Logical Framework
Analysis and Problem tree
21st March 2013
Overview

• Explanation of purpose and benefits of Logical Frameworks
• Develop a problem tree analysis linking roots – causes – effects (exercise)
• Logic of Logical frameworks
• Definitions
• Develop a Logical framework (exercise)
Purpose of a logical framework

• A **systematic** tool: for designing, planning, implementing, monitoring & evaluating a project (research or a programme).

• A tool for **organizing thinking**:
  • for relating **inputs** to the implementation of **activities**, activities to the production of **outputs**, outputs to the achievement of a defined **purpose**, and purpose to a high-level **goal** or impact.
Purpose of a logical framework (2)

• A tool for identifying and assessing risks: by listing critical assumptions inherent in project design and implementation.

• A tool for measuring project progress: through objectively verifiable indicators and means of verification.

• A tool for developing consensus and communicating a project’s intent and strategy
Don’t over-focus on the language and the variations of the various LogFrame matrix models. The important lesson is to learn to think through projects using a logic model.
Logframe characteristics

• Finding the “roots” before setting the objectives
• Objectives & beneficiary oriented
• Participatory/Ownership!
• Consensus oriented
• Focus on logical links
• Systematic common sense!!!
Benefits of a logframe

- **RELEVANCE, FEASIBILITY & SUSTAINABILITY (IMPACT)**

  - Situation and weaknesses are analysed
deviation correct solutions
(activities)

- Mistakes are avoided

- Facilitates implementation

- Identifies indicators of the projects achievements
9 steps of a logframe analysis

1. Analysis of context
2. Analysis of stakeholders
3. Problem analysis/Situation analysis
4. Objectives analysis
5. Plan of activities
6. Plan of resources/Inputs
7. Indicators/measurements
8. Risk analysis
9. Analysis of assumptions
Problem analysis crucial!

As with weeds, the roots must be tackled, if the weeds are to disappear
Problem analysis

- Finding “the roots of the evil”
- Which is the problem to be solved?
- Who owns the problem?
- One focal problem, focus!
- Find the causes and effects to the focal problem
- The causes of the problem shall be “tackled” through activities within the framework of the project in order to solve the problem in a sustainable way
Example of a Problem Tree

**Effects**

- Poor health condition of rural population
  - Low nutritional intake

- No cash income
  - No marketable surplus

**Causes**

- Inefficient extension services
- Low labour productivity
- Post-harvest losses
- Low soil fertility

- New techniques not used

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Centre for Sustainable International Development

UNIVERSITY OF ABERDEEN
Problem tree

Problem

Causes

Effects
Group work

• Organise yourselves into groups of 4/5 people around a common problem

• Working in the group – agree on the wording of the problem

• Use post-it notes of the same colour to identify the causes of the problem

• Use post-it notes of a different colour to identify the effects of the problem
Why a Problem Tree?

**Problem Tree**
- Effects
  - Focal problem
  - Causes

**Objective Tree**
- Overall objectives
  - Project Purpose
  - Results
Problem analysis:

Bus example

Effects
- Passengers hurt or killed
- People are late
- Frequent bus accidents

Core problem
- Drivers not careful enough
- Bad conditions of vehicles
- Bad road conditions

Causes
- Vehicles too old
- No ongoing maintenance
Objectives analysis:
Bus example

- Customers have a better image of the bus company
  - Less passengers hurt
  - Frequency of bus accidents considerably reduced
    - Drivers drive carefully and responsibly
    - Vehicles kept in good condition
      - Old vehicles are regularly replaced
      - Vehicles regularly maintained and checked
    - Road conditions improved
  - Passengers arrive at scheduled time
    - Old vehicles are regularly replaced
Causal Logic Modelling

A systematic tool that visually shows, through a graphic illustration or picture, how a particular initiative occurs through logical relationships.

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Indicators</th>
<th>Means of Verification</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Label?</td>
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<td>Label?</td>
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</table>
What will change, who will benefit, and how and what will be the impact of the project

**GOAL:** Ask: What is the impact we want to achieve? What does our community look like if we are successful?

**Healthy Mothers and Infants in our target population**

<table>
<thead>
<tr>
<th>OBJECTIVES</th>
<th>KEY OUTPUTS</th>
<th>MAJOR ACTIVITIES</th>
<th>INDICATORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ask: What are the desired effects on people’s knowledge, attitudes, and behaviors.</td>
<td>Ask: What final goods and services will we provide?</td>
<td>Ask: What daily efforts contribute to our outputs?</td>
<td>Ask: How will we know if we have achieved our Objective?</td>
</tr>
</tbody>
</table>
## The Logic of LogFrames

<table>
<thead>
<tr>
<th>Goal</th>
<th>Objective(s)/Outcome(s)</th>
<th>Deliverables/Outputs</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>If the OBJECTIVES are accomplished;</td>
<td>If DELIVERABLES are produced;</td>
<td>If the ACTIVITIES are conducted;</td>
<td>If adequate RESOURCES/INPUTS are provided;</td>
</tr>
<tr>
<td>Then this should contribute to the overall goal</td>
<td>Then the OBJECTIVES are accomplished</td>
<td>Then RESULTS can be produced</td>
<td>Then the ACTIVITIES can be conducted</td>
</tr>
</tbody>
</table>
### Project Description Statements

| **Goal** | The broad development impact to which the project contributes – at a national or sector level  
Statement Wording: “To contribute to...” |
|---|---|
| **Objective(s)/Deliverables/Outputs** | The development outcome at the end of the project – more specifically the expected benefits to the target group(s)  
Statement Wording: “Increased, improved, etc.” |
| **Activities** | The tasks (work program) that need to be carried out to deliver the planned results  
Statement Wording: “Prepare, design, construct, research, etc.” |
## Objective Hierarchy

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<td><strong>Objective(s)/Outcome(s)</strong></td>
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<td><strong>Activities</strong></td>
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<table>
<thead>
<tr>
<th>1</th>
<th>1.1</th>
<th>Improved river water quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.1</td>
<td>Conduct baseline survey of households</td>
<td></td>
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<tr>
<td>1.1.2</td>
<td>Prepare and deliver public awareness campaign</td>
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<tr>
<td>1.1.3</td>
<td>Prepare engineering specifications for latrines and increased sewage network.</td>
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<tr>
<td>1.1.4</td>
<td>Etc.</td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>1.2.1</td>
<td>Reduced volume of fecal waste discharged into the river system</td>
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<td>1.2.2</td>
<td>Etc.</td>
<td></td>
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Developing statements

<table>
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<tr>
<th>Objective Hierarchy</th>
<th>Examples of how to develop statements</th>
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<tbody>
<tr>
<td><strong>Goal</strong></td>
<td>To contribute to improved health, particularly of under 5s</td>
</tr>
<tr>
<td><strong>Objective(s)/Outcome(s)</strong></td>
<td>1. Improved river water quality</td>
</tr>
</tbody>
</table>
| **Deliverables/Outputs** | 1.1 Reduced volume of fecal waste discharged into the river system  
1.2 Reduced volume of household refuse directly dumped into the river system |
| **Activities** | 1.1.1 Conduct baseline survey of households  
1.1.2 Prepare and deliver public awareness campaign  
1.1.3 Prepare engineering specifications for latrines and increased sewage network.  
1.1.4 Etc.  
1.2.1 Prepare and deliver public awareness campaign  
1.2.2 Etc. |
The Logic of LogFrames

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If the horizontal logic is followed AND assumptions hold true; Then the project will likely succeed
Group work

• Return to your group and agree on the wording of the goal/aim of your project/programme
• Use post-it notes of the same colour to describe the objectives/outcomes you wish to achieve
• Use post-it notes of a different colour to describe the deliverables/outputs you wish to achieve
• Use post-it notes of a second different colour to describe the activities/inputs you need to make to achieve your deliverables/outputs
**Goal:**
To contribute to improved health, particularly of under 5s

**Objective(s)**
Improved river water quality

**Outcome 1**
Reduced volume of fecal waste discharged into the river system

**Assumption(s)**
## Assumptions

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<td></td>
<td>To contribute to improved health, particularly of under 5s and the general health of the river ecosystem.</td>
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<tr>
<td></td>
<td>Improved quality of river water.</td>
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</tbody>
</table>
|      | **1.1** Reduced volume of fecal waste discharged into river  
**1.2** Reduced volume of household refuse directly dumped into the river system |           |                      |             |
|      | **1.1.1** Conduct baseline survey of households  
**1.1.2** Prepare and deliver public awareness campaign  
**1.1.3** Prepare engineering specifications for latrines and expanded sewage network.  
**1.2.1** Etc. |           |                      |             |

- The Clean River legislation is introduced by the EPA and enforced  
- Up river water quality remains unchanged  
- Waste water treatment meets national standards  
- Fishing cooperatives meet obligations to establish waste collection systems  
- Municipal budgets for improvements to sewage systems remain unchanged.
DEFINITION

“A quantitative or qualitative factor or variable that provides a simple and reliable means to measure achievement, to reflect changes connected to an intervention, or to help assess the performance of a development actor” OECD/DAC (DAC Glossary of Key Terms in Evaluation, May 2002)

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## SMART Indicators

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<tr>
<th>S</th>
<th>Specific</th>
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<tbody>
<tr>
<td>M</td>
<td>Measurable</td>
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</table>
| A | Achievable  
Or: acceptable, applicable, appropriate, attainable or agreed upon (to stress the importance of common understanding) |
| R | Relevant  
Or: reliable, realistic (when achievable/attainable is not used) |
| T | Time-bound |
Direct Indicators

**Direct indicators:** pinpoint the subject of interest, often the case with operational and more technical subjects. What the manager wants to know, can be (and generally is) measured directly.
Indirect Indicators

Indirect indicators (Proxy indicators): refer in an indirect way to the subject of interest. Reasons to formulate indirect indicators:

• The subject of interest cannot be measured directly, often the case for more qualitative subjects, e.g. behavioural change
• The subject of analysis can be measured directly, but it is too sensitive to do so, e.g. level of income, “safe sex”

The use of an indirect indicator can be more cost-effective than the use of a direct one. An indirect indicator may represent the right balance between level of reliability of information and the efforts needed to obtain the data.
Means of Verification (MoV)

Where to find the information or how to collect it

- May need to reformulate the indicator
- If the information referred to in the indicator cannot be obtained, the indicator becomes useless and a new one should be formulated.

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<tr>
<td>Results</td>
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<td>Activities</td>
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### A LogFrame Matrix

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<tbody>
<tr>
<td>To contribute to improved health, particularly of under 5s and the general health of the river ecosystem.</td>
<td>Incidence of water-borne diseases reduced by 30% by 2012, specifically among low income families who live by the river.</td>
<td>Municipal hospital and clinic records collected by mobile health teams.</td>
<td></td>
</tr>
<tr>
<td>Improved quality of river water.</td>
<td>Concentration of e. coli reduced by 20% (compared to levels in 2003) and meets national health and sanitation standards by 2012.</td>
<td>Monthly water quality surveys conducted by the EPA and the River Authority.</td>
<td>-The Clean River legislation is introduced by the EPA and enforced --Up river water quality remains unchanged</td>
</tr>
<tr>
<td>1.1 Reduced volume of fecal waste discharged into river</td>
<td>1.1  60% of household fecal waste is disposed of via latrines or sewage connections.</td>
<td>1.1 Annual sample survey conducted by municipality between 2009 and 2012.</td>
<td></td>
</tr>
<tr>
<td>1.2 Reduced volume of household refuse directly dumped into the river system</td>
<td>1.2 ...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1.1 Conduct baseline survey of households</td>
<td>1.1.1 Baseline data (Knowledge Practice Coverage) for household waste management exists</td>
<td>1.1.1 6 month progress report</td>
<td>-Waste water treatment meets national standards -fishing cooperatives meet obligations to establish waste collection systems</td>
</tr>
<tr>
<td>1.1.2 Prepare and deliver public awareness campaign</td>
<td>1.1.2 Schedule of visits of mobile teams completed</td>
<td>1.1.2 Extension team progress reports</td>
<td></td>
</tr>
<tr>
<td>1.1.3 Prepare engineering specifications for latrines and expanded sewage network.</td>
<td>1.1.3 Engineering plans approved by Ministry of Public Works</td>
<td>1.1.3 Approved project charter from the Ministry of Public Works</td>
<td></td>
</tr>
<tr>
<td>1.1.4 Etc.</td>
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DFID Guidelines