Module 2: Results Chain

Learning Objectives

At the end of this workshop, participants will:

• Understand the results chain and its use in M&E
• Be able to identify program outcome objectives for use in monitoring
• Be able to identify questions for evaluation
• Be able to recognize different types of evaluation questions and understand their significance for later evaluation activities
**Results Chain: Purpose**

Results Chain help us ..... think more analytically about cause and effect, and
- identify relationships among program components (consider relationships internal to the program)
- clarify program objectives and long term goals
- identify key indicators for M&E
- identify key assumptions underlying the program
- develop our questions for evaluation
- visualize a program in context (consider factors in the social/physical environment that are external to the program but might influence program outcomes)

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**Results Chain and M&E Process**

<table>
<thead>
<tr>
<th>Evaluation</th>
<th>Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Determine and refine questions</td>
<td>1. Determine monitoring objectives</td>
</tr>
<tr>
<td>2. Select an evaluation design</td>
<td>2. Select intermediate and end outcomes</td>
</tr>
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</table>

- 3. Select indicators and measures
- 4. Develop data collection strategy
- 5. Identify data analysis strategy
- 6. Review and test the plan

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<table>
<thead>
<tr>
<th>Plan</th>
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<tbody>
<tr>
<td>7. Execute the plan</td>
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<table>
<thead>
<tr>
<th>Do</th>
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<tbody>
<tr>
<td>8. Report results</td>
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<thead>
<tr>
<th>Report</th>
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</table>
**Results Chain in Projects/Programs**

1. We implement projects/programs to pursue certain **objectives**.

2. Projects use **inputs** and **activities** which result in

3. **Outputs**, which allow to obtain certain

4. **Outcomes**

5. In the longer term, outcomes will be reflected in **Impacts**

6. This is called the **Results Chain**

7. This is applicable to projects and **programs**

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**How to read a Results Chain**

![Diagram of Results Chain with inputs, activities, outputs, outcomes, and impacts]

- **Inputs**: Certain inputs (resources) are needed to operate your program
- **Activities**: If you have access to them, then you can use inputs to accomplish your planned activities.
- **Outputs**: If you accomplish your planned activities, then you will hopefully deliver the amount of product and/or service that you intended.
- **Outcomes**: If you accomplish your planned activities to the extent you intended, then your beneficiaries/stakeholders will benefit in certain ways.
- **Impacts**: If these benefits to stakeholders are achieved, then certain changes in society, organizations, communities, or systems might be expected to occur.

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*Note that some of your results could be negative, for example, increased manufacturing output could lead to both economic improvements (positive) and more pollution (negative).*

Adapted from Kellogg Foundation’s Logic Model Development Guide
**Examples of components**

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Activities</th>
<th>Outputs</th>
<th>Outcomes</th>
<th>Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources</td>
<td>What the program does</td>
<td>Products or services produced / provided</td>
<td>Results or effects of outputs</td>
<td>Long term effects</td>
</tr>
<tr>
<td>- Money&lt;br&gt;- Facilities&lt;br&gt;- Equipment&lt;br&gt;- Supplies&lt;br&gt;- Staff&lt;br&gt;- Technical expertise</td>
<td>- Constructing roads&lt;br&gt;- Teaching secondary school students with enhanced teaching methods and textbooks&lt;br&gt;- Health center providing immunizations</td>
<td>- Roads constructed&lt;br&gt;- Students completed courses&lt;br&gt;- Babies immunized</td>
<td>- Access to market increased, more products sold&lt;br&gt;- Students advanced to university, gained and used knowledge&lt;br&gt;- Babies less susceptible to disease and illnesses</td>
<td>- Improved household income&lt;br&gt;- Improved labor force and income&lt;br&gt;- Decreased incidence of disease and infant-child mortality, improved health</td>
</tr>
</tbody>
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**The stages in designing a project**

Preferably, start with the desired impacts and work back to define the process through which they will be achieved.

**Impacts**
- Trade activities and economic development improved, employment and household income increased

**Outcomes**
- Journey time reduced, more products are sold because farmers and manufacturers have better access to markets

**Outputs**
- Improved roads, 412 kilometers of roads are completed and repaired

**Activities**
- Construction and repair of roads occurs

**Inputs**
- Funds for road construction, equipment and staff provided
### Examples of Output, Outcome and Impact

<table>
<thead>
<tr>
<th>Outputs</th>
<th>Outcomes</th>
<th>Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Project</td>
<td>Increased visits to regular health facilities by underserved patients</td>
<td>Reduced health costs for underserved patients</td>
</tr>
<tr>
<td>Road Project</td>
<td>Increased use of main and secondary roads, decreased journey time</td>
<td>Trade activities and economic development improved, increased employment, increased household income</td>
</tr>
<tr>
<td>Water Supply Project</td>
<td>Increased availability and use of potable water by households</td>
<td>Reduced water-related illnesses, healthier citizens, reduced health costs</td>
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<table>
<thead>
<tr>
<th>Example of the Project Results Chain</th>
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**Moldova: Trade and Transportation Support Project**

- **Input**: $1.37 million will be used for
- **Activity**: technical assistance to the customs service for simplification of customs procedures and operations
- **Output**: amendments to the customs legislation (introduction of random checks), redesigning of customs procedures and establishment of the integrated system for customs procedures and information system
- **Outcome**: time required for customs procedure had reduced fourfold, trading volume per one officer had increased by 37%...
- **PDO**: trade and transportation related non-tariff costs reduction had been achieved
- **Impact**: assistance to the development of trade/economic activity (generally, this part of the chain has a longer-term period, beyond the life of the project)
Exercise 2-A and 2-B: Construct Results Chain

- Review the instructions on the handout. Construct the project Results Chain by identifying:
  - Inputs
  - Activities
  - Outputs
  - Outcomes
  - Impacts
Determining and Refining Evaluation Questions

Question

Where do you live?
Determining Your Evaluation Questions

- Models (Results Chain) help identify and clarify evaluation questions
- What is the purpose of your evaluation? Consider the
  - goals and objectives of the program, in light of sectoral and macro-level objectives
  - stakeholders
  - program logic

Sources of Questions

Where might we get our questions?

- Project/program model (Results Chain)
- Project/program documents
- Government, NGO officials, other stakeholders
- Program beneficiaries
- Experts
- Other studies
Defining and Refining Questions

Defining your questions
- What is it you want to know?
- Who wants to know?
- Why do they want to know?
- How will the results be used?
- What's most important?

Refining (Operationalizing) your questions
- Moving from general to specific.
- “Operationalizing” involves breaking down broad questions into sub-questions to make them answerable.

Types of Evaluation Questions

1. Descriptive Questions:
   “What is?”

2. Normative questions:
   “What should be?”

3. Outcome/Impact or Cause-Effect Questions:
   “What difference does it make?”
Descriptive Questions

- Seek to understand or describe a program or process.
- Provide a snapshot of what is
- Can be used to describe...inputs, activities, outputs
- Journalist’s questions:
  - who, what, when, where, why, how, and how much?
- Examples:
  - Who receives the program?
  - What are the characteristics of the program?
  - Where is the program delivered?
  - When was the program implemented?
  - How do the participants feel about the program?
  - How much did the program cost?

Normative Questions

- Examine what is...and compare it to what should be
- Are we doing what we are supposed to be doing?
- Are we hitting our target?
- Examples:
  - Did we spend as much as we had budgeted?
  - Did we reach our goal of admitting 5,000 students per year?
  - Did we vaccinate 80% of children as planned?
  - Did we drain 100,000 hectares (ha) last year?
Outcome/Impact or Cause-Effect Questions

- Examine the effects of a program.
- Focus on the outcomes and impacts of a particular program.
  - Has the program made a difference?
  - Is the change a result of the program? (Attribution)
- Examples:
  - Has school performance improved as a result of the teacher education program?
  - Has the program resulted in an increase in the output of middle-level skilled workers to meet the needs of the modern market?

Causality

- When we want to know if a program (intervention) caused a change, we want to establish causality.
- An impact is a consequence of project/program.
- Can the change be attributed to the project/program and not to some other factor(s)?
- This issue is often referred to as “attribution” or the “counterfactual.”
Impact or Cause-Effect Questions

Social Science Terms:

The **program**

is the **independent variable**

which is expected to **cause changes**

in the **dependent variable**

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What Other Explanation?

**Discussion:**

- There was a program to increase crop production to eliminate poverty. It was found that family income increased.

- What is a counterfactual argument?
**Why Type of Question Matters**

• All need to be answered accurately and objectively

• All follow the same evaluation steps

• **BUT:** Impact questions present unique challenges
  • Design is important to rule out rival explanations.
  • Impact questions are the hardest to answer!

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**Questions: Summary**

When preparing evaluation questions, it is important to:

• Define your questions

• Operationalize questions to make them answerable and measurable

• Be clear about types of questions (descriptive, normative or impact)
**Evaluation Plan – Exercise**

- Refer to the evaluation plan.

- Based upon the information you have from the case(s) identify what you believe are important evaluation questions for this program.

- Develop both the general questions and sub-questions, as needed.

- Classify each question or sub-question as **descriptive**, **normative** or **impact**.

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### Evaluation Plan

<table>
<thead>
<tr>
<th>Type of Design</th>
<th>Indicators &amp; Measures</th>
<th>Data Sources</th>
<th>Data Collection &amp; Sampling</th>
<th>Data Analysis</th>
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Determining Objectives for Results Monitoring

Identifying your project outcome objectives

- In results monitoring, we focus on outcome objectives to help develop our indicators.

- We must be able to distinguish between output, outcome and impact objectives.

<table>
<thead>
<tr>
<th>Why distinguish between outputs and outcomes?</th>
<th>Because outputs do not reflect the changes in the beneficiaries as the result of utilizing goods and services (outputs).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why distinguish between outcome and impacts?</td>
<td>Because impacts are usually too far in the distance to be very useful for your performance monitoring.</td>
</tr>
</tbody>
</table>
**Issue of Time**

Example: Development Objective - Sustainable timber production

<table>
<thead>
<tr>
<th>Year</th>
<th>0</th>
<th>3</th>
<th>5</th>
<th>25</th>
</tr>
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<tbody>
<tr>
<td>Life of program</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Expected impact</td>
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</table>

**Examples of Output, Outcome and Impact Objectives**

<table>
<thead>
<tr>
<th>Output Objectives</th>
<th>Outcome Objectives</th>
<th>Impact Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Provide preventive health services to underserved patients</td>
<td>1. Reduce emergency room visits by underserved patients</td>
<td>1. Reduce health costs for underserved patients</td>
</tr>
<tr>
<td>2. Complete repairs of main and secondary roads</td>
<td>2. Improve road condition quality</td>
<td>2. Increase access to markets</td>
</tr>
<tr>
<td>3. Rehabilitate water system to increase production of potable water</td>
<td>3. Increase availability of potable water to households</td>
<td>3. Reduce water-related illnesses</td>
</tr>
</tbody>
</table>
Monitoring Results of the World Bank Projects

✓ **Project Development Objectives (PDOs)** are measured by outcomes: they are the PDO Indicators. Since it takes some time for project activities to be reflected in PDO Indicators …

✓ ...progress *towards* achieving PDOs are measured by **Intermediate Outcome Indicators (IOIs)**. They capture
  ✓ project outputs (i.e., km of roads built) or
  ✓ intermediate outcomes (i.e., satisfactory road maintenance in pilot regions)

What Makes for a Good PDO?

- Objectives clearly stated
- Target groups are clearly identified
- Clear expressions of how performance will change; i.e. outcomes
- Outcomes can be observed and measured
- Outcomes can realistically be achieved by project’s inputs and time span, subject to normal risks
- The cause-effect link between project activities and outcomes is clearly established
Discussion: Arrangements for results monitoring

Case Projects

- Identify the PDOs of the project.
- Discuss whether the project has good PDOs, and restate them if needed.

Exercise: Results Framework

<table>
<thead>
<tr>
<th>Project Outcome Indicator</th>
<th>Use of Project Outcome Information</th>
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<tbody>
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<table>
<thead>
<tr>
<th>Intermediate Outcome Indicators</th>
<th>Use of Intermediate Outcome Monitoring</th>
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