



**FEED THE FUTURE**

The U.S. Government's Global Hunger & Food Security Initiative

# PERFORMANCE MONITORING

FACILITATOR'S GUIDE



**USAID**  
FROM THE AMERICAN PEOPLE

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August 2016

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## H. Materials, Supplies and Checklist

### Session Materials

#### Session Five

- PowerPoint slides
- Computers loaded with Setting Targets Worksheet (participants)
- Setting Targets Worksheet for Participants (in Participant Guide)
- Setting Targets Worksheet for Facilitators (in Participant Guide)

### Supplies

*Have the following standard office supplies available:*

- Pads of paper
- 5 x 7 index cards (different colors)
- Extra Pens
- Mr. Sketch markers (for facilitators and each table)
- Colored felt-tipped pens (for each table)
- Masking tape or painter's tape
- Suction cups for banners
- Paper clips
- Stapler and staples
- Scissors
- Post-It Notes (3x3, different colors)
- Chocolate (a must!!!)

### Equipment

- LCD project and screen
- Laptop loaded with course PowerPoint slides
- Internet access
- Speakers
- Remote for LCD projector/PowerPoints and extra batteries
- Microphones (if necessary)
- Flipchart stands and paper (one stand per table plus two stands for facilitators)
- Chimes to ring at breaks
- Camera for photos during session
- Note: Additional laptops are needed for individual sessions (see session list of materials)

## Session 5: Defining Beneficiaries, Baselines and Targets

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Session Goal: Define and identify beneficiaries, baselines and targets

Learning Objectives:

- Identify direct and indirect beneficiaries
- Recognize whether a baseline is required
- Identify the beneficiary universe for collecting baseline data
- Understand methods to collect baseline values and the strengths and limitations of each
- Learn approaches to setting targets

Session Length: 180 minutes

Session Materials:

- Session 5 slides
- Laptops
- Setting targets
  - Computers loaded with Setting Targets Worksheet (participants)
  - Setting Targets Worksheet for Participants
  - Setting Targets Worksheet for Facilitators

Facilitator Notes:



Time & Facilitator	Content/Activities	Materials
Pre-work	Load Setting Targets Excel Worksheet on computers	
1:45 pm (30 min)	<p><b>INTRODUCTION</b></p> <p style="text-align: center;"><b>Slide 1</b></p> <div data-bbox="602 428 1045 762" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;">  </div> <p>Say: In this session we will look at:</p> <ul style="list-style-type: none"> <li>○ Identifying direct and indirect beneficiaries</li> <li>○ Recognizing whether baseline data is required and if it is required, how to collect these data</li> <li>○ Establishing activity targets</li> </ul> <p style="text-align: center;"><b>Slide 2</b></p> <div data-bbox="602 1043 1045 1377" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;">  </div> <p>Ask: Can anyone describe any of the criteria you use to determine whether an individual is a direct beneficiary of an FTF activity? <i>Record their responses on a flipchart.</i></p> <p>Ask: Why do you think it is important to be able to differentiate direct from indirect beneficiaries for FTF activities?</p> <p>In the first part of this session you will make sure you thoroughly understand who is considered a direct and who is considered an indirect beneficiary of a FTF activity. This distinction is critically important, because all of our activity-level indicators measure direct beneficiaries, and we want to make sure each activity that reports on these indicators is measuring the same thing.</p>	

### Slide 3



**A direct beneficiary...**  
...is an individual or organization that **directly receives significant goods or services** with support from the activity

**Significant direct contact**  
...includes people trained through “cascade” and other **peer-to-peer training and demonstration strategies, mothers/fathers/ other caregivers** reached with behavior change counseling about their children, and farmers reached through **market-level interventions**

*Compare answers given by participants and recorded on the flipchart with the definition.*

Say: A direct beneficiary receives significant goods and/or services with support from the activity. Goods are things like inputs, loans, and vitamin or food supplements; and services include things like extension, technical assistance, marketing and other business development services, nutrition counseling, screening for acute malnutrition, and literacy and numeracy training.

The contact with the activity needs to be significant. Significant means that it is enough to make a meaningful contribution to the beneficiaries being able to achieve an outcome the activity wants to help them achieve. That means people who are only lightly exposed to something a project does, such as attending a sensitization meeting or community theater presentation, hearing a radio message or seeing a poster in the health clinic or input suppliers shop, but who do not interact further with the activity, meaning he or she does not receive other benefits that are part of a package that follows from or complements that initial exposure, should not be counted as direct beneficiaries.

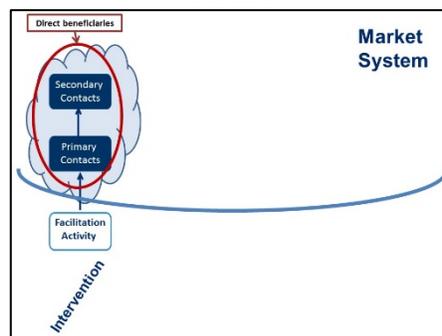
I know there can be temptation to interpret the definition of direct beneficiary broadly, to show that your activities are reaching lots of people and achieving high coverage levels (especially during things like portfolio reviews that place a lot of importance on the levels of coverage being achieved). However, doing this is a double-edged sword. Why? Because reaching beneficiaries is just step one in your theory of change and RF. We expect that you are reaching direct beneficiaries with effective packets of interventions and that this will lead to changes in outcome indicators among those direct beneficiaries. So while it can be tempting to cast as wide a net as possible in defining who is a direct beneficiary so you can show large numbers and high levels of coverage of smallholders or mothers or children, remember that we will then expect that large proportions of that number, of those direct beneficiaries, will eventually apply improved agricultural or feeding practices, and see their gross margins, sales and dietary diversity go up. Missions and implementing partners will need to be able to set targets for outcome indicators such as application of improved technologies, gross margins, incremental sales, or improved feeding behaviors, and then track and report on those indicators across that whole population you have defined as direct beneficiaries. And, very important, to then be held accountable for achieving the outcome targets among those beneficiaries, understand and explain why targets are not being achieved, and adapt and adjust your programming to achieve the targets, all when you're not really providing a significant, comprehensive set of services to them.

Note that the definition doesn't say that a direct beneficiary receives the good or service directly “from” the activity. This means that the good or service doesn't

have to be provided directly by a paid staff member of the implementing partner. In general this should be pretty obvious. Most of our activities reach beneficiaries by working through local markets, organizations and individuals, first because we want to sustainably build local capacity and leave behind strong local systems, structures and organizations that can continue to provide needed goods and services long after we leave, and second, because we would never have enough money to have implementing partners pay staff directly to provide the necessary goods and services to all the people we want to reach.

There are a number of strategies and mechanisms through which activities deliver goods and services to beneficiaries. One very common service delivery mechanism is training people who then demonstrate, train, counsel or provide other services to others. Examples include lead farmers and care group lead mothers. It also includes reaching a child through his or her mother or caregiver – something I mentioned in Session 3 when talking about the nutrition-specific coverage indicators. An activity's direct beneficiaries include the people it trains directly – the lead farmers and lead mothers. It also includes all the people that those people it trained go on to train, who make up the majority of the activity's direct beneficiaries. So when we work to train, for example, a lead farmer who then continues and passes on his learning to other members in his community as part of a planned service delivery strategy of the project, both the lead farmer and the farmers that the lead farmer trained during the farmer field schools, for example, are considered direct beneficiaries. The lead farmer has to have direct, intentional contact with those other farmers for them to count as direct beneficiaries.

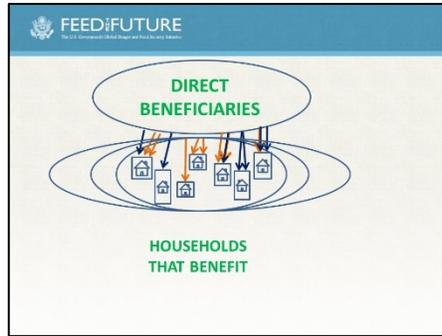
**Slide 4**



*Slide is animated.*

Say: Another very common approach to reach our direct beneficiary smallholder farmers is through value chain facilitation activities. These types of activities aim to transform market systems by identifying and helping to eliminate or lower barriers and constraints and stimulate the efficient functioning of input and output and service markets through strategic targeted interventions that facilitate without becoming a direct part of the chain. So, for example, an activity helps link an agro-input firm and a source of credit that helps eliminate a financial constraint that was preventing the agrodealer from expanding a network of roving community-level input agents. The expanded network of input agents brings the inputs closer to the farmers, eliminating the long distance to the agrodealer that was preventing many farmers from accessing inputs. In this case, CLICK the agrodealer is the facilitation activity's primary contact and, through its agents, CLICK the farmers are the secondary contact. CLICK Both of these contacts are considered direct beneficiaries.

**Slide 5**



The slide is animated. The above graphic is a simplified version of the animated slide.

Say: In addition to knowing who is a direct beneficiary, you also need to know what qualifies a household to be counted as having benefitted from Feed the Future.

Ask: Does anyone remember the criteria from Session 3?

Answer: A household is considered to have benefitted from FTF if the household has at least one member who is a direct beneficiary.

Ask: So, do you think that an indicator that counts the number of direct beneficiaries will give you the same value as one that counts the number of households that benefitted?

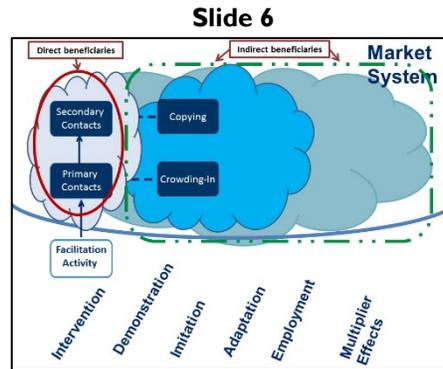
Ask: Will the number be *CLICK* less, *CLICK* the same, *CLICK* or greater? *CLICK*

Say: Let's think about NUTSENAG. We have two main interventions under the activities: value chain interventions working with producers, and care group nutrition interventions working with pregnant women and mothers of children under two. If we add up all the producers and all the pregnant women and all the mothers of children under two and all the children under two, does that equal the number of households that benefitted?

No, of course it doesn't. Usually you have at least some, and perhaps quite a few, households that have more than one beneficiary. In NUTSENAG, we could have a *CLICK* household with just a value chain producer beneficiary and *CLICK* another that has two producer beneficiaries. That's 3 beneficiaries and two households. *CLICK* then we have two households, one with a mom and a toddler and another with a pregnant woman, but neither with a producer participating in the value chain activity. That's three more beneficiaries but only two more households. *CLICK* Then we have a household with a producer dad and a mom with a baby, *CLICK* and another with a producer mom and an 18 month old, *CLICK* and a household with a pregnant producer and her producer spouse. You get the idea. *CLICK* the number of households benefitting is usually less than the number of an activity's direct beneficiaries.

What this also illustrates is how important it is for an activity to be able to track its beneficiaries and link those beneficiaries to households so that it can produce an accurate number of households benefitting without double-counting for that required if applicable (and it's almost always applicable) indicator. Knowing that this will be necessary from the beginning is useful so partners can put in place systems that allow them to do this tracking, for example, by generating and assigning unique beneficiary IDs that combine a household ID and a household member ID so

individual direct beneficiaries across interventions can be linked to their households.



*Slide is animated.*

Say: Now, let's talk about indirect beneficiaries.

Ask: Who do you remember are the direct beneficiaries of a value chain facilitation or market system activity?

Ask: Can you think of who might be considered indirect beneficiaries of this kind of activity?

Say: *CLICK* Indirect beneficiaries include other agroinput dealers that see how the network of agents has increased sales of the original agroinput dealers and other kinds of firms that see potential in adapting the community agent networks to expand the customer base for their related products or services. Indirect beneficiaries in this case – and in the lead farmer case we just talked about – also include “**spill-over and diffusion,**” or copying, e.g., those who apply improved technologies based on observing the lead farmer or one of his direct beneficiaries or who see the results achieved by farmers who purchased inputs and applied the technical advice on good agricultural they got from the agents and decide to copy those farmers (imitation is the sincerest form of flattery).

*CLICK* The more indirectly other people in the area benefit from increases in jobs due to farmers hiring more labor and other non-farm families and businesses in the rural economy also benefit from the increased demand for goods and services of many types generated by the increased income of the direct and indirect beneficiary firms and farmers.

Clearly, indirect beneficiaries and the processes that generate them are incredibly important. They're important for spread. They're important for sustainability. They're important for us to reach the population level impacts that we're trying to achieve in our zones of influence. In fact our development hypothesis depends on these processes and indirect effects happening. We want to know and are working on ways to measure indirect beneficiaries and benefits of our activities. But, to go back to the start of this presentation, what do our FTF activity-level indicators measure...??? for our all of the FTF activity level indicators.

**Slide 7**

	<div data-bbox="597 201 1040 535" style="border: 1px solid black; padding: 5px;">  <p><b>Direct or indirect?</b></p> <ul style="list-style-type: none"> <li>• Think about the <b>service delivery mechanism</b></li> <li>• Think about being <b>held accountable for changes</b> in behaviors and other outcomes</li> </ul> </div> <p>As mentioned in Session 3, FTF indicators measure direct beneficiaries.</p> <p>Ask: Can anyone list any criteria we use to determine whether an individual is a direct beneficiary on a FTF activity?</p> <p>Ask: Does anyone remember what qualifies a household to count as having benefitted from an FTF activity?</p> <p>Ask: Can anyone provide an example of an indirect beneficiary?</p>	
<p>2:15 pm (30 min.)</p>	<p><b>Individual Application Exercise</b></p> <p><b>Individual Reflection</b> Say: In your participant guide, complete the application exercise for defining beneficiaries, baselines and targets.</p> <p>Think about an FTF activity you are working on. List the direct beneficiaries. List the indirect beneficiaries.</p> <p><b>Pair-Share</b> Say: With a partner, share your activity and your list of direct and indirect beneficiaries. Explain why you put beneficiaries as either direct or indirect. Does your partner agree with your categorization? If not, listen to their interpretation and decide if you want to change your lists.</p> <p><b>Plenary</b> Ask 2 or 3 people to share their lists and highlights of their pair-share discussion.</p>	
<p>2:45 pm (15 min.)</p>	<p><b>Break</b></p>	

3:00 pm  
(30 min.)

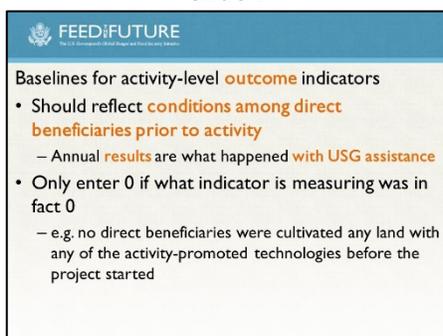
## Establishing Baselines

### Slide 8



Say: Now we are going to talk about the first set of data you will be required to collect for the indicators you have selected. The baseline.

### Slide 9



Say: Baselines are required for all indicators. They are very easy to set for output indicators, like number of people trained.

Ask: Since output indicators count things directly produced by the project, and those things aren't being done before the project starts, what do you think the baseline for output indicators should be?

Answer: The baseline for all output indicators is 0.

Say: The situation is different for outcome indicators, because they capture the status of an existing condition or situation among the direct beneficiary population before the activity starts. For example, how many beneficiaries were already using certified seed before the activity started? What gross margin did beneficiaries receive for maize in the production season before the activity started working with them? How much maize did they sell? In many if not most cases, the baseline for outcome indicators will be some positive number and not zero.

Ask: Can you think of any situations where the baseline for an outcome indicators would legitimately be zero?

Answer: You should only enter a zero baseline for an outcome indicator when in fact the value of the indicator pre-activity was zero. For example, not a single beneficiary was applying a practice, or not a single beneficiary sold the targeted commodity.

Say: We do have a couple of outcome indicators that are exceptions to this rule – one is the number of jobs generated with USG assistance indicator and another is private sector capital investment leveraged, because it does not matter how many jobs or investments there were before the activity – we are solely interested in the additional jobs or investments leveraged by our support.

People have often said that all outcome indicator baselines should be zero because the indicator title says “with USG assistance” and there was no USG assistance before the activity started. However, what’s important to remember is that the baseline isn’t a result. And it’s the results reported under the indicator that are “with USG support”, not the situation that existed prior to the activity. It is very important that we document what that status of the indicator was before we started, to make sure we do not claim as a result something that we had nothing to do with as evidenced by the fact that it existed already before we started. And if baseline values for application of improved technologies and practices did come back showing that large proportions of beneficiaries already applied a particular technology or practice, we’d probably want to reassess whether we are focusing on the right set of technologies to promote.

#### Slide 10

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**Value of incremental sales (at farm level)**

- Captures the **increase** in sales with our support
  - factors in what beneficiaries were selling before the activity started
- **Cannot be calculated** if value of baseline sales or number of baseline beneficiaries is missing
  - Baseline not available? Use **reporting year sales and number of beneficiaries from the first year** as the baseline values.

Say: Outcome indicator baselines are important for the reasons I just explained. However, a baseline value of sales and number of beneficiaries is absolutely essential for the incremental sales indicator. Without these two data points, the indicator cannot be calculated.

Incremental sales captures increases in sales due to our activity by factoring into the design of the indicator what beneficiaries were selling before the activity

started. This is because we wanted to be able to talk about the additional or increase in sales as a result of our interventions and not claim credit for sales of a particular value chain commodity that a beneficiary may already have had prior to our activities.

Now, because when we introduced these indicators some activities were already ongoing, our advice was that, if you did not have data on the baseline sales of your beneficiaries, you could use the reporting year sales and number of beneficiaries from the first year that you reported against the indicator as the baseline, recognizing that that would somewhat underestimate total incremental sales. We figured it was still better to do that than to be unable to calculate the indicator at all -- which is the case if there are no baseline sales or number of baseline beneficiaries. I suspect this should no longer be that much of an issue since most of our existing activities have now started after the requirement for the baseline sales and beneficiaries were there. So we don't anticipate this to continue to be an issue but just in case we do have guidance on what to do if you are missing your baseline sales.

**Slide 11**

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Overestimating incremental sales because of:

- growth in the number of beneficiaries
- baseline sales of new beneficiaries not reflected in baseline sales value.

FTFMS adjusts by calculating:

average baseline sales per beneficiary X  
number of reporting year beneficiaries =  
**adjusted baseline sales**

reporting year sales - adjusted baseline sales =  
**adjusted incremental sales**

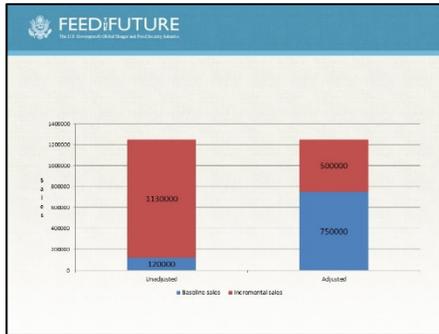
Say: Another thing we've learned over time is that the way the indicator was originally set up led to an overestimation of incremental sales. That is because for many, many activities the number of beneficiaries in the first year is not the sum total of beneficiaries that are going to be reached over the life of the activity. Most activities have growth in the number of beneficiaries over time. And what was happening is that we were taking the total sales in the reporting year of all the beneficiaries and subtracting out the baseline sales of a much smaller number of beneficiaries and that lead us to overestimate the amount of incremental sales. So we programmed FTFMS to calculate an adjusted baseline sales estimate by calculating the average baseline sales per beneficiary based on the baseline sales and number of baseline beneficiaries, and then multiplying the number of the reporting year beneficiaries by the average baseline sales per beneficiary, to calculate an estimate of what the baseline sales would have been for all of the beneficiaries being reported on in the reporting year. FTFMS then subtracts that adjusted baseline sales value from the reporting year sales to get an adjusted incremental sales value.

**Individual Activity - Calculating Unadjusted and Adjusted Incremental Sales**

Say: Next I'm going to ask each of you to take 10 minutes and calculate unadjusted and adjusted incremental sales in the scenario on the next slide and graph your answer as a stacked bar chart, with baseline sales on the bottom and incremental sales stacked on top and with labels that reflect the amount in each bar section. The total height of the bar will be equal to reporting year sales. Here's

an example of what your answer should look like.

### Slide 12



### Slide 13

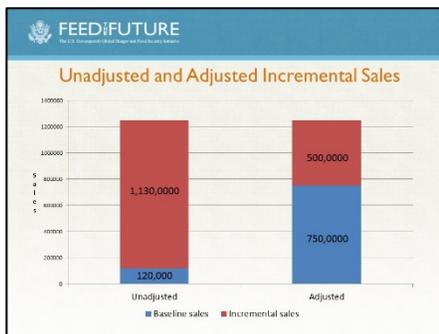
Calculate Reporting Year:

1. **Unadjusted Incremental Sales** = reporting year sales – baseline sales
2. **Adjusted baseline sales** = baseline sales / baseline beneficiaries X reporting year number of beneficiaries
3. **Adjusted Incremental Sales** = reporting year sales – adjusted baseline sales
4. Graph the results in a stacked bar chart with two bars: unadjusted and adjusted. Total height of bar = reporting year sales; divide each bar into two sections: baseline sales and incremental sales. Label each section with the associated value.

	Sales	# beneficiaries
Baseline	120,000	4,000
Reporting Year	1,250,000	25,000

Review the instructions on the slide.

### Slide 14



Animated slide – reveals answers as you click through the slide.

Ask: What value did you get for unadjusted baseline sales?

Click to show answer: 120,000.

Ask: What was the value for unadjusted incremental sales did you get?

Click to show answer: \$1,130,000, which is reporting year sales of \$2,250,000 minus the unadjusted baseline sales of \$120,000.

	<p>Ask: Now, what value did you get for adjusted baseline sales?</p> <p>Click to show answer: \$750,000.</p> <p>Ask someone who had the correct answer: Can you explain how you calculated that?</p> <p>Answer: Baseline sales per beneficiary is \$30 times reporting year number of beneficiaries (25,000) equals 750,000)</p> <p>Ask: If adjusted baseline sales are \$750,000, what is the adjusted incremental sales value?</p> <p>Click to show answer: \$500,000</p> <p>Say: \$500,000 is reporting year sales of \$2,250,000 minus the adjusted baseline sales of \$750,000. This result may look a little bit exaggerated but in fact it's not. We have seen growth in beneficiaries like this example from 4,000 in a baseline year to more than 25,000 in year one or two or three, with incredible growth in the value of sales that are being reported in that reporting year. And the old way we used to calculate it, we would have come up in this example with a reporting of \$1.13 million in incremental sales because we would be assuming that the \$120,000.00 that we calculated at baseline represented the value of baseline sales for that entire 25,000 beneficiaries. You can see that that really doesn't make sense to assume that.</p> <p>So after doing the calculation and inputting the average baseline sales per beneficiary to all 25,000 beneficiaries you can see that we have a much larger estimate of adjusted baseline sales which leaves us with what we hope is a more realistic and defensible estimate of the additional sales as a result of our activities of \$500,000.00. It's still a lot of sales. We are still reporting an impressive amount of sales in our progress report but we feel much more comfortable in being able to defend the value that we are reporting as a more accurate representation of what the increase in sales has been with the support provided by our activity.</p>	
	<p><b>Continue Presentation</b></p> <p style="text-align: center;"><b>Slide 15</b></p> <div data-bbox="576 1386 1019 1722" style="border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;">  <p><b>When</b> to establish baselines:</p> <ul style="list-style-type: none"> <li>–<b>First year</b> of implementation, <b>before interventions</b> influence the outcome</li> </ul> </div> <p>Say: All this means that partners need to conduct a baseline data collection exercise during the first year of activity implementation, designed to measure the situation with regards to the activity's outcome indicators among direct beneficiaries before whatever the indicator is measuring is influenced by the</p>	

support provided by the activity. For many of our indicators, this means partners collect data that refers to the agricultural season prior to when the activity started to provide support such as training, facilitating access to inputs or markets. While they may result in them having different recall periods for baseline compared with annual reporting, e.g. the baseline could be conducted before planting commences for the current production season so baseline will have 8-12 month recall to the previous season, while annual reporting may collect data right after harvest and/or after period when bulk of sales have occurred, so the recall period will be much shorter. But that's ok, we can live with this inconsistency.

### Slide 16

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#### How to establish baselines

- Collect baseline information from each **first year** beneficiary upon enrollment OR
- Wait until **first year** list of beneficiaries has been developed. Collect baseline data from sample of direct beneficiaries OR
- Sample "**likely**" beneficiaries
  - no list of beneficiaries is available
  - partner wants to collect data before the list is available
  - partner wants more representative sample of beneficiaries
  - extrapolate sample average X number of year one beneficiaries

Say: Because our activity-level indicators measure direct beneficiaries, the baselines need to reflect conditions among our direct beneficiaries prior to receipt of activity interventions. And, since baselines need to be established in the first year of implementation, this has meant that baselines are established by measuring the conditions of the direct beneficiaries of the activity's first year. Until recently we'd advised that activities wait until they had the list of first year beneficiaries and use that list to establish the baseline (if the partner wasn't collecting baseline information on an on-going basis as new beneficiaries enrolled during the first year.) We advised that partners do this rather than conduct a survey of likely beneficiaries because we were concerned about potential bias.

But partners often want to do a survey of likely beneficiaries because they don't have a list of beneficiaries or don't want to wait until one is fully created, or if they feel a survey will give a more representative baseline of their eventual set of beneficiaries. Because most of our annual indicators are totals, in these cases partner need to extrapolate survey averages to beneficiary totals using the sample weighted average times the number of year one beneficiaries as opposed to the sample weighted total because the sample frame usually covers a population larger than targeted direct beneficiary population, e.g. if sample frame is all farm households in ZOI, sample weighted totals would reflect estimates of totals across ZOI, e.g. estimate of total sales of soy at ZOI level, estimate of total number of producers applying improved technologies, and then all out year targets and actual results would likely be lower than the baseline unless activities are going to reach close to 100% ZOI coverage.

But experience has shown that bias is possible with either approach.

### Slide 17

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The U.S. Department of Agriculture and Feed the Future Initiative

#### Baseline Challenges

Activity- and self-**selection bias** can occur with either approach

- Possibly not representative of final group of beneficiaries
  - **People selected** to participate
  - **People who decide** to participate

Say: Either approach can result in baseline values being collected from a group that ends up not really representing the final group of beneficiaries and therefore not representing what the baseline conditions really were for that final beneficiary group. This is because there are likely to be two types of selection processes going on, by the implementing partner and by the potential beneficiaries themselves.

### Slide 18

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#### First year's beneficiaries

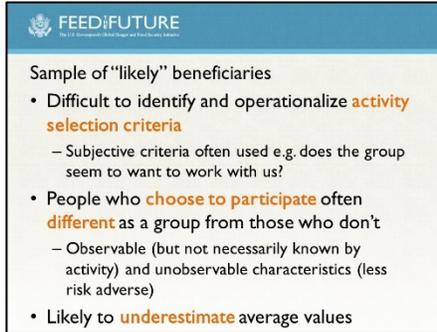
- **Better-off and more ambitious** than later beneficiaries
  - Lead farmers, early adopters compared with later adopters
- Population more **easily accessed**
- Likely to **overestimate average values** of broader group of beneficiaries
- Can particularly affect incremental sales

Say: The set of first year beneficiaries may be better off or more ambitious than those who join (or are provided the opportunity to join) the activity in subsequent years. First year beneficiaries may be more willing to take risks. Many of them may be those selected as lead farmers. They may be more accessible to the activity e.g. to roads, so the activity starts working with them first then rolls out to harder-to-reach places in later years. This can lead to the baseline values for this group being higher than for subsequent beneficiaries, which can particularly affect incremental sales.

Ask: Given the exercise you just completed, why do you think would be the effect of establishing baseline sales from a group that has higher than average sales compared to subsequent beneficiaries? For example, where the first year beneficiaries were all already selling a good amount of the commodity, but most of the beneficiaries added in year two never had any surplus to sell before and are only just starting to apply the improved technologies that will lead to a marketable surplus.

Answer: It could lead to negative incremental sales if the average baseline sales per beneficiary was higher than the average reporting year sales of the beneficiaries that include a large number who are not selling or selling very little.

## Slide 19



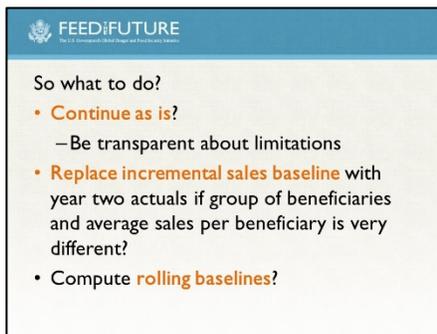
FEEDiFUTURE  
The U.S. Department of Agriculture's Feed the Future Innovation Lab for Watershed Resilience

Sample of "likely" beneficiaries

- Difficult to identify and operationalize **activity selection criteria**
  - Subjective criteria often used e.g. does the group seem to want to work with us?
- People who **choose to participate** often **different** as a group from those who don't
  - Observable (but not necessarily known by activity) and unobservable characteristics (less risk adverse)
- Likely to **underestimate** average values

Say: The bias is likely to be in the other direction with the sample of "likely" beneficiaries because the sample will likely include people who do not meet an activity's selection criteria or who would not choose to participate if given the opportunity to do so. And those people may very well be less productive in general. So this is more likely to underestimate average values for the final group of beneficiaries (This at least is my hypothesis -- we haven't actually tested this empirically.) It is very difficult to conduct a survey that screens in only respondents that would meet an activity's criteria (assuming the activity has them) and who would choose to participate if given the opportunity. That's because not all of an activity's selection criteria or an individual's self-selection criteria or characteristics are objective and easily observable. And partners may not even know beforehand what sort of observable characteristics make someone more likely to choose to participate in the activity. Note, this is also an on-going challenge for impact evaluations as researchers try to identify control or comparison groups in the absence of randomization.

## Slide 20



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So what to do?

- **Continue as is?**
  - Be transparent about limitations
- **Replace incremental sales baseline** with year two actuals if group of beneficiaries and average sales per beneficiary is very different?
- Compute **rolling baselines?**

Say: So what to do? For now we intend to continue with current guidance to set your baselines using year one beneficiaries or (still less preferred) a sample of likely beneficiaries if necessary.

Other options include replacing, on a case-by-case basis, an activity's incremental sales baseline with its year two actuals if there's large increase in the number of beneficiaries in the second year, and average value of the indicator or data point per beneficiary is significantly lower than baseline average per beneficiary. This would be only if the mission knows it's due to partner coverage expanding into a significantly larger but poorer/less productive group than the much smaller and more productive group of first year beneficiaries - e.g. 24,000 second year beneficiaries largely composed of farmers producing and selling soy for the first

	<p>time compared to 2,000 baseline/year one beneficiaries, most of whom were already producing soy and selling to one of the country's small processing plants.</p> <p>Or compute rolling or updated baselines every year and either go back and change the baseline every year, or change FTFMS data entry so that each year the implementing partner could enter a baseline and reporting year sales.</p>	
<p>3:30 pm (30 min.)</p>	<p><b>Group Activity – Incremental Sales Baseline and Rolling Baseline</b></p> <p style="text-align: center;"><b>Slide 21</b></p> <div data-bbox="576 527 1019 858" style="border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;">  <p><b>Group Activity:</b> For your assigned challenge, brainstorm the pros and cons.</p> <ul style="list-style-type: none"> <li>• Topic #1 - Replace incremental sales baseline?</li> <li>• Topic #2 - Compute rolling baselines?</li> </ul> <p><i>Think about implications for implementing partner information systems, previous year's results already reported publicly, and audits.</i></p> <p>On a flipchart report your arguments and be prepared to share three points you would like to share in plenary.</p> </div> <p><b>Directions:</b></p> <ul style="list-style-type: none"> <li>• Divide into small groups.</li> <li>• Assign 1/2 the groups the first bullet point – replace incremental sales baseline – and 1/2 the groups the second bullet point – compute rolling baselines.</li> <li>• Each group needs to brainstorm the pros and cons of their topic and record their arguments on a flipchart.</li> </ul> <p><b>Say:</b> Think about implications for implementing partner information systems and tracking requirements, previous year's results already reported publicly, and auditors wanting to replicate our results.</p> <p>You have 20 minutes to complete the exercise. Record your thoughts on the flip chart and identify THREE points you'd like to share with the group. If you think of other ideas also record them and their pros and cons.</p> <p><b>Potential answers:</b></p> <ul style="list-style-type: none"> <li>• Topic #1 - This will significantly overestimate incremental sales for year one beneficiaries for the life of activity (annually by the difference between the original baseline value and the revised baseline value times number of baseline beneficiaries) and underestimate incremental sales in year two unless partner collects both baseline and reporting year sales.</li> <li>• Topic #2 - This will require partners to track separately the baselines for each cohort of beneficiaries and compute weighted averages each year.</li> </ul>	<p>Flipchart, paper and markers (1/table)</p>

4:00 pm  
(45 min.)

## SETTING TARGETS

### Slide 22



Transition from baselines to setting targets.

### Slide 23

- What is a target (in relation to baseline) and why it is important
- Outcome vs. output indicator targets
- Tools for setting outcome targets
- Tools for setting output targets
- Setting and revising targets – approach, timing, responsibilities

Read the topics on the slide that the session will cover.

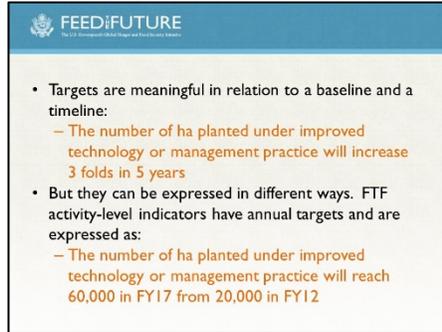
### Slide 24

- The specific, planned level of result to be achieved by an indicator within an explicit timeframe with a given level of resources.
- Targets are essential component of adaptive management.

Say: The definition of a target is “the specific, planned level of result to be achieved by an indicator within an explicit timeframe with a given level of resources.” Targets are essential component of adaptive management.

Ask: How are targets important for adaptive management? *Allow group to explore the question.*

## Slide 25



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The U.S. Government's Global Hunger and Food Security Agency

- Targets are meaningful in relation to a baseline and a timeline:
  - The number of ha planted under improved technology or management practice will increase 3 folds in 5 years
- But they can be expressed in different ways. FTF activity-level indicators have annual targets and are expressed as:
  - The number of ha planted under improved technology or management practice will reach 60,000 in FY17 from 20,000 in FY12

Say: A target is meaningful in relation to a starting point and a timeline, although it is not always “expressed” in relation to a baseline.

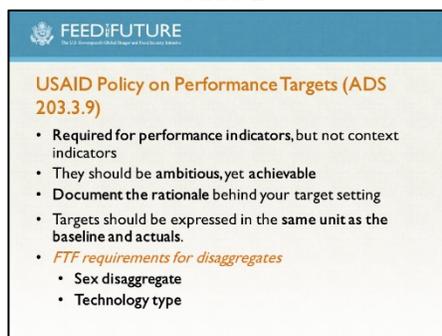
The starting point or baseline: All of our indicators have a baseline (refer to Anne’s previous presentation).

Our output indicators are defined in such a way that all baseline are zero. Our outcome indicators have a baseline that should be measured and usually will be non-zero.

Timeline: FTF activity-level indicators should have annual targets. This is how we’ve defined them. You could have a custom indicator that would be useful for tracking a specific intervention with a different periodicity. Quarterly targets may be useful to track a process of some sort, or on the other hand, in some case, longer time intervals between targets may be necessary. We are not discussing population-based indicators here, but these are examples of indicators where annual targets don’t make sense. We don’t expect stunting and poverty to meaningfully change in a year.

Useful here to discuss an indicator tracking a policy reform process? The activity manager may want to define an indicator that would allow her to track a calendar established for enacting a reform by a certain time (or anything else – A DG activity leading to an election for instance). But note that our policy indicator is still defined with an annual periodicity for the target. We are counting the number of policies that have completed each of the pre-defined steps at the end of the each year.

## Slide 26



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**USAID Policy on Performance Targets (ADS 203.3.9)**

- Required for performance indicators, but not context indicators
- They should be ambitious, yet achievable
- Document the rationale behind your target setting
- Targets should be expressed in the same unit as the baseline and actuals.
- *FTF requirements for disaggregates*
  - Sex disaggregate
  - Technology type

Say: This is to tell you what the ADS says about targets Note the 3<sup>rd</sup> bullet. It is extremely important to document the rationale and steps followed to set targets,

not only for others but also for yourself, as we forget what information we've had and how we use it to determine these things.

FTF requires targets for every indicator, although for complex indicators, such as gross margins, we don't require targets for each data point, but only for the aggregate value. Note that it may be useful for implementing partners and possibly activity managers at the Mission to set or determine indicative targets for the individual data points, such as number of hectares planted and yield, as a monitoring tool. But we don't require them.

We do require sex-disaggregated targets for all of our indicators as well as targets by technology type, as in number of farmers and others who have applied new technologies and number of hectares under improved technologies.

### Slide 27

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### Setting Targets

- The task is to set targets that are
  - reasonable
  - meaningful
  - useful
- General considerations
- Tools

Say: Now to setting targets for your indicators. There is no magic way to set targets, yet it is one of the most important task – setting reasonable, meaningful, and useful targets.

- Reasonable: do they make sense? Are they adequately tied to your context, objectives, and specific work plan?
- Meaningful: what are they telling you about what you want to achieve and what constraints you are facing?
- Useful: will they help you understand what is really happening during implementation and where you need to intervene and perhaps adjust your strategy

We will first discuss some general consideration in setting targets and then review some of the tools available to help us setting targets

### Slide 28

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### General considerations in setting targets

- Understand the universe and context of the indicator
- Targets should not be set, or revised, in isolation
- Be transparent and engage your stakeholders. Be clear on the difference between individual activity targets and aggregate ones

Say: Understand the “universe” and context of your indicator:

- Is it counting people or things?
- Is it “simple” indicators, like the number of people trained,
- or a complex one, like gross margins, which is made of different data points that may vary in different directions
- Do you have a firm expectation as to whether it will go up (or down), or can there be variations from year to year that may not be under your control, again like gross margins where you probably don’t have much control over the price at which products will sell or the cost of input

Know your expected trend line: Outcome and output indicator targets will follow a different curve pattern over time.

Let’s review some possibilities. Let’s look at simple graphs and see if we can make sense of what it can tell us about the indicator.

Outcome indicators, on the other hand, are something we are contributing to and usually will have a non-zero baseline. These indicators are usually trending up or down and we are hoping through our interventions to change the slope, i.e., to accelerate the progression. The targets will follow an upward or downward curve or some sort, but we should not see the end value being lower (or higher) than any previous ones. We know that for some indicators, there can be year to year volatility, but in any case, we want to see the trend line going up or down.

Note that output indicator targets for a single activity will show an inverted U shape, but on aggregate, you probably still want to see an increasing slope (refer to activity-level targets in portfolio reviews?)

Targets should be set as part of a coherent system (vertically and horizontally). They should make sense and tell something meaningful.

- Internal coherence: targets for the various indicators should be set in tandem as they are related – the target for the number of farmers and others applying new techniques should be related (in most cases) to the number of farmers trained
- External coherence: there should be a relationship between the targets at the activity level and your overall strategy. If we want to have an impact on household income and nutrition, we need to have a sense of how many people we need to reach, by how much maize productivity needs to increase, and how many more hectares of soy need to be planted (reference to the Theory of change in the NUTENAG case study).

This leads me to something important here about targets: Be transparent and engage your stakeholders and Understand the difference between individual activity targets and the aggregate ones.

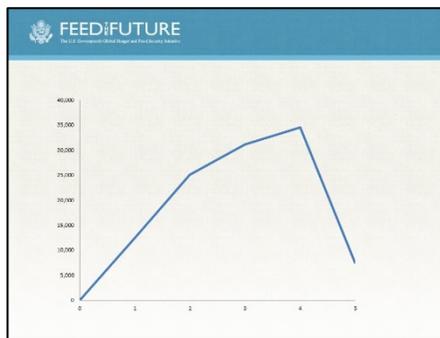
Activity-level targets will usually be set through process of discussion and negotiation with an implementing partner. That is fine, our implementing partners are the technical experts and they know what they can reach based on the contextual and resources constraints. And since they will be held accountable for reaching some targets, they will analyze carefully what they can achieve. However, the Mission is also accountable for reaching “aggregate” targets. There needs to be a coherent results framework by which the number of beneficiaries reached and “behavior change” facilitated have a chance to lead to the changes at the ZOI level we are aiming to (overall increase in agricultural productivity, improved dietary diversity, improved nutrition, and improved income). So there is a shared accountability here, but the implementing partner is responsible for what it can achieve through its interventions, while the Mission is responsible to ensure that

on aggregate, the program has enough reach and intensity. And this “reach” and “intensity” are translated into targets.

Here, I’m talking about “accountability” and “responsibility” and hinting at what gives targets a sour taste. Targets are seen as something bad, that that serves only at determining if activities are performing or not. Yes, of course, we need some benchmarks. But targets should also serve as management tool, telling us if (i) our strategy makes sense and whether we have all the important elements included to reach our goals and (ii) something else is happening that we need to investigate.

Targets can and should be adjusted regularly and we will come back to this. But if a target is missed (by a significant amount in one year, or systematically year after year – and only activity managers can determine what amounts to “significant”), then adjustments should be done, but all targets should be looked at. If one target is adjusted, there is probably reason to adjust others.

### Slide 29

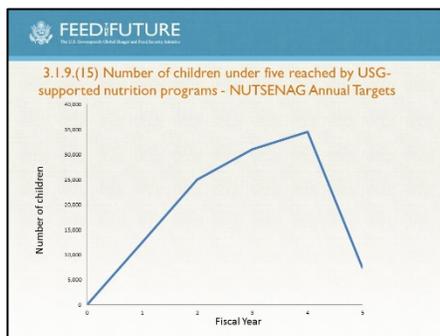


Ask: This is a simple line graph. I have not labeled the axes (a no-no by the way!). What can you tell me about the indicator shown here?

Answer: This is a typical shape of an output indicator for an implementing partner, showing the direct result of an activity. We start at zero; the project begins implementation and rapidly set up its activities. It increases its reach year after year, first at a fast pace, then at a little slower rate, but still increasing through year 4. Then we see a net decrease in the last year, as the project closes down.

This is actually from a real project and the indicator is the Number of children reached.

### Slide 30



Note: Same slide as previous slide but with a title and axes labeled.

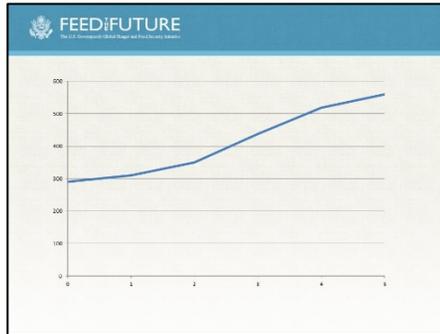
Ask: What do you notice about this slide?

Answer: Same as previous slide but with a title and axes labeled.

Ask: What difference does it make having a title and axes?

Let's see another one.

**Slide 31**

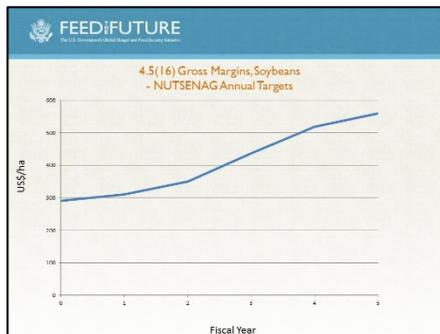


Ask: What does this graph tells you about the indicator?

Answer: These targets are for an outcome indicator. The baseline is non-zero and we see a progression throughout the life of the project.

Say: This is also from a real project and is for gross margins for soybeans. We can see the progression of the activities for this one value chain. The project expect the largest gains to occur after year 1 through year 4. Further gains are expected in the last year but at a slower rate. This could be because the interventions are expected to be much less, but it could also be related to the decreasing marginal benefits of the technology promoted, assuming the number of beneficiaries more or less plateau towards the end of the project.

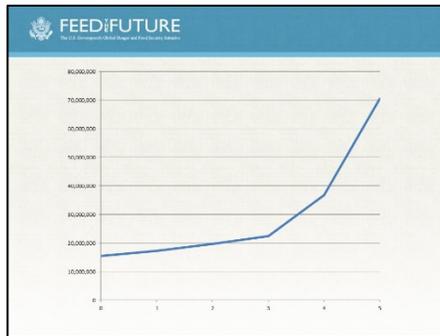
**Slide 32**



Say: Again, same as the previous slide but with a title and axes labeled.

Let's see yet another one.

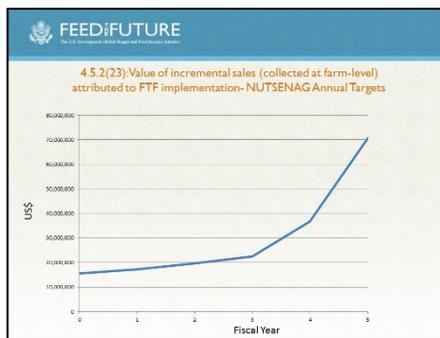
### Slide 33



Ask: How about this graph?

Say: I thought it would be interesting to show yet another plot of an outcome indicator – we notice both the non-zero baseline and the positive slope throughout the life of the project. This is slightly different however as it shows the targets for the total value of incremental sales summed across several value chains. These are clearly ambitious targets. It shows that incremental sales should increase throughout the life of the project, very modestly at first, but then at an increasing pace. This could show for instance a project that focuses first on training and access to improved techniques. By year 3 or so, we start seeing an impact on yield and total production increases. The project should then emphasis on marketing activities – reducing post-harvest loss, improving handling and transportation – hence the sharp increase in sales. Note that this is incremental sales and therefore is adjusted for any increase in the number of beneficiaries from year to year. The steeper slope is not due to an increase in the number of beneficiaries.

### Slide 34



Say: Again, same slide but with a title and labels.

### Slide 35

**Tools for setting targets**

- Historical data: Trend analysis
- Min/Max analysis
- Benchmarking
- Disaggregation Analysis
- CBA

Say: Now we will look at tools we have available to help us set reasonable targets.

Read the bullet points on the slide.

Say: This is not a comprehensive list but should give you a sense of what can and can't do when setting targets. As a general rule, you should use more than one tools to verify your assumptions and triangulate your results leading to determining a set of targets. These tools are all related and overlapping anyway.

### Slide 36

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### Historical Data: Trend Analysis

- Is historical data available?
  - For what administrative level?
  - Does it include your focus value chains?
- Do you have enough data points to detect a trend if one exists?

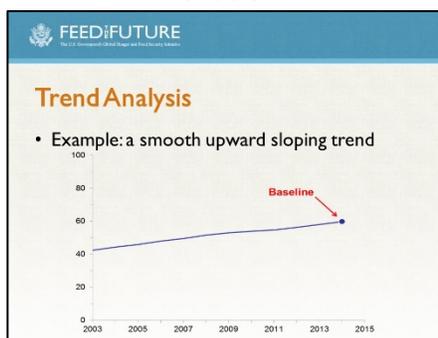
Too few data points can be misleading!

Say: First, look for historical data. Then see if you can detect a trend. Trend analysis will be useful for variables used as or in outcome indicators mainly, such as production, yields, sales, etc.

This data is not always available however, and if it exists, it will usually be at the national level, and therefore it may be difficult to reconstruct for the ZOI. National trends will be useful to analyze, as benchmarks.

In order to analyze historical trend, it is important to have sufficient data points. Too few can be very misleading. So you have to be careful about that. And there is no clear a priori as to how many data points is enough. But if the data exist, at a minimum, you should look at the historical data.

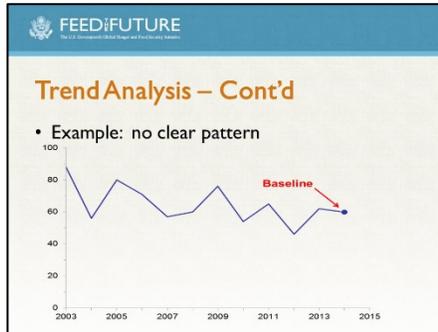
### Slide 37



Say: In this example, the historical trend shows a smooth upward sloping trend. There is about 10 years of data in this example, which seems reliable. You may be aware of a major event further in the past, such as a major drought, which you may want to take into consideration as well, but otherwise, this seems a relatively easy drive.

Say, you are starting implementation in 2015, thus your baseline is for 2014. Our activities in effect are trying to change the slope of this line by accelerating the annual rate of change. Doing some basic analysis of this historical data, you can see that, say this is production of soybeans in Aredonia, production increased by 43% between 2003 and 2014 and the average annual rate of change is about 3%. Your project aims at introducing productivity enhancing techniques that would increase production in the next 5 years, which is equivalent to changing the slope, making it steeper.

### Slide 38



Say: In this example, the historical data show that there has been a fair amount of year to year variability. No specific trend seems to emerge here, although in some cases variability could be associated with an upward or downward trend. Although we can't derive a trend line here, the variability is important to know and take into consideration when setting targets as your annual results are likely to show fluctuations. You would still need to set targets in this case, showing say an upward trend, but to really measure whether your activities are on track, you would need to look at more than one data points.

In this case, the program should try to address both the variability (reducing it) and the flatness of the trend (so that there is an upward or downward trend).

### Slide 39

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The U.S. Department of Agriculture and International Partners

#### Benchmarking and Similar Context Analysis

- If you have insufficient data for your country or context, it can be useful to look at data from similar contexts
- In order to understand how to compare, a finer analysis of what factors affect the outcome of interest (measured by the indicator) is necessary

Say: Benchmarking means “identifying a basis of reference or comparison”. If there aren't data for your country, you can look at other data from other countries with similar context. It will never be quite the same, so you can only use this data for benchmarking. But it can help understanding how fast changes can happen for instance, looking in a similar context where a technology you are looking into introducing has been introduced. It is a good idea to do some research and compare general environment and external conditions that might

influence the results – rain pattern, exchange rate, access to imported inputs, infrastructure, etc. There are a number of factors that will influence what happens to production or yields or adoption rate, so comparing what happens in another country to your context is difficult. But we are “benchmarking” here, trying to determine what you can reasonably target.

#### Slide 40

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### Min/Max Analysis

- Estimate what the maximum and minimum value could be for the indicator

Ex: Value of incremental sales

Maximum =

- Highest possible yields x
- Largest area of a smallholder x
- Highest price

Minimum = 0

Say: Now, let's look more closely at how the information available for the project can be used to set reasonable targets.

An exercise that can be useful in target setting is looking at maximum and minimum values and indicators that can reasonably be taken. The data can either come from secondary sources (including “reliable” expert opinion) or you may already have baseline data collected through a beneficiary-based survey.

If you have primary data through a baseline survey, you can simply extract the maximum and minimum values for a variable and look at various characteristics of the distribution to understand how your sample beneficiaries fit within the range. It could be that your maximum value is skewed by a small number of extremely productive farmers, but the majority of your potential beneficiaries are close to the lower end.

If you don't have primary data, you need to find secondary sources.

Example: Value of incremental sales. Estimate what the minimum and maximum value for a beneficiary can be:

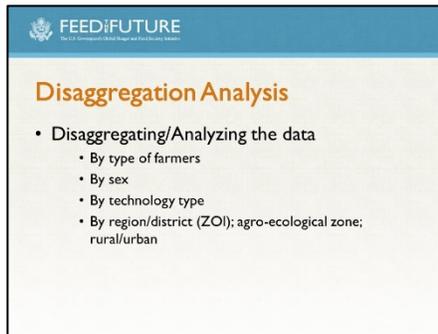
- Minimum can be no sales at all, and thus would be 0
- Maximum: estimate maximum production for a beneficiary by estimating
  - The highest yields reached in the area  
Using the largest area that beneficiaries may own and plant with the crop in question, keeping in mind our definition of a smallholder farmer beneficiary. You could have farmers cultivating larger area in the focus crop, but she should not be included in your indicator because (1) Land: 5 hectares or less; and (2) Equivalent units of livestock: 10 beef cows (cattle); 2 milking cows (dairy); 5 adult ewes/does (sheep and goats); 5 camel cows (camel meat and milk); 2 adult sows (pigs); 20 layers and 50 broilers (chickens).
  - The highest price a farmer could get for her crop.

This gives you the maximum total sales for a crop in one year for one beneficiary, assuming this farmer sells all her crop. And gives you the range in the value of sales that you can get for any beneficiaries. The middle value would give you the median. Now, you also need to look at the number of beneficiaries you intend to reach, since this indicator reports the total value of sales across all of your beneficiaries. So, although this is useful to have the range and median, you still

need to better understand how your beneficiaries will fit within this range, and where along the distribution the majority of your beneficiaries might be in every single year. Without good sample data, you might have to make assumptions.

Assumption are ok! However, you **MUST** document them as clearly as possible, so that anyone can understand what you've done.

#### Slide 41



Say: Let's go a little deeper in the details, by disaggregating the data that we have, either from historical data, project data, or beneficiary-based survey data. If you have data available, historical or from a baseline survey, it is useful to breakdown the data to look at specific trend, or what may drive the aggregate trend, also whether some component are more variable than other, etc. Obvious category to look at are the disaggregates we are interested in, but others might give your insight for your program. To start with, it is useful to understand how your beneficiary population and your targeted value chains fit in the overall:

- What proportion of small holder population are you targeting, in the project area, in the ZOI, nationally?
- What proportion do small holder represent in terms of total production of the targeted value chains?
- What proportion of total agricultural production do your targeted value chains represent?

These seem basic questions, but you would be surprised to know how few have a good sense of these figures.

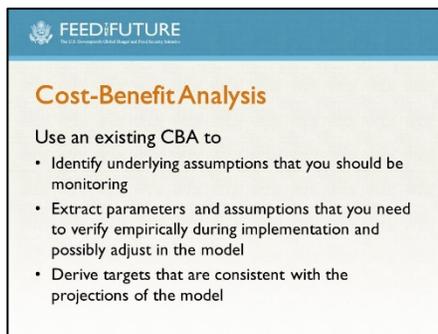
Disaggregated data is useful as you can usually relate it better to your planned interventions and estimate where your specific beneficiary population might fit into the distribution.

- A program is building/rehabilitating irrigation infrastructure, which is expected to boost irrigated rice production significantly. Even if at baseline, you had very few farmers toward the maximum end of the yield spectrum, you may rapidly move many and end up with rice production in a totally different place compared with other crops.
- Your program may be targeting women in a value chain that is done by both sexes. The available data may not segregate between men and women production, but you need to figure out where your majority beneficiary population fits in the distribution. This is something we know quite well now from experience: that within a value chain, male and female farmers may get very different gross margin for instance, because of differential access in inputs or different marketing incentives. In setting

your targets, you need to take this into account and make sure that your targets reflect the specific population you will be working with and show a reasonable course of event.

Already mentioned is the importance of understanding the characteristics of the area where we work – the ZOI – and disaggregating the data by region or district to the extent possible. The ZOI is not always defined neatly as one contiguous areas and disaggregating the data by large administrative units may not be useful. Data by smaller administrative units like districts or communes may not be available. Agro-ecological zone disaggregation may exist, which can help approximate the situation in the ZOI.

#### Slide 42



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### Cost-Benefit Analysis

Use an existing CBA to

- Identify underlying assumptions that you should be monitoring
- Extract parameters and assumptions that you need to verify empirically during implementation and possibly adjust in the model
- Derive targets that are consistent with the projections of the model

Say: If a CBA exists for one of your activity, you should absolutely use it to derive targets. You should also make sure that you are monitoring the underlying assumptions and updating the model periodically with your project data.

Identify underlying assumptions that you should be monitoring: these are the exchange rate for instance and other macroeconomic conditions, things that are not endogenous to the model and you cannot control. You can only monitor them, but the project cannot change the outcome.

A CBA model will also have a number of assumptions and will include parameters, (meaning something that has a fixed value, as opposed to a variable). Parameters will often be the object of sensitivity analysis, although things that I put in the first category, such as exchange rate, could also be.

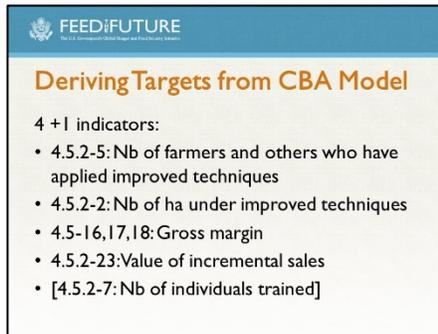
Here, I'm thinking of adoption rate of course, which is critical in our project, market prices (if they are exogenous), the ratio of men to women in the beneficiary population, the proportion of production that is sold, etc.

In just about any agricultural CBA model, you should find the variables necessary to construct your main indicators and therefore, find the values that were used in the model and use those as your targets (or argue with the economist that did the analysis). I am talking about prices, production by crop or animal, hectares planted or number of heads of animals, sales values, and number of beneficiaries, all data points that are either directly an indicator, or used to construct the more complex ones like gross margins.

The CBA model will have a complete internal logic, which may not be reflect the entire activity. For instance, you would find in a CBA model that the number of farmers applying an improved technique is the number of farmers trained times the adoption rate. As part of the activity, your implementer will train farmers and

others in a number of ways, and therefore will report a number under 4.5.2.7 that is not necessarily directly linked to 4.5.2.5. The CBA will model only the main interventions and will require this internal coherence. So, the CBA will not necessarily be the only tool to use in setting the target for 4.5.2.7, although you want to make sure that your targets are not lower than what is in the CBA. And the values in the model for number of farmers applying new techniques are probably the right targets to use in your M&E plan.

**Slide 43**



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### Deriving Targets from CBA Model

4 +1 indicators:

- 4.5.2-5: Nb of farmers and others who have applied improved techniques
- 4.5.2-2: Nb of ha under improved techniques
- 4.5-16,17,18: Gross margin
- 4.5.2-23: Value of incremental sales
- [4.5.2-7: Nb of individuals trained]

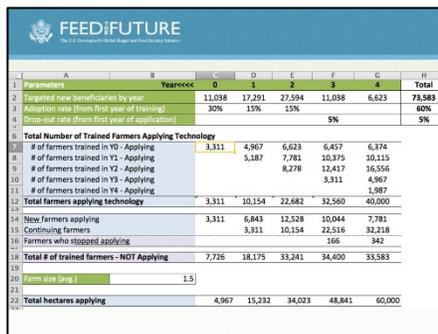
Say: Let say we have a CBA model for an agricultural activity, like NUTSENAG, but I have already a demo model, so that's what we will use.

Most agricultural activity CBA will include information relevant for these indicators and can provide either the full target or a subset of it.

Can anyone tell me which indicator(s)?

Answer.

**Slide 44**



Parameters	Year0000	1	2	3	4	Total
Expected new beneficiaries by year	11,038	17,291	27,594	11,038	6,623	73,583
Adoption rate (from first year of training)	20%	19%	15%			60%
Drop-out rate (from first year of application)				5%		5%
<b>Total Number of Trained Farmers Applying Technology</b>						
# of farmers trained in Y0 - Applying	3,311	4,967	6,623	6,457	6,374	
# of farmers trained in Y1 - Applying		5,187	7,781	10,375	10,115	
# of farmers trained in Y2 - Applying			8,278	12,417	16,556	
# of farmers trained in Y3 - Applying				3,311	4,967	
# of farmers trained in Y4 - Applying					5,987	
<b>Total farmers applying technology</b>	3,311	10,154	22,682	32,560	40,090	
New farmers applying	3,311	6,843	12,528	10,044	7,781	
Continuing farmers		3,311	10,154	22,516	32,218	
Farmers who stopped applying				166	342	
<b>Total # of trained farmers - NOT Applying</b>	7,726	18,175	33,241	34,400	33,583	
Farm size (avg.)	1.5					
<b>Total hectares applying</b>	4,967	15,232	34,023	48,841	60,000	

Say: Here is a snapshot from a CBA spreadsheet. I arranged it somewhat so that it could fit in a slide, so an actual spreadsheet may have other calculations and not show all this information together. You will certainly have to navigate the spreadsheet to find the information that you need. And you will need to do your own calculation, as we will see later.

A CBA model looking at the cost effectiveness of training farmers to improved techniques will include project data on the number of farmers that will be trained every year. It will have an assumption on the adoption rate. Assumptions will be explained and justified somewhere in the spreadsheet. There should also be an accompanying document explaining the model and results in more details. Note that the number of farmers trained provided here will not usually be the

same as 4.5.2-7, since this indicator include all individual trained in a year by the activity, and not only farmers. However, the numbers here should be included in the total indicator and in the disaggregate “producer”. Depending on the activity, these figures may be very close to the total reported by the project.

### Slide 45

Parameters	Year	0	1	2	3	4	Total
2 Targeted new beneficiaries by year		11,038	17,291	27,594	11,038	6,623	73,583
3 Adoption rate (from first year of training)		30%	15%	15%			60%
4 Drop-out rate (from first year of application)					5%		5%
<b>Total Number of Trained Farmers Applying Technology</b>							
7 # of farmers trained in Y0 - Applying		3,311	4,967	6,623	6,623	6,374	
8 # of farmers trained in Y1 - Applying			5,187	7,781	10,375	10,115	
9 # of farmers trained in Y2 - Applying				8,278	12,417	16,556	
10 # of farmers trained in Y3 - Applying					3,311	4,967	
11 # of farmers trained in Y4 - Applying						1,987	
12 Total farmers applying technology		3,311	10,154	22,682	32,560	40,000	
14 New farmers applying		3,311	6,843	12,528	10,044	7,781	
15 Continuing farmers			3,311	10,154	22,516	32,218	
16 Farmers who stopped applying					566	342	
18 Total # of trained farmers - NOT Applying		7,726	18,175	33,241	34,400	33,583	
20 Farm size (avg.)			1.5				
22 Total hectares applying		4,967	15,232	34,023	48,841	60,000	

Say: Then you have the number of farmers applying new techniques, which is the number of beneficiaries trained times the assumed adoption rate in year 1 (CBA models typically count years starting with year 0, but in our case, this would be our FYI – we would report the result through the end of the FY). The indicator 4.5.2-5 counts farmers and “others”, which may include individual processors that are not a firm or a small traders. So, again depending on the specifics, the project may be reporting a number greater than what we have here but it’s likely to be most of it.

### Slide 46

Parameters	Year	0	1	2	3
2 Targeted new beneficiaries by year		11,038	17,291	27,594	11,038
3 Adoption rate (from first year of training)		30%	15%	15%	
4 Drop-out rate (from first year of application)					5%
<b>Total Number of Trained Farmers Applying Technology</b>					
7 # of farmers trained in Y0 - Applying		$=C2*5C3$	$=(C2*5C3)+(C2*5D3)$	6,623	6,457
8 # of farmers trained in Y1 - Applying			$=D2*5C3$	7,781	10,375
9 # of farmers trained in Y2 - Applying				8,278	12,417
10 # of farmers trained in Y3 - Applying					3,311
12 Total farmers applying technology		3,311	10,154	22,682	32,560

Say: Here, you can see the formula. First year nb of farmers applying is the number of farmers trained as shown in C2 times the assumed adoption rate in the first year (30%). That is 3,311 farmers at the end of the first year.

For the second year, we have the farmers that were trained in the first year and applies in that same year (C2 \* C3) plus the number of farmers that were trained in the first year and are now applying in the second year. Then we have the farmers that were trained in the 2<sup>nd</sup> year and are applying in the same year – thus the adoption rate from the first year of training.

### Slide 47

Parameters	Year 0	Year 1	Year 2	Year 3	Year 4	Total
Targeted new beneficiaries by year	11,038	17,291	27,594	11,038	6,623	73,583
Adoption rate (from first year of training)	30%	15%	15%			60%
Disruptive rate (from first year of application)				5%		5%
<b>Total Number of Trained Farmers Applying Technology</b>						
# of farmers trained in Y0 - Applying	3,311	4,967	6,623	6,457	6,374	
# of farmers trained in Y1 - Applying		5,187	7,781	10,375	10,115	
# of farmers trained in Y2 - Applying			8,278	12,417	18,556	
# of farmers trained in Y3 - Applying				3,311	4,967	
# of farmers trained in Y4 - Applying					1,987	
<b>Total farmers applying technology</b>	3,311	10,154	22,682	32,560	43,000	
New farmers applying	3,311	6,843	12,328	10,044	7,781	
Continuing farmers		3,311	10,154	22,516	32,218	
Farmers who stopped applying				166	342	
<b>Total # of trained farmers - NOT Applying</b>	7,726	18,175	33,241	34,400	33,583	
Farm size (avg)					1.5	
<b>Total hectares applying</b>		4,967	15,232	34,023	48,841	60,000

Say: Here I want to show how we get the number of hectares under improved techniques. It is simply the number of farmers that are applying times the average farm size.

### Slide 48

WITHOUT PROJECT - YAMS			WITH PROJECT - YAMS		
Discount Rate	0.12	%			
<b>Production Information</b>	<b>Quantity</b>	<b>Units</b>	<b>Quantity</b>	<b>Units</b>	<b>same as W/O</b>
Price (Year 0)	3.75	\$/kg	3.75	\$/kg	
Price (Years 1 - 9)	0%	annual % change	0%	annual % change	
Yield	475	kg/ha	575	kg/ha	
Additional Yield Year 1 - 9	0	kg/ha	0	kg/ha	
Household Consumption	75	per ha	75	per ha	
<b>Costs</b>			<b>Costs</b>		
Seeds	25	\$/ha	50	\$/ha	
Fertilizer	35	\$/ha	60	\$/ha	
Land Rent (opportunity cost)	500	\$/ha	500	\$/ha	
Irrigation	20	\$/ha	40	\$/ha	
New treatment (Year 0 only)	0	\$/ha	New treatment (Year 0 only)	200	\$/ha
Depreciation (Y1+)	0	\$/ha	Depreciation (Y1+)	50	\$/ha
Family Labor (opportunity cost)	150	days per ha	Family Labor (opportunity cost)	200	days per ha
Hired Labor	5	days per ha	Hired Labor	40	days per ha
Wage Rate	1.25	\$/per day	Wage Rate	1.25	\$/per day
<b>Farm Characteristics</b>			<b>Farm Characteristics</b>		
Farm Size	1.5	ha	Farm Size	1.5	ha
Average Hill Size	4.5	persons	Average Hill Size	4.5	persons

Say: I'm showing you here another table of parameters from the same CBA model. The model needs to calculate the revenue from the agricultural activity, with and without the interventions. Some of the assumptions and parameters will not be affected by the project and some will. What is in red here is assumed to be the same with and without the project, that is, the project will not have an impact on these. It is assumed however that the cost of input per hectare will be higher with the project – presumably because more will be used – and yields will increase.

You can see that with the first tab with the number of farmers and number of hectares, you have everything you need to calculate gross margin per ha.

### Slide 49

**Deriving gross margin**

4.5 (16, 17, 18): Gross margin per hectare, animal or cage of selected product (USD/HA)

- > Hectares planted (for crops); Number of animals (for milk, eggs); or Area (ha) of ponds or Number of crates (for fish)
- > Total Production (mt)
- > Value of Sales (USD)
- > Quantity of Sales (mt)
- > Purchased input costs (USD)

$$\text{Gross Margin (USD/HA)} = \frac{\text{Prod} * (\text{value sales} / \text{vol. sales}) - \text{input}}{\text{Unit of production}}$$

Say: Gross margin is calculated from 5 data points, and all data points need to be reported, although targets are not required for individual data points. Using the

CBA, the targets for GM will be calculated from these data points, so you will also have predicted values for these individual data points.

Ask: Who can tell me what is included in input cost?

Answer:

- Only significant cash costs that can easily be ascertained, usually from input amounting to at least 5% of total costs.
- Capital investments are not included
- Unpaid family labor, seeds from a previous harvest, and other in-kind input should not be included

Returning to our table of parameters to see how to find these individual data points and calculate gross margin.

### Slide 50

WITHOUT PROJECT - YEARS		WITH PROJECT - YEARS	
Discount Rate	0.12 %		
<b>Production Information</b>			
Price (Year 0)	375 \$/ha	Price	375 \$/ha
Price (Years 1 - 9)	0% annual % change	Price (Years 1 - 9)	0% annual % change
Yield	475 kg/ha	Yield	575 kg/ha
Additional Yield Year 1 - 9	0 kg/ha	Additional Yield Year 1 - 9	0 kg/ha
Household Consumption	75 per HH	Household Consumption	75 per HH
<b>Costs</b>			
Seeds	25 \$/ha	Seeds	50 \$/ha
Fertilizer	35 \$/ha	Fertilizer	40 \$/ha
Land Rent (opportunity cost)	500 \$/ha	Land Rent (opportunity cost)	500 \$/ha
Irrigation	20 \$/ha	Irrigation	40 \$/ha
New Investment (Year 0 only)	0 \$/ha	New Investment (Year 0 only)	200 \$/ha
Depreciation (Y1-)	0 \$/ha	Depreciation (Y1+)	50 \$/ha
Family Labor (opportunity cost)	150 days per ha	Family Labor (opportunity cost)	300 days per ha
Hired Labor	5 days per ha	Hired Labor	40 days per ha
Wage Rate	1.25 \$ per day	Wage Rate	1.25 \$ per day
<b>Farm Characteristics</b>			
Farm Size	1.5 ha	Farm Size	1.5 ha
Average HH Size	4.5 persons	Average HH Size	4.5 persons

Say: Production is calculated by multiplying yield by the number of hectares under production (which we saw in the previous slides).

Ask: Can someone tell me if we should calculate gross margin with the project or without the project?

Answer: Both.

Say: This indicator reports the average gross margin for all direct beneficiaries, whether they apply the improved techniques promoted by the project or not.

All five individual data points should be the same across all beneficiaries: total production under improved techniques + total production not under improved techniques, hectares under improved techniques + hectares not under improved techniques etc. But because we divide by the total number of hectare to get gross margin per hectare, we end up with an average.

### Slide 51

**Targets in FTFMS**

- Targets in the FTFMS Guidance:
  - As in the ADS, BFS requires that out-year targets be set at the overall indicator level as well as the disaggregate levels.
  - When possible, enter targets for mechanisms still in the procurement phase at the overall indicator level
  - Out-year targets can be revised during the FTFMS reporting season. Current year target cannot.
- Because FTFMS is used in global reporting, failing to enter out-year targets gives the impression that FTF results are declining

	<p>Say: To conclude, I want to discuss something important, which is when and how to enter targets in FTFMS.</p> <p>All indicators require targets. All activity-level indicators require annual targets, while population-level ones do not.</p> <p>Targets are required at the overall indicator as well as for the disaggregate: sex, technology type, type of beneficiaries, etc. These may be difficult to set in some circumstances, but all efforts should be made to disaggregate as far as possible what we intend to reach by when.</p> <p>Yes, targets are about accountability, but they are also about good management. Targets can and should be revised. All out-year targets can be revised during the reporting season, while current year target cannot. If there is a need to revise target say in March or April, after the reporting season has closed, you can by all mean contact your M&amp;E advisor, who can work with the FTFMS team to update your current year targets if advisable.</p> <p>It is better to set tentative targets than none, although even tentative targets should be reasonable.</p> <p>Targets are about good management as they provide us with a tool to make sure we have a coherent results framework and the right assumptions underlying it. Targets missed are not necessarily a sign of poor performance, but it can be the sign that something is wrong in the design or assumption of the project. Is the projected number of beneficiaries reached reasonable, feasible? Is the project be able to provide the training and support necessary to this number of beneficiaries to maximize application of improved techniques? Is the underlying assumption about adoption rate too optimistic, and if so, what prevent farmers for adopting. Is there an important dropout rate after some time that was not taking into account?</p> <p>Target setting is also helpful in thinking through the results chain logic for the program. Looking at individual activity targeted reach and impact, can we expect that on aggregate, summing across all activities, we will have the coverage and intensity of interventions that are necessary to meet our goals in the ZOI? If not, what needs to change and where?</p>	
<p>4:45 pm (45 min.)</p>	<p><b>GROUP EXERCISE</b></p> <p style="text-align: center;"><b>Slide 52</b></p> <div data-bbox="576 1402 1019 1738" style="border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;">  <p style="text-align: center;"><b>Exercise on Setting Targets</b></p> <ul style="list-style-type: none"> <li>• ANSFA, the NUTSENAG implementer, needs to set annual targets for their FTF indicators and hires you to help.</li> <li>• You are provided with the design documents that set some overall goals and the baseline survey results.</li> <li>• You set up a team of 5-6 ensuring that you have a mix of Excel proficiency levels within your team</li> </ul> </div> <p><b>Directions</b> Say: We will now do an exercise on setting targets. The exercise should help you think about each indicator individually, but also how they are inter-related and you will need to put together a coherent set of assumptions about your targets.</p>	<ul style="list-style-type: none"> <li>• Computers loaded with Setting Targets Worksheet (participants)</li> <li>• Setting Targets Worksheet for Participants</li> <li>• Setting Targets Worksheet for Facilitators</li> </ul>

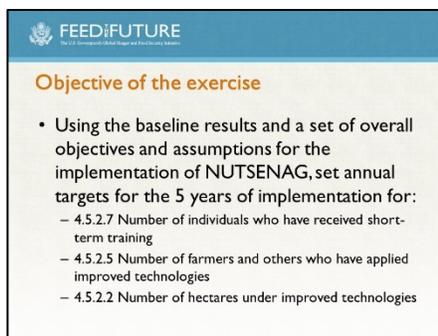
You have been hired by ANSFA, the NUTSENAG implementer as an M&E advisor and you need to determine a set of relevant, reasonable annual targets for the FTF indicators.

You are have the design documents that describes what the activity is about and the overall goals of the activity. A baseline survey was also just completed, and you have the results.

**Arrange groups by Excel skills. Each group needs at least one expert.**

Say: Before we start, we would like for everyone to come up and put yourself in one of three groups – group here on my right if you consider yourself quite good or adept at excel, come stand in the middle here if you can get by but by no means consider yourself an expert, and stand on my left here if you're not very experienced at all with excel. We need 5-6 groups, each with a good mix and at least one person in each group who is very good with Excel.

**Slide 53**



**FEEDiFUTURE**  
The U.S. Agency for International Development

**Objective of the exercise**

- Using the baseline results and a set of overall objectives and assumptions for the implementation of NUTSENAG, set annual targets for the 5 years of implementation for:
  - 4.5.2.7 Number of individuals who have received short-term training
  - 4.5.2.5 Number of farmers and others who have applied improved technologies
  - 4.5.2.2 Number of hectares under improved technologies

**Directions** (continued once groups are formed)

Say: We will focus on 3 simple indicators: Number of individual trained, Number of farmers and others who have applied improved techniques, and Number of hectares under improved techniques. So we are looking at the value-chain component of NUTSENAG.

We have loaded an Excel spreadsheet on the computers with two tabs. And we've also made copies, which you can find here.

The first tab has estimates from the NUTSENAG baseline survey. The baseline survey was conducted from a sample of beneficiaries and the results are presented extrapolated at the population level. Although NUTSENAG intend to reach a much larger number of beneficiaries that those used to sample the baseline survey, the baseline results are considered representative of all farmers.

The tab also include a set of assumptions that are derived from the overall objectives of the activity and have been discussed and agreed upon with the team leader of NUTSENAG and the activity manager at USAID. These include the number of farmers NUTSENAG needs to work with in order to meet its value-chain goals, what the team expect the take-up of improved technologies will be, and the shift in land allocation that need to take place in order to increase production of legumes. These are assumptions that will need to be monitored and verified during the implementation as they are critical for reaching the overall targets. If these assumptions turn out not to be verified, targets and possibly the strategy, will need to be adjusted.

## Slide 54



**Objective of the exercise - cont'd**

- Complete the tab "FTFMS Data" for the 3 indicators, including baseline and annual targets
- Document any additional assumptions you need to make to set the targets
- Note how assumptions should be monitored and how these might affect the targets.

### **Directions** (continued):

Say: We want you to take 45 minutes to dig into the baseline data, the set of assumptions, and the case study and see how you can derive targets for these 3 indicators. Note that you should identify what the year 5 targets are and then make assumptions about the yearly ones. You already have the end target for the number of individual trained. Remember to enter the appropriate baseline as well. Document and justify as needed any additional assumptions you are making, especially about annual targets.

Remember, assumptions are fine, as long as they are reasonable, documented, and monitored. Make note of how you might want to monitor your assumptions and when and how you might need to adjust your targets.

Any questions?

FOR THE FACILITATOR: see the Facilitator spreadsheet for how to fill the FTFMS tab and for suggestions as to how the students should tackle the exercise.

### **Debrief:**

#### **Have groups share:**

- Their overall assumptions for:
  - 4.5.2.7 Number of individuals who have received short-term training
  - 4.5.2.5 Number of farmers and others who have applied improved technologies
  - 4.5.2.2 Number of hectares under improved technologies
- Their baseline and annual targets and assumptions they made to set the targets
- After all the groups have presented, discuss the different approaches each group took. Compare/contrast assumptions, baselines and targets.

## Individual Application

### Slide 55



**Individual Reflection**

- What are your key learnings from this session?
- Think about a FTF activity you are working on:
  - Who are the direct beneficiaries?
  - The indirect beneficiaries?
  - How will you determine your baselines?
  - What targets will you set?

#### Individual exercise:

- Refer participant guide and have them record their individual reflections:
  - Key learnings from the session
  - Think about a FTF activity they are working on:
    - Who are the direct beneficiaries?
    - The indirect beneficiaries?
    - How will you determine your baselines?
    - What targets will you set?

#### Debrief in plenary:

- Ask two or three participants to share their reflections.

Note to the Facilitator: This data is taken from Exercise 8.2 and the Nutsenag Case Study. Only baseline and target figures are used for this exercise

Everyone grows maize, no one grows both legumes.

	% beneficiaries applying improved technologies			% of beneficiaries applying using improved seed			% of beneficiaries applying using improved cultural practices			% of beneficiaries applying using improved post-harvest practices			
	baseline	target	actual	baseline	target	actual	baseline	target	actual	baseline	target	actual	
0.10	0.30	0.20	0.90	0.80	0.60	0.90	0.7	0.80	1.00	0.80	0.00	1.00	0.60
0.40	0.70	0.10	0.90	0.40	0.40	0.90	0.70	0.80	1.00	0.80	0.00	1.00	0.70
0.37	0.66												
1.00	1.00	0.20	0.90	0.80	0.50	0.90	0.60	0.75	1.00	0.75	0.00	1.00	0.20
1.00	1.00	0.10	0.90	0.75	0.40	0.90	0.50	0.80	1.00	0.80	0.00	1.00	0.20
1.00	1.00												
0.02	0.10	0.30	0.90	0.75	0.90	0.90	0.90	0.90	1.00	0.90	0.00	1.00	0.70
0.10	0.30	0.20	0.90	0.80	0.85	0.90	0.85	0.95	1.00	0.95	0.00	1.00	0.80
0.09	0.28												

	# beneficiaries cultivating			# beneficiaries applying improved technologies			# beneficiaries using improved seed			# beneficiaries using improved cultural practices			# beneficiaries using improved post-harvest practices		
	baseline	target	actual	baseline	target	actual	baseline	target	actual	baseline	target	actual	baseline	target	actual
Groundnut male	487	6,300	8,899	97	5,670	7,120	58	5,103	4,984	78	5,670	5,696	0	5,670	4,272
Groundnut female	17,544	#####	113,468	1,754	#####	45,387	702	#####	31,771	1,404	#####	36,310	0	#####	31,771
Groundnut total	18,031	#####	122,368	1,852	#####	52,507	760	#####	36,755	1,481	#####	42,005	-	#####	36,043
Maize males	4,873	21,000	22,249	975	18,900	17,799	487	17,010	10,679	731	18,900	13,349	0	18,900	3,560
Maize females	43,860	#####	189,114	4,386	#####	141,835	1,754	#####	70,918	3,509	#####	#####	0	#####	28,367
Maize total	48,733	#####	211,362	5,361	#####	159,634	2,242	#####	81,597	4,240	#####	#####	-	#####	31,927
Soy males	97	2,100	2,225	29	1,890	1,669	26	1,701	1,502	26	1,890	1,502	0	1,890	1,168
Soy females	4,386	56,700	28,367	877	51,030	22,694	746	45,927	19,290	833	51,030	21,559	0	51,030	18,155
Soy total	4,483	58,800	30,592	906	52,920	24,362	772	47,628	20,791	860	52,920	23,061	-	52,920	19,323

	% beneficiaries applying improved seeds			% beneficiaries applying improved cultural practices			% beneficiaries applying improved post-harvest practices		
	baseline	target	actual	baseline	target	actual	baseline	target	actual
	0.12	0.81	0.56	0.16	0.90	0.64	-	0.90	0.48
	0.04	0.81	0.28	0.08	0.90	0.32	-	0.90	0.28
	0.10	0.81	0.48	0.15	0.90	0.60	-	0.90	0.16
	0.04	0.81	0.38	0.08	0.90	0.60	-	0.90	0.15
	0.27	0.81	0.68	0.27	0.90	0.68	-	0.90	0.53
	0.17	0.81	0.68	0.19	0.90	0.76	-	0.90	0.64

	% beneficiaries that apply improved technologies to legume but not maize (to eliminate double-counting)			unique # beneficiaries applying improved technologies			unique # beneficiaries using improved seed			unique # beneficiaries using improved cultural practices			unique # beneficiaries using improved post-harvest practices		
	baseline	target	actual	baseline	target	actual	baseline	target	actual	baseline	target	actual	baseline	target	actual
Groundnut male	0.6	0	0.4	58	-	2,848	35	-	1,993	47	-	2,278	0	-	1,709
Groundnut female	0.6	0	0.5	1,053	-	22,694	421	-	15,886	842	-	18,155	0	-	15,886
Groundnut total				1,111	-	25,541	456	-	17,879	889	-	20,433	-	-	17,594
Maize males				975	18,900	17,799	487	17,010	10,679	731	18,900	13,349	0	18,900	3,560
Maize females				4,386	#####	141,835	1,754	#####	70,918	3,509	#####	#####	0	#####	28,367
Maize total				5,361	#####	159,634	2,242	#####	81,597	4,240	#####	#####	-	#####	31,927
Soy males	0.5	0	0.5	15	-	834	13	-	751	13	-	751	0	-	584
Soy females	0.4	0	0.4	351	-	9,077	298	-	7,716	333	-	9,078	0	-	7,262
Soy total				365	-	9,912	311	-	8,467	346	-	9,829	-	-	7,846
			males	1,048	18,900	21,481	536	17,010	13,424	791	18,900	16,378	-	18,900	5,853
			females	5,789	#####	173,606	2,474	#####	94,519	4,684	#####	#####	-	#####	51,515
			total	6,837	#####	195,087	3,009	#####	#####	5,475	#####	#####	-	#####	57,367

	average area cultivated per beneficiary			total area cultivated by beneficiaries			total area under improved technologies			total area under improved seeds			total area under improved cultural practices		
	baseline	target	actual	baseline	target	actual	baseline	target	actual	baseline	target	actual	baseline	target	actual
Groundnut male	0.02	0.20	0.05	10	1,260	445	2	1,134	356	1	1,021	249	2	1,134	285
Groundnut female	0.05	0.20	0.25	877	26,460	28,367	88	23,814	11,347	35	21,433	7,943	70	23,814	9,077
Groundnut total				887	27,720	28,812	90	24,948	11,703	36	22,453	8,192	72	24,948	9,362
Maize males	1.20	1.00	1.10	5,848	21,000	24,474	1,170	18,900	19,579	585	17,010	11,747	877	18,900	14,684
Maize females	0.90	0.70	0.75	39,474	#####	141,835	3,947	119,070	106,376	1,579	107,163	53,188	3,158	119,070	85,101
Maize total				45,322	#####	166,309	5,117	137,970	125,955	2,164	124,173	64,936	4,035	137,970	99,785
Soy males	0.04	0.20	0.25	4	420	556	1	378	417	1	340	375	1	378	375
Soy females	0.02	0.20	0.10	88	11,340	2,837	18	10,206	2,269	15	9,185	1,929	17	10,206	2,156
Soy total				92	11,760	3,393	19	10,584	2,687	16	9,526	2,304	18	10,584	2,531

## NUTSENAG Baseline Survey: Population Level Results

	Number of farmers	Number of farmers using improved techniques	Number of farmers using improved seeds	Number of farmers using improved cultural practices	Number of farmers using improved post-harvest practices	Area cultivated (ha)	Average land size (ha/beneficiary)
Total farmer males	4,873	1,048	536	791	0	5,862	1.20
Total farmer female	43,860	5,789	2,474	4,684	0	40,439	0.92
Total farmers	48,733	6,837	3,009	5,475	0	46,300	
Groundnut males	487	97	58	78	0	10	0.02
Groundnut females	17,544	1,754	702	1,404	0	877	0.05
Groundnut total	18,031	1,852	760	1,481	0	887	
Maize males	4,873	975	487	731	0	5,848	1.20
Maize females	43,860	4,386	1,754	3,509	0	39,474	0.90
Maize total	48,733	5,361	2,242	4,240	0	45,322	
Soy males	97	29	26	26	0	4	0.04
Soy females	4,386	877	746	833	0	88	0.02
Soy total	4,483	906	772	860	0	92	

### Assumptions

*(these are given to the students)*

1. The implementer (ANSFA) plans on training 220,500 individuals by FY5, of which 210,000 producers and 10,500 entrepreneurs
2. The activity will target women farmers at a ratio of 90% to 10%, but for private sector agents, the implementer does not expect to be able to target women at more than 40%
3. Through training, demonstration sites, and one-on-one advice to farmers, ANSFA will promote improved seed varieties, land preparation practices, cultivation practices, harvesting and drying practices, post-harvest practices and processing, storage and marketing for all 3 value-chains
4. Some of these practices are already being applied by a small percentage of farmers sampled at baseline, but ANSFA expects that its careful mix of interventions will lead to a 90% take up overall of improved practices across all value chains.
5. The use of improved seeds faces constraints that will be dealt with, although the implementer still expect that the take up of this particular technique will be less than the other ones. ANSFA cautiously predicts that 90% of farmers who will be applying new techniques, will be actually using improved seeds. However, it expects that all the other techniques will be fully applied.
6. Every farmer, both male and female cultivate maize, but not all of them cultivate legumes and nobody cultivates both legumes. ANSFA expects to increase the proportion of farmers cultivating legumes from less than 50% to almost 95%, as follows:

	Baseline	Target
Males cultivating groundnuts	10%	30%
Females cultivating groundnuts	40%	70%
Total cultivating groundnuts	37%	66%
Males cultivating soy	2%	10%
Females cultivating soy	10%	30%
Total cultivating soy	9%	28%
Total cultivating legumes	46%	94%

7. The activity aims at improving productivity of maize, which every household grows, so as to reduce the land needed for maize and increase land available to grow legumes. ANSFA aims at changing the distribution of land area from baseline to FY5 as follows:

	Baseline	Target
Males cultivating groundnuts	0.02	0.20
Females cultivating groundnuts	0.05	0.20
Total cultivating groundnuts		
Males cultivating maize	1.20	1.00
Females cultivating maize	0.90	0.70
Total cultivating maize		
Males cultivating soy	0.04	0.20
Females cultivating soy	0.02	0.20
Total cultivating soy		

**For the Facilitator:**

The students need to create this table using the baseline data and the assumptions provided. These are the end targets.

	Number of farmers	Number of farmers using improved techniques	Number of farmers using improved seeds	Number of farmers using improved cultural practices	Number of farmers using improved post-harvest practices	Area cultivated (ha)	Average land size (ha/beneficiary)
Total farmer males	21,000	18,900	17,010	18,900	18,900	20,412	
Total farmer female	189,000	170,100	153,090	170,100	170,100	153,090	
Total farmers	210,000	189,000	170,100	189,000	189,000	173,502	
Groundnut males	6,300	5,670	5,103	5,670	5,670	1,134	0.20
Groundnut females	132,300	119,070	107,163	119,070	119,070	23,814	0.20
Groundnut total	138,600	124,740	112,266	124,740	124,740	24,948	
Maize males	21,000	18,900	17,010	18,900	18,900	18,900	1.00
Maize females	189,000	170,100	153,090	170,100	170,100	119,070	0.70
Maize total	210,000	189,000	170,100	189,000	189,000	137,970	
Soy males	2,100	1,890	1,701	1,890	1,890	378	0.20
Soy females	56,700	51,030	45,927	51,030	51,030	10,206	0.20
Soy total	58,800	52,920	47,628	52,920	52,920	10,584	

From these figures, they can enter the FTFMS data as they are required, for the totals and by disaggregates for FY5 (end targets).

How they enter the annual targets is up to them. They can apply the same proportion (by disaggregates) and uptake each year, which is how the FTFMS data tab is constructed right now, or they can vary from year to year, if they want to make their life even more complicated. They should explain what their assumptions are and justify them. Simplicity is an acceptable assumption!

They should note that the indicator 4.5.2.7 is an output indicator, while the 2 other ones are outcome indicators. The baseline in the former should be 0 and we should expect the annual targets to follow some kind of inverted U shape. The 2 outcome indicators have non-zero baseline, although 0 can be the baseline value, as in the case of farmers not using any improved post-harvest techniques in this case. The annual targets should in this case follow an upward curve throughout.

Baseline Year	Baseline Value	FY1	FY2	FY3	FY4	FY5	
		Target	Target	Target	Target	Target	
Operating Unit / Indicator / Disaggregation	Baseline					Target	
<b>4.5.2(7): Number of individuals who have received USG supported short-term agricultural sector productivity or food security training</b>							
	0					220,500	
Producers	0	20,000	55,000	115,000	175,000	210,000	
Sex							
Male	0	2,000	5,500	11,500	17,500	21,000	10%
Female	0	18,000	49,500	103,500	157,500	189,000	90%
People in private sector firms	0	250	1,000	2,000	7,000	10,500	
Sex							
Male	0	150	600	1,200	4,200	6,300	60%
Female	0	100	400	800	2,800	4,200	40%
<b>4.5.2(5): Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance</b>							
	6,850						
Producers	6,837	18,000	49,500	103,500	157,500	189,000	90%
Sex							
Male	1,048	1,800	4,950	10,350	15,750	18,900	10%
Female	5,789	16,200	44,550	93,150	141,750	170,100	90%
Disaggregates							
Not Available							
Technology type							
crop genetics	3,009	16,200	44,550	93,150	141,750	170,100	0.9
cultural practices	5,475	18,000	49,500	103,500	157,500	189,000	1
livestock management							
wild fishing technique/gear							
aquaculture management							
pest management							
disease management							
soil-related fertility and conservation							

Assuming an inverted U shape curve

Same assumption applied to sex disaggregates

Assuming an inverted U shape, but with a slower start than with farmers

irrigation								
water								
management (non-irrigation)								
climate								
mitigation or adaptation								
marketing								
and distribution								
post-harvest -	0	18,000	49,500	103,500	157,500	189,000	1	
handling and storage								
value-added								
processing								
other								
total w/one	6,837	18,000	49,500	103,500	157,500	189,000		
or more improved								
technology								
Commodity								
Groundnut	1,852	11,880	32,670	68,310	103,950	124,740	0.7	
Maize	5,361	18,000	49,500	103,500	157,500	189,000	1.0	
Soy	906	5,040	13,860	28,980	44,100	52,920	0.3	
Others (rest of data not included)								
<b>4.5.2(2): Number of hectares under improved technologies or management practices as a result of USG assistance</b>	5,225	16,200	44,550	93,150	141,750	173,502	0.9	
Sex								
Male	1,173	1,906	5,241	10,959	16,676	20,412	12%	
Female	4,053	14,294	39,309	82,191	125,074	153,090	88%	
Disaggregates								
Not Available								
Technology								
type								
crop genetics	2,216	14,580	40,095	83,835	127,575	156,152	90%	
cultural	4,125	10,428	28,676	59,958	91,241	111,679	64%	
practices								
livestock								
management								
wild fishing								
technique/gear								
aquaculture								
management								
pest								
management								
disease								
management								
soil-related								
fertility and conservation								
irrigation								
water								
management (non-irrigation)								

climate mitigation or adaptation marketing and distribution post-harvest - handling and storage value-added processing other total w/one or more improved technology	5,225	16,200	44,550	93,150	141,750	173,502	
Commodity							
Groundnut	90	2,329	6,406	13,394	20,382	24,948	14%
Maize	5,117	12,882	35,426	74,074	112,721	137,970	80%
Soy	19	988	2,718	5,682	8,647	10,584	6%



## BIOGRAPHIES –



**Anne Swindale**, Senior Program Advisor – Monitoring and Evaluation in USAID’s Bureau for Food Security, is an economist with more than 30 years of experience in technical assistance, research and project management in agriculture, food security, and nutrition strategy and program assessment, design, monitoring, and evaluation. She has a multi-sectoral background spanning agriculture, poverty, food consumption, and nutrition; and extensive experience with project management, program impact evaluation and performance reporting for USAID agriculture, food security and nutrition programs; and the collection, management, and analysis of large and complex primary income, expenditure, and consumption data sets from households and individuals. Prior to joining USAID in 2011, she was Deputy then Director of the USAID-funded Food and Nutrition Technical Assistance Project (FANTA) for 13 years. She also worked for the Consultative Group for International Agricultural Research International Potato Center in Peru and the Dominican Republic. She has a Ph.D. from the Fletcher School of Law and Diplomacy at Tufts University with a specialization in development economics and food, nutrition, and agricultural policies. She speaks Spanish.



Salik Farooqi serves as Technical Advisor for Monitoring, Evaluation & Learning in the Bureau for Food Security, and oversees the Bangladesh portfolio. He also developed, and now manages, the flagship Feed the Future Monitoring, Evaluation, and Learning mechanism, PEEL. Salik joined the Bureau in September 2012 as a Presidential Management Fellow. A few weeks prior to coming on board, he completed his PhD in Sociology and Public Policy at the University of Michigan with a successful defense of his dissertation in which he conducted a sociological analysis of development effectiveness. Salik earned his Bachelor's degree in Economics and Political Science at McGill University in Montreal, Canada and his Juris Doctorate at William and Mary School of Law, where he focused on International Law.



## **FOR MORE INFORMATION:**

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