Foundamentals of

Project Cycle Management

a tool for project proposal

Prof. Emanuela Colombo, Ph.D
Rector’s Delegate to Cooperation and Development
Unesco Chair in Energy for Sustainable Development
Politecnico di Milano
What is Italy known for?
Italy, Science and Technology

Italy has “some” experience in Science

Leonardo Da Vinci (1452-1519)
An artist and a scientist

Galileo Galilei (1564-1642)
The father of modern science
Italy has “some” experience in

**Applied Research**

**Engineering**

**Architecture**

**Design**
Politecnico di Milano is a Public State University founded in 1863 due to a strong cooperation with the local industrial sector.

- **Engineering** (since 1863)
- **Architecture** (since 1865)
- **Industrial Design** (since 2000)

International QS Ranking

- 28th in the world
- 9th in Europe
- 1st in Italy
The traditional academic mission

Three pillars:
• Teaching and education
• Scientific research
• Knowledge & technological cooperation

But
New Social challenges are now affecting global economy

Our mission needs to be shaped to tackle them
...Some memories out of my CV

A genuine passion for

Energy Innovation Development

“Those who are used to dream during the day know a number of things that are missed by those who dream only at night”
Edgar Allan Poe
Goal of the day!

How to set up project
With appropriate solution
For the local situation.
What’s a project beyond a project?

Project Management

The design is an **area of negotiation** (conflict management) within the asymmetric relationship between value systems, power and knowledge.

The design is **the representation of reality, partially shared, and experimental**.

The design is also a methodology.
What’s technology for?

Scientific research

Innovation is a leverage for development and the scientific research is a precondition to promote it for fostering relationships and building an autonomous development.

Somewhere innovation aims more at overcoming the frontier of technology.

Somewhere else innovation aims more at redesigning technology for the local contest.

Innovation is still an instrument to overcome frontiers...the geographical, economic, and social barriers limiting human and social development.

Innovation is a challenge but it ....

Must rely mainly on human attitude and capacity.
Appropriate technology (AT) is an instrument that is designed to take into consideration the environmental, ethical, cultural, social, political, and economical aspects of the community. Appropriate technology is technology that ordinary people can use for their own benefit and the benefit of their community.
How to get the needs?

Promoting participation and ownership

**Empowerment** bringing about a more equitable sharing of power, increasing the political awareness of disadvantaged groups, and supporting them in taking actions that will allow them to take more control of their own futures.

**Capacity building:** People learn best by doing things for themselves. If people are assisted to plan and manage their own affairs the outcomes are more likely to meet their real needs. Building capacity within local agencies and groups is thus an important objective of participatory approaches.

**Effectiveness:** Participation can be a vehicle for increasing the effectiveness of development projects or programs. If people have a genuine stake in a development activity and are actively involved in decision making, they are likely to give a greater degree of commitment.

**Efficiency** While effectiveness is about the degree to which stated objectives are met (using whatever means and inputs that might be required), efficiency incorporates the additional consideration of cost.
How to get the needs?

Promoting participation and ownership

- **Involving** people as subjects not objects
- **Respect** for local knowledge and skills
- **Ensuring influence** over development decisions, not simply involvement
- **A learning process** as much as an outcome
- **An approach and attitude** rather than a specific set of technical skills

**The intensity**

- **Information sharing.** This is the minimal level of ‘participation’ and often consists of little more than keeping people informed
- **Consultation.** Consultation means that there is a two-way flow of information – a dialogue. This dialogue may not impact on decision making.
- **Decision making.** Participation reaches a higher level when it involves individuals or groups. They have authority and responsibility
- **Initiating action.** The highest level of participation is achieved when people take the ownership of the actions
Project and Programme

A project

A project is a **series of activities** aiming at **specified objectives** within a **defined time-period** and with a defined budget.

- A development process requires more time than a project time-period
- A project responds to “punctual” need while people needs are “integral”

Programme

**Set of projects**, working with the **same purpose** or general **objective** in the same **area of intervention**.
## Definitions - Project Cycle

<table>
<thead>
<tr>
<th>Classical Project Management</th>
<th>Project Cycle Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undefined <strong>logical framework</strong></td>
<td><strong>Project design</strong> based on a full specific territorial and stakeholders analysis</td>
</tr>
<tr>
<td>Offer <strong>driven project</strong></td>
<td><strong>Demand driven</strong> project</td>
</tr>
<tr>
<td>“Non required” <strong>Assessment</strong></td>
<td><strong>Detail analysis and assessment</strong></td>
</tr>
<tr>
<td><strong>Outcome and output not a priority</strong></td>
<td><strong>Monitoring and evaluation system</strong></td>
</tr>
<tr>
<td><strong>Project documentations</strong> fragmentary and incomplete</td>
<td><strong>Good-quality</strong> key documentation</td>
</tr>
</tbody>
</table>

**Project Cycle** follows the life of a project from the initial idea to its completion. It provides a structure to ensure that **stakeholders are consulted**, define the **key decisions**, requirements and **responsibilities** - allow **evaluation** to build the lessons learnt and introduce it into the design of future programmes.
Who are the players?

Stakeholders

Any individuals, groups of people, institutions or firms that may have a relationship with the operation / programme are defined as stakeholders. They may – directly or indirectly, positively or negatively – affect or be affected by the project.

Partners (local or international)
Those who implement projects in the country

Beneficiaries

Facilitators

Adversaries

Usually, different sub-groups have to be considered
Who are the players?

Beneficiaries

Those who **benefit** in whatever way from the implementation of the project.

Distinction may be made between:

- **Direct beneficiaries/Target group(s):** the group / entity who will be positively affected by the operation at the Operation Purpose level;

- **Indirect beneficiaries/influenced population:** those who, beyond the level of the target groups, **benefit from the operation in the long term at the level of the society or sector at large**

  *e.g. “children” due to increased spending on health and education, “consumers” due to improved agricultural production and marketing, or “the state” as such due to increased export earnings from improved agricultural production and marketing*
The PC is a common and world wide used approach: EU, WB, UN agencies
Usually 6 phases are recognised

Programming
Identification
Formulation
Financing
Implementation
Evaluation

Project Cycle
The purpose is to identify the main objectives and sector priorities for co-operation, and thus to provide a relevant and feasible programming framework within which programmes and projects can be identified and prepared.

Priorities are defined by International Organizations and Communities (e.g. EC), Local authorities defined accordingly to different points of view:

- By nature of the intervention (development, reconstruction, humanitarian aid ...)
- Geographic (which countries)
- Sectorial (health, education, production ...)
- By type of local partners (institutions, NGOs, private sector, movements ...)
Identification

It involves the initial elaboration of the operation idea in terms of objectives, results and activities, consistent with partner and programming priorities, with the goal of determining whether or not to go ahead with a feasibility study.

This phase involves...

• consultation with the intended beneficiaries,
• an analysis of the problems they have,
• the identification of options to address these problems.

...in order to make the project:

RELEVANT
FEASIBLE
WELL MANAGED
Confirm the **relevance and feasibility** of the project idea as proposed in the Identification.

**Prepare a detailed project design**, including the activities, management and coordination arrangements, cost-benefit analysis, risk management, monitoring, ...

**Prepare a Financing Proposal** (for individual projects) and a financing decision.
Project Cycle

Financing

Information elements produced by end of formulation:

- Situation analysis/
  Key assessments
  - Policy & programme context
  - Stakeholder analysis & institutional capacity assessment
  - Problem analysis
  - Lessons learned and review of ongoing/planned initiatives
  - Strategy selection

- Project description
  - Overall objective and purpose
  - Target group, location and duration
  - Results and indicative activities
  - Resources and costs

- Management arrangements
  - Coordination and management structures
  - Financial management/financing arrangements
  - Monitoring, evaluation and audit

- Feasibility & Sustainability
  - Economic and financial
  - Environmental
  - Technical
  - Social and governance
  - Risk management

The projects are submitted to the donors and ... they are approved for financing.
Project Cycle

Implementation

- **Deliver the results**, achieve the purpose(s) and contribute effectively to the objectives of the project.

- **Manage the available resources** efficiently and monitor and report on progress

The Project Manager needs to **maintain a direct relationship between staff, beneficiaries and all the other stakeholders.**
During the implementation, project progress is monitored (in terms of expenditure, resource use, implementation of activities, stakeholders awareness, delivery of results, management of risks), and corrective measures could be suggested if required to support efficient and effective implementation.

This is achieved through ‘monitoring’, which is the systematic and continuous collection, analysis and use of management information to support effective decision-making, and ‘reporting’.
Project Cycle

Evaluation

The final phase of the project cycle during which the project is examined versus its objectives, and lessons are learnt.

The purpose of evaluation is to make an “assessment, as systematic and objective as possible, of an ongoing or completed project, programme or policy, its design, implementation and results. The aim is to determine the relevance and fulfilment of objectives, developmental efficiency, effectiveness, impact and sustainability.

• BASELINE
• INTERMEDIATE EVALUATION
• FINAL EVALUATION
The objectives of the audit are to express a conclusion (i.e. provide assurance) on:

- The legality and regularity of project expenditure and income *i.e. compliance with laws and regulations and with applicable contractual rules and criteria*;

- Whether project funds have been used efficiently and economically *i.e. in accordance with sound financial management, and for purposes intended.*
How to design a project??

The Logical Framework Approach
an analytical process and tools used to support project planning management.

The logical framework approach (LFA) presents a strategy to plan project in a logical and transparent way. It sets out its objectives in a systematic and logical way. This should reflect the causal relationships between the different levels of objectives, and indicate how to check whether these objectives have been achieved, and establish what assumptions and risks outside the control of the partners may influence to success.
LFA - Logical Framework Approach

The Logical Framework Approach has two main phases

**ANALYSIS PHASE**

- **Stakeholder analysis** – identifying & characterising potential major stakeholders; assessing their capacity
- **Problem analysis** – identifying key problems, constraints & opportunities; determining cause & effect relationships
- **Objective analysis** – developing solutions from the identified problems; identifying means to end relationships
- **Strategy analysis** – identifying different strategies to achieve solutions; selecting most appropriate strategy.

**PLANNING PHASE**

- Developing Logical Framework matrix - defining project structure, testing its internal logic & risks, formulating measurable indicators of success
- **Activity scheduling** – determining the sequence and dependency of activities; estimating their duration, and assigning responsibility
- **Resource scheduling** - from the activity schedule, developing input schedules and a budget
How to design a project?

What kind of problem?

Fishermen note that the fish in the river is decreasing.
Families are experiencing reduction of food and income.
The river is more and more polluted.

Upstreams factories are polluting the river with bad quality solid waste.
The Families discharge their pollution and wastwater in the river.
Analysis Phase

Stakeholder Analysis

Don't forget:

Stakeholders: any individuals, groups of people, institutions or firms that may have a significant interest in the success or failure of a project.

The key questions to ask to stakeholder:

- How does the project fit your mission or needs?
- What is your motivation to be in the project?

The key questions asked by stakeholder:

- Whose problems or opportunities are we analyzing?
- Who will benefit or lose-out?

Maximize the social, economic and institutional benefits of the project towards target groups and ultimate beneficiaries, and minimize its potential negative impacts (including stakeholder conflicts).
**Analysis Phase**

**Stakeholder Analysis**

- **Identify groups** who have a significant interest in the (potential) project.
- **Priorities the stakeholders** by using appropriate tool;

**Stakeholder map.**

- **High power, interested people:** people you must fully engage and make the greatest efforts to satisfy.
- **High power, less interested people:** keep them satisfied, but not so much that they become bored.
- **Low power, interested people:** keep these people adequately informed, and talk to them to ensure that no major issues are arising.
- **Low power, less interested people:** again, monitor these people, but do not bore them with excessive communication.

**Stakeholder matrix**

<table>
<thead>
<tr>
<th>Stakeholder and basic characteristics</th>
<th>Interests and how affected by the problem(s)</th>
<th>Capacity and motivation to bring about change</th>
<th>Possible actions to address stakeholder interests</th>
</tr>
</thead>
</table>

---

POLITECNICO MILANO 1863
## Analysis Phase
### Stakeholder Analysis

#### The Stakeholder MATRIX

<table>
<thead>
<tr>
<th>Stakeholder and basic characteristics</th>
<th>Interests and how affected by the problem(s)</th>
<th>Capacity and motivation to bring about change</th>
<th>Possible actions to address stakeholder interests</th>
</tr>
</thead>
</table>
| **Fishing families:**
c.20,000 families, low income earners, small scale family businesses, organised into informal cooperatives, women actively involved in fish processing and marketing | • Maintain and improve their means of livelihood  
• Pollution is affecting volume and quality of catch  
• Family health is suffering, particularly children and mothers | • Keen interest in pollution control measures  
• Limited political influence given weak organizational structure | • Support capacity to organize and lobby  
• Implement industry pollution control measures  
• Identify/develop alternative income sources for women and men |
| **Industry X:**
Large scale industrial operation, poorly regulated and no-unions, influential lobby group, poor environmental record | • Maintain/increase profits  
• Some concern about public image  
• Concern about costs if environmental regulations enforced | • Have financial and technical resources to employ new cleaner technologies  
• Limited current motivation to change | • Raise their awareness of social and environmental impact  
• Mobilise political pressure to influence industry behaviour  
• Strengthen and enforce environmental laws |
| **Households:**
c.150,000 households discharge waste and waste water into river, also source some drinking water and eat fish from the river | • Aware of industrial pollution and impact on water quality  
• Want to dispose of own waste away from the household  
• Want access to clean water | • Limited understanding of the health impact of their own waste/waste water disposal  
• Potential to lobby government bodies more effectively  
• Appeal willing to pay for improved waste management services | • Raise awareness of households as to implications of their own waste disposal practices  
• Work with communities and local government on addressing water and sanitation issues |
| **Environmental protection agency:**
Etc | etc | etc | etc |
Analysis Phase

Problem and Stakeholder analysis

SWOT analysis

To analyse the **internal strengths** and **weaknesses** of an organization and the **external opportunities** and **threats** that it faces.

A strategy may be analyzed as follows:

1. Ideas are generated about the **internal strengths and weaknesses** of the project and consortium, and the **external opportunities and threats**;

2. The situation is analysed by looking for approaches in which the group/organisation’s **strengths can be built on** to overcome identified weaknesses, and opportunities can be taken to minimize threats;
## Analysis Phase

### Problem and Stakeholder Analysis

#### SWOT Analysis

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Grassroots based and quite broad membership</td>
<td></td>
</tr>
<tr>
<td>- Focused on the specific concerns of a relatively homogenous group</td>
<td></td>
</tr>
<tr>
<td>- Men and women both represented</td>
<td></td>
</tr>
<tr>
<td>- Provide a basic small scale credit facility</td>
<td></td>
</tr>
<tr>
<td>- Limited lobbying capacity and environmental management skills</td>
<td></td>
</tr>
<tr>
<td>- Lack of formal constitutions and unclear legal status</td>
<td></td>
</tr>
<tr>
<td>- Weak linkages with other organizations</td>
<td></td>
</tr>
<tr>
<td>- Internal disagreements on limiting fishing effort in response to declining fish stocks</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Growing public/political concern over health impacts of uncontrolled waste disposal</td>
<td></td>
</tr>
<tr>
<td>- New government legislation in preparation on Environmental Protection – largely focused on making polluters pay</td>
<td></td>
</tr>
<tr>
<td>- The river is potentially rich in resources for local consumption and sale</td>
<td></td>
</tr>
<tr>
<td>- New markets for fish and fish products developing as a result of improved transport infrastructure to nearby population centers</td>
<td></td>
</tr>
<tr>
<td>- Political influence of industrial lobby groups who are opposed to tighter environmental protection laws (namely waste disposal)</td>
<td></td>
</tr>
<tr>
<td>- New environmental protection legislation may impact on access to traditional fishing grounds and the fishing methods that can be employed</td>
<td></td>
</tr>
</tbody>
</table>

**INTERNAL factors:**

belong to the context of analysis and can be changed

**EXTERNAL factors:**

arise from the external environment and are not editable

**EXAMPLE:**
The Fishing Cooperative
Analysis Phase

Problem analysis: PROBLEM tree

Identifies the negative aspects of an existing situation and establishes the ‘cause and effect’ relationships between the identified problems.

1. Definition of the framework and subject of analysis
2. Identification of the major problems faced by target groups and beneficiaries (What is/are the problem/s? Whose problems?)
3. Visualization of the problems in form of a diagram, called a “problem tree” or “hierarchy of problems” to help analyse and clarify cause–effect relationships
Analysis Phase

Problem Analysis

PROBLEM tree

PROBLEM

EFFECT

CAUSES

EXAMPLE: The Fishing Cooperative
Analysis Phase

Objectives Analysis

OBJECTIVE tree

A methodological approach employed to:

1. **Describe the situation in the future** once identified problems have been remedied;

2. **Verify the hierarchy of objectives**;

3. **Illustrate the means-goals relationships in a diagram**.

The ‘negative situations’ of the problem tree are converted into solutions, as ‘positive achievements’ in the objective tree.
Analysis Phase

Objectives Analysis

OBJECTIVE tree

GENERAL OBJECTIVES
(Overall Objective)

RESULTS

EXAMPLE: The Fishing Cooperative
Analysis Phase

Analysis of Strategies

During the process we have to identify:

Not all the causes may be cope by the project activities, due to:

- **Time** constrains
- **Resource** constrains
- **Competence** constrains
- **Local ownership not supported**
Analysis Phase

Analysis of Strategies

STRAATEGY selection

EXAMPLE:
The Fishing Cooperative

GENERAL OBJECTIVES

RESULTS

SPECIFIC OBJECTIVE
LFA - Logical Framework Approach

The Logical Framework Approach has two main phases

**ANALYSIS PHASE**

- **Stakeholder analysis** – identifying & characterising potential major stakeholders; assessing their capacity
- **Problem analysis** – identifying key problems, constraints & opportunities; determining cause & effect relationships
- **Objective analysis** – developing solutions from the identified problems; identifying means to end relationships
- **Strategy analysis** – identifying different strategies to achieve solutions; selecting most appropriate strategy.

**PLANNING PHASE**

- **Developing Logical Framework matrix** – defining project structure, testing its internal logic & risks, formulating measurable indicators of success
- **Activity scheduling** – determining the sequence and dependency of activities; estimating their duration, and assigning responsibility
- **Resource scheduling** – from the activity schedule, developing input schedules and a budget

The Logical Framework Approach has two main phases

**ANALYSIS PHASE**

- **Stakeholder analysis** – identifying & characterising potential major stakeholders; assessing their capacity
- **Problem analysis** – identifying key problems, constraints & opportunities; determining cause & effect relationships
- **Objective analysis** – developing solutions from the identified problems; identifying means to end relationships
- **Strategy analysis** – identifying different strategies to achieve solutions; selecting most appropriate strategy.

**PLANNING PHASE**

- **Developing Logical Framework matrix** – defining project structure, testing its internal logic & risks, formulating measurable indicators of success
- **Activity scheduling** – determining the sequence and dependency of activities; estimating their duration, and assigning responsibility
- **Resource scheduling** – from the activity schedule, developing input schedules and a budget

The Logical Framework Approach has two main phases
Planning Phase

The Logical Framework Matrix

The matrix should provide a summary of the project design, and should generally include only the project General Objective, Specific Objective and Results, while Indicative Activities are optional.
# Planning Phase

## The Logical Framework Matrix

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Indicators</th>
<th>Source of Verification</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall objective:</strong> The broad development impact to which the project contributes — at a national or sectoral level (provides the link to the policy and/or sector programme context)</td>
<td>Measures the extent to which a contribution to the overall objective has been made. Used during evaluation. However, it is often not appropriate for the project itself to try and collect this information.</td>
<td>Sources of information and methods used to collect and report it (including who and when/how frequently).</td>
<td></td>
</tr>
<tr>
<td><strong>Purpose:</strong> The development outcome at the end of the project — more specifically the expected benefits to the target group(s)</td>
<td>Helps answer the question ‘How will we know if the purpose has been achieved’? Should include appropriate details of quantity, quality and time.</td>
<td>Sources of information and methods used to collect and report it (including who and when/how frequently)</td>
<td>Assumptions (factors outside project management’s control) that may impact on the purpose-objective linkage</td>
</tr>
<tr>
<td><strong>Results:</strong> The direct/tangible results (good and services) that the project delivers, and which are largely under project management’s control</td>
<td>Helps answer the question ‘How will we know if the results have been delivered’? Should include appropriate details of quantity, quality and time.</td>
<td>Sources of information and methods used to collect and report it (including who and when/how frequently)</td>
<td>Assumptions (factors outside project management’s control) that may impact on the result-purpose linkage</td>
</tr>
<tr>
<td><strong>Activities:</strong> The tasks (work programme) that need to be carried out to deliver the planned results <em>(optional within the matrix itself)</em></td>
<td><em>(sometimes a summary of resources/means is provided in this box)</em></td>
<td><em>(sometimes a summary of costs/budget is provided in this box)</em></td>
<td>Assumptions (factors outside project management’s control) that may impact on the activity-result linkage</td>
</tr>
</tbody>
</table>
Planning Phase

Logical Framework Matrix

**Project Description** *(1\textsuperscript{st} column of LFM)*

<table>
<thead>
<tr>
<th>Overall objective</th>
<th>To contribute to improved family health, particularly of under 5s, and the general health of the riverine eco-system</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>1. Improved river water quality</td>
</tr>
</tbody>
</table>
| **Results**       | 1.1 Reduced volume of waste-water directly discharged into the river system by households and factories  
|                   | 1.2 Waste-water treatment standards established and effectively enforced                        |
| **Activities**    | 1.1.1 Conduct baseline survey of households and businesses                                         
|                   | 1.1.2 Complete engineering specifications for expanded sewerage network                           
|                   | 1.1.3 Prepare tender documents, tender and select contractor                                     
|                   | 1.1.4 Identify appropriate incentives for factories to use clean technologies                    
|                   | 1.1.5 Prepare and deliver public information and awareness program                                
|                   | 1.1.6 etc                                                                                       |

**EXAMPLE:**
The Fishing Cooperative
Planning Phase

Logical Framework Matrix

Assumptions (4th column of LFM)

Assumptions are external factors that have the potential to influence (or even determine) the success of a project, but lie outside the direct control of project managers.

They are the answer to the question: “What external factors may impact on project implementation and the long-term sustainability of benefits, but are outside project management’s control?”

- Any assumption under responsibility of the PM
Planning Phase

Logical Framework Matrix

Project Description – Assumptions: IF-AND-THEN causality

The first and the fourth column of the Log-frame matrix summarises the ‘means-end’ logic of the proposed project (also known as the ‘intervention logic’). When the objective hierarchy is read from the bottom up, it can be read as follows:

IF adequate inputs/resources are provided,
THEN activities can be undertaken

IF adequate are provided
THEN
Inputs

Activities
Planning Phase

Logical Framework Matrix

Project Description – Assumptions: IF-AND-THEN causality

The first and the fourth column of the Log-frame matrix summarises the ‘means-end’ logic of the proposed project (also known as the ‘intervention logic’). When the objective hierarchy is read from the bottom up, it can be read as follows:

IF adequate inputs/resources are provided, THEN activities can be undertaken

IF the activities are undertaken,

AND assumptions are hold true

THEN results can be produced
Planning Phase

Logical Framework Matrix

Project Description – Assumptions: IF-AND-THEN causality

IF adequate inputs/resources are provided, THEN activities can be undertaken
IF the activities are undertaken, AND assumptions are hold true, THEN results can be produced

IF results are produced,
AND assumptions are hold true,
THEN the purpose will be achieved
Planning Phase

Logical Framework Matrix

**Project Description – Assumptions:** IF-AND-THEN causality

**IF** adequate inputs/resources are provided, **THEN** activities can be undertaken

**IF** the activities are undertaken, **AND** assumptions are hold true, **THEN** results can be produced

**IF** results are produced, **AND** assumptions are hold true, **THEN** the purpose will be achieved

**IF** the purpose is achieved, **AND** assumptions are hold true, **THEN** this should contribute to the overall objective
Planning Phase

Logical Framework Matrix

Project Description – Assumptions: IF-AND-THEN causality

**Overall objective**
To contribute to improved family health, particularly of under 5s, and the general health of the riverine eco-system

**Purpose:**
Improved quality of river water

**Assumptions:**
Public awareness campaign by Local Government impacts positively on health and sanitation practices of poor families

**Result 1:**
Volume of waste-water directly discharged into the river system by households and factories reduced

**Assumptions:**
River flows maintained above X mega litres per second for at least 8 months of the year
EPA is successful in reducing solid waste disposal levels from X to X tons per year

**EXAMPLE:**
The Fishing Cooperative
Planning Phase

Logical Framework Matrix

Indicators (2\textsuperscript{nd} column of LFM)

Objectively Verifiable Indicators (OVIs) describe the project’s objectives in operationally measurable terms (quantity, quality, time and who). Specifying OVIs helps to check the feasibility of objectives and helps to form the basis of the project’s monitoring and evaluation system.

A good OVI should also be SMART

Specific to the objective it is supposed to measure

Measurable (either quantitatively or qualitatively)

Available at an acceptable cost

Relevant to the information needs of managers

Time-bound – we can expect the objective/target to be achieved
Planning Phase

Logical Framework Matrix

**Source of Verification (SoV) (3rd column of LFM)**

This will help to **test whether or not the Indicators are SMART** (can be realistically measured at the expense of a reasonable amount of time, money and effort).

The SoV should specify:

1. **How** the information should be collected *(e.g. from administrative records, special studies, sample surveys, observation, progress reports, official statistics, ...)*
2. **Who** should collect/provide the information *(e.g. field extension workers, contracted survey teams, the district health office, the project management team, ...)*
3. **When/how regularly** it should be provided. *(e.g. monthly, quarterly, annually, ...)*

There is often a direct relationship between the complexity of the SOV (i.e. ease of data collection and analysis) and its cost. If an OVI is found to be too expensive or complicated to collect, it **should be replaced** by a simpler, cheaper and often **indirect (proxy)** OVI:

- How much the roads are icy?
  → How much salt has been poured into the streets (proxy)
Planning Phase

Logical Framework Matrix

**Indicators and Source of Verification**

Example of possible indicators and sources of verification for the ‘Purpose’

<table>
<thead>
<tr>
<th>Project description</th>
<th>Indicator</th>
<th>Source of Verification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td><strong>The Indicator:</strong> Concentration of heavy metal compounds (Pb, Cd, Hg) and untreated sewerage</td>
<td>Weekly water quality surveys, jointly conducted by the Environmental Protection Agency and the River Authority, and reported monthly to the Local Government Minister for Environment (Chair of Project Steering Committee).</td>
</tr>
<tr>
<td>Improved quality of river water</td>
<td><strong>The Quantity:</strong> Is reduced by 25% compared to levels in 2003</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>The Quality:</strong> And meets established national health/pollution control standards</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>The Time:</strong> By end of 2006</td>
<td></td>
</tr>
</tbody>
</table>
Planning Phase

Gantt

Main Steps

• **List main activities**
The main Activities identified through the Logframe analysis are a summary of what the project must do in order to deliver project results.

• **Break Activities down into Manageable tasks**
The purpose of breaking Activities down into sub-activities or tasks, is to make them sufficiently simple to be organised and managed easily.

• **Clarify Sequence and Dependency**
Once the Activities have been broken down into sufficient detail, they must be related to each other to determine their:
  - *sequence* - in what order should related Activities be undertaken?
  - *dependencies* - is the Activity dependent on other Activity?

• **Allocate Task Among Partners**
This involves more than just saying who does what. With task allocation comes responsibility for achievement of milestones. In other words, it is a means to define each team member’s accountability - to the project manager and to other team members.
Planning Phase

Gantt

**EXAMPLE:** The Fishing Cooperative
Planning Phase

Budget definition

Cost estimates should be based on careful and thorough budgeting. They will have significant influence over the investment decision at project appraisal and subsequently on the smooth implementation of the project if the go-ahead is given. Again, the list of Activities should be copied into a Resource Schedule pro-forma. Each Activity should then be used as a checklist to ensure that all necessary resources/inputs required under that Activity are provided for. Budgeting of management activities should not be forgotten at this stage.

Main item should be:
- **Staff** costs
- **Travel** costs
- **Equipment**
- **Office** and others
The final Coherence Check

LF is useful also for the final phase of the PCM (the *Evaluation*) as follows:

- The link between the levels of the Logframe’s objective hierarchy and the key evaluation criteria -