ Unit\ Cost_{\$US\ per\ MT}\right) \times Total\ Loss\ Ajusted\ Quantity\ of\ Specialized\ Nutritious\ Food_{MT} + \ In\ country\ Programming\ Unit\ Cost_{\$US\ per\ Chid} \times N\ Targeted + \ if\ applicable \rightarrow \left(Oil\ Unit\ Cost_{\$US\ per\ MT} + Oil\ International\ Freight\ Unit\ Cost_{\$US\ per\ MT} + ITSH\ Unit\ Cost_{\$US\ per\ MT}\right) \times Total\ Loss\ Ajusted\ Quantity\ of\ Fortified\ Vegetable\ Oil_{MT}$$

where SNF Product Unit Cost, SNF International Freight Unit Cost, ITSH Unit Cost, In-country Programming Unit Cost, N Targeted (Number of Children Targeted), Oil Unit Cost, and Oil International Freight Unit Cost are user inputs

Total Economic Cost to Volunteers and Recipients/Caregivers – Total economic cost to program recipients or their caregivers and/or program volunteers, including out-of-pocket spending and opportunity cost of time.

$$= \ Average\ Household\ Out\ of\ Pocket\ Spending_{\$US\ per\ child} + \left(Average\ Program\ Volunteer\ Time_{hours\ per\ child} + Average\ Caregiver\ Time_{hours\ per\ child}\right) \times Average\ Hourly\ Valuation\ of\ Time_{\$US\ per\ hour}$$

where all terms are user inputs

Total All-Inclusive Cost - Total cost including both the financial cost to the program and the economic cost to program recipients or their caregivers and/or program volunteers.

$$= Total\ Financial\ Cost\ to\ Program_{\$US} + Total\ Economic\ Cost\ to\ Volunteers\ and\ Recipients/Caregivers_{\$US}$$

Financial Cost per Targeted Child - Average financial program cost per child targeted by the program.

$$= \frac{Total\ Financial\ Cost\ to\ Program_{\$US}}{N\ Targeted}$$

where N Targeted (Number of Children Targeted) is user input

All-Inclusive Cost per Targeted Child - Average all-inclusive cost (financial cost to program and economic cost to volunteers and recipients/caregivers) per child targeted by the program.

$$= \frac{Total\ All\ inclusive\ Cost_{\$US}}{N\ Targeted}$$

where N Targeted (Number of Children Targeted) is a user input

Financial Cost per Recovered Child - Average financial program cost for each enrolled child who recovered from MAM or SAM at program discharge.

$$= \frac{Financial\ Cost\ per\ Targeted\ Child_{\$US\ per\ child}}{\%\ Recovery}$$

where % recovery is a user input

* The uncertainty range for Financial Cost per Recovered Child is calculated based on the lower and upper bound of the uncertainty range for % Recovery provided by user input.

All-Inclusive Cost per Recovered Child - Average all-inclusive cost (financial program cost and non-Financial economic burden) for each enrolled child who recovered from MAM or SAM at program discharge.

$$= \frac{All\ inclusive\ Cost\ per\ Targeted\ Child_{\$US\ per\ child}}{\%\ Recovery}$$

where % recovery is a user input

* The uncertainty range for All-inclusive Cost per Recovered Child is calculated based on the lower and upper bound of the uncertainty range for % Recovery provided by user input.

Financial Cost per Sustained Recovered Child - Average financial program cost for each recovered child who sustained recovery from MAM or SAM over user-defined post-intervention period (nutrition status did not fall back to MAM for MAM treatment or to SAM for SAM treatment).

$$= \frac{Financial\ Cost\ per\ Recovered\ Child_{\$US\ per\ child}}{\%\ Sustained\ Recovery}$$

where % sustained recovery is a user input

* The uncertainty range for Financial Cost per Sustained-Recovered Child is calculated based on the lower and upper bound of the uncertainty range for % Sustained Recovery provided by user input.

All-Inclusive Cost per Sustained-Recovered Child - Average all-inclusive cost (financial cost to program and economic cost to volunteers and recipients/caregivers) for each recovered child who sustained recovery from MAM or SAM over user-defined post-intervention period (nutrition status did not fall back to MAM for MAM treatment or to SAM for SAM treatment).

$$= \frac{All\ inclusive\ Cost\ per\ Recovered\ Child_{\$US\ per\ child}}{\%\ Sustained\ Recovery}$$

where % sustained recovery is a user input

* The uncertainty range for All-inclusive Cost per Sustained-Recovered Child is calculated based on the lower and upper bound of the uncertainty range for % Sustained Recovery provided by user input.

Percentage (%) of Total MAM (or SAM) Burden Targeted by the Program - Percentage of user-specified MAM or SAM burden targeted by the MAM or SAM treatment program.

$$= \frac{N\ Targeted}{Burden\ of\ MAM\ or\ SAM} \times 100\%$$

where N Targeted (Number of Children Targeted) and Burden of MAM or SAM is a user input

Percentage (%) of Total MAM (or SAM) Burden with Recovery Due to this Program - Percentage of user-specified MAM or SAM burden with recovery from MAM or SAM due to the MAM or SAM treatment program.

$$= \frac{N\ Targeted\ \times \%\ Recovery}{Burden\ of\ MAM\ or\ SAM} \times 100\%$$

where N Targeted (Number of Children Targeted), % Recovery, and Burden of MAM or SAM is a user input

* The uncertainty range for Percentage (%) of Total MAM (or SAM) burden with Recovery is calculated based on the lower and upper bound of the uncertainty range for % Recovery provided by user input.

Percentage (%) of Total MAM (or SAM) Burden with Sustained Recovery within User-defined Post-treatment period Due to this Program- Percentage of user-specified MAM or SAM burden with sustained recovery from MAM or SAM over user-defined post-intervention period due to the MAM or SAM treatment program (nutrition status did not fall back to MAM for MAM treatment or to SAM for SAM treatment).

$$= \frac{N\ Targeted\ \times \%\ Recovery \times \%\ Sustained\ Recovery}{Burden\ of\ MAM\ or\ SAM} \times 100\%$$

where N Targeted (Number of Children Targeted), % Recovery, % Sustained Recovery, and Burden of MAM or SAM are user inputs

* The uncertainty range for Percentage (%) of Total MAM (or SAM) burden with Sustained Recovery is calculated based on the lower and upper bound of the uncertainty range for % Sustained Recovery provided by user input.

Annex 4. Glossary and Formulas for Prevention of Stunting, Wasting, and/or Underweight Programs

Total Loss-Adjusted Quantity of Selected Specialized Nutritious Food - Total quantity in Metric Ton (MT) of the selected specialized nutritious food for infant and young children (IYC) and/or for pregnant and lactating women (PLW), adjusted for food losses from user inputs.

$$= IYC\ Total\ Loss\ Adjusted\ Quantity\ of\ Selected\ SNF_{MT} + PLW\ Total\ Loss\ Adjusted\ Quantity\ of\ Selected\ SNF_{MT}$$

$$= \frac{IYC\ N\ Targeted \times IYC\ SNF\ Dosage_{grams\ per\ child\ per\ day} \times (IYC\ Supplementation\ Duration_{months\ per\ child} \times 30.42_{days\ per\ month})}{(1 - \%\ IYC\ SNF\ Losses) \times 1{,}000{,}000_{grams\ per\ MT}}$$

$$+ \frac{PLW\ N\ Targeted \times PLW\ SNF\ Dosage_{grams\ per\ child\ per\ day} \times (PLW\ Supplementation\ Duration_{months\ per\ mother} \times 30.42_{days\ per\ month})}{(1 - \%\ PLW\ SNF\ Losses) \times 1{,}000{,}000_{grams\ per\ MT}}$$

where N Targeted (Number of Recipients Targeted), SNF Dosage, Supplementation Duration, and %SNF Losses are user inputs for either IYC or PLW. Terms that starts with "IYC" or "PLW" in the formula are only applicable when the corresponding eligible group(s) (IYC and/or PLW) are selected.

Total Loss-Ajusted Quantity of Fortified Vegetable Oil - Total quantity in Metric Ton (MT) of fortified vegetable oil (if applicable), adjusted for food losses from user input

$$= IYC\ Total\ Loss\ Adjusted\ Quantity\ of\ Oil_{MT} + PLW\ Total\ Loss\ Adjusted\ Quantity\ of\ Oil_{MT}$$

$$= \frac{IYC\ N\ Targeted \times IYC\ Oil\ Dosage_{grams\ per\ child\ per\ day} \times (IYC\ Supplementation\ Duration_{months\ per\ child} \times 30.42_{days\ per\ month})}{(1 - \%\ Oil\ Losses) \times 1{,}000{,}000_{grams\ per\ MT}}$$

$$+ \frac{PLW\ N\ Targeted \times PLW\ Oil\ Dosage_{grams\ per\ child\ per\ day} \times (PLW\ Supplementation\ Duration_{months\ per\ mother} \times 30.42_{days\ per\ month})}{(1 - \%\ Oil\ Losses) \times 1{,}000{,}000_{grams\ per\ MT}}$$

where N Targeted (Number of Recipients Targeted), SNF Dosage, and Supplementation Duration are user inputs for either IYC or PLW; %Oil Losses is a user input regardless of eligible group. Terms that starts with "IYC" or "PLW" in the formula are only applicable when the corresponding eligible group(s) (IYC and/or PLW) are selected.

Total Procurement Cost of Selected Specialized Nutritious Food - Total product cost in $US of the selected specialized nutritious food, adjusted for food losses from user input.

$$= IYC\ Total\ Loss\ Adjusted\ Quantity\ of\ Selected\ SNF_{MT} \times IYC\ SNF\ Product\ Unit\ Cost_{\$US\ per\ MT} + PLW\ Total\ Loss\ Adjusted\ Quantity\ of\ Selected\ SNF_{MT} \times PLW\ SNF\ Product\ Unit\ Cost_{\$US\ per\ MT}$$

where SNF Product Unit Cost is a user input for either IYC or PLW. Terms that starts with "IYC" or "PLW" in the formula are only applicable when the corresponding eligible group(s) (IYC and/or PLW) are selected.

Total Procurement Cost of Fortified Vegetable Oil - Total product cost in $US of the selected specialized nutritious food, adjusted for food losses from user input.

$$= (IYC\ Total\ Loss\ Adjusted\ Quantity\ of\ Fortified\ Vegetable\ Oil_{MT} + PLW\ Total\ Loss\ Adjusted\ Quantity\ of\ Fortified\ Vegetable\ Oil_{MT}) \times Oil\ Unit\ Cost_{\$US\ per\ MT}$$

where Oil Unit Cost is a user input regardless of eligible group. Terms that starts with "IYC" or "PLW" in the formula are only applicable when the corresponding eligible group(s) (IYC and/or PLW) are selected.

Total Financial Cost to Program - Total financial cost to the program, including SNF (and oil, if applicable) product procurement, supply chain, and in-country programming cost, adjusted for food losses from user input.

$$\begin{aligned} = &\left(IYC\ SNF\ Product\ Unit\ Cost_{\$US\ per\ MT} + IYC\ SNF\ International\ Freight\ Unit\ Cost_{\$US\ per\ MT} + ITSH\ Unit\ Cost_{\$US\ per\ MT}\right) \\ &\times IYC\ Total\ Loss\ Ajusted\ Quantity\ of\ Specialized\ Nutritious\ Food_{MT} \\ &+ \left(PLW\ SNF\ Product\ Unit\ Cost_{\$US\ per\ MT} + PLW\ SNF\ International\ Freight\ Unit\ Cost_{\$US\ per\ MT}\right. \\ &\left. + ITSH\ Unit\ Cost_{\$US\ per\ MT}\right) \times PLW\ Total\ Loss\ Ajusted\ Quantity\ of\ Specialized\ Nutritious\ Food_{MT} \\ &+ \ In\ country\ Programming\ Unit\ Cost_{\$US\ per\ recipient} \times (IYC\ N\ Targeted + PLW\ N\ Targeted) + if\ applicable \\ &\rightarrow \left(Oil\ Unit\ Cost_{\$US\ per\ MT} + Oil\ International\ Freight\ Unit\ Cost_{\$US\ per\ MT} + ITSH\ Unit\ Cost_{\$US\ per\ MT}\right) \\ &\times Total\ Loss\ Ajusted\ Quantity\ of\ Fortified\ Vegetable\ Oil_{MT} \end{aligned}$$

where SNF Product Unit Cost, International Freight Unit Cost, and N Targeted (Number of Recipients Targeted) are user inputs for either IYC or PLW*; ITSH Unit Cost, In-country Programming Unit Cost, and Oil Unit Cost are user inputs* regardless of eligible group. Terms that starts with "IYC" or "PLW" in the formula are only applicable when the corresponding eligible group(s) (IYC and/or PLW) are selected.

Total Economic Cost to Volunteers and Recipients/Caregivers - Total economic cost to program recipients or their caregivers and/or program volunteers, including out-of-pocket spending and opportunity cost of time.

$$= Average\ Household\ Out\ of\ Pocket\ Spending_{\$US\ per\ recipient} + \left(Average\ Program\ Volunteer\ Time_{hours\ per\ recipient} + Average\ Caregiver\ Time_{hours\ per\ recipient}\right) \times Average\ Hourly\ Valuation\ of\ Time_{\$US\ per\ hour}$$

where all terms are user inputs regardless of eligible group.

Total All-Inclusive Cost - Total cost including both the financial cost to the program and the economic cost to program recipients or their caregivers and/or program volunteers.

$$= Total\ Financial\ Cost\ to\ Program_{\$US} + Total\ \ Economic\ Cost\ to\ Volunteers\ and\ Recipients/Caregivers_{\$US}$$

Financial Cost per Targeted Recipient - Average financial program cost for each recipient targeted by the program.

$$= \frac{Total\ Financial\ Cost\ to\ Program_{\$US}}{IYC\ N\ Targeted + PLW\ N\ Targeted}$$

where N Targeted (Number of Recipients Targeted) is a user input for either IYC or PLW. Terms that starts with "IYC" or "PLW" in the formula are only applicable when the corresponding eligible group(s) (IYC and/or PLW) are selected.

All-Inclusive Cost per Targeted Recipient - Average all-inclusive cost (financial cost to program and economic cost to volunteers and recipients/caregivers) for each recipient targeted by the program.

$$= \frac{Total\ All\ inclusive\ Cost_{\$US}}{IYC\ N\ Targeted + PLW\ N\ Targeted}$$

where N Targeted (Number of Recipients Targeted) is a user input for either IYC or PLW. Terms that starts with "IYC" or "PLW" in the formula are only applicable when the corresponding eligible group(s) (IYC and/or PLW) are selected.

Financial Cost per Targeted Mother-Child Pair - Average financial program cost for each mother-child pair targeted by the program.

$$= \frac{Total\ Financial\ Cost\ to\ Program_{\$US}}{N\ Targeted\ Mother\ Child\ Pair}$$

where $N\ Targeted\ Mother\ Child\ Pair = IYC\ N\ Targeted$ *if only IYC is selected or both IYC and PLW are selected as eligible group(s);* $N\ Targeted\ Mother\ Child\ Pair = PLW\ N\ Targeted$ *if only PLW is selected as the eligible group.*

All-Inclusive Cost per Targeted Mother-Child Pair - Average all-inclusive cost (financial cost to program and economic cost to volunteers and recipients/caregivers) for each mother-child pair targeted by the program.

$$= \frac{Total\ All\ inclusive\ Cost_{\$US}}{N\ Targeted\ Mother\ Child\ Pair}$$

where $N\ Targeted\ Mother\ Child\ Pair = IYC\ N\ Targeted$ *if only IYC is selected or both IYC and PLW are selected as eligible group(s);* $N\ Targeted\ Mother\ Child\ Pair = PLW\ N\ Targeted$ *if only PLW is selected as the eligible group.*

Financial Cost per Case Of Stunting (or Wasting, or Underweight) Averted - Average financial program cost for each case of child stunting (or wasting, or underweight) averted by the program.

$$= \frac{Financial\ Cost\ per\ Targeted\ Mother\ Child\ Pair_{\$US\ per\ mother\ child\ pair}}{Percentage\ Points\ Reduction\ in\ \ Child\ Stunting\ or\ Wasting\ or\ Underweight}$$

where Percentage Points Reductions in Child Stunting, Wasting, or Underweight are user inputs regardless of eligible group.

* The uncertainty range for Financial Cost per Case of Stunting (or Wasting, or Underweight) Averted is calculated based on the lower and upper bound of the uncertainty range for Percentage Points Reduction in Child Stunting (or Wasting, or Underweight) provided by user input.

All-Inclusive Cost per Case Of Stunting (or Wasting, or Underweight) Averted - Average all-inclusive cost (financial cost to program and economic cost to volunteers and recipients/caregivers) for each case of child stunting (or wasting, or underweight) averted by the program

$$= \frac{All\ Includisve\ Cost\ per\ Targeted\ Mother\ Child\ Pair_{\$US\ per\ mother\ child\ pair}}{Percentage\ Points\ Reduction\ in\ Child\ Stunting,\ \ Wasting, or\ Child\ Underweight}$$

where Percentage Points Reductions in Child Stunting, Wasting, or Underweight are user inputs regardless of eligible group.

* The uncertainty range for All-inclusive Cost per Case of Stunting (or Wasting, or Underweight) Averted is calculated based on the lower and upper bound of the uncertainty range for Percentage Points Reduction in Child Stunting (or Wasting, or Underweight) provided by user input.

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