



Monitoring, Evaluation and Impact of Research Projects

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Points

1. Definitions

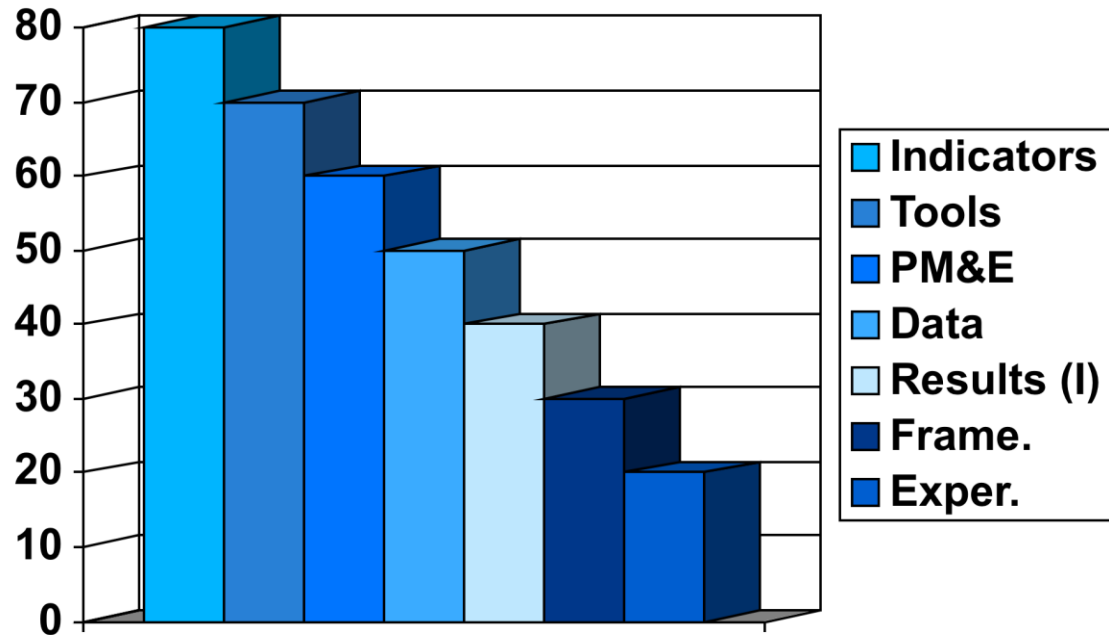
- * Monitoring
- * Evaluation
- * Impact
- * Results
- * A monitoring framework

2. Monitoring and Evaluation Frameworks

- * Results-based Management
- * Outcome mapping

3. Experience: Impact of a scientific project (India)

M & E Needs



Monitoring, evaluation and impact

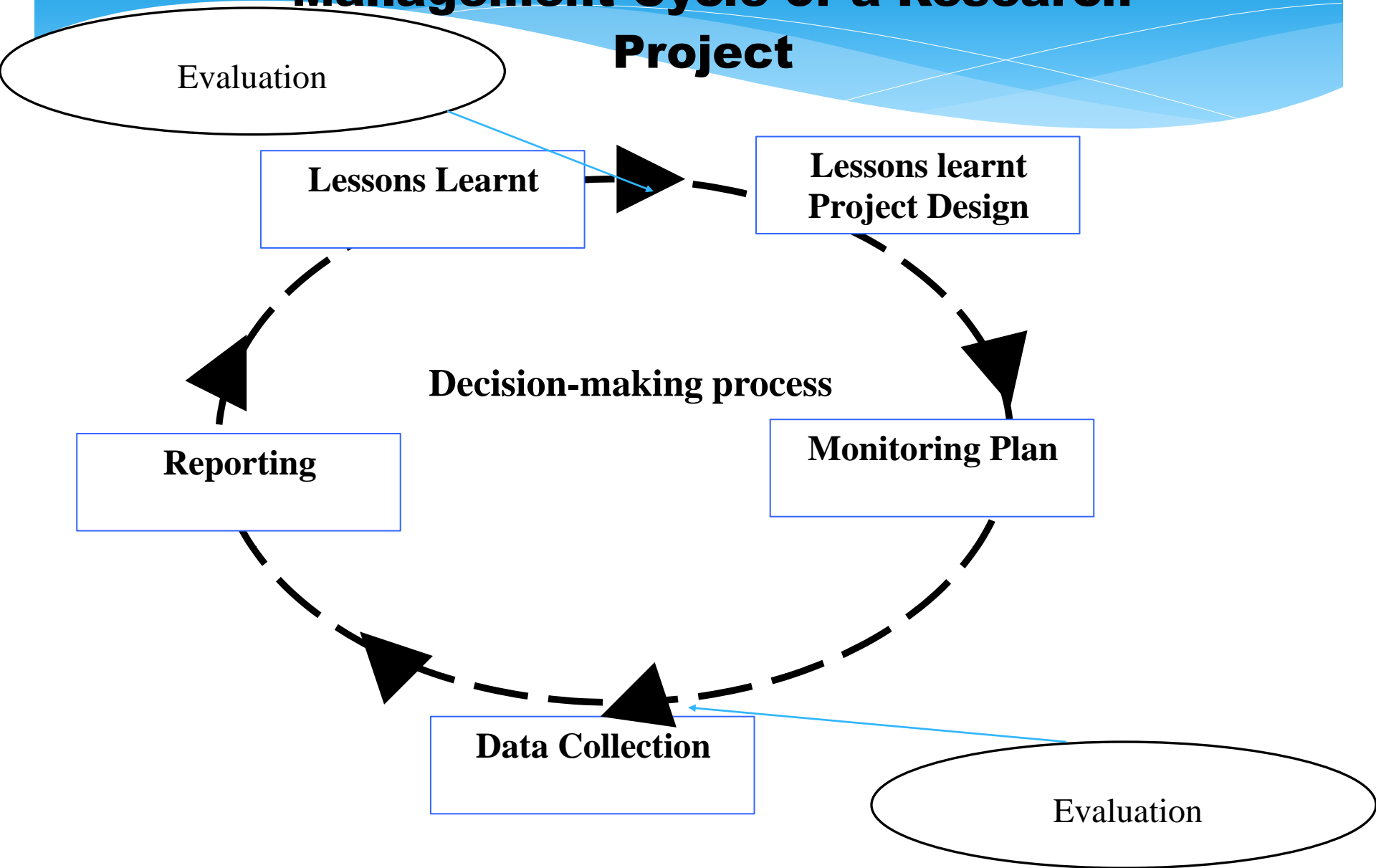
As Management Functions

- * Financial/Administrative aspects
- * Policies
- * Quality
- * Accountability

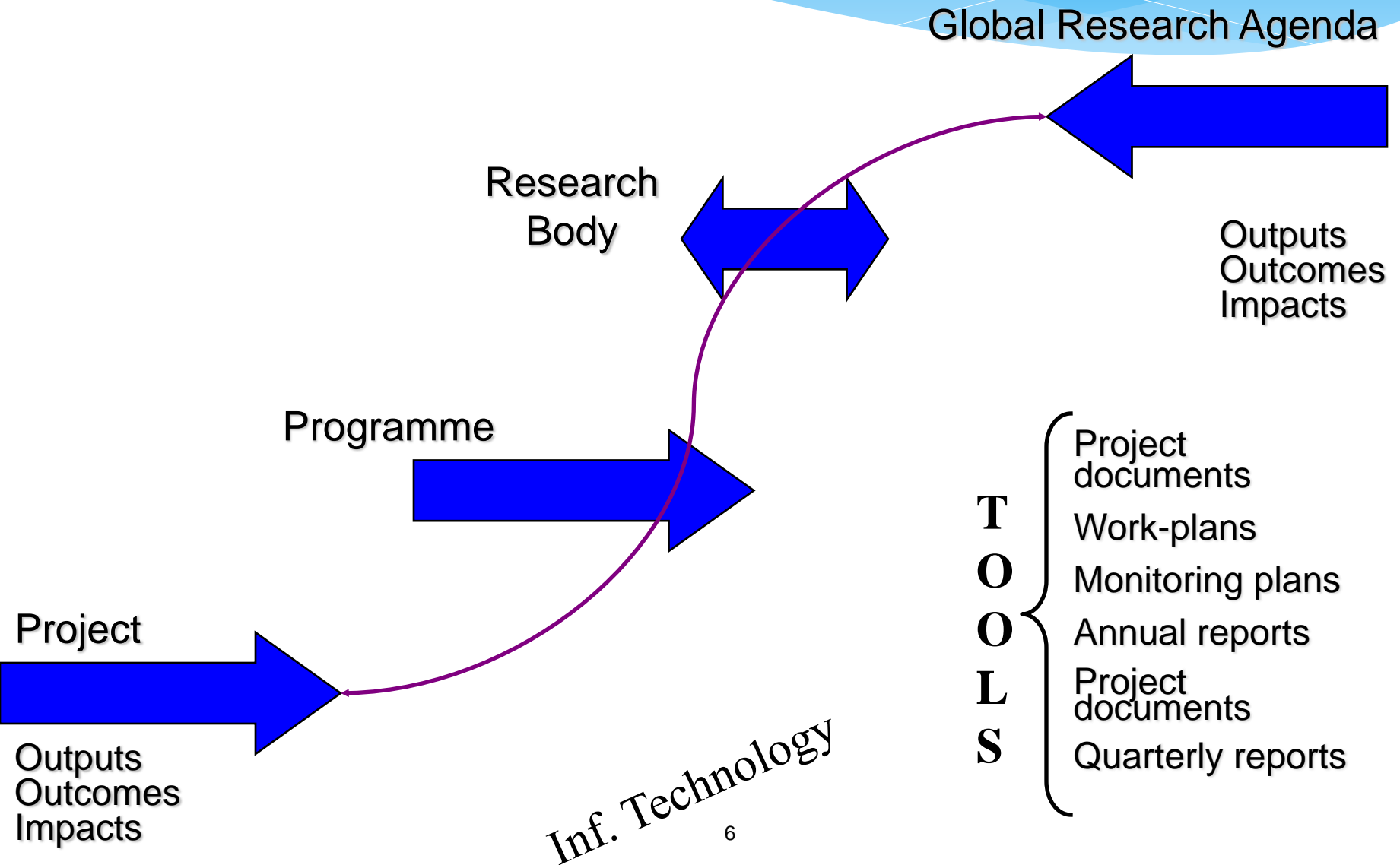
As Research Functions

- * Human Well-being change
- * Can be systematic
 - * Baselines/
 - * Benchmarks/
 - * targets)
- * Can be learning oriented
 - * S.>>>>S
- * Quality + Relevance
(societal transformation)

Management Cycle of a Research Project



M & E Levels to Be Articulated



Conventional M & E vs Participatory M & E

Monitoring is a CONTINUING activity that aims primarily to provide INDICATIONS of progress, or lack thereof, in the achievements of results.

Evaluation is a time-bound exercise that attempts to ASSESS systematically the RELEVANCE/ PERFORMANCE AND SUCCESS of a project.

Participatory Monitoring is the process in which the project RECIPIENTS and all other stakeholders become ACTIVELY INVOLVED in the implementation and regular checking of a project progress or lack of it.

SERVICE USERS & Others

Participatory Evaluation is the ACTIVE COLLECTIVE examination of a project by all stakeholders in which project recipients become not just mere objects of evaluation but also agents of evaluation

Impact Assessment

“Impact concerns long term and sustainable changes introduced by a given project or intervention in the lives of people.”

It can be related either to the specific objectives of a project or intervention or to unanticipated changes caused by the project or intervention.

“It can be either positive or negative, the latter being equally important to be aware of.”

Types of Impact

Impact

anticipated

Or

anticipated change

(in the long term)

Types

- * Scientific
- * Cultural
- * Economic (*people*)
- * Political
- * Social

Social Sciences

Economics (Transactions)
Political Science (Power relations)
Sociology (Society)
Psychology (Mind)
Anthropology (Culture)
Communication (Dialogue)
Linguistics (language as a social tool)

*Relations
&
Humans
Institutions
people*

Results Expected in Research Projects

<i>Objectives</i>	<i>Outputs</i>	<i>Outcomes</i>	<i>Impacts</i>
<p>Statements about PURPOSES and ENDS</p>	<p>Completion of ACTIVITIES</p> <p>Specific Products Services</p>	<p>Actual Intended CHANGES in Development Conditions (Partners)</p>	<p>Long-term ACHIEVEMENTS</p>
<p>Example</p>	<p>"Outputs"</p> <p>Contraception clinic established</p>	<p>Development Gains</p> <p>Participation in decision making by men and women regarding contraception increased</p>	<p>Well-being Gains</p> <p>Contraception clinic services for <i>poorer (women)</i> sections of the population improved</p>

Causal vs Sequential Thinking

Tip

Causal Thinking

Sequential Thinking

In order to

First

If...then

Following

Through

Before

By

After

Objectives

Tip

Use action verbs whenever possible

installed

constructed

strengthened

supported/developed

reduced

increased

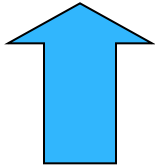
enhanced

Tautology (redundancy)

- Tip

- THEN (Tautology)

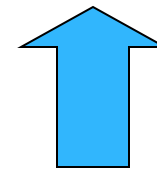
A strengthened institution



- If we build the *institution's capacity* for delivering research services

- THEN (Value-added)

The institution's **PERFORMANCE** in delivering research services is improved.



- If we build the institution's capacity for delivering research services

Results Based Management

- ***Inputs***

Experts

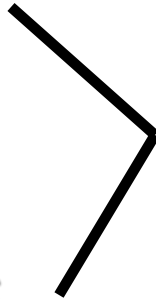
Equipment

Funds

- ***Outputs***

People trained

studies completed



- ***Outcomes***

Jobs created

incomes increased

gender equity obtained

- ***Impact***

Conditions improved

health/longevity/low

income/satisfaction/

human development

A Monitoring Plan (P)	RESULTS		
1. Results	Activities Outputs	(Purpose) Outcomes	(Goal) Impacts
2. Indicators	<ul style="list-style-type: none"> ■ Qualitative/Quantitative Indicators ■ Subjective/Objective Indicators 		
3. Data collection	<ul style="list-style-type: none"> ■ Baseline/Benchmarks/Targets ■ Surveys (clients)/Case-Studies/Focus groups/Films 		
4. Reporting requirements	Formats	Frequency	Distribution
5. Responsibilities	Service users/implementers/researchers Managers/funders		
6. Schedule	Crucial M & E Activities (steering meetings, quarterly meetings, annual meetings)		
7. Budget	5 to 10% of the Budget for Monitoring		

Indicators

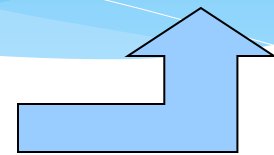
While RESULTS define what we want to achieve, INDICATORS *indicate* how we observe in order to verify whether, or to what extent, it is true that progress is (or is not) being made.

Indicators require clarity about the issue we are addressing **BEFORE** and **AFTER** any interventions

Indicators

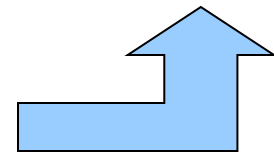
Target:

It is the situation at the end of a project



Milestones:

They correspond to expected PERFORMANCE at periodic intervals



Baseline:

It is the starting point for monitoring RESULTS

Examples

Qualitative indicators

Existence policy recommendation formulated? submitted? approved? local governance act passed? (yes or no)

Category (for example X or Y or Z) poverty analyzed in the west region? locally? nationally?

Level of focus of an initiative on sustained human development high? medium? low?

Quantitative indicators

Number: of service users trained/ of new jobs in small Enterprise area

Percentage: share of government budget devoted to training/ share of rural population with access to basic health care

Ratio: of female to male health services enrollment/ of trainers per Institution, project.

Indicators

Substance & practicality

The following criteria and questions may be useful in selecting indicators:

Valid: does the indicator capture the essence of the expected result?

Practical: are data actually available at reasonable cost and effort?

Precise meaning: do stakeholders agree on exactly what to measure?

Clear direction: are we sure whether an increase is favorable or unfavorable?

“Owned”: do stakeholders agree that this indicator makes sense to use?

Data Collection

Where are the sources of information/data?

- * Public records (passage of a legislation/public statistics)
- * Internal records (data-base of the project -- number of seminars conducted, number of people trained, policy recommendations submitted to local, regional national authorities)
- * Development of instruments and/or establishment of routines for capturing information

Data Collection

Tools

- * Awareness/attitude surveys and questionnaires
- * Expert panels
- * Key informant interviews (i.e. principal trainers / training experts)
- * Focus groups
- * Mapping techniques
- * Documentaries (testimonial records)
- * Case-studies

Data Collection

- * **Triangulation:** a process of cross-checking and cross-validating by talking with and referring to various sources of information
- * **Stratified sampling:** a selection that ensures representation of a cross-section of a community according to such characteristics as age, gender, sexual orientation, social class or ethnicity

Reporting

It is an integral part of monitoring RESULTS and it should be concise, precise, systematic and timely.

Roles and Responsibilities

Project title	Responsibilities		
M & E Activities	Maria	Joan	Satish
Draw Eval. ToR	I	E	A
Organise M workshop	E	E	A
Recruit auditing team	I	I	E
Field visits coordination	E	E	A
...			
...			

Schedule

ACTIVITY/ YEAR	0	1	2	3	4
5					
M & E actions during DOCUMENT preparation					
Participatory monitoring plan					
Work plan elaboration					
Quarterly reports (process/financial)					
Audit (social audit) gender aspects					
Monitoring field visits (data collection)					
Annual project report (data analysis)					
Stakeholders review meeting					
Mid term (participatory) evaluation					
Final (participatory) evaluation/impact assessment					
Terminal report					
Ex-post evaluation					



M & E FRAMEWORKS

RESULTS-BASED MANAGEMENT FRAMEWORK

OUTCOME MAPPING (IDRC)

RBM Phases

- Defining clear and measurable objectives (results)
- Choosing indicators to measure progress
- Setting explicit targets for indicators

Results-oriented planning or strategic planning

- Developing performance monitoring systems (data collection)
- Reviewing and analysing results

Performance measurement

- Integrating evaluations
- Using performance information for internal management, learning and decision-making processes

Results-based management system

Results-Based Management (RBM) Tools

Strategic Planning Tool: Strategic Results Framework (SRF)

SRF describes main results to be achieved according to goal, sub-goals, strategic areas of support, period of time, type of results (outputs, outcomes, impacts) and indicators.

PARTICIPATORY??

(Case: UNDP/India)

6 Goals (Poverty/Environment/Gender/Governance/
UN System/Special Development Situations)

11 Sub-goals = 11 Outcomes

2001-2003

Results-Based Management (RBM) Tools

The Performance Tool: Result Oriented Annual Report (ROAR):

ROAR reports on performance and progress of results achieved.

PARTICIPATORY??

(Case: UNDP/India)

ROAR 2000/2001/2002

Results-Based Management (RBM) Tools

The Management Tool: Plan of Evaluations

Agents	Scope	Timing
<ul style="list-style-type: none">■ Internal agents (P)■ External agents	<ul style="list-style-type: none">■ Programme■ Project■ Sector■ Thematic■ Policy■ Process and/or■ Results	<ul style="list-style-type: none">■ Mid term■ Final■ Ex-post <p>(impact assessment)</p>

Development Evaluation

UN, EC, DFID, World Bank

- **Relevance:** the extent to which an intervention is consistent with the policies and priorities of each of the major stakeholders
- **Effectiveness:** the extent to which an intervention achieves its objectives at the Purpose and Goal level
- **Efficiency:** the relationship between the outputs achieved and the inputs used
- **Impact:** all changes (positive or negative) attributable to the intervention
- **Sustainability:** the extent to which the activities, outputs and impacts will continue after external support has ended

Outcome Monitoring IDRC

Intentional Design	Outcome and Performance Monitoring	Evaluation Planning
1.Vision		
2. Mission	8.Monitoring priorities	
3.Partnerships	9.Outcomes Journals	12. Evaluation Plan
4.Outcome challenges	10.Strategy Journal	
5.Progress markers	11. Performance Journal	
6.Strategy maps		
7.Organisational Practices		

Outcome Monitoring

The progress of partnerships towards the achievement of outcomes	The programme /project strategies to support outcomes	Organisational practices used
Tool: Outcome Journal	Tool: Strategy Journal	Tool: Performance Journal

Outcomes “Changes in the behaviour, relationships, activities, and /or actions of a partner that can be logically linked to a programme/project (although not necessarily caused by it.

RBM OM	Outputs Outputs	Outcomes Outcomes	Impacts Impacts
RBM OM	Cause Relation	Cause/Effect (Attribution) Contribution	Effect
RBM OM		Partners	
RBM OM		Changes Changes in people	Changes
RBM OM		Accountability/Learning Learning/self assessment	

Impact Monitoring of a Scientific Project
Oriented towards Poverty Lessening through
the Development of Three Open-pollinated
Seed Varieties Resistant to Tomato Leaf Curl
Virus (ToLCV) in South India

The Scientific Project

General Objective

To understand the Sustainable Management of *Tomato Leaf Curl Virus* disease and its *whitefly* vector, *Bemisia tabaci* (Genn.) in India in the context of a poverty alleviation programme (1996-2002).

The Scientific Project

Output:

In 2002 three new types of virus-resistant open-pollinated seeds – Nandi, Sankranthi and Vybhav were developed and released commercially by the partnership of:

- * The University of Agricultural Sciences Bangalore (India),
- * The Natural Resources Institute of the University of Greenwich (UK),
- * and The Asian Vegetable Research and the Development Centre (Taiwan).

The Scientific Project

Since 2002

The project was concerned with the dissemination and promotion of the major results among stakeholders such as farmers, researchers, universities, government and private companies.

The Scientific Project

Challenge:

Designing an impact monitoring model for the project

Role clarification among various stakeholders

Impact pathway monitoring (results-based management framework)

WHICH ACTORS, FOR WHAT?

Dissemination and promotion of research results Actors	Promotion (Encouragement to stakeholders in Karnataka and other states to <i>use</i> ToLCVs)	Dissemination (Spreading information about ToLCVs)	Uptake (Farmers using the ToLCVs seeds)	Adoption (ToLCV seeds integrated into regular farming of farmers)
Seed Companies	Are they involved in promotion? If yes, how?	Are they involved in dissemination? If yes, how?	Yes, how and where?	Yes/No?
NGOs				
Public extension services				
University				
Farmers				
Credit Institutions				
Government agencies				
Mass media (TV, radio, newspapers)			Garforth and Norrish	

Traditional approach to IA

- ▶ Investment.....Physical benefits
- ▶ Cost.....Benefit
- ▶ Quantification.....Validation of impacts
- ▶ Time (Ex- ante & Ex-post evaluation)

New dimensions to IA

- ▶ While a project is unfolding
- ▶ People's participation (service users involvement)
- ▶ Equity/equality (gender, ethnic minorities)
- ▶ Sustainability (capacity building/ financial)
- ▶ Environmental friendly interventions

HUMAN WELL BEING/ECOSYSTEM

Time (paths to impact)

Impact pathway Monitoring

Mapping

Strength of the impact – (at the service users level, institutional, project level)

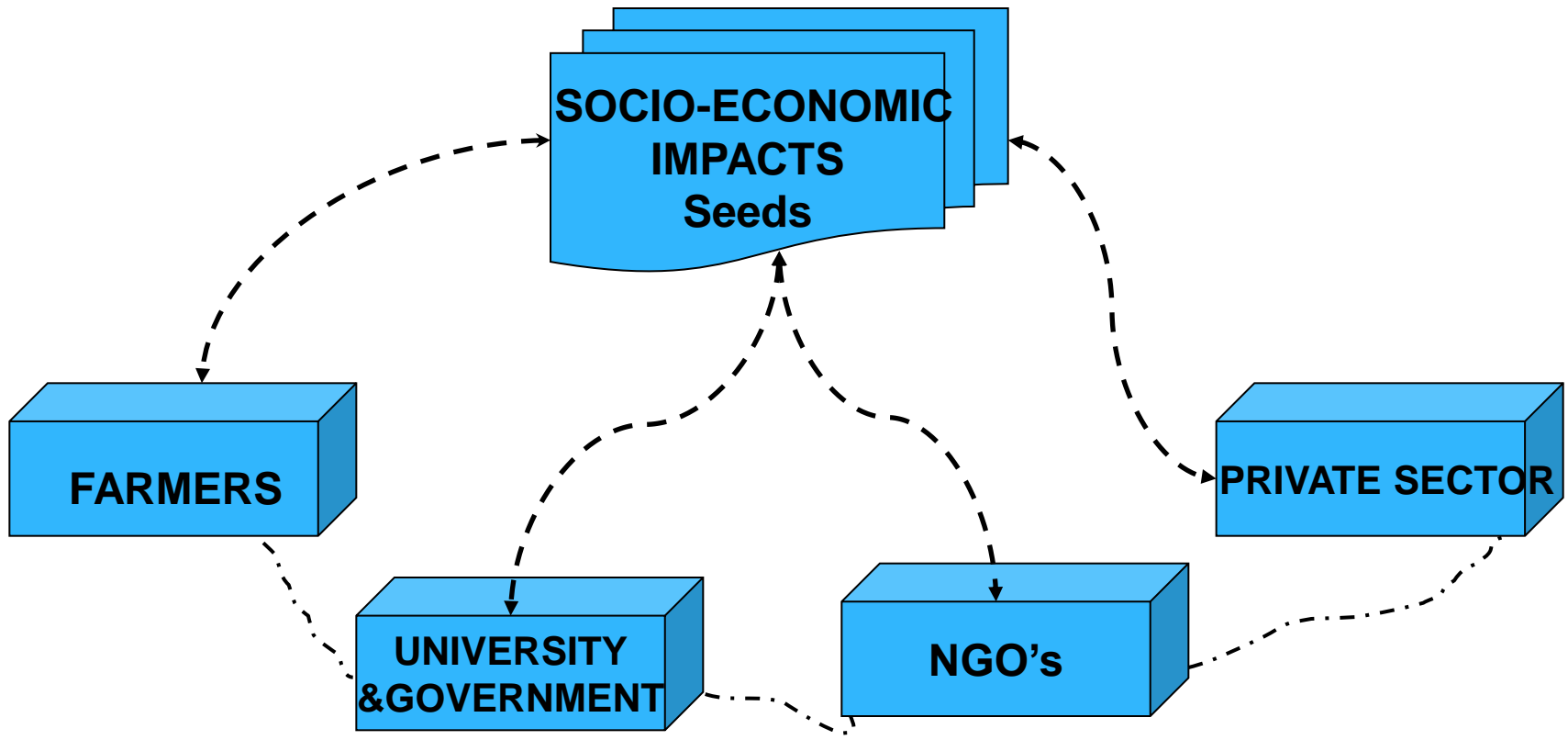
Gestation period (time from the moment in which the seeds were to released to the moment in which the farmers used the seeds)

Visibility (small farmers)

Stakeholders (who has being benefiting the most?)

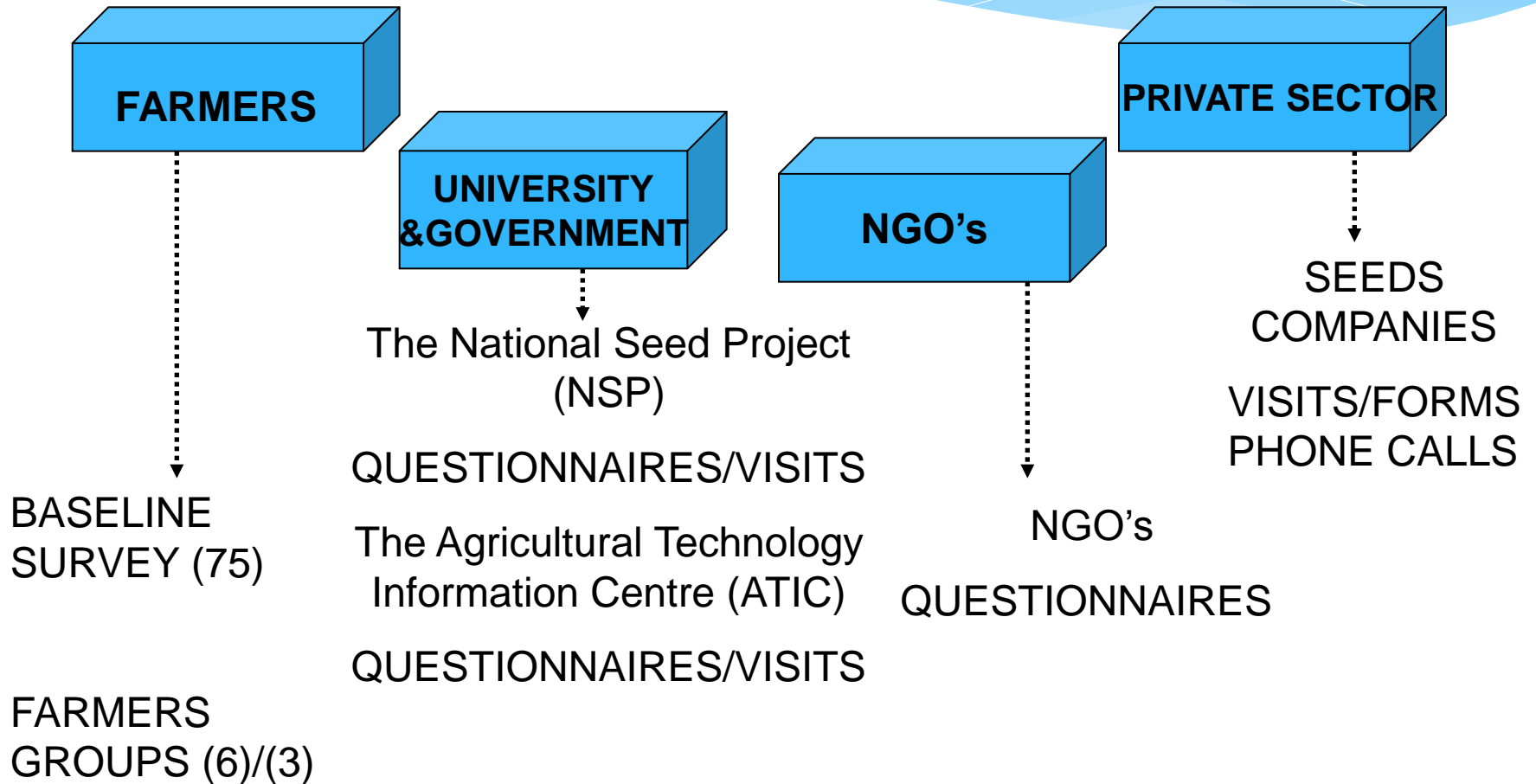
Monitoring Impact

Impact Pathways



Monitoring Impact

Monitoring Tools



MONITORING IMPACT



EXTERNAL MID-TERM REVIEW

POLICY DIMENSIONS



FARMERS

RESULTS & LESSONS

SURVEY (75 farmers, 2003) Before the seed were used

- Male farmers
- Paddy (rice), tomato and sugarcane
- Difference between marketing and hybrids and open-pollinated
- Preference for open-pollinated tomatoes for their own consumption (taste)
- ***Both men farmers and women farmers take care of the crops at the planting, cultivation and production stages/ However it is mainly the men who take care of the marketing of all crops in general and tomatoes in particular.***
- ***The farmers spend quite a lot of money buying pesticides to kill the whitefly vector of ToLCV. During discussions with them prior to the baseline it was observed that the farmers were using pesticides 7 to 8 times during a crop cycle lasting 80 days on average in order to manage ToLCV.***



FARMERS

RESULTS & LESSONS

SURVEY (75 farmers, 2003) Before the seed were used (Contd)

- At the moment of the survey almost all farmers did not have information about the existence of resistant seeds to ToLCV.
- Sources of information: they were chemical dealers, *extension services*, seed companies, experienced farmers, family members and radio and TV.

Expenditure:

- The highest was social occasions (Rps18, 582)/
- Buying pesticides (negative impact on health and economy of producers and consumers)



FARMERS

RESULTS & LESSONS

GROUPS (6) Successful only 3

- Three basic tools: the questionnaire used in the baseline, a checklist designed to follow their livelihood issues and a detailed monitoring form about the cost of cultivation of the project varieties and two other contrasting open-pollinated varieties such as PKM and Ruchi.
- The groups using the three resistant varieties for the first time, were interviewed in average three to four times while the cultivation was going on.
- The three successful groups have on average 9 farmers out of 15 or 20 that started using the seeds
- Lack of water/Care of the plants
- Five basic problems: water scarcity, price fluctuation, fruit borer and wilts, irrigation and electricity

FARMERS

LESSONS

- Scientists get to appreciate the social, political and economic dimensions of their scientific work.
- ***It is important in scientific projects to differentiate the techno-scientific aspects from the social ones since the two imply different subjects.***
- The social technique of questionnaire has to be complemented with techniques that provide more in depth data. The initial baseline did not allow the project to appreciate fully all the possible economic, social and health-environmental impact(s) of the project. Only after frequent visits and interviews with the farmers all those issues emerged more clearly.

Results

**UNIVERSITY
& GOVERNMENT**

www.tomatoleafcurlandwhitefly.org

ACTIVITY	RESULT
1. Scientific papers published	8 Abstracts/ 23 papers
2. Master in Science (M. Sc) and Philosophy Doctoral' theses (PhD).	
Department of Agronomy	2 M. Sc
Department of Genetics and Plant Breeding	6 M. Sc/ 2 Ph. D
Department of Seed Science and Technology	2 M. Sc
Department of Entomology	1 M. Sc
Department of Plant Pathology	15 M. Sc/8 Ph. D
3. International Conferences	18

Lessons



**UNIVERSITY
& GOVERNMENT**

Many of the traditional research activities done such as publication of papers, elaboration of theses, conference presentation and even collection of pictures were seen as in need of taking a different communicational role. This role was, furthermore, related to the demonstration of evidence of impact and visibility in times of low resources to public institutions and need of innovative practices.



NGO's

Results and Lessons

5 NGO's working on rural issues in the areas of Karnataka and Maharastra were contacted with the purpose of helping in the promotion and dissemination of the seeds. However the efforts were not successful.

Lesson:

Need to create awareness about the different although complementary work between research on development and development projects. NGO's in general do not get involved in research directly and universities do not get involved in the day to day activities directly with rural communities.

Results and Lessons

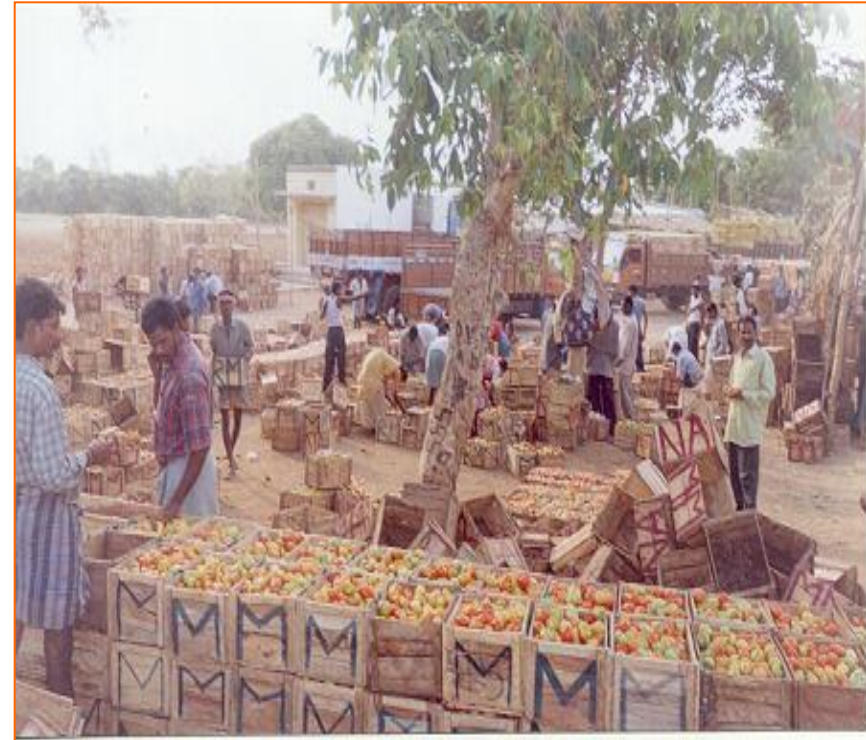
- Until June 2005 eleven small and mid size Indian seed companies had bought the seeds going beyond the initial modest expectation that only two or three companies will buy the seeds
- Until June 2005 the project has sold 59 grams equivalent to 173,750 Indian Rupees
- Until June 2005 the seed companies reported that they were not experiencing the ToLCV disease and, also the majority of them stated that they will try the three resistant varieties mainly in the development of Hybrids. None company confirmed the use of the seeds in developing open-pollinated seeds.

Lesson:

The main lessons learnt by the project in its work from the private sector came from the sharing of material at very early stages of the research.

POLICY

- Lack of infrastructure for storage and processing of tomatoes
- Price instability and wide oscillation in prices (between Rupees 5 per kilo and 50 paisas a kilo in the case of the open-pollinated variety) in a matter of days within the same season.





THANKS!!