DEVELOPMENT RESEARCH METHODS

Week 6, Lesson 1: Logical framework and SWOT analysis

Development Research Methods
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What we will cover in today's lecture

1. What is Logical Framework Approach?
2. Two main stages of using Logical Framework Approach for project design.
3. What is SWOT analysis?
4. Conventional approaches to conducing SWOT analysis.

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What is Logical framework Approach?

- Logical Framework Approach (LFA) is
  a) **An instrument for logical analysis and structured thinking** in project planning
  b) A framework, a battery of questions which, if they are used in a uniform way, provide a structure for the dialogue between different stakeholders in a project.
  c) An instrument to create participation/accountability/ownership.
  d) A suitable tool to use for capacity development.
- Logical Framework Approach (LFA) is used to:
  a) **Identify problems** and needs in a certain sector of society.
  b) Facilitate selecting and **setting priorities** between projects
  c) **Plan and implement** development projects effectively
  d) **Follow-up and evaluate** development projects.

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The Pros and Cons of Logical Framework Approach

ADVANTAGES	LIMITATIONS
1. Ensures that fundamental questions are asked and weaknesses are analyzed.	**1.** Rigidity in project administration may arise when objectives and external factors are over-emphasized.
2. Guides systematic and logical analysis of the inter-related key elements.	
3. Improves planning by highlighting linkages between project elements and external factors.	
4. Provides a better basis for systematic monitoring and analysis of the effects of projects.	**2**.LFA is a general analytic tool.
5. Facilitates common understanding and better communication between stake holders.	
6. Standardized procedures for collecting and assessing information.	**3.**The full benefits of utilizing LFA can be achieved only through systematic training of all parties involved and methodological follow-up.
7. Ensures continuity of approach when original project staff is replaced.	
8. Facilitate communication between governments and donor agencies.	

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Using the Logical Framework Approach for Project Design

ANALYSIS PHASE	PLANNING PHASE
Context analysis- initial overall "scanning" of the project's context. Example SWOT analysis.	**Developing Logical Framework matrix** – defining project structure, testing its internal logic & risks, formulating measurable indicators of success.
Stakeholder analysis- identifying & characterizing potential major stakeholders; assessing their capacity.	
Problem/situation analysis- or "Problem Tree". Consists of identifying key problems, constraints & opportunities; determining cause & effect relationships.	**Activity scheduling** – determining the sequence and dependency of activities; estimating their duration, and assigning responsibility.
Objective analysis- or "Solutions Tree". Consists in developing solutions from the identified problems.	**Resource scheduling** – or "Budgeting". From the activity schedule, developing input schedules and a budget.
Strategy analysis- identifying different strategies to achieve solutions.	

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Using the Logical Framework Approach for Project Design-

The two main phases

1. Analysis Phase

2. Planning Phase

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Stakeholder Analysis Matrix- River Pollution Example

Stakeholder and basic characteristics	**Problems** (How affected by the problem(s)	**Interests** (and possible actions to address it)	**Potential** (Capacity and motivation to bring about change)
1.Fishing families: X families • Low income earners •	• Pollution is affecting volume and quality of catch •	• Maintain and improve their means of livelihood •	• Limited political influence given weak organizational structure •
2**. Industry X**: • Poorly regulated and no unions •	• Concern about costs if environmental regulations enforced •	• Mobilize political pressure to influence industry behavior •	• Limited current motivation to change
3. **Households:** • X households discharge waste and waste water into river, •	• Health risks •	• Want to dispose of own waste away from the household •	• Limited understanding of the health impact of their own waste/ waste water disposal •
4**. Local governments**, etc.			

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Source: European Integration Office, 2011

Steps to Conduct Problem Analysis by Creating Problem Tree

STEP 1
Identify major existing problems, based upon available information. Openly brainstorm problems which stakeholders consider to be a priority.

STEP 2
Select an individual starter, a focal problem for analysis.

STEP 3
Look for related problems to the starter problem: identify substantial and direct causes/effects of the focal problem.

STEP 4
Begin to construct the problem tree by establishing a hierarchy of cause and effects relationship between the problems.

STEP 5
All other problems are then sorted in the same way.

STEP 6
Connect the problems with cause-effect arrows – clearly showing key links.

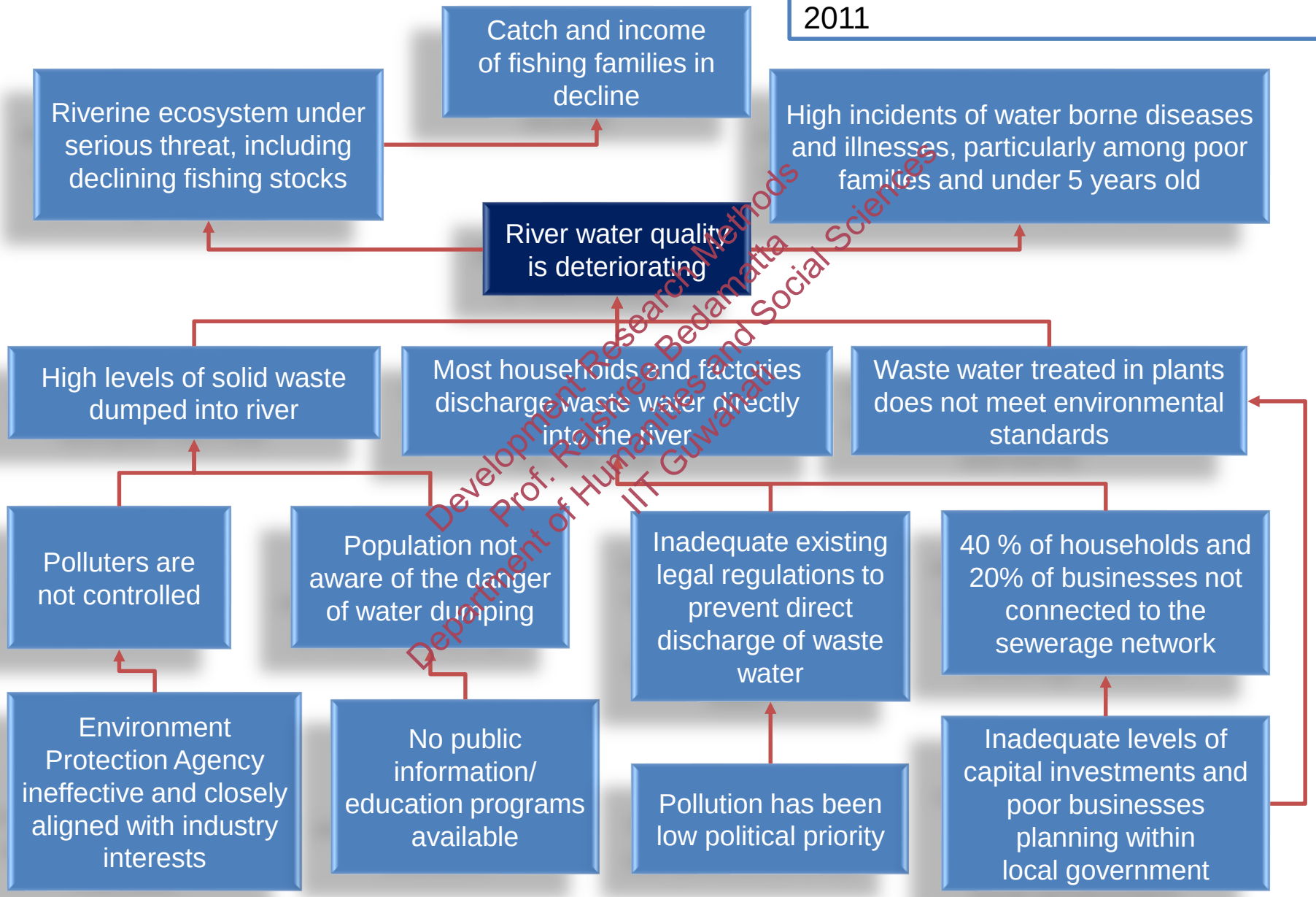
STEP 7
Review the diagram, verify its validity and completeness and make necessary adjustment.

STEP 8
Copy the diagram onto a sheet of paper to keep as a record, and distribute for further comment/ information.

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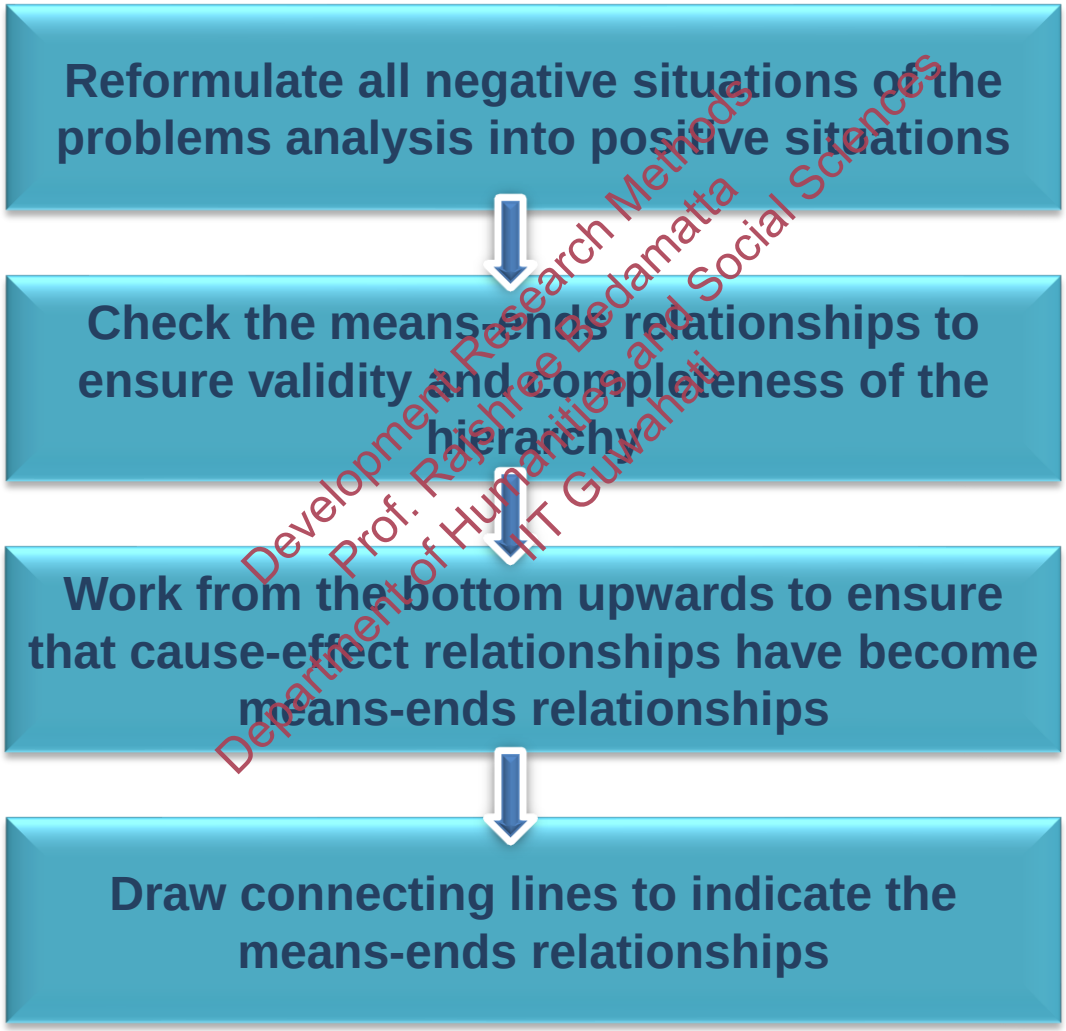
Problem Analysis- River Pollution Example

Source- European Integration Office, 2011



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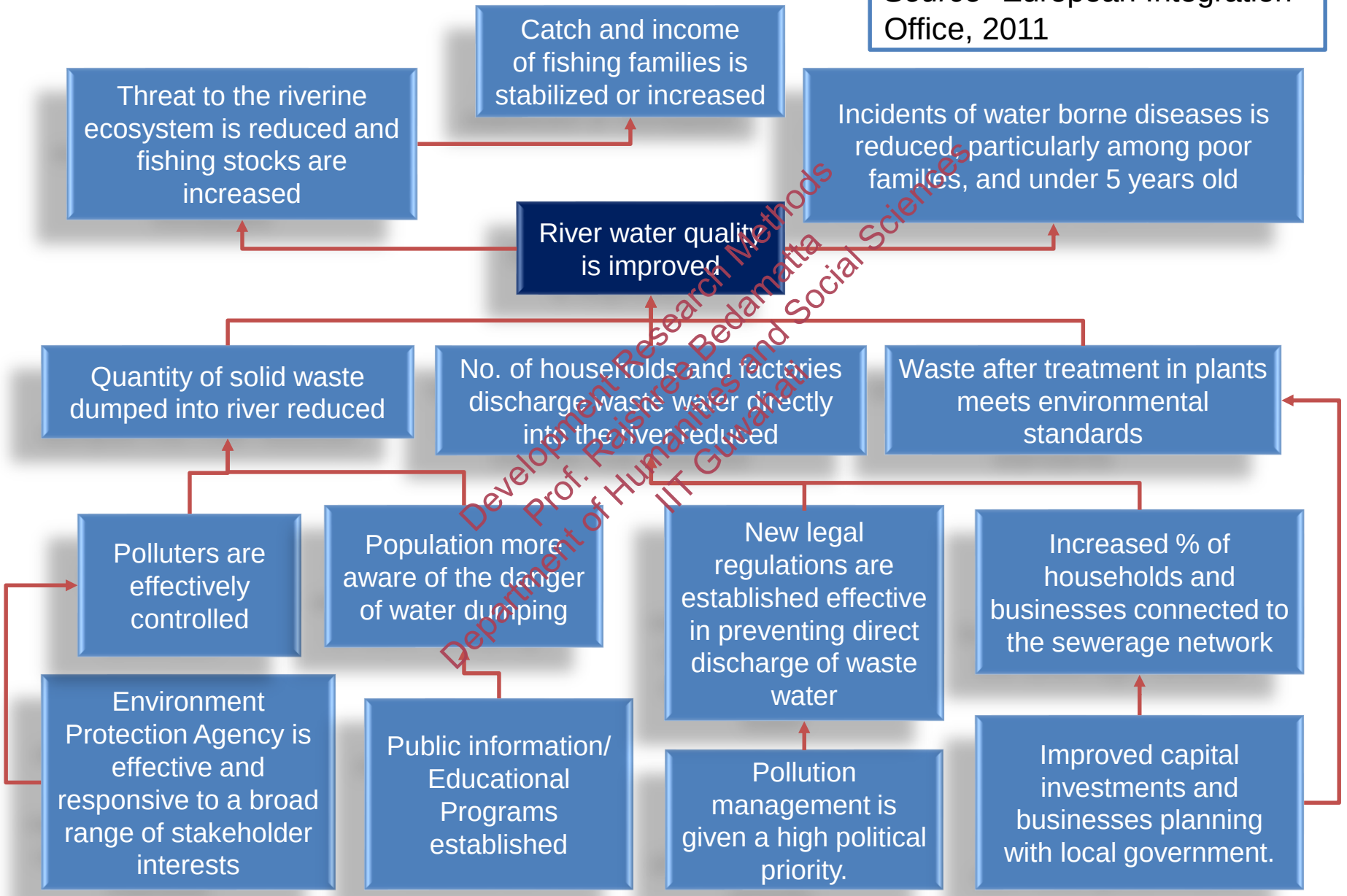
Steps to Conduct Objective Analysis by Establishing an Objective Tree



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Objective Analysis- River Pollution Example

Source- European Integration Office, 2011



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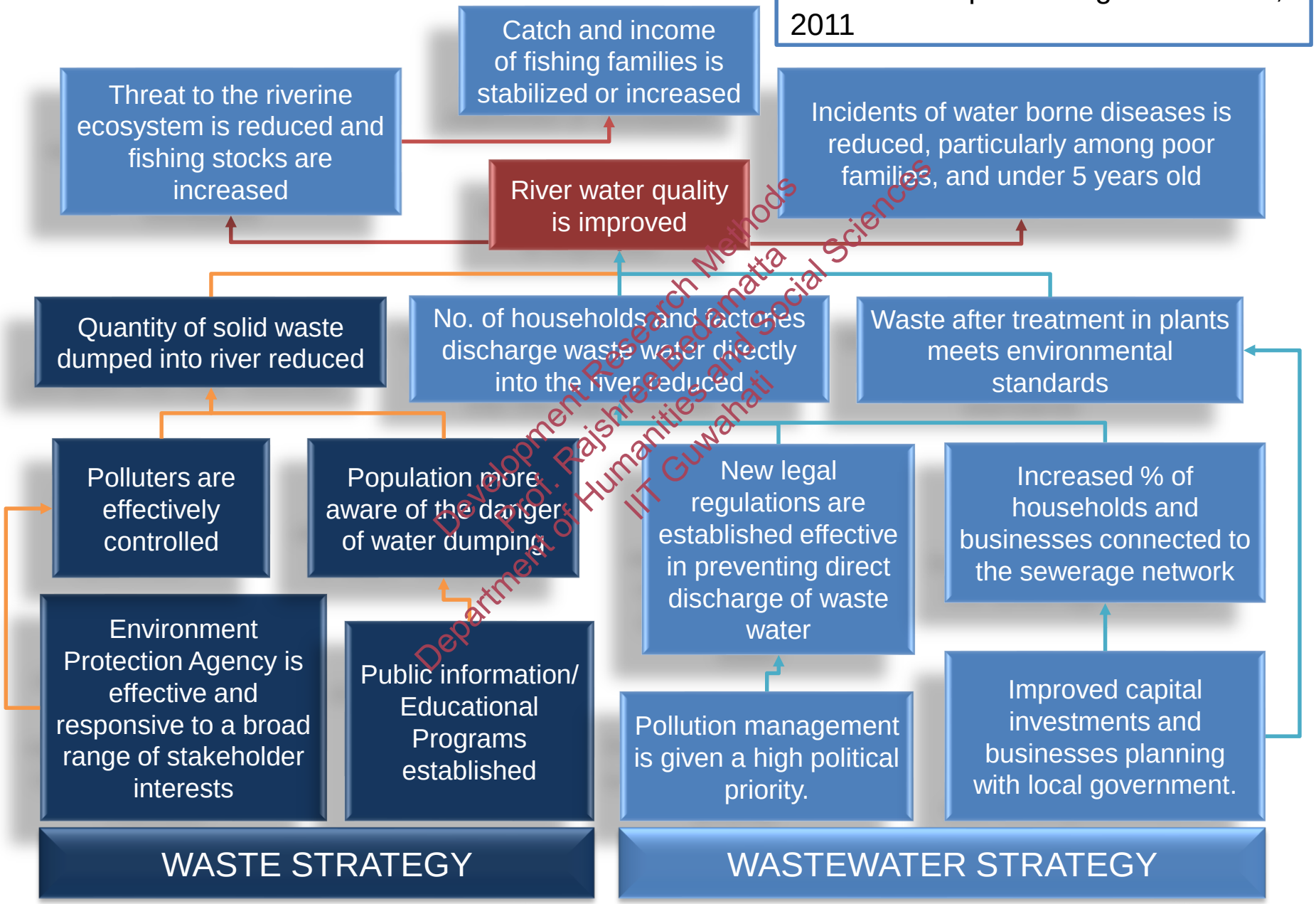
Steps to Conduct Analysis of Strategies/Alternative Options

- Identify differing "means-ends" ladders, as possible alternative options or project components
- Eliminate objectives which are obviously not desirable or achievable
- Eliminate objectives which are pursued by other projects in the area.
- Discuss the implications for affected groups
- Make an assessment of the feasibility of the different alternatives
- Select one of the alternatives as the project strategy
- Introduce additional criteria, or; alter the most promising option by including or subtracting elements from the objectives tree

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Analysis of Alternative Strategies-Example

Source- European Integration Office, 2011



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Using the Logical Framework Approach for Project Design-

The two main phases

1. Analysis Phase

2. Planning Phase

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1.The Log frame: Format and Process of Preparation

1. Adapt the format to the project needs and requirements

- The results of the stakeholder, problem, objectives and strategy analysis are used as the materials and preparatory work.

2. Sequence of completion and content

- The project description and logic of intervention (top down), then the assumptions (bottom-up), followed by the indicators and then sources of verification (working across).

3. Completing the Draft Log frame Matrix

- The activity scheduling, resource and cost analysis cannot be detailed until the framework of objectives, assumptions and indicators/SOVs has been considered.
- Include indicative activities for each result, and necessary means and expenses needed for the implementation of these activities.

4. Checking the project design

- Target groups
- Overall objective
- Purpose
- Results
- Activities
- Inputs: Resources
- Assumptions
- Indicators

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Logical Framework Matrix

Logic of intervention	Objectively Verifiable Indicators	Sources of Verification	Assumptions
Overall Objective (1)	(10)	(11)	(9)
Purpose (2)	(12)	(13)	(8)
Results (3)	(14)	(15)	(7)
Activities (4)	Means (16)	Costs (17)	(6)
			Preconditions (5)

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Sequence of Completion

First Column: Logic of Intervention

1. Define the overall objective to which your project contributes.

- Higher-order objective that the project seeks to achieve, often in combination with others.
- Statements should be kept as clear and concise as possible.

2. Define the purpose to be achieved by the project.

- The intended effects of the project (project purpose), the immediate objective for the direct beneficiaries as a precisely stated future condition.

3. Define the results for achieving the purpose.

- The targets which the project management must achieve and sustain within the life of the project.
- Often described in the terms of reference (tor) for the project.

4. Define the activities for achieving each result.

- Processes that indicate the basic structure and strategy of the project.
- Provide an indicative list of activities that must be implemented to accomplish each result.

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Formulating logic of intervention: An example

	Example of how to write statements
Overall objective	To contribute to improved family health, particularly of under 5s, and general health of the riverine eco-system
Purpose	1. Improved river water quality
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 enforced
Activities (May not be included in the matrix itself, but rather presented in an activity schedule format)	1.1.1. Conduct baseline survey of households 1.1.2. Complete engineering specifications for expanded sewerage network 1.1.3. Prepare tender documents, 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, etc.

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How Results and Activities should be numbered

Fourth Column: The Assumptions

1. Identifying assumptions related to each level of the Logic of Intervention.

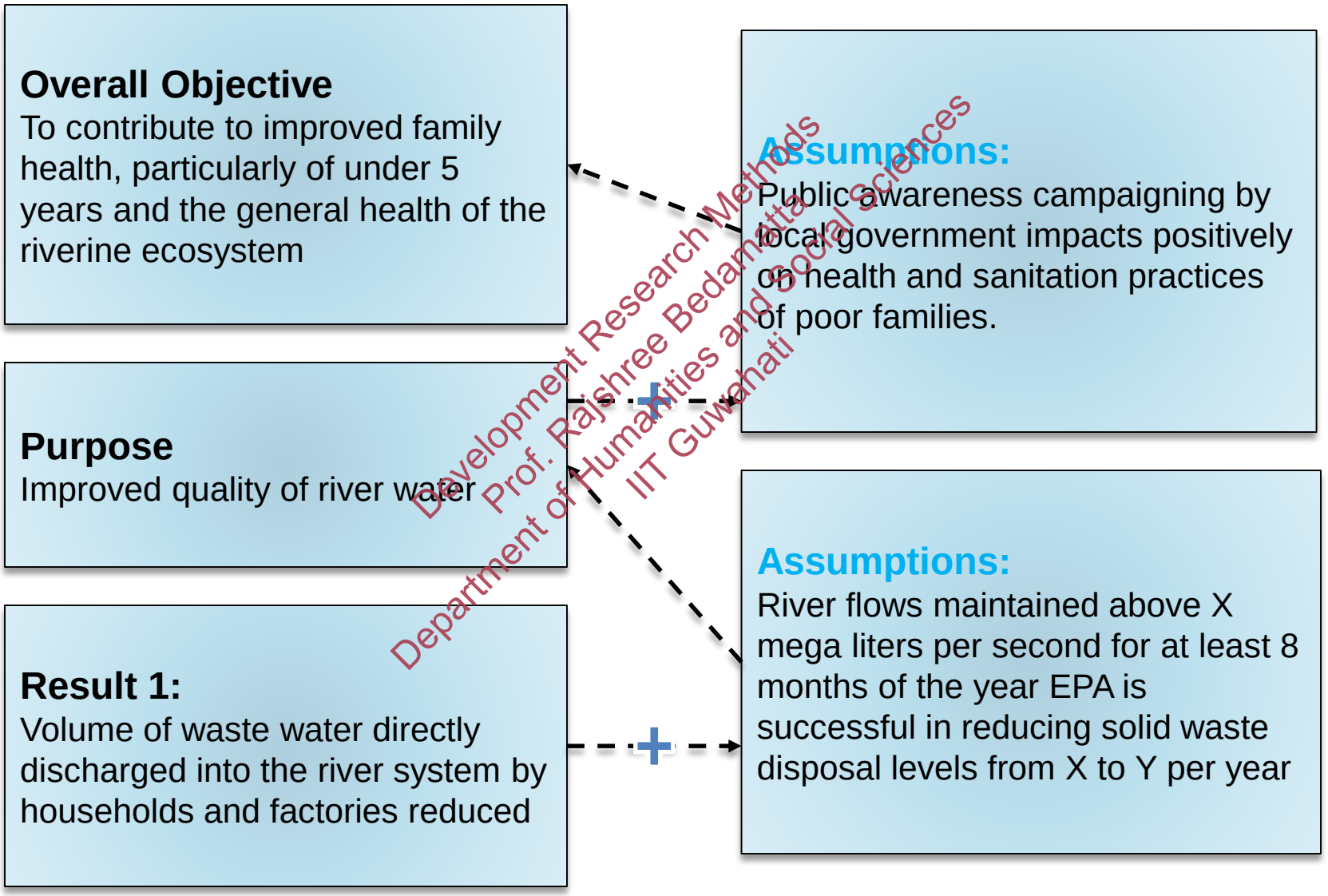
- Assumptions are external factors that have the potential to influence the success of a project.
- Assumptions are part of the vertical logic in the log frame.
- Identify assumptions at each level in the matrix up to the development objective level
- Assumptions are usually progressively identified during the analysis phase.
- Some assumptions can be derived from elements in the objectives tree which were not incorporated into the project.

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2. Checking the assumptions and their significance.

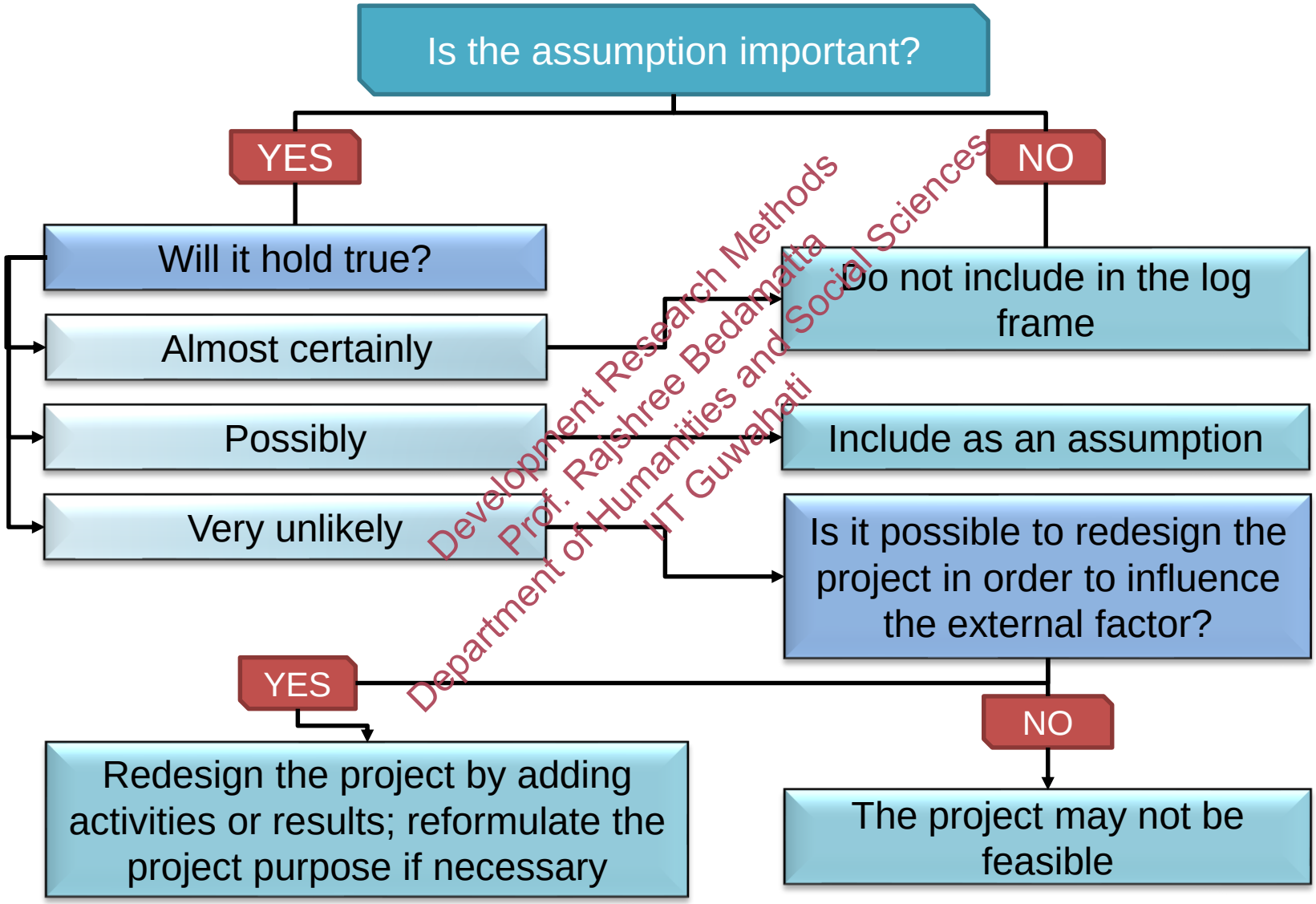
- The probability and significance of assumptions being met is part of assessing how ‘risky’ the project is.
- Assemble and analyze adequate information from an appropriate range of sources, including the different viewpoints of different stakeholders (e.g. What is considered a key assumption to one group, may not be so important to others).

Assumptions on Different Levels of Intervention Logic



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Decision Making Flowchart for Checking Assumptions



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Source- European Integration Office, 2011

Second column: Objectively Verifiable Indicators

- Objectively Verifiable Indicators (OVIs) describe the project's objectives in operationally measurable terms.
- How to recognize successful accomplishment of objectives.
- Indicators tell us what will be sufficient performance to assure that we can reach the next level of objective.
- Begin with the higher order objective and work backwards through the causal chain: Overall Objective, then Purpose, then Results.
- Necessary to establish more than one indicator for each objective statement.
  - For example, one indicator may provide good quantitative information, to be complemented by another indicator focused on qualitative matters (such as the opinions of target groups).

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Formulating the Indicator

Some Characteristics to Remember

Specific: to the objective it is supposed to measure and substantial.	**Measurable:** either quantitatively or qualitatively, in a factual way.
Available: at an acceptable cost, based on obtainable data.	**Relevant:** to the information needs of managers and plausible
Time-bound: so we know when we can expect the objective/target to be achieved.	**Independent**: indicators should be independent of each other.
Indicators should be defined at the level of overall objective, purpose, and results appropriately	

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Third column: Source of Verification

- The source of verification should specify:
  - **What information** to be made available, (e.g. from administrative records, special studies, sample surveys, observation, etc.).
  - **Where, in what form** the information/documented source should be collected (e.g. progress reports, project accounts, official statistical documents, etc.).
  - **Who should collect/provide** the information (e.g. field extension workers, the district health office, the project management team, etc.).
  - **When/how regularly** it should be provided (e.g. monthly, quarterly, annually, etc.).

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Log Frame- River Pollution Example

Logic of intervention	Objectively Verifiable Indicators	Sources of Verification	Assumptions
Overall Objective To contribute to improved family health, and to improve general health of riverine ecosystem	Incidents of water born diseases, skin infections and blood disorders caused by heavy metals, reduced by 50%	Municipal hospital and clinic records, including maternal and child health records collected by mobile MCH teams.	
Purpose Improved quality of river water	Concentration of heavy metal compounds and untreated sewerage reduced by 25%	Weekly water quality surveys jointly conducted by EPA and the River Authority and reported monthly to the Local Government Minister	The public awareness campaign conducted impacts positively on families sanitation and hygiene practices
Results 1 Volume of wastewater directly discharged into the river system by households and factories reduced	70% of waste water produced by factories and 80% of wastewater produced by households is treated in plants	Annual sample survey of households and factories conducted by municipalities between 2003 and 2008	River flows maintained above X mega liters per second for at least 8 months of the year
. . . .			

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Source- European Integration Office, 2011

Checking the project design

Content of Log frame Matrix	Points to ensure
Target groups	• Precisely defined at the level of development objective, immediate objective and output.
Overall Objective	• Consistent with the development policy of the partner country and with the donor's policy guidelines for development aid • Represents a sufficient justification for the project. • Expressed as a desired end, not as a means (a process).
Purpose	• Consists of one single realistic objective.
Results	• Only the outputs which can be guaranteed by the project are included. • Each output can be seen as a necessary means to achieve the purpose.
Activities	• All essential activities necessary to produce the anticipated outputs are included. • All activities contribute directly to the output level above. • Activities are stated in terms of actions being undertaken rather than completed outputs.
Inputs-Resources	• Can be related directly to the specified activities. • The inputs are precisely and verifiably defined (quantity, quality, cost).
Assumptions	• Formulated as desirable, positive conditions and linked to the correct project level
Indicators	• Specific in terms of quantity, quality, time, location and target group. • Reliable and up-to-date means of verification is available (statistics, observation, records).

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2. Activity Scheduling

- **Also called Plan of Activities**- means to achieve the objectives, means to eliminate the causes of the focal problem.
- Activities constitute the means to achieve the goals.
- If the activities are planned and implemented in a suitable way, the results will be achieved.
- The plan of activities is drawn up by the project group with guidance from the problem analysis made by the stakeholders and based on the objective analysis.

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3. Resource Scheduling

- A detailed plan of the resources which are needed to implement the project.
- Resources can consist of:
  - Technical expertise (local and/or foreign expertise: what kind of know-how is needed to support the development of capacity)
  - Equipment /spare parts /training in the use of the equipment
  - Premises
  - Funds
  - Time
- The budget, particularly in respect of cost-sharing should also preferably be decided before the start of the project and be clearly stated in the contract.

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SWOT ANALYSIS

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What is SWOT Analysis?

- Process of exploring the internal and external environments and extracting strategies based on its strengths, weaknesses, opportunities and threats.
- Strengths: enhancers to desired performance, Weaknesses: inhibitors to desired performance. Opportunities: enhancers and Threats: inhibitors to desired performance.
- SWOT framework includes environmental analysis and organizational analysis.
- Identifies internal strengths and external opportunities that an organization can leverage to accomplish its objectives.

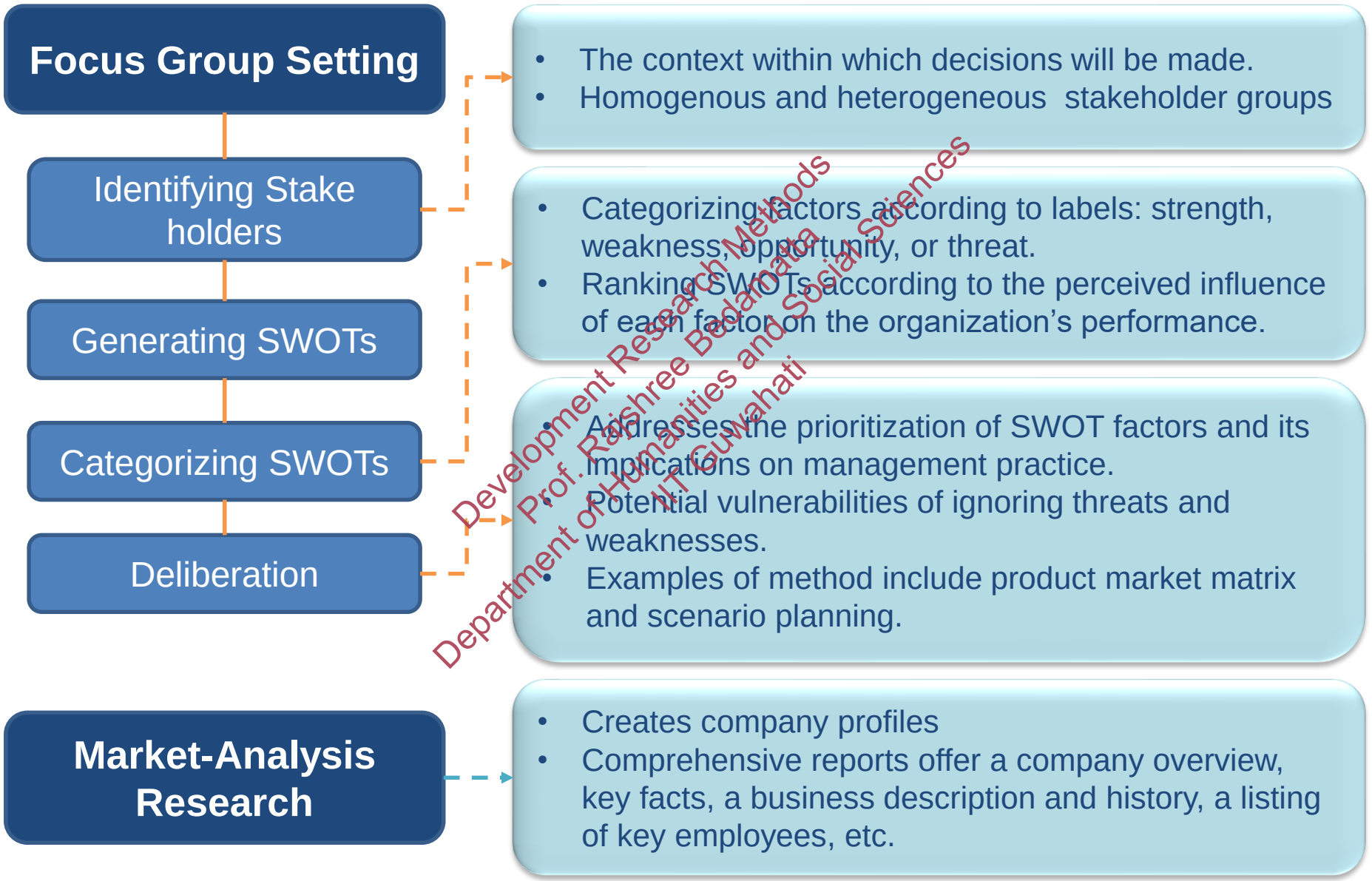
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Components of SWOT Analysis- An Example

Internal factors	
Strengths	**Weaknesses**
Characteristics that give advantage over others in the industry E.g., Market dominance, Economies of scale, Manufacturing ability	**Characteristics that place at a disadvantage relative to others** E.g., Market share weakness, Old equipment, Weak Management skills
External factors	
Opportunities	**Threats**
External elements in the environment that give benefits for the industry E.g., New products, Diversification opportunities, Competitor weakness, Demographic and social change	**External elements in the environment that could cause trouble for the organizations** E.g., Increased competition, Low market growth, Technological threat, New international barriers to trade

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Conducting SWOT analysis- Conventional Approaches



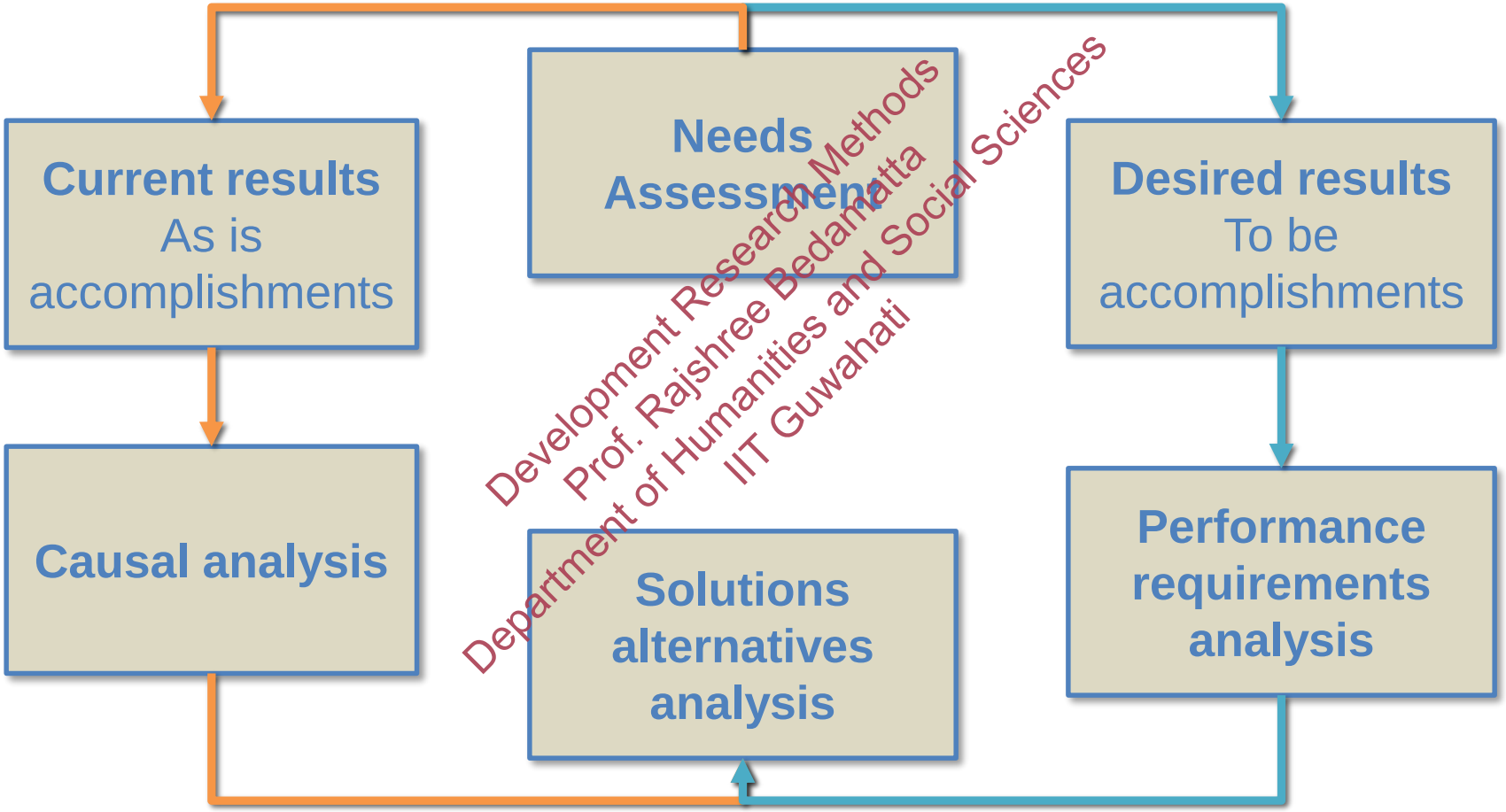
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Applications of SWOT analysis

- **Strategic Planning and Needs Assessment**
  - Strategic planning is the process of identifying the direction in which an organization should head.
  - Needs assessments identify gaps between current and desired results.
- **Evaluation of Change Initiatives**
  - Provides information regarding the gap between objectives that were intended to be accomplished, and those results that were actually accomplished.
  - **Formative evaluation:** Used to monitor changes over time in the internal and external environments of a program.
  - **Summative evaluation:** Provides determination of a program's merit or intrinsic quality; its worth or value given its costs; or its significance or importance.

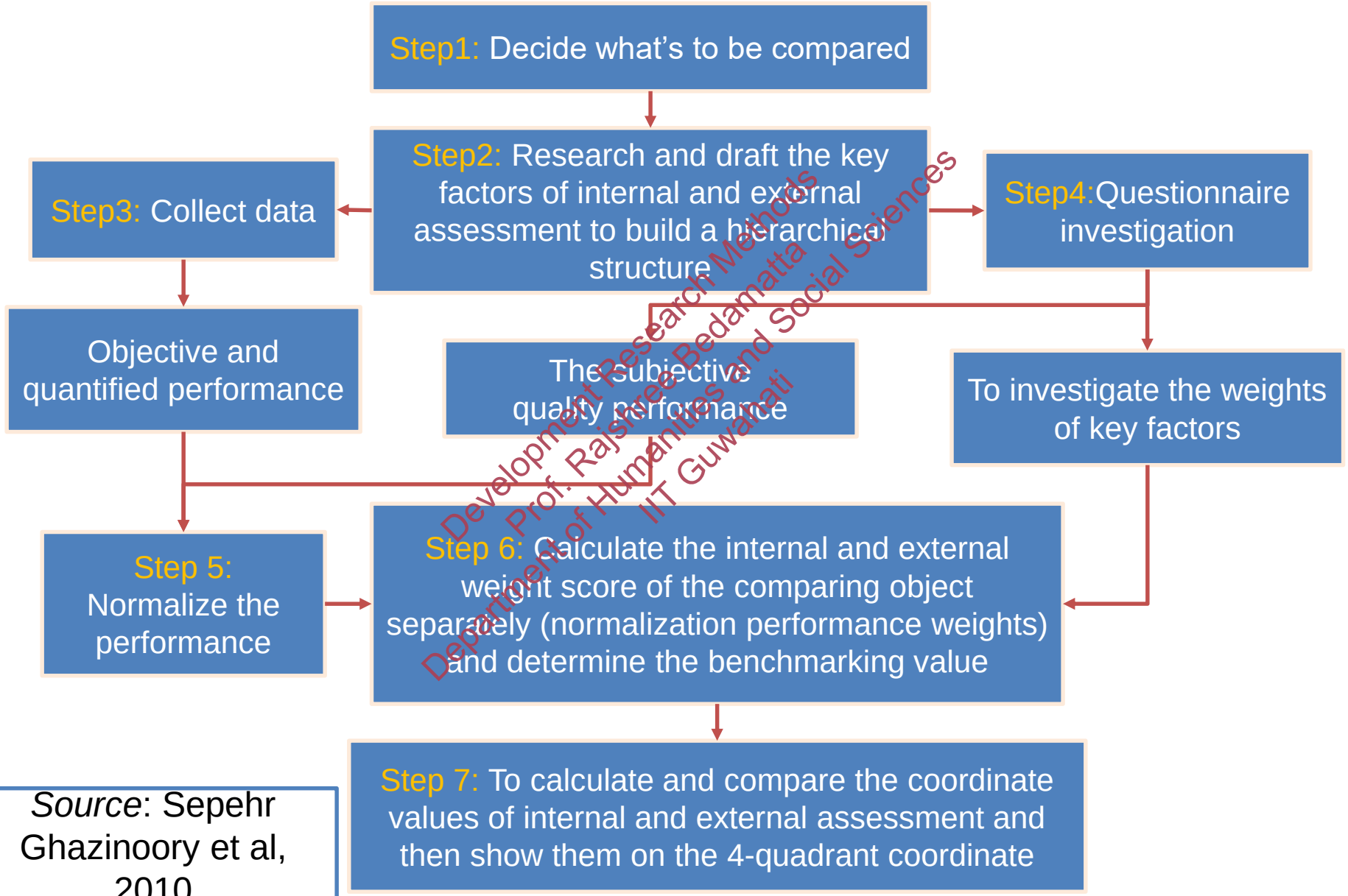
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The Performance Accomplishment Model



Source: Kaufman, Watkins, and Leigh, 2001 (taken from Pershing, 2006)

Flowchart of Quantified SWOT Analysis Pattern



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Source: Sepehr Ghazinoory et al, 2010

References used for this lecture

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- James A. Pershing “Handbook of Human Performance Technology Principles, Practices, and Potential”, 2006, Pfeiffer.
- Emet Gurel and Merba Tat, “SWOT Analysis: A Theoretical Review”, 2017, The Journal of International Social Research

For a comprehensive literature on the topics covered in this lecture it is also suggested that students go through the reference list of the above cited papers.

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