Table of Contents

Supplies 5

Session 8: Reporting and Using Performance Monitoring Data 7
H. Materials, Supplies and Checklist

Session Materials

Session Eight

- Data exercise
  - 3 – 6 laptops with NUTSENAG Excel Worksheet loaded on each laptop
  - NUTSENAG Excel Worksheet (in Participant Guide)
  - NUTSENAG Excel Worksheet (facilitator version)

- WEAI
  - WEAI data for NUTSENAG
  - GIF banner, if available

- Narratives
  - Spreadsheet for group activity

- Data visualization – 2 sets of
  - 3 Scenario cards (6 X 4, green card stock)
  - 3 Findings cards (6 x 4, blue card stock)
  - Thin colored markers (1 per table)
  - GEOCenter handout (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 8: Reporting and Using Performance Monitoring Data

Session Goal: Report and use performance monitoring data to manage FTF activities

Learning Objectives:
- Use FTFMS data to report performance
- Analyze the data for additional insights on performance
- Identify and recognize areas of learning and potential adaptation
- Use data to make evidence-based decisions and management adaptations
- Draft a performance narrative using FTF templates
- Make compelling graphics

With a bonus section on Using the Women’s Empowerment in Agriculture Index (WEAI) and Gender Integration Framework (GIF) to Adapt Programming

Session Length: 420 minutes

Session Materials:
- Session 8 slides
- NUTSENAG Case Study
- Data exercise
  - 3 laptops with NUTSENAG Excel Worksheet loaded on each laptop
  - NUTSENAG Excel Worksheet (printed single-sided, legal size paper, 4 pages)
  - NUTSENAG Excel Worksheet (facilitator version)
- WEAI
  - WEAI data for NUTSENAG
- Narratives
  - Spreadsheet for group activity
- Data visualization
  - 3 Scenario cards (6 X 4, green card stock)
  - 3 Findings cards (6 x 4, blue card stock)
  - Paper
  - Colored pens
  - GEOCenter handout

Facilitator Notes:
<table>
<thead>
<tr>
<th>Time &amp; Facilitator</th>
<th>Content/Activities</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before the session</td>
<td>Load NUSTENAG Excel Worksheet on 3 laptops</td>
<td></td>
</tr>
<tr>
<td>10:30 am (90 min.)</td>
<td><strong>Introduction</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Slide 1</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td><img src="image1" alt="Slide 1" /></td>
<td></td>
</tr>
<tr>
<td>Say: In this session on Reporting and Using Data, we will:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Continue working with the data from the NUSTENAG case</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Learn about WEAI, the Women’s Agriculture Empowerment Index and how it can help us improve the impact of FTF activities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Practice creating narratives for the data that tell the story behind the data</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Create visuals to make the data come alive</td>
<td></td>
</tr>
<tr>
<td>80 minutes (60 for exercise)</td>
<td><strong>Group Exercise</strong></td>
<td>3 laptops with NUSTENAG Excel Worksheet loaded</td>
</tr>
<tr>
<td></td>
<td><em>Slide 2</em></td>
<td>NUSTENAG Case Study</td>
</tr>
<tr>
<td>Say: After all of this, you now have good quality data for indicators in your results framework and you want to make sure you use those data to see what’s happening in your program, to continually test and validate your theory of change - are you reaching your targets for individual indicators, and is meeting your targets in lower-level output indicators leading to the assumed changes in your immediate and higher-level outcome indicators? You should be identifying areas where things are not advancing as planned, where you may need to intensify or adapt your implementation, or where you may need to pull in other types of information, or even collect more information though a quick qualitative study, to better understand why you’re not seeing the results you expected to inform this strategic adaptation. You also want to use your numbers and narrative and visuals to tell a compelling and honest story of what you are accomplishing, the lessons you are</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Session 8: Reporting and Using Performance Monitoring Data 8-7
learning and how you are adapting your approaches in response. We are going to cover almost all of these in this session.

**Directions:**

Say: The first part of the session is focused on analyzing the data you collect. For this part, we’d first like 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.

Note: Divide up the group ensuring that each group has a good mix of Excel skills with at least one Excel expert in each group.

Say: We have loaded a spread sheet on the computers that contains two tabs. The first tab has select NUTSENAG FTFMS results for three indicators – number of people trained, number of beneficiaries applying improved technologies, and my personal favorite because of all the great information that’s hidden in its data points - gross margin. The second sheet contains more detailed data from the implementing partner’s database. There are also print-outs of each of these tabs on the table.

Note: Pass out NUTSENAG Excel Worksheet to each group

Say: We want you to take 60 minutes to dig into the data on these three indicators. Look at the data, do some analysis, for example, compare targets to achieved, look at what proportions of results or beneficiaries fall in different disaggregate categories, and jot down what you observe in the data. Then we’ll go around the room at least twice, asking each table to report out on one finding each time, how you were able to see this or what you did to find this in the data, and what NUTSENAG might need to do about it.

**Slide 3**

- Is NUTSENAG reaching the number of beneficiaries it planned to, overall and with training?
- Does the training seem to be effective?
- Do beneficiaries seem to be facing constraints in applying specific technology types?
- Are beneficiaries facing trouble applying some types of technologies more than others?
- Are there crops where beneficiaries are having a harder time applying the promoted technologies?
- Do some of the crops yield a greater return to investment than others?
- Are there differences in the number of direct beneficiaries cultivating each crop?
- Are there significant differences in gross margin by sex of farmer? If yes, why? Are these differences in yields? In prices received? In inputs per hectare?
- Does the amount of land cultivated under each crop vary by sex of farmer?
- What about the proportion of the harvest sold?

Say: Here are some are questions you’ll want to ask. You always want to apply a gender lens, by asking these questions in general and then also looking to see if the answer is different for male versus female farmers:

- Is NUTSENAG reaching the number of beneficiaries it planned to, overall and with training?
- Does the training seem to be effective?
- Do beneficiaries seem to be facing constraints in applying specific technology types?
• Are beneficiaries having trouble applying some types of technologies more than others?
• Are there crops where beneficiaries are having a harder time applying the promoted technologies?
• Do some of the crops yield a greater return to investment than others?
• Are there differences in the number of direct beneficiaries cultivating each crop?
• Are there are significant differences in gross margin by sex of farmer? If yes, why? Are there differences in yields? In prices received? In inputs per hectare?
• Does the amount of land cultivated under each crop vary by sex of farmer? What about the proportion of the harvest sold?

Ask: Does anyone have questions about the exercise before we begin?

Debrief

Slide 4

What are your findings?
• What did you find?
• How did you find it?
• What does it mean for NUTSENAG?

Debrief:

Ask:
• What were some of your findings?
• How did you find it?
• What if anything does it mean for NUTSENAG?

Take each table in turn and have them present one finding. Go around all the tables at least twice.

Answers should include:
• On track with producer training male and female
• Not on track with firm-level training
• On track with % of trained applying overall, some but not large gender difference at aggregated level
• Some constraints apparent in applying improved seed
• Much greater constraints in applying the promoted post-harvest handling technologies
• Constraints to application of improved technologies are greater in groundnut and soy than maize
• Much lower proportion of female groundnut beneficiaries applying improved techs, but among women, similar proportions applying each tech type, 80% cultural vs 70% other two
- Maize cultural practices seem very easy to accept, while post-harvest practices seem most challenging, and seed in the middle. No real gender differences in rates of application of overall or by type of practice.
- Somewhat lower rate of application of improved soy seed by women but this doesn't result in large yield differences.

Additional findings that the facilitator needs to point out if groups do not have these:
- Groundnut female yield is significantly lower than male yield, and female farmers have significantly lower inputs per hectare, lower price per kg, and significantly lower proportion sold.
- Maize gross margin is higher for females because inputs/ha for females is lower while yield, price, production, proportion sold are all basically the same for males and female beneficiaries. (Ask: Why? Answer: Females use family labor and saved seed, while males purchase both.)
- Soy has the highest GM but the lowest number of beneficiaries, by a large margin. Male and female gross margin is similar, but male cultivates more than 2.5 times the area that females do. Question is how to increase number of beneficiaries planting soy to take advantage of the high GM and contribute better to poverty objective.

**Conclusion/Transition to WEAI:**
Say: The data pointed to an interesting conclusion – that maize gross margin is higher for females – in the next part of this session, we will look at how you can use the WEAI – Women’s Empowerment in Agriculture Index – to improve the impact of your FTF activities.

<table>
<thead>
<tr>
<th>12:00 pm</th>
<th>Lunch</th>
</tr>
</thead>
<tbody>
<tr>
<td>(60 min.)</td>
<td></td>
</tr>
</tbody>
</table>
### 4.5.2(7): Number of individuals who have received USG supported short-term agricultural sector productivity or food security training

<table>
<thead>
<tr>
<th>Type of individual</th>
<th>Baseline</th>
<th>Target</th>
<th>Actual</th>
<th>Facilitator Notes: Analyses and findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Producers</td>
<td>220,500</td>
<td>212,444</td>
<td></td>
<td>On track with producer training male and female</td>
</tr>
<tr>
<td>Sex</td>
<td>210,000</td>
<td>211,363</td>
<td>101%</td>
<td>(compute percent of target)</td>
</tr>
<tr>
<td>Male</td>
<td>21,000</td>
<td>22,249</td>
<td>106%</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>189,000</td>
<td>189,114</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>People in private firms</td>
<td>10,500</td>
<td>1,082</td>
<td>10%</td>
<td>Not on track with firm-level training</td>
</tr>
<tr>
<td>Sex</td>
<td>6,500</td>
<td>750</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>4,000</td>
<td>332</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 4.5.2(5): Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Baseline</th>
<th>Target</th>
<th>Actual</th>
<th>Facilitator Notes: Analyses and findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groundnuts/peanuts</td>
<td>220,500</td>
<td>212,444</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>6,837</td>
<td>189,000</td>
<td>90%</td>
<td>On track with % of trained applying overall, some but not large gender difference at aggregated level</td>
</tr>
<tr>
<td>Female</td>
<td>5,789</td>
<td>173,606</td>
<td>92%</td>
<td></td>
</tr>
<tr>
<td>Hectares planted</td>
<td>887</td>
<td>67,812</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>10</td>
<td>445</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>15</td>
<td>4,422</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Production (MT)</td>
<td>126</td>
<td>5,306</td>
<td>0.18 yield</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>3</td>
<td>200</td>
<td>0.45</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>123</td>
<td>9,106</td>
<td>0.18</td>
<td></td>
</tr>
<tr>
<td>Value of Sales (USD)</td>
<td>4,892</td>
<td>229,868</td>
<td>$194.48 price</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>471</td>
<td>4,205</td>
<td>$300.00</td>
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<tr>
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<td>70%</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>25</td>
<td>1,021</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Purchased input costs (USD)</td>
<td>9,064</td>
<td>155,294</td>
<td>$10.00 inputs/ha</td>
<td></td>
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<tr>
<td>Male</td>
<td>292</td>
<td>26,698</td>
<td>$60.00</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>8,772</td>
<td>145,606</td>
<td>$15.00</td>
<td></td>
</tr>
<tr>
<td>Number of direct beneficiaries</td>
<td>18,031</td>
<td>122,368</td>
<td>0.18 yield</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>487</td>
<td>3,987</td>
<td>0.45</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>17,544</td>
<td>118,381</td>
<td>0.24</td>
<td></td>
</tr>
</tbody>
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#### Groundnut
- Female yield is significantly lower than male yield, and female farmers have significantly lower inputs per hectare, lower price per kg, and significantly lower proportion sold. From IP sheet - much lower proportion of female GN beneficiaries applying improved tech than males, but among women, similar proportions applying each tech type, 80% cultural vs 70% other two

#### Maize
- Gross margin is higher for females because inputs/ha for females is lower while yield, price, production proportion sold are all basically the same for males and female beneficiaries. Females use family labor and saved seed, while males purchase both. From IP sheet - cultural practices seem very easy to accept, while post harvest practices seem most challenging, and seed in the middle. No real gender differences in rates of

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

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<tr>
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<td>140</td>
<td>70%</td>
<td></td>
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<tr>
<td>Female</td>
<td>25</td>
<td>1,021</td>
<td>20%</td>
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### 4.5(16,17,18): Gross margin per hectare, animal or cage of selected product

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<td>17,544</td>
<td>118,381</td>
<td>0.24</td>
<td></td>
</tr>
</tbody>
</table>
Everyone grows maize, no one grows both legumes.

<table>
<thead>
<tr>
<th></th>
<th># beneficiaries cultivating</th>
<th># beneficiaries applying improved technologies</th>
<th># beneficiaries using improved seed</th>
<th># beneficiaries using improved cultural practices</th>
<th># beneficiaries using improved post-harvest practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groundnut males</td>
<td>487 6,300 8,889</td>
<td>97 5,670 7,120</td>
<td>58 5,103 4,984</td>
<td>78 5,670 5,690</td>
<td>0 5,670 4,272</td>
</tr>
<tr>
<td>Groundnut females</td>
<td>17,544 113,468</td>
<td>1,754 119,070 45,387</td>
<td>702 107,163 31,771</td>
<td>1,404 119,070 36,310</td>
<td>0 119,070 31,771</td>
</tr>
<tr>
<td>Groundnut total</td>
<td>18,031 122,988</td>
<td>1,852 124,740 52,507</td>
<td>760 112,266 36,755</td>
<td>1,481 124,740 42,005</td>
<td>- 124,740 36,043</td>
</tr>
<tr>
<td>Maize males</td>
<td>4,873 21,000 22,249</td>
<td>975 18,900 17,799</td>
<td>487 17,010 10,679</td>
<td>711 18,900 13,349</td>
<td>0 18,900 3,560</td>
</tr>
<tr>
<td>Maize females</td>
<td>43,860 119,070</td>
<td>1,754 119,070 45,387</td>
<td>702 107,163 31,771</td>
<td>1,404 119,070 36,310</td>
<td>0 119,070 31,771</td>
</tr>
<tr>
<td>Maize total</td>
<td>48,733 121,362</td>
<td>5,361 189,000 59,634</td>
<td>2,242 170,100 83,597</td>
<td>4,240 189,000 126,817</td>
<td>- 189,000 31,927</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>% beneficiaries that apply improved technologies to legume but not maize (to eliminate double-counting)</th>
<th>unique # beneficiaries applying improved technologies</th>
<th>unique # beneficiaries using improved seed</th>
<th>unique # beneficiaries using improved cultural practices</th>
<th>unique # beneficiaries using improved post-harvest practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groundnut males</td>
<td>0.6 0 0.4</td>
<td>58 - 2,848</td>
<td>35 - 1,993</td>
<td>47 2,278</td>
<td>0 1,709</td>
</tr>
<tr>
<td>Groundnut females</td>
<td>0.6 0 0.5</td>
<td>1,053 - 22,694</td>
<td>421 - 15,886</td>
<td>842 18,155</td>
<td>0 15,886</td>
</tr>
<tr>
<td>Groundnut total</td>
<td>-</td>
<td>1,111 - 25,541</td>
<td>456 - 17,879</td>
<td>889 20,433</td>
<td>- 17,594</td>
</tr>
<tr>
<td>Maize males</td>
<td>1,048 18,900 21,481</td>
<td>536 17,100 13,424</td>
<td>791 18,900 16,378</td>
<td>- 18,900 3,560</td>
<td></td>
</tr>
<tr>
<td>Maize females</td>
<td>5,789 170,100 173,606</td>
<td>2,474 153,090 94,519</td>
<td>4,684 170,100 169,069</td>
<td>- 170,100 51,515</td>
<td></td>
</tr>
<tr>
<td>Maize total</td>
<td>6,837 189,000 195,087</td>
<td>3,009 170,100 107,943</td>
<td>5,475 189,000 185,448</td>
<td>- 189,000 57,367</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Average area cultivated per beneficiary</th>
<th>Total area cultivated by beneficiary</th>
<th>Total area under improved technologies</th>
<th>Total area under improved seeds</th>
<th>Total area under improved cultural practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>groundnut males</td>
<td>0.02 0.20 0.05</td>
<td>10 1,260 445</td>
<td>2 1,134 356</td>
<td>1 1,021 249</td>
</tr>
<tr>
<td>groundnut females</td>
<td>0.05 0.20 0.25</td>
<td>877 26,460 28,367</td>
<td>88 23,813 11,347</td>
<td>35 21,433 9,471</td>
</tr>
<tr>
<td>groundnut total</td>
<td>1.00 0.50 0.70</td>
<td>887 27,730 28,812</td>
<td>90 24,948 11,703</td>
<td>36 22,453 8,192</td>
</tr>
<tr>
<td>maize males</td>
<td>1.20 1.00 1.10</td>
<td>5,848 21,000 24,474</td>
<td>1,170 18,900 19,579</td>
<td>585 17,010 11,747</td>
</tr>
<tr>
<td>maize females</td>
<td>0.90 0.70 0.75</td>
<td>39,474 132,300 141,855</td>
<td>3,947 119,070 106,376</td>
<td>1,579 107,163 53,188</td>
</tr>
<tr>
<td>maize total</td>
<td>45,322 189,000 195,087</td>
<td>5,117 137,970 125,955</td>
<td>2,164 124,173 64,936</td>
<td>4,035 137,970 99,785</td>
</tr>
<tr>
<td>soy males</td>
<td>0.04 0.20 0.25</td>
<td>4 420 556</td>
<td>1 378 417</td>
<td>1 340 375</td>
</tr>
<tr>
<td>soy females</td>
<td>0.02 0.20 0.20</td>
<td>88 11,340 2,857</td>
<td>18 10,206 2,269</td>
<td>15 9,185 1,929</td>
</tr>
<tr>
<td>soy total</td>
<td>92 11,760 3,393</td>
<td>19 10,584 2,687</td>
<td>16 9,526 2,304</td>
<td>18 10,584 2,531</td>
</tr>
</tbody>
</table>
Using the Women’s Empowerment in Agriculture Index (WEAI) and Gender Integration Framework (GIF) to Adapt Programming

Session Goal: Apply the WEAI to FTF projects to understand the underlying gender factors contributing to differences in the empowerment/disempowerment of men and women and to use this data to improve programming performance.

Learning Objectives:
• Understand how to use and interpret WEAI data
• Analyze WEAI data to identify domains which are the largest contributors to women’s disempowerment
• Use the results from WEAI data and apply the GIF to modify interventions and improve FTF programming

Session Length: 90 minutes
Session Materials:
• Session 8 slides
• GIF banner (if available)

Facilitator Notes:
### Session 8: Reporting and Using Performance Monitoring Data

<table>
<thead>
<tr>
<th>Time &amp; Facilitator</th>
<th>Content/Activities</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00 pm (50 min.)</td>
<td>Introduction</td>
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#### Slide 5

Say: The goal of the session is to gain skills and knowledge about WEAI so that you are able to use this data to improve the impact of FTF activities. We will begin by looking at “what the WEAI is” and then use real WEAI data to practice interpreting contributors to gender empowerment and disempowerment. Then we will introduce the GIF – Gender Integration Framework – and how the framework can help us improve FTF programming by adding or enhancing gender empowerment components in FTF initiatives.

Ask:
- Who has heard of the WEAI?
- For participants who heard of WEAI, ask one or two participants to share what they know about WEAI
- What do you think empowerment means? Get a few definitions.

Ask: What is empowerment in the context of agriculture? Get examples of what empowerment looks like in an agricultural context (e.g., legal rights to own land, access to extension workshops, etc.)

#### WEAI: What it is and how to interpret WEAI results

<table>
<thead>
<tr>
<th>Slide 6</th>
<th>Slide 7</th>
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</table>

Women’s Empowerment in Agriculture Index
- Measures women’s and men’s empowerment and inclusion in the agricultural sector
- Developed by USAID, IFPRI, OPHI in 2012

- Survey-based
  - Not based on aggregate statistics or secondary data
  - Uses interview of the women and men in the same household
  - Index components designed to apply across countries and cultures
Cover the information on the slide:

- The WEAI, Women’s Empowerment in Agriculture Index, is an aggregate index that measures both women’s and men’s empowerment and inclusion levels in the agricultural sector. It is not a measure of overall/general empowerment.
- The WEAI is only representative of the Zone of Influence, and not the whole country in most cases.
- **History**
  - The WEAI was developed by USAID, the International Food Policy Research Institute (IFPRI), and the Oxford Poverty and Human Development Initiative, and was first launched in February or 2012.
  - Data collection took place in all 19 FTF focus countries in 2011 and 2012 as a part of Feed the Future Population-based surveys.
  - The WEAI has also been used in several impact evaluations and is being adopted by partners.
- There are now several different versions of the WEAI released or in development:
  - The original WEAI, which was collected for FTF baseline and interim surveys.
  - The Abbreviated-WEAI, a streamlined version that takes less time to collect.
  - A Project-WEAI, designed for use by projects and activities.

**How the WEAI is Constructed**

Say: The WEAI is a series of weighted averages comprised of two sub-indices:

- The 5 Domains of Empowerment (5DE)
- The Gender Parity Index (GPI)

5 Domains of Empowerment

1 to 3 indicators per domain
There are 5 different domains. Each domain has 1 to 3 indicators. The domains are scaled on an index of 0 to 1 with the higher score indicating greater empowerment.

Read and explain each domain:

1. Decision-making in agriculture production - Sole or joint decision-making power over food or cash-crop farming, livestock, and fisheries, as well as autonomy in agricultural production.

2. Access to and decision-making over productive resources - Ownership of, access to, and decision-making power over productive resources such as land, livestock, agricultural equipment, consumer durables, and credit.
3. Control over income - Sole or joint control over income and expenditures

4. Leadership in the community – Membership in economic or social groups and being comfortable speaking in public

5. Time – Allocation of time to productive and domestic tasks, and satisfaction with the time available for leisure activities
Say: Each of the 5 domains has equal weight in measuring empowerment and, therefore, this equal weighting makes it comparable across countries. For example, we can compare a WEAI score in Bangladesh with a score in Kenya. Each domain, except income, includes multiple topics or sub-indicators. And each domain uses multiple survey questions and indicators.

For example, within the Access to Resources domain, there are three topics or sub-indicators: ownership of assets; purchase, sale, and transfer of assets; and access to and decisions over credit. The survey asks each person questions about whether they own different kinds of assets (for example, land, housing, livestock, farming tools, and so on) and what transactions they can make with them. Their responses to these questions are combined to make each one of the 10 indicators, and then the 10 indicators are added up to make a person’s individual empowerment score (their individual SDE).

The WEAI survey asks one woman and one man in each household the same set of questions about these 5 domains, mainly related to agriculture. This lets us measure how empowered each man and each woman are for all of the topics and domains. These measurements are then the building blocks for the 5 Domains of Empowerment (SDE) and Gender Parity Index.

Even though someone may be “empowered” by their overall score, it is important to look at the individual indicator scores because s/he may actually be disempowered in distinct domains. For example, an interviewee may score 83% overall and, therefore, be deemed “empowered,” yet may be highly disempowered in the area of assets.

Therefore, progress toward empowering women in agriculture will be achieved by empowering them in the five domains and achieving gender parity within the household.

**Interpreting WEAI Results**
Demonstrate how to interpret WEAI results by using the example for Bangladesh.
Say: Let's look at WEAI results from a project in Bangladesh.

Note: This example is representative for the Zone of Influence)

Slide 19

Ask: What are the three indicators that contribute most to women's disempowerment?

Slide 20

Answer: Group membership, speaking in public, control over income
Ask: What are the three indicators that contribute most to men’s disempowerment?

Answer: Group membership, speaking in public, workload

Ask: What strikes you about similarities and differences between men and women’s disempowerment?

Answer:
- Women are about twice as disempowered as men, and are highly disempowered overall.
- Group membership disempowers men and women highly and almost equally.
- Speaking in public likewise is a top constraint for both men and women, although women are much more disempowered in this indicator.
- Control over income is a major contributor to disempowerment for women but not for men.

**Individual Exercise**
Direct participants to their participant guide where there is WEAI data for Aredonia (the country of the NUTSENAG case study).

**Slide 24**

<table>
<thead>
<tr>
<th>Exercise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using the WEAI data for Aredonia in your NUTSENAG case study, answer the following questions:</td>
</tr>
<tr>
<td>- What are the three indicators that contribute most to women’s disempowerment?</td>
</tr>
<tr>
<td>- What are the three indicators that contribute most to men’s disempowerment?</td>
</tr>
<tr>
<td>- What strikes you about similarities and differences between men and women’s disempowerment?</td>
</tr>
</tbody>
</table>

Say: Now that we did an example as a group, individually, interpret the WEAI data for Aredonia’s Zone of Influence.

Review the questions for the exercise:
- What are the three indicators that contribute most to women’s disempowerment?
- What are the three indicators that contribute most to men’s disempowerment?
- What strikes you about similarities and differences between men and women’s disempowerment?

**Group Debrief**
Say: Let’s look at the answers.

Ask: What are the top three contributors to disempowerment for women?
Answer: Group membership, autonomy in production, access to and decisions over credit.

Ask: What are the top three contributors to disempowerment for men?
Answer: Group membership, Autonomy in production, Access to and decisions over credit.

Ask: What strikes you about differences in empowerment between women and men?
Get multiple answers as there is no “one right answer.”

Potential answers:
- Women are more than three times as disempowered as men.
- The top three constraints are identical for both men and women. However, for each of these top constraints, women are much more disempowered than men.
- The indicators with the greatest gaps are also the indicators that are the biggest contributors to disempowerment for women and men.

<table>
<thead>
<tr>
<th>1:50 pm</th>
<th>Gender Integration Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 min.</td>
<td>Brief introduction to the GIF in Plenary</td>
</tr>
</tbody>
</table>
Review GIF using the PowerPoint slide highlighting:
- What is the GIF
- An abbreviated form with guiding questions to integrating women’s empowerment into FTF initiatives

Slide 26

Say: The GIF is a large matrix and available in the resource section. Today we will be looking at a “zoomed in” portion of the GIF.

Applying GIF to the NUTSENAG Case Study
Walk participants through the example of Bangladesh.

Slide 27

Say: One of the insights gathered from analyzing the performance monitoring data from NUTSENAG was a difference in yields in groundnuts between men and women. Female yield was significantly lower than male yield, with lower inputs per hectare,
lower price per kg, and significantly lower proportion sold. Greater number of hectares per female beneficiary and large number of female beneficiaries.

We previously analyzed the WEAI data for Aredonia (the country where NUTSENAG is implemented), which can help us understanding underlying factors that may explain these disparities.

**Slide 28**

Ask: Based on your analysis of the WEAI, what constraints faced by women do you think NUTSENAG activity should focus on in order to narrow the gap between female and male groundnut yields? Provide evidence to explain your choice(s).

**Slide 29**

Answer:

- Women do not have equal or adequate autonomy in household decision-making processes related to agriculture
- Women do not have equal or adequate access to or ability to make decisions regarding credit for agriculture purposes
- Women do not have strong social networks and are not connected with or through group organizations.

**Small Groups (15 minutes)**
Assign a different constraint to each group and give the following directions:

- Focusing on three questions from the GIF, identify:
  - What component(s) of NUTSENAG currently address or relate to this constraint? How?
  - How could you modify NUTSENAG to address the issues around this topic?
  - How will these changes specifically contribute to improving NUTSENAG outcomes?
- Prepare a flipchart summarizing your answers.

**Plenary (15 minutes)**

Do a gallery walk.

Have each group present their flipchart and then let other groups ask questions to clarify.

Summarize the different approaches/similar findings across groups.

(15 min.) **Individual Application Exercise**
Say: Please turn to the WEAI individual application exercise in your participant guide. Think about your own work. Select an activity you are working on and record your reflections in your participant guide on:

- How would you engage your partners with the WEAI data?
- What process would you follow to use the WEAI data to modify your interventions?

In plenary, ask a few participants to share their answers to inspire others.

Additional Resources

Slide 33

Extensive information on the WEAI, including its construction and interpretation, is available at the WEAI Resource Center, including:

- **Summary Brochure**: overview of the WEAI and how to interpret its findings
- **Baseline Report**: summary results from the WEAI baseline data from 13 countries.
- **WEAI Versions Table**: Explains differences in structure and intended usage of the Original WEAI, A-WEAI, and Pro-WEAI
- **Training Materials**: includes a standard presentation on the WEAI and various webinars on implementing specific modules and calculating indicators
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Details</th>
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<tbody>
<tr>
<td>2:30 pm</td>
<td>Break</td>
</tr>
</tbody>
</table>

- **Original WEAI Instructional Guide**: designed to assist practitioners implementing the WEAI, pointing out the most critical issues for consideration and good practices in survey design, data collection, calculation, and analysis of the WEAI
- **Original WEAI Survey Instruments**: survey questionnaires and manuals for WEAI data collection
- **Abbreviated-WEAI Instructional Guide**: designed to assist practitioners implementing the A-WEAI
- **Abbreviated-WEAI Survey Instruments**: questionnaire for the A-WEAI
- **WEAI Intervention Guide**: guidance on illustrative interventions that address the WEAI domains
- **GIF Webinar**: introduction to use of the GIF through the Bangladesh case study
- **USAID course on the WEAI and GIF**
Writing Results Narratives for Missions and Implementing Partners

Session Goal: Write a performance or budget request narrative that presents the problem, the solution, and the results in a way that creates a persuasive narrative.

Learning Objectives:
• Identify your audience and what is in it for them
• Write a narrative that concisely presents the problem, the solution and the results
• Use numbers and specific examples to illustrate your narrative
• Build the case for additional resources

Session Length: 90 minutes

Session Materials: Flipchart stand, paper and markers (1 per table)

Facilitator Notes:
### Time & Facilitator

<table>
<thead>
<tr>
<th>Time &amp; Facilitator</th>
<th>Content/Activities</th>
<th>Materials</th>
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</thead>
<tbody>
<tr>
<td>2:45 pm (90 min.)</td>
<td><strong>INTRODUCTION</strong></td>
<td></td>
</tr>
</tbody>
</table>

#### Slide 34

**Writing Results Narratives for Missions and Implementing Partners**

Ask:
- How many people have written performance or budget request narratives?
- For those who have written a performance or budget request narrative, ask them to share the impact of their narrative on their audience(s)?
- What do they feel made narrative effective? *Flipchart their responses.*

*If no one has written a narrative, ask them about a performance or budget narrative they read/heard and what they thought made it effective or not effective.*

Say: The purpose of this short session is to provide practical tips on drafting good narratives, including Deviation Narratives, Performance Narratives, Key Issue Narratives, and Success Stories.

The reason narratives are so important is that they:
- Communicate strategy and thinking to various audiences
- Provide context to data
- Reduce the number of data calls needed
- Provide information for communication products

#### Slide 35

*Past FTF Information Requested*

- How is the Feed the Future Initiative engaging U.S. farmers?
- Please provide a breakdown of dollar amounts of farm, country, and donor contributions.
- What are some examples of actions for each part of the supply chain?
- Why should we fund agricultural development when given the economic environment?
- What are some examples of safety nets?

Say: This slide depicts some of the questions from Congress we receive during the Budget Request season.

Read a few of the quotes.
The purpose of this short session is to provide practical tips on drafting a performance or budget request narrative that are typically done during the PPR, FTFMS reporting, OP, or CBN process.

The reason narratives are so important is that they:

- Communicate strategy and thinking of Mission staff to various audiences
- Reduce the number of data calls needed (slide depicts some of the questions from Congress we receive during the Budget Request season)
- Provide information for communication products

This session will help you address those questions and write compelling performance or budget request narratives.

INTERACTIVE PRESENTATION

Slide 36

Key Considerations

- Audience: who is it?
  - The tones and themes of the narrative will differ based on the audience
- Purpose: why are we writing the narrative?
  - Will drive the content and key take-away messages

Say: Regardless of what type of narrative we are writing, narratives must keep in mind the **Audience** the narrative is intended for, and the **Purpose** of the narrative.

- Who do we want to read the narrative?
- Why do we want them to read it?
- What should they take away from the narrative?

Slide 37

Types of Narratives

In Feed the Future context, we focus on three types of narratives:

1. **Performance Narratives**: explain how results are linking to desired outcomes, identify successes and challenges and expected activities
2. **Deviation Narratives**: explain why targets have been missed (+/-)
3. **Success Stories**: highlight real-life examples of positive results of interventions

Say: Three are three types of FTF narratives.

Read: Read the slide explaining each type of narrative.
In general, narrative should answer the questions:

- What's the problem?
- What are we doing to solve the problem?
- What results are we seeing?
- What are we going to do to improve results?

We first turn our attention to Performance Narratives, which for mission staff, will also include Key Issue Narratives.

The problem typically starts off the narrative and sets the scene. It establishes the need (for resources, interventions).

You don’t have to establish the problem at the outset of every narrative. Again, think about the audience. Are you able to tell your story through different documents? For example, if it’s the same audience (e.g. a FTF Portfolio review), then you would need to update the need about ever 3-5 years. If it’s a general document (e.g., OP narrative) accessible to a broad audience, then you would want to constantly reiterate the need.

The problem shouldn’t be the bulk of your narrative. In fact, you should be concise and limit it to 1-2 sentences. Again, know your audience. If you are writing to food security, then talk about poverty, stunting, or the agriculture sector. If you are writing to a nutrition audience, talk about anthropometry or dietary diversity.

Be Specific. Saying that children are severely stunted doesn’t pack as much punch as telling your audience the magnitude (e.g., 1 in 3 children under 5). Use statistics. Again, you want to sound like you’ve done your homework (researched) and provide some way for people to understand the magnitude or severity of the
Say: The above problem statement shows a problem statement about a global problem. You can establish a problem at any level:

- Initiative
- Country
- Area within country

Ask: As you read this problem statement, what stands out to you?

*Their answers should include how the color, fonts, and text highlight shapes the audience’s the takeaway message.*

Say: Depending on your format, you should use these to highlight the takeaway message. Typically people spend a lot of time skimming, so if you can make your message pop, all the better.

**Exercise: Comparing Two Problem Statements**

Say: Take a look at the two problem statements in your workbook.

Pause and give participants time to read the statements:

- **Option 1:** Honduras is the second poorest country in the Western Hemisphere, with a poverty rate of 66 percent. Approximately 2.5 million of the extreme poor live in rural areas, 40 percent of which are concentrated in the Western Highlands.

- **Option 2:** Nepal is a severely food deficit country recovering from a 10-year civil war and remains the poorest country in South Asia. Malnutrition is a widespread problem in Nepal with rates comparable to those in many African countries.
those in many African countries.

Ask: Which option do you find more effective?
   • Clap if you like Option 1.
   • Clap if you like Option 2.

Ask:
   • For those who preferred Option 1, why did you find it more effective?
   • For those who preferred Option 2, why did you find it more effective?

Summarize: Highlight why Option 1 is a more effective statement of the problem:

- Option 1 has the characteristics I mentioned in a good problem statement:
  - It establishes the need in 2 sentences.
  - It is specific, speaking to a region (“western hemisphere”) and an area within the country (“Western Highlands”).
  - It uses numbers to give you a sense of the severity (66 percent poverty, 2.5 million in extreme poverty, with 40% living in a specific area).

- Option 2 gives information on the problems facing Nepal, but leaves the “so what?”
  - What does it mean to be the poorest country in South Asia? If I don’t know about South Asia, what does this mean to me?
  - Malnutrition in what sense? Stunting? Undernutrition? Wasting?
  - More importantly, is the food shortage due to the instability in the country caused by the civil war? So is this a governance issue more so than an agriculture sector issue?

The second part to a good narrative is describing the solution. Now that we know the problem, what are you doing about it? When talking about your intervention or activity, once again, know your audience. That will help determine the level of specificity and the length. In general, you want to be direct and to the point.

Be as specific as you can:
- Where are you working (region, county, district)?
- What commodities or value chains are you targeting?

Don’t use jargon. For example, what do you mean by capacity building? Local
Exercise: Comparing Two Solution Statements

Say: Take a look at the two solution statements in your workbook.

Pause and give participants time to read the statements:

Ask: Which option do you find more effective?
   - Raise your hand if you like Option 1.
   - Raise if you like Option 2.

Ask:
   - For those who preferred Option 1, why did you find it more effective?
   - For those who preferred Option 2, why did you find it more effective?

Summarize: Highlight why Option 1 is a more effective solution statement.

- Option 1 has the characteristics I mentioned in a good solution statement.
  - Gets to the point (Funding is doing what?)
  - Provides Specifics (working in the river valley and forest zone in the South, on rice and maize, capacity support means training in different aspects of production)
  - The money is used for training

- Option 2 leaves a lot of questions
  - What capacity building?
  - What labor saving technologies?
  - What is the vulnerability of food insecure households?
  - What crops are you working with? Where?
  - What do you mean “some” export cash crops, which ones?
  - In all, it feels like they are still thinking through their intervention, which doesn’t inspire confidence and may require additional follow ups to get information for any data calls or budget defense requests.
Say: The third part a performance narrative should address the result. In Feed the Future, we have several years of implementation under our belt, so there should be results you can talk about. When talking about results, always ask yourself: “SO WHAT?”

Start with your output results, but you MUST ALWAYS Address the outcome. Training people is nice, but so what? Are they applying? Are there more hectares under improved technologies? Are incomes rising? Are famines disappearing? Is the lean season shorter? Remember: So What?

Again, know your audience. However, in general (unless you are talking to an M&E Specialist), it is okay to round your results in narratives. In fact, it makes it easier to remember. How many articles and speeches have you heard where they talk about 294,431 households? Most likely, they will say nearly 300,000 households or over 290,000 households. Extra points if you can give geographic parameters or some context (e.g., nearly 300,000 households in the district, or 55% of all district households).

What if you don’t have outcomes you can talk about? For example, with number of children reached? Then talk about coverage (reached 3 million children or 80% of children in the county).

Don’t forget to reference the timeframe for your results.

Say: An example used previously in FTF. Notice the comparison to previous
year’s results to emphasize how much results increased.

**Exercise: Comparing Two Results Statements**

*Slide 46*

Say: Take a look at the two result statements in your workbook.

Pause and give participants time to read the statements:

- **Option 1:** In FY 2011, USAID reached over 435,000 farmers who applied deep fertilizer placement and urea briquettes to improve management practices on more than 244,600 hectares, leading to an average 15% increase in rice yields for these farmers. As a result, the Barisal division in the south experienced its first-ever rice surplus. In the horticulture and aquaculture sectors, USAID assistance resulted in $108 million in increased sales and 17,200 full time jobs.

- **Option 2:** Malawi has completed a CAADP Compact, CIP Peer review and CAADP Business Meeting. Malawi’s FTF strategy is fully aligned to Malawi’s CIP. Through a public-private partnership with Lilongwe Dairies, FTF beneficiaries doubled milk yields in 2011 as a result of USAID technical training in feeding practices and fodder conservation improved animal breeds, and improved storage facilities.

Ask: Which option do you find more effective?

- Stand up if you like Option 1.
- Stand up if you like Option 2.

Ask:
- For those who preferred Option 1, why did you find it more effective?
- For those who preferred Option 2, why did you find it more effective?

Summarize: Highlight why Option 1 is a more effective results statement.

- Option 1 has the characteristics I mentioned in a good results statement.
  - References a time period for results (FY 11)
  - Provides Specifics (over 435,000 farmers, 244,600 hectares, $108 million, etc.)
  - Talks about outputs and outcomes (trained the farmers, resulting in additional hectares of improved management, increased yields, income) and even impact (rice surplus)
• Option 2 leaves a lot of questions
  o Is doubling of milk production good? I’m still unclear on how effective your program was.
  o So what that you completed your CAADP compact and reviewed it?
  o Why are you talking about interventions again?

Ask: Is order important?

Say: While all narratives have three components (problem, solution, result), they don’t have to be written in that order. Sometimes it makes sense to talk about your results first, mention that the problem still lingers, then propose your intervention/solution. Other times, it’s more effective to talk about your problem, the results your previous interventions yielded, and how you will continue to implement to address the problem. Again, know your audience.

Slide 47

The Potential

• So, what now? Communicate how we plan to improve results going forward
• This means identifying:
  1) successes and challenges
  2) planned activities for building on successes and mitigating challenges
• Be concrete about planned activities;
• Provide targets and timelines (when possible)
• Talk about LEARNING!!!

Say: Now that we know what the problem is, how we are trying to solve it, and what results we have seen thus far, we need to focus on how we can generate more results? The final part of the narrative should speak to the successes and challenges faced in implementation and how the activity plans to build upon those successes and mitigate the effects of challenges.

Slide 48

Say: Say: Take a look at the two statements in your workbook. Clap if you like Option 1. Clap if you like Option 2.

Ask:
  • Why do you like option 1?
  • Why do you like option 2?
Option 2 has the characteristics I mentioned in a good statement. Option 1 does not provide much detail on concrete activities needed to improve results; no targets presented.

Slide 49

Say: To summarize, a good narrative has all the characteristic shown on the slide.

Slide 50

Say: Now that we know what the problem is, how we are trying to solve it, and what results we have seen thus far, we need to focus on **how we can generate more results**? The final part of the narrative should speak to the successes and challenges faced in implementation and how the activity plans to build upon those successes and mitigate the effects of challenges.

Slide 51

Say: Give participants time to read the options in their participant guide.

Ask:
- Who likes Option 1? Why
- Who likes Option 2? Why
Option 2 has the characteristics of a good deviation narrative.
1. References a time period for results (FY 11)
2. Provides Specifics (over 435,000 farmers, 244,600 hectares, $108 million, etc.)
3. Talks about outputs and outcomes (trained the farmers, resulting in additional hectares of improved management, increased yields, income) and even impact (rice surplus)

Option 2 leaves a lot of questions
1. Is doubling of milk production good? I’m still unclear on how effective your program was.
2. So what that you completed your CAADP compact and reviewed it?
3. Why are you talking about interventions again?

I mentioned previously that while all narratives have three components (problem, solution, result), they don’t have to be written in that order. Sometimes it makes sense to talk about your results first, mention that the problem still lingers, then propose your intervention/solution. Other times, it’s more effective to talk about your problem, the results your previous interventions yielded, and how you will continue to implement to address the problem. Again, know your audience.

**Slide 52**

Success Stories ≠ Performance Narratives

**Slide 53**

Success Stories
- The formula is simple: use powerful statistics, communicate progress; and bring it to life with a personal narrative.
- Stories must contain beneficiaries and beneficiary quotes
- Photographs bring a story to life!
- [https://stories.usaid.gov/wtoc](https://stories.usaid.gov/wtoc)

Say: Now that we know what the problem is, how we are trying to solve it, and what results we have seen thus far, we need to focus on **how we can generate more results**? The final part of the narrative should speak to the successes and challenges faced in implementation and how the activity plans to build upon those successes and mitigate the effects of challenges.

Say: Now that we know what the problem is, how we are trying to solve it, and what results we have seen thus far, we need to focus on **how we can generate**
more results? The final part of the narrative should speak to the successes and challenges faced in implementation and how the activity plans to build upon those successes and mitigate the effects of challenges.

Group Activity

Slide 54

Directions:
- Divide into small groups (think of a way to creatively divide the group so they are working with new people)
- Direct the participants to the spreadsheet in the participant guide/hand out copies of the participant guide
- Give the following directions:
  - Write a short (3 to 4 sentence) Performance Narrative highlighting one or two results
  - Chose a spokesperson to share your narrative with the class
  - You have 20 minutes

Debrief:
Sharing narratives:
- Have each group read their narrative.
- After a group finishes, ask the class what were the strengths of the narrative? What changes would you suggest to make it tell a better story?

After all groups have shared their narratives, ask:
- What did the narratives have in common?
- How were the narratives different?
- What are you key take-aways about writing creative narratives?

Individual Reflection

Slide 55

Individual Reflection

Record your key learnings about writing performance narratives.

We do not learn from experience... we learn from reflecting on experience.
- John C. Maxwell
Say: In your participant guide, record your key learnings from this session.
Finding and conveying meaning in data through visualization

Session Goal: Create compelling visuals to convey the meaning of data
Learning Objectives:
- Create data comparisons
- Select appropriate chart type
- Simplify and annotate graphics
- Sketch visuals of data

Session Length: 45 minutes
Session Materials:
- Internet connection

Facilitator Notes:
<table>
<thead>
<tr>
<th>Time &amp; Facilitator</th>
<th>Content/Activities</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before the session</td>
<td>Preload video:  <a href="https://www.youtube.com/watch?v=jbkSRLYSJo">https://www.youtube.com/watch?v=jbkSRLYSJo</a></td>
<td>Internet connection</td>
</tr>
</tbody>
</table>

**Introduction**

**Slide 56**

![Finding and conveying meaning in data through visualization](image1)

Say: Now that you have your narrative, you need to think about how you will support the “story” with compelling graphics of the data.

**Slide 57**

![Slide is hyperlinked to video: [https://www.youtube.com/watch?v=jbkSRLYSJo](https://www.youtube.com/watch?v=jbkSRLYSJo)](image2)

Say: We are going to watch a short (less than 5 minute video) of Hans Rosling’s presenting enormous quantities of public health data with a sport’s commentator’s style to reveal the story of the world’s past, present and future development.

Debrief the video asking:
- What did you notice about the video?
- What was effective about the video?
- What was less effective?
- How did it make you feel?

Ask and record responses on a flipchart: **Why bother visualizing data?**

*Note: Reference the Hans Rosling video during this discussion.*
Though data visualization is powerful for communication, it's equally useful to explore and understand the data and:

- Easily make COMPARISONS
- Generate hypotheses about relationships that can be tested using statistics; are those two things correlated? Causative?
- Generate conversation about what the data mean and how they compare to other knowledge. Not a replacement for subject matter expertise, but a complement
- Easily summarize data into a readable format. Tables are great for seeing information, but they require you to memorize many numbers at once to be able to make comparisons (as in, what's the highest value?). In a data visualization, you're relying on the fact that your brain is quite good at making visual comparisons to identify trends and patterns.

**Ask and record responses on a flipchart:** What limitations do you see in visualization?

Data visualization is fantastic, but it can’t do everything.

- People often assume a dashboard will solve all their problems: “If I see all the data, the answer will be obvious!” In reality, the success of a dashboard is dependent upon the user having a series of well-defined tasks that the dashboard helps them answer. If you don’t know what information you need, a dashboard is unlikely to tell you.
- Just because things overlap visually doesn’t mean one causes the other. For example, there’s a website called Spurious correlations (http://www.tylervigen.com/spurious-correlations) that has analyzed all
sorts of things that are probably unrelated, like how science funding is correlated with suicides.

- Garbage in, garbage out. If you start with bad data, you can make it look pretty, but you can’t make it meaningful.
- Good data visualization takes time and requires a lot of thought about what relationships to show and how to show them.

**Slide 60**

**How do I make it meaningful?**

1. Find the comparison that’s useful to the audience
2. Pick an appropriate chart type
3. Simplify graphics to focus message
4. Annotate to highlight and explain

Say: To make a **meaningful** visualization, focus on these four best practices:

1. Know who will use this information and what comparison or relationship is interesting for them to better understand.
2. Choose a chart type that focuses on that relationship.
3. Eliminate any distractions within the graphic, especially lots of colors and lots of lines.
4. Use annotations on the chart itself to highlight interesting behavior.

We will discuss each of these next.

**Slide 61**

**Visualizations are all about comparisons**

Ask: What is the relationship you want to show?
Read: Bullet points on the slide.

Say: If you can't answer these questions, you're not ready to make a visualization. (Inspired by http://blogger.ghostweather.com/2013/11/data-vis-consulting-advice-for-newbies.html)

Say: How you represent data changes the story you're telling. Fundamentally, data visualizations are all about comparisons, and it's your job to decide the relevant comparison to make. Here, we're graphing essentially the same data, but the point is different. Are you trying to compare how Rwanda has improved with respect to child mortality in recent years relative to the rest of the world (and the MDG goals)? Or are you more interested in which age group is dying at a higher rate? (children under 5? or infants in their first year of life?) Both comparisons could be useful depending on what your purpose is. 

Pro tip: you can use TWO graphics to tell two stories rather than trying to cram them on the same thing.

Also don’t make the reader search for the conclusion, tell them in the title. People have this false sense that data visualizations are unbiased. In reality, they’re our interpretation of data. So lead the reader directly to what you think is interesting relevant, and it’s their duty as a responsible consumer to verify that the data support your claim.
Every chart has its own purpose, but some are better suited than others for specific tasks. Here, we will focus on three of the most useful (and often under-utilized) chart types: bar graphs, small multiples, and scatter plots.

What each of these three have in common is that they are all based around the fact that the most important comparison you’re making is shown through position -- so length rather than color, angle, 3D depth, etc.

Note: Resource for chart inspiration: [http://www.datavizcatalogue.com/](http://www.datavizcatalogue.com/)

Say:  People love pie charts. While I love pie, it's best for eating, not for chart plotting. A pie chart with a few slices (< 5) can be okay. The major benefit: people know how to read them. The downsides: people often make slices of pie.
In this pie graph:
- What’s the relationship between the blue and purple wedges?
- How about the red and blue regions? Blue is less than red-- but by how much?

How much easier are these to see when you use a bar graph? If you want accuracy to compare these values, a bar graph is much better. If you want a qualitative “there’s a lot of red”, a pie graph is maybe okay.

Slide 67

Say: One of the most common problems we see with visualizations is that people try to show EVERYTHING on the same graph. Don’t do it! Small multiples are an effective way to address this problem.

With small multiples, you have the same graph repeated over and over again, but for each individual category. In this example from NPR, they’re looking at the proportion of energy each state derives from each power source and how they’ve changed in the last decade. In this case, NPR is showing the change using something called a slope or bump chart, which shows the year on the x-axis and highlights the change by drawing a line between the two points. So you can quickly see the rate of change by looking at the steepness (slope) of the line.

The advantage of small multiples is that it allows you to focus on the difference of each state side by side. For instance, you can quickly see that Alabama has had a huge decrease in reliance on Coal, while Alaska and Arizona are largely unchanged. Once you know how to read one panel of the small multiples, you can see all of them. This allows you to see both the individual behavior of each state and their differences.

By the way, just because you have geographic data doesn’t mean you have to have a map!

Slide 68
Lastly, one of the most efficient ways to show relationships is through a scatter plot, like we saw in the Hans Rosling video. He has his own website where you can explore the data (https://www.gapminder.org/).

The scatter plot uses position to encode the values on both the x-axis and y-axis so you can see how these two vary together. You can also get fancy and add in more information using the size of the bubble (showing population) and/or color (which in this case is encoding income/person—so redundant with the x-axis).

Slide 69

Say: Always show the data. The data should be the dominant (most prominent) element on the page. To do that you need to focus on the story and eliminate all unnecessary color (get it right in black and white).

Slide 70

Source: www.who.int/bulletin/volumes/86/5/07-048769/en

Ask: Try it out: is this graphic effective? What do you like or dislike about this graphic?
Answers to reinforce:

- Unclear what the story is: total number of deaths? Proportion? Comparison between regions?
- Pies don’t let me compare anything useful.
- WAY too many colors. The colors are also confusing—how many different yellows are there?? (okay, only two, but they’re basically the same color)
- The data are not the focus / dominant element on the page. WAY too much going on.
- Title doesn’t tell us any information on what we should have learned from the data
- The map is unnecessary, aside from telling us where each of these regions are. If that’s important, it would be better to have it as a small reference map.
- Never, ever, ever use 3D. In the best cases, it’s merely distracting, and in the worst cases, it distorts the data
- Don’t use abbreviations unless you have to. I have no idea what WPR means (Google tells me it’s Western Pacific Region).
- Similarly, don’t use a legend unless you have to. Legends make readers work, having to move back and forth between the legend and graphic. Directly label on the chart.
- Numbers don’t add to 100% b/c of rounding
- Where’s the source?

**Slide 72**

Say: One good story is infinitely better than a visualization that shows all the data. A little better: tell one story. For example, pneumonia is highest in Africa and is roughly ⅕ of all child deaths.

You can do this in Excel! The main thing you have to do is eliminate all the unnecessary lines, colors, shadows.
Annotations are the single most useful bling you can add to a graph. They allow you to teach the reader how to read the graph, point out interesting behavior, and bring in additional context.

Source: http://www.nytimes.com/interactive/2015/12/10/us/gun-sales-terrorism-obama-restrictions.html?_r=0

Say: From this data, it’s clear something happened in 2013. But what? Let’s find out.

By annotating the data, you can help bring in that additional information that makes the story much richer, more interesting, and more relevant.
Say: Okay, so I kind of miscounted. The 5th best practice for data visualization is to sketch and don’t be afraid to try things. Sketching allows you to organize your ideas and focus on what the story within the data is. Think back to: what’s the relationship I want to show? Then sketch out different ways of showing it, and ask others for their opinions on what’s effective and what isn’t.

Group Activity

Directions:
- Divide groups into tables of roughly 5 people
- Have two stacks of cards
  - Scenario cards
  - Findings cards
- Each group will draw a scenario cards and a finding card to create a unique combination of a scenario and a “finding”.
- Each will sketch out their data story and present it to the larger group.

Possible scenarios:
- You’re writing talking points for the FtF end of the year progress report and want to highlight things you’ve learned this year
- You’re writing a PAD and need to synthesize the findings of the data in a coherent manner.
- You’re preparing for a portfolio review and need to advocate for an adaptation to your programming.

Data findings:
- Soy has the highest gross margin but the lowest number of beneficiary producers, by a large margin. Male and female gross margin is similar, but male cultivates more than 2.5 times the area that females do
Groundnut yield for female farmers is significantly lower than yield for males, and female farmers have significantly lower input use per hectare, lower price per kg, and significantly lower proportion sold.

Maize gross margin is higher for females because inputs/ha for females is lower while yield, price, production, proportion sold are all basically the same for males and female beneficiaries. Females use family labor and saved seed, while males purchase both.

Debrief

Slide 78

Ask groups to share:
- What design decisions did you make?
- What were you thinking and why?
- Did you have to make any tradeoffs (not show certain data, de-emphasize one component, etc.)?
- What inspired your design?

Summary

Slide 79

At the end of the day...

- Be thoughtful:
  - what comparisons are you making?
  - is your representation appropriate?
  - how is the visualization useful?
- Simplify, simplify:
  - break things into small multiples
  - get it right in black and white
  - annotate

Say: At the end of the day, successful visualizations require time! So think about what you’re doing and why.

- What’s the relationship?
- Who’s the audience?
- What’s the best way to show the relationship?

Keep it simple
- Focus on the data
- Don’t try to show everything in one big graph/map
- Get it right in black and white
- Annotation is your friend
And-- most importantly-- visualization is a process. It requires iteration, feedback, and testing out lots of options.

**Slide 80**

Say: Within the Agency, the GeoCenter is a free service that provides advice and analysis on data collection, analysis, and visualization. We analyze and communicate insights, consult, and train. There’s an explosion of books, classes, webinars, etc. We’ve collected our favorites at www.geocenter.github.io/StataTraining/resources

- Color Brewer is an amazing free resource for picking color palettes
- Stephanie Evergreen has a blog and tutorials on doing data visualization in Excel.
- Don’t be afraid to ask advice from others. It’s easy to get lost in your work and lose perspective.
- For inspiration: the NYT has some of the best data scientists and visualizers in the world. Pay attention to the Upshot
- Data Stories and Source OpenNews Projects peel back the layers on what decisions professionals make when they’re building visualizations
- We’ve assembled a Pinterest gallery on interesting visualizations: https://www.pinterest.com/kuhobbes/geocenter-inspiration

**Slide 81**

Say: To see more about what the GeoCenter does, please visit our website (USAID internal only): https://sites.google.com/a/usaid.gov/usaidgeocenter/

Handout CEOCenter pdf or direct participants to copy in the participant guide.
WHERE SHOULD I START WHEN MAKING A VISUALIZATION OR MAP?

1. **Have a Question or Goal**
   What do you want to learn or find out?
   What story or message do you want to tell?

2. **Define the Audience**
   Who will use the information?
   How will they use it?
   Least
   Interactive / online presentation
   One pager
   Poster
   Most
   Information
   Document
   Why will they use it?
   • to learn
   • to understand
   • to make decisions
   • as a platform to discuss data
   • ...

3. **Explore & Clean the Data**
   Do the data make sense?
   • How are the data distributed?
   • Are there outliers?
   • Are there missing data?
   • Do the data fall within a reasonable range?
   What do they mean?
   • Are the data related?
   • Do new variables shed more insight?
   Plot bar charts (categorical data)
   or histograms (numerical data)
   Plot scatter or line plots
   between two variables
   Transform data
   • Average (point or running),
   calculate a percent, convert to comparable units
   • Normalize, create ratios, reduce dimensions by calculating an index
   Is this normal?
   x seems to be positively correlated with y.

4. **Define What Comparisons to Make**
   What do you want to show?
   How do you want to show it?
   Fill in the blanks!
   I want to show the relationship between _____ and _____.
   I want _____ to use this info to _____.
   I want to represent this with <plot type>.

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Session 8: Reporting and Using Performance Monitoring Data
5 Test it Out!
Sketch, make a mock-up, test it in your software, and refine it.

6 Is this the Best Way to Represent the Info?
Is the plot successful? Refine it by asking yourself:
• Does the plot show the relationship I want?
• Will it be useful to the audience?
• Can you understand the plot with little verbal explanation?
Annotations are your friend. Use them to explain how to read the graph, and/or what’s interesting about it. Directly label things where possible. Only use legends if you have to.
• Is the plot a faithful representation of the data?
Plots can lie (or at least distort the truth). Don’t do that.
• Is the plot more effective as small multiples?
• How should things be ordered?
  • alphabetically
  • by ranked value
  • by group or theme

• Is the plot type successful?
  Is there a better way?

• Is every dot, symbol, color, line, and variable necessary?
Keep things simple, consistent, and meaningful

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Session 8: Reporting and Using Performance Monitoring Data
8-57
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.

Anna Brenes began work in July 2012 with USAID | Haiti as the GIS Mapping and Reporting Specialist where she assisted M&E teams with data collection, analyses, and management using the Haiti DevResults information management systems. She joined the USAID/BFS/SPPM/MEL team in January 2016 as a Data Support Specialist. Prior to working with USAID, Ms. Brenes worked with the State of Minnesota as a GIS Analyst. She has lived abroad with her husband and children in Morocco, Bolivia, and the Netherlands. Ms. Brenes has an undergraduate BA degree from the University of Wisconsin, Madison in International Relations, and a graduate MS degree in Agriculture Education/Sustainable Community Development from the University of Wisconsin, River Falls.

Farzana Ramzan is a Monitoring and Evaluation Specialist in the Bureau for Food Security. Farzana is the M&E technical advisor for Feed the Future countries in East Africa, including Tanzania, Kenya, Ethiopia, South Sudan and the Democratic Republic of Congo. Farzana also manages the Women’s Empowerment in Agriculture Index portfolio, the first direct measure of women’s empowerment and inclusion in the agriculture sector, and the PovertyCounts portfolio, a simplified tool.
Krista Jacobs is a Gender Advisor at the Bureau for Food Security and a development economist whose work focuses on gender, food security and assets. Current and recent work includes advising agricultural projects on gender integration, program evaluation, developing methods to measure women’s and men’s land and asset rights, building gender capacity of community-based programs, and building the monitoring and evaluation capacity of local civil-society organizations. Her work has focused in East and West Africa. Dr. Jacobs holds a PhD in Agricultural and Resource Economics from the University of California, Davis.

Laura Hughes is a data scientist at the U.S. Agency for International Development. As a member of the GeoCenter, she uses data science and visualization to analyze international development issues. She also trains people on how to use data visualizations to communicate complex problems and solutions. Trained as a biophysical chemist, Laura is passionate about translating messy data and complex statistical analyses into understandable insights that can influence policy and investment decisions. She holds a Ph.D. from Stanford University, an M.Phil. from the University of Cambridge as a Gates Cambridge Scholar, and an M.S./B.A. from Northwestern University.

Lindsey Anna is a public health and international development professional with over 7 years of experience designing, implementing, and monitoring food security and nutrition programs. She joined USAID’s Bureau for Food Security in October 2014 as a Monitoring & Evaluation Adviser supporting Feed the Future focus countries in LAC and aligned countries in the Middle East and Asia. She is also the M&E lead for Ebola-affected countries in West Africa. Most notably, Lindsey serves as the BFS technical lead for data quality. Before joining USAID, Lindsey previously worked at a number of USAID implementing partners, including Social Impact and FHI360, where she filled various programmatic and technical roles providing budget, program design, and M&E support. Lindsey also possesses vast experience in domestic and global health policy having started her career in the U.S Senate and the U.S. Department for Health and Human Services. Lindsey received her MPH from The George Washington University and BS in Commerce from DePaul University.
FOR MORE INFORMATION:

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