Strengthening partnerships and networks in agricultural research for development

a learning module
(Version 1.0)

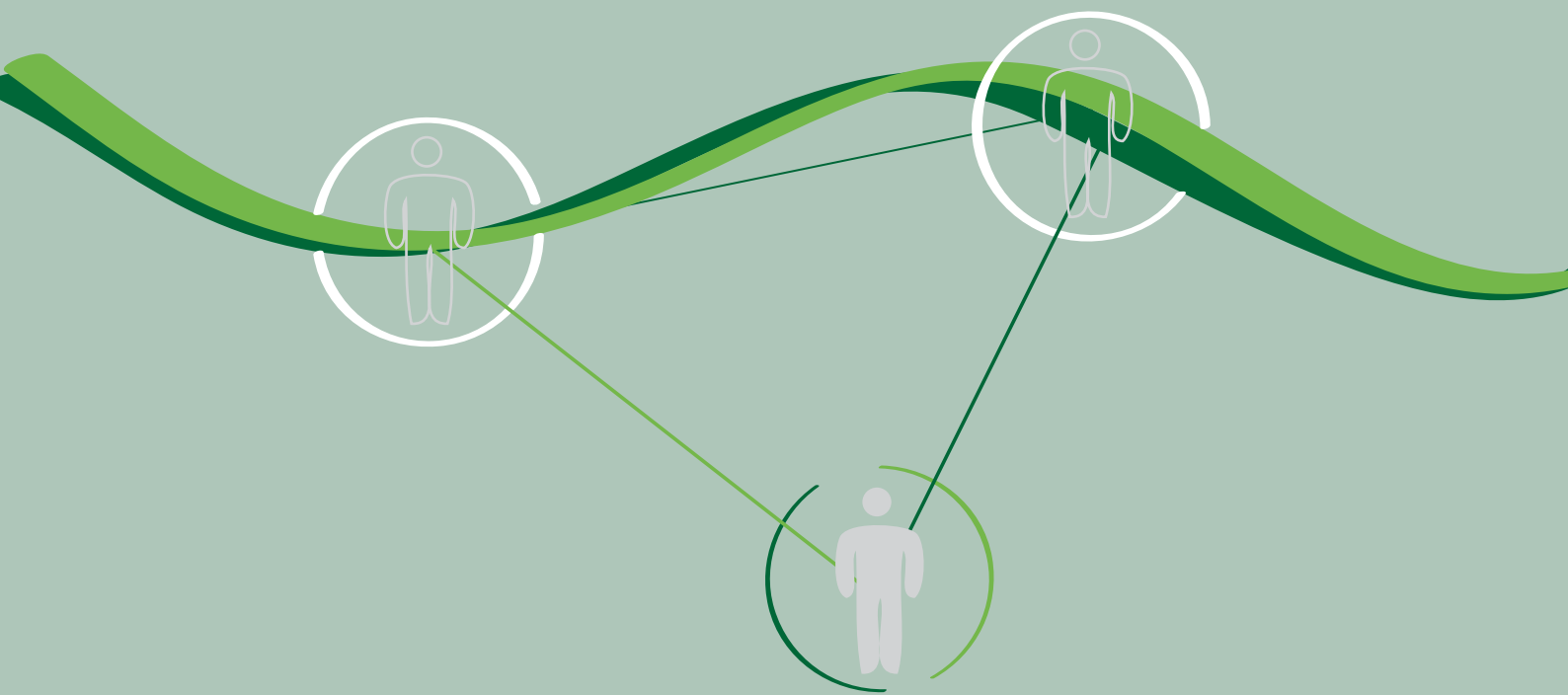# Strengthening partnerships and networks in agricultural research for development

A learning module (Version 1.0)

Ponniah Anandajayasekeram and Ranjitha Puskur

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Preface

The nature and complexity of agricultural development challenges the world is facing are constantly changing. The agricultural research systems, the world over, have been transforming and adopting new paradigms in response to such changes. It is acknowledged that the research system alone cannot tackle these complex challenges. They hold only one piece of the puzzle!

These developments demand that contemporary thinking of agricultural development look beyond production into the chain of activities and interventions required up to consumption. This calls for the involvement of all relevant actors, individuals and organizations in the process. In turn this requires a different framework and institutional arrangement to conduct research for development. To be effective, emerging concepts such as Innovation Systems Perspective (ISP), value chain analysis, Integrated Agricultural Research for Development (AR4D) and impact orientation need to be integrated into the agricultural research process. The R4D system should think in terms of contributing to innovation and not just generating knowledge.

In such a scenario, capacity and skills of researchers to work with a diverse set of partners at various levels becomes critical. It becomes necessary to create the capacity to design and manage partnerships in agricultural research for development. This learning module has been prepared to serve as a tool in achieving the objective of strengthening the capacity of researchers and other actors who are believed to have a key role to play in leading agricultural R4D initiatives. This includes national, regional, international and private sector agricultural researchers and development practitioners.

Partnerships have been and are a cornerstone of ILRI's implementation framework. ILRI has a partnership strategy to guide the implementation of ILRI's activities. This module complements this strategy in terms of preparing our collaborating partners to effectively participate and contribute to multidisciplinary, multistakeholder interventions.

This module is expected to have multiple uses. One, as a source material for trainings that could be organized at different levels, and two, as reference document to upgrade the knowledge of staff of partner organizations about partnership design and management in R4D projects. The design of the learning module includes guidance notes for potential trainers including learning purpose and objectives for each session; description of the session structure (including methods, techniques, time allocation to each activity); power point presentations, presentation text, exercise handouts, worksheets, and additional reading material. There are also evaluation forms and recommended bibliography for use by future facilitators.

The module has been prepared in the style of a source book and it assumes that the reader is familiar with the concepts, procedures and tools used in participatory research approaches. Users can pick and choose the sessions/ideas/tools/concepts that are most relevant and appropriate in specific contexts and for specific purposes. This is work in progress. The module is being continually refined and updated, based on application of the concept and tools in ILRI and elsewhere and, lessons learned in the process. ILRI would like to encourage users of this learning module to actively provide feedback, including suggestions on how it can be improved.

Bruce Scott
Director, Partnerships and Communication
ILRI

Acknowledgements

Learning approach

This learning module provides trainers with the information, specific activities and materials they need to effectively plan and deliver a learning program on 'Partnerships and networks in agricultural research for development'.

The learning module is organized to foster participatory learning and hence takes into consideration the principles of adult and experiential learning. As a result, all sessions are planned to include a short presentation by the trainer not exceeding 30 to 45 minutes followed by an exercise session to help participants relate the presentation (the new knowledge) with what they already know and reflect on possible opportunities and challenges for its application. In doing so, the module encourages participation and provides hands-on, problem-solving experiences and exercises.

The whole module is divided into ten sessions and, including a field visit. Each session is self-contained but logically flows from the preceding session. Therefore, at the outset of each session, the trainer should try to highlight the link between the current, previous and following sessions.

The module also has an evaluation session to be held at the end of the workshop to get feedback from participants that would help in refining the module.

How to prepare for a session

Before starting the session the trainer should read the facilitators guide of each session and make sure that the materials and handouts required for running the session are in place.

Furthermore, it is required to ensure that all training materials listed in the trainer's guide are available, the training hall is well organized and has enough space for the plenary and group sessions.

Target users

This module is aimed primarily at national, regional, international and private sector agricultural researchers, research managers and development practitioners who are concerned and working towards enhancing efficiency that impact agricultural research for development.

Workshop on partnerships and networks in agricultural research for development—Tentative schedule

Day one	Day two	Day three	Day four	Day five
08:30–09:00 Registration	08:30–09:30 Session 5 Partnership design : Key steps and tools Presentation	8:30–9:30 Session 8 Key skills for effective partnership management—Conflict management, negotiation and facilitation	Field work	08:30—10:30 Presentation of field report
09:00–10:30 Session 1 Welcome Official opening Introduction to the workshop Introduction of participants	09:30–10:30 Exercise 5	09:30–10:30 Exercise 8		
10:30–10:45 Health break				
11:30–12:30 Session 2 Changing R&D paradigms Presentation	10:30–11:30 Exercise 5 (cont'd)	10:45–12:00 Exercise 8 (cont'd)	Field work	10:45–11:30 Session 10 Issues, challenges and best practices Presentation
12:30–13:00 Exercise 2	11:30–12:15 Session 6 Partnership implementation and tools. Presentation	12 :00–13:00 Session 9 Monitoring, evaluation and impact assessment of partnerships Presentation		
	12:15–13:00 Exercises 6			11:30–13:00 Exercise 9
13:00–14:00 Lunch break				
14:00–14:45 Session 2 Exercise 2 (cont'd)	14:00–14:30 Exercise 6 (cont'd)	14: 00–15:30 Exercise 9	Field report preparation	14:00–15:00 Exercise 10 (cont'd) 15:00–16:00 workshop evaluation
14:45–15:30 Session 3 Why Partnerships in agricultural research for development Presentation and Plenary Discussion	14:30–15:30 Session 7 Key skills for effective partnership management—Interpersonal relations, feedback and communication Presentation			16:00–17:00 Graduation ceremony and closure
15:30–15:45 Health break		15:45–16:30 Exercise 9 (cont'd)	Field report preparation	
15:45–17:00 Session 4 Partnership typology and key research partnerships Presentation and plenary discussion	15:45–17:00 Exercise 7	16:30–17:00 Preparation for field work		
17:00–17:15 Feedback on the day's activity	17:00–17:15 Feedback on the day's activity	17: 00–17:15 Feedback on the day's activity		

Training workshop evaluation form

Strengthening partnerships and networks in agricultural research for development

Your co-operation in completing this questionnaire will be greatly appreciated. The information you provide will be useful in planning future events and will help resource persons to improve their materials and presentation.

A. General assessment	In general, I would rate the workshop as:
	Excellent
	Very Good
	Good
	Poor
	Very Poor

B. How would you rate this workshop in meeting your expectations?

☐ Partially   ☐ Fully   ☐ Exceeded

Please explain (if the workshop did not fully meet your expectations only)

_____
_____
_____
_____
_____

C1. Were the training objectives clear?

☐ Fully   ☐ Partially   ☐ No

C2. Objectives	The objectives of this workshop are listed below. Please circle on a scale of 1 to 5 if, in your opinion, the objectives have been achieved. The scale ranges from 1 (the objective has not been achieved); to 5 (the objective has been achieved).

Please list specific objectives of the training workshop

1. To discuss ongoing transformation and changing paradigms within the Agricultural R&D Arena.

1	2	3	4	5
☐	☐	☐	☐	☐

2. To gain better understanding of the processes and issues related to design, implementation, management and evaluation of research partnerships.

1	2	3	4	5
☐	☐	☐	☐	☐

3. To discuss the key skills required for effective partnership and management.

1	2	3	4	5
☐	☐	☐	☐	☐

4. To share the experiences and to discuss the principles and good practices for effective partnerships and networks.

1	2	3	4	5
☐	☐	☐	☐	☐

5. To provide a platform for co-learning

1	2	3	4	5
☐	☐	☐	☐	☐

x

D. Was there a good balance between theory and practical work?

☐ Yes   ☐ No

Please explain _____

_____

E. Strengths and weaknesses

Please list what you consider to be three strengths of the workshop.

1.

2.

3.

Please list what you consider to be three weaknesses of the workshop.

1.

2.

3.

F. Features	Very good	Good	Fair	Poor
Accommodation	☐	☐	☐	☐
Meals	☐	☐	☐	☐
Lectures/presentations	☐	☐	☐	☐
Discussions	☐	☐	☐	☐
Papers/handouts	☐	☐	☐	☐
Organization and management	☐	☐	☐	☐
Quality of visual aids	☐	☐	☐	☐
Quantity of visual aids	☐	☐	☐	☐

G. Additional topics   What additional topics would you have liked included in this training?

H. Topics to be eliminated   In your opinion what topics/seminars should be considered for eliminations?

I. How useful is this training for your day to day work? On a scale of one to five (1=not useful; 5=very useful) Please rate the usefulness.

1	2	3	4	5
☐	☐	☐	☐	☐

J. Will you be able to train others in what you learnt.

☐ Yes   ☐ No   ☐ I am not sure

K. How would you rate your knowledge and skills on this subject before and after the training? (Use a scale of 1–5, One being very low to five being very high).

☐ Before training

☐ After training

L. Would you recommend this workshop to your colleagues?

Yes ☐   No ☐

Please explain _____

_____

_____

M. Any additional comments   Please use the space below to write down any additional comments you may have.

Thank you very much for your valuable input.

Registration form

Learning workshop on strengthening partnerships and networks in agricultural research for development

Date:

Last name		First name	

| Function in this meeting | ☐ Participant
☐ Facilitator/presenter
☐ Organizer
☐ Observer
☐ Other _____ | Title | ☐ Dr
☐ Mr
☐ Mrs
☐ Ms
☐ Ing
☐ Other | Sex | ☐ M
☐ F |

Degree	☐ Diploma ☐ BSc ☐ MSc ☐ PhD	Other degree	

| Position (type) | ☐ Policymaker
☐ Senior manager
☐ Middle manager
☐ Researcher
☐ Information specialist
☐ Technician
☐ Other _____ | Position (title) | |
| | | Department | |

Organization	

Name of your immediate supervisor	

Your organization's address	

Telephone no.		Fax. no.	

E-mail	

Trainer's guide

Session 1: Welcome and introduction to the workshop: Objectives and expected output

Purpose	To enhance the capacity of the agricultural researchers to forge effective and efficient partnerships with other relevant stakeholders in the agricultural innovation system for achieving greater impacts
Objectives	At the end of this session participants will be able to, • Understand the objective and expected outputs of the workshop
Resources	• Flipcharts • Copies of handouts 1.1 for each participant • Computer and LCD projector
Time needed	One hour and 30 minutes

Method of facilitation

Activity		Time
Presentation	Distribute handout 1.1 before you start your presentation	1 hour and 25 minutes
	Give an introductory presentation about the workshop goals, objectives, duration and learning procedure	
	Make sure that participants are clear about what is presented	
Transition	Make closing remarks and transit to the next session	5 minutes

Session 1: Welcome and introduction to the workshop: Summary of overheads

1.1

<div style="border:1px solid black; padding:1em;">

Design, implementation, management, and assessment of partnerships and networks in agricultural research for development

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</div>

1.2

<div style="border:1px solid black; padding:1em;">

Workshop objectives
and expected output

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</div>

1.3

<div style="border:1px solid black; padding:1em;">

Purpose

- To enhance the capacity of the agricultural 'researchers' to forge effective and efficient partnerships with other stakeholders in the AIS for achieving greater impacts

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</div>

1.4

Objectives

- To discuss ongoing transformation and changing paradigms within the agricultural R&D arena

- To gain better understanding of the processes and issues related to design, implementation, management and evaluation of research partnerships

- To share the experiences and to discuss the principles and good practices for effective partnerships and networks

- To provide a platform for co-learning

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1.5

Expected outputs

- Participants with:
    - better understanding of the context for agricultural R&D
    - better understanding of the processes, skills and issues related to planning, implementation and M&E of research partnerships projects
    - knowledge to achieve greater impacts from the current partnership activities

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1.6

Expected outcome

- Enhanced capacity to design, implement, manage and assess partnership projects (Immediate)

- Improved understanding and better relationships between the partner institutes (Intermediate)

- Greater impacts of partnership projects in agricultural R&D (Ultimate)

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Guidance

Interactive mode

Co-learning

'Best practices' vs. 'best fit'

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Not this

Not this

But this
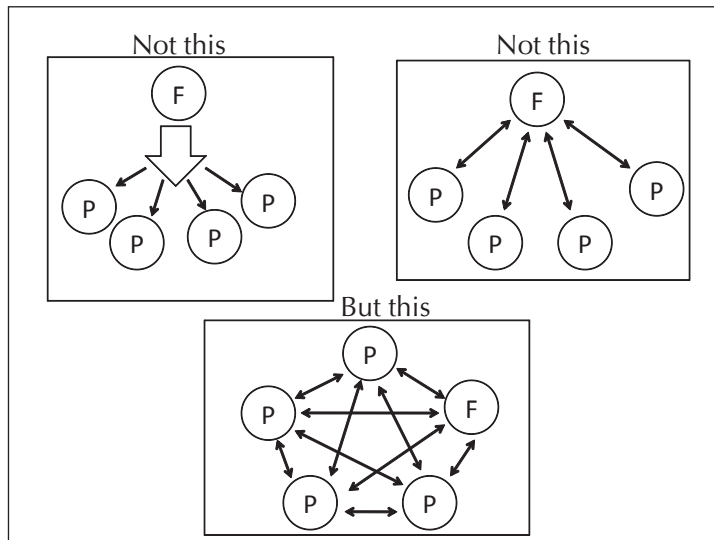
Participant action plan approach
(PAPA) and its relationship with
experiential learning cycle

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1.10

Experiential learning cycle

Experience

Application

Process

Generalization

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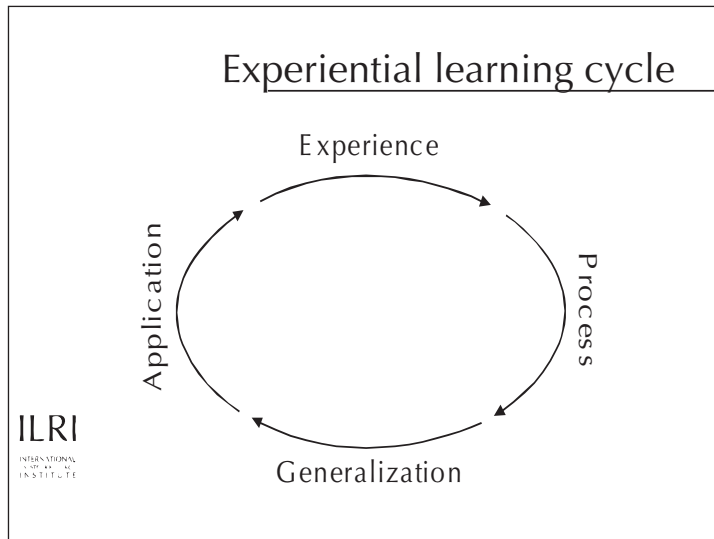
1.11

Why PAPA?

- Systematic and continuous planning of future activities by participants as workshop evolves
- Formal link between participants and resource persons for follow -up activities
- Further involvement of participants in improving the learning workshop content after training event

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1.12

Uses of PAPA

- Assess transfer of skills to workplace
- Determine impact of change introduced
- Identify problems of implementation
- Provide information to improve the workshop content and approach
- Evaluate the most useful parts/quality of the workshop

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Steps of PAPA

Planning for PAPA → In-course activities

Reporting

Follow-up activities

Analysis and conclusions

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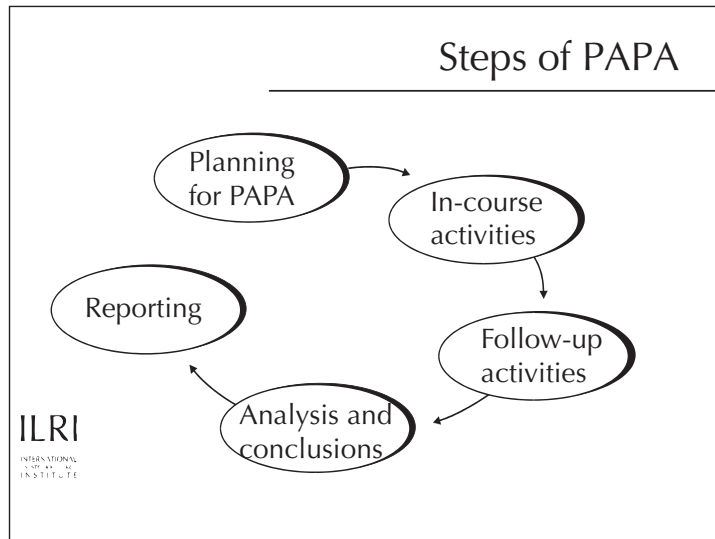
In-course activities

Develop an action plan

Procedure:

- prepare a preliminary list of action items
- confer with partner
- finalize and prioritize list of action item
- report individual action plans
- make copies for trainees and facilitators

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Follow-up activities

Facilitators | Participants

- Formulate and send questionnaire
- Analyze and interpret data
- Prepare report
- Improve workshop content and approach if necessary
- On the basis of information, assess the impact

- Implement the planned action items

- Fill out and return questionnaire

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1.16

Rules of behaviour/
code of conduct

?

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1.17

Thank you!

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Session 1: Welcome and introduction to the workshop: Summary of presentation

Participant action plan approach (PAPA)

As part of this training, you will do an exercise designed to help you apply what you have learned. You may not find everything taught in the training appropriate to your specific situation. In some cases, you may want to adapt some of the materials to fit your particular job or work setting.

The participant action plan approach (PAPA) was developed by the United States Office of Personnel Management with the objective of following up the results of a training workshop. PAPA is an easy-to-use method for determining how you have changed your job behaviour as a result of your participation in a training course or program. The application of new knowledge and skills acquired during the training events is the most important objective of the training program. Application is the last phase of the Experiential Learning Cycle (see Figure below), which is the basic theoretical model that ISNAR uses in training events to ensure learning during the workshop.

Experiential learning cycle
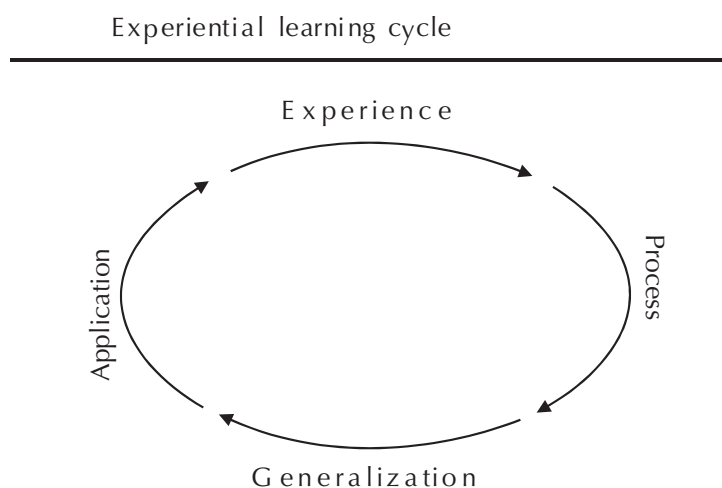
The method generates information that enables the trainers to answer questions such as the following:

1. What happened on the job as a result of the learning?
2. Are changes that occurred the ones intended by those providing the learning?
3. What may have interfered with participants' trying to use on the job what they learned in the learning?

With the information from PAPA, learning facilitator (as evaluators) can also decide if the learning workshop should be modified, and in what ways. The participants can use the information to determine the worth of the workshop and make informed decisions about its future.

Workshop activities

The method consists of two stages. At the beginning of the learning workshop, you are introduced to the idea of an action plan and are asked to consider throughout the workshop tasks that you might want to do differently when you return to your job as a result of the training. Then, at the end of the training you are asked to write an action plan. This is a list of new, workshop-related activities that you plan to try when you return to your job.

Follow-up activities

At a scheduled time after the workshop (usually several months), you will be interviewed or contacted by questionnaire. You will be asked which of your planned activities you have been able to implement up to that time, and what other new activities you have attempted as a result of attending the learning workshop. You will also be asked what effect your new activities have had on your work environment, and what problems, if any, you encountered in trying them.

PAPA—First stage

Ideas for action items

Workshop title: Design, implementation, management, and assessment
                    of partnerships and networks in agricultural research for
                    development

Date/venue:

Name: _____

Organization:

Ideas I would like to try when I return to work at my research institute, based on
what I have learned in this learning workshop.

_____

_____

_____

_____

_____

_____

_____

Name:

Institution: _____

Area of research:_____

I feel motivated to deal with issues related to impact assessment when: _____

During this workshop I expect:_____

_____

My major expectation of this workshop is:_____

_____

The facilitator will request you to introduce yourself through this information to the
audience.

Guidelines for writing action items

The most important characteristic of an action item is that it is written so you—or someone else — will know when it occurs. One way to help achieve this is to use specific action verbs. The following is a list of such verbs:

	Mental skills	Physical skills	Attitude
State	Demonstrate	Execute	Choose
Name	Discriminate	Operate	Volunteer
Describe	Classify	Repair	Allow
Relate	Generate (a solution)	Adjust	Recommend
Tell	Apply (a rule)	Manipulate	Defend
Write	Solve	Handle	Endorse
Express	Derive	Manufacture	Cooperate
Recount	Prove	Calibrate	Accept
	Analyse	Remove	Decide
	Evaluate	Replace	Agree

As you are working on the action items, ask yourself, is the behaviour described observable? Will it be obvious to others or me when it occurs?

The following are examples of action items. As a result of participating in this learning workshop I plan to:

1. Describe this workshop to my superior within a week of returning to the job. As a result, my supervisor will know the contents of the learning workshop, how I can apply what I learned to the job, and whether or not others in the organization will attend.
2. Handle every piece of paper only once to improve the management of my own time. I will begin as soon as I am back on the job.
3. Apply the principles of performance analysis to the problem of incomplete or tardy case reviews in my research institute and request assistance from the learning workshop unit as needed. As a result I will know whether training is required and/or if some other solution is appropriate. I will begin within a month after returning.
4. Talk to my employees directly about a problem which arises, rather than avoiding a confrontation; discuss the situation in order to reach mutual understanding.
5. Within two weeks after I return, I will implement a _____ research management procedure/process in my research institute.

Implementing the action item

As you proceed to develop action items, be sure to think of yourself in your actual job setting, implementing the activity you have described.

If you have an idea of when you will be able to begin implementing the action items, make a note of it. Three categories can be chosen: 1) within two months, 2) after two months, and 3) as the opportunity arises (you do not know when the opportunity to try this item will occur).

You may find that you cannot try out your ideas exactly as you envisioned them, or that it is difficult to be specific. That is all right. It is still important to write out your intent, as a tentative plan, knowing you may have to modify it once you are back on the job. Try to develop at least two or three action items. One may not work, so it is handy to have others.

PAPA—Second stage

Ideas for action items

Workshop title: Design, implementation, management, and assessment
of partnerships and networks in agricultural research for
development

Date/venue:

Name:

Organization:

Action items	Start to implement action plan (check if known)		
I plan to:	Within 2 months	After 2 months	As opportunity arises

Participant action plan approach

Supervisor's contact address

Name	
Organization/centre	
Name of immediate superior	
Title of immediate superior	
Address	
Tel No.	
Fax No.	
E-mail	

Cards for the interactive exercise

Note to facilitator:

Each of the following forms has a different question for participants. Photocopy on coloured paper and be sure to cut the cards as indicated before session 1 begins.

....Cut here✂.........................…..…...........................

Name: _____

Institution: _____

Area of research:_____

When I am a member of an interdisciplinary team and have to deal with controversies over impact assessment methods, I feel anxious because:_____

_____

However, my reaction is: _____

My major expectation of this workshop is:_____

_____

The facilitator will request you to introduce yourself through this information to the audience.

.... Cut here ✂........................... ....

Name: _____

Institution: _____

Area of research:_____

If I were to describe myself as a researcher in one sentence, I would say: _____

_____

because:_____

My major expectation of this workshop is:_____

_____

The facilitator will request you to introduce yourself through this information to the audience.

....Cut here✂.........................…..…...........................

Name: _____

Institution: _____

Area of research:_____

My best professional quality is:_____

_____

This helps me: _____

My major expectation of this workshop is:_____

_____

The facilitator will request you to introduce yourself through this information to the audience.

....Cut here✂...........................…....…...........................

Name: _____

Institution: _____

Area of research:_____

When I am carrying out an impact evaluation in a multidisciplinary team, I perceive myself as a person who_____

_____

because:_____

My major expectation of this workshop is:_____

_____

The facilitator will request you to introduce yourself through this information to the audience.

....Cut here✂...........................…....…...........................

Name: _____

Institution: _____

Area of research:_____

My perception of modern-day demands for impact evaluation is that:

_____

because:_____

My major expectation of this workshop is:_____

_____

The facilitator will request you to introduce yourself through this information to the audience.

....Cut here✂............................…...….........................

Name: _____

Institution: _____

Area of research:_____

I think that my peers in impact evaluation projects perceive me as: _____

because:_____

My major expectation of this workshop is:_____

_____

The facilitator will request you to introduce yourself through this information to the audience.

....Cut here✂............................…...….........................

Name: _____

Institution: _____

Area of research:_____

When I am leading an interdisciplinary team in charge of an impact evaluation project, I feel that:

_____

because: _____

My major expectation of this workshop is:_____

_____

The facilitator will request you to introduce yourself through this information to the audience.

....Cut here✂.................................…….….................................

Name: _____

Institution: _____

Area of research:_____

People who really get to know me as a researcher who believes in impact evaluation projects say:

_____

because:_____

My major expectation of this workshop is:_____

_____

The facilitator will request you to introduce yourself through this information to the audience.

....Cut here✂...........................…….…..........................

Name: _____

Institution: _____

Area of research:_____

I think that my scientific and management skills in dealing with impact evaluation issues are:

_____

because: _____

My major expectation of this workshop is:_____

_____

The facilitator will request you to introduce yourself through this information to the audience.

....Cut here✂...........................…....…........................

Name: _____

Institution: _____

Area of research:_____

I like to learn about monitoring, evaluation, and impact assessment concepts, methods, and approaches when: _____

_____

because:_____

My major expectation of this workshop is:_____

_____

The facilitator will request you to introduce yourself through this information to the audience.

....Cut here✂...........................…....…........................

Name: _____

Institution: _____

Area of research:_____

As a researcher who believes in impact assessment, I like myself when:_____

_____

and I dislike myself when: _____

My major expectation of this workshop is:_____

_____

The facilitator will request you to introduce yourself through this information to the audience.

....Cut here✂...........................…....…........................

Name: _____

Institution: _____

Area of research:_____

When I am dealing with the complexity of estimating rates and return at farm level, I feel irritated when: _____

_____

because:_____

My major expectation of this workshop is:_____

_____

The facilitator will request you to introduce yourself through this information to the audience.

....Cut here✂...........................…....…........................

Name: _____

Institution: _____

Area of research:_____

While learning about methods and strategies for evaluating impact, I prefer to discuss my thoughts and doubts with:_____

_____

because: _____

My major expectation of this workshop is:_____

_____

The facilitator will request you to introduce yourself through this information to the audience.

....Cut here✂............................…...…........................

Name: _____

Institution: _____

Area of research:_____

When I am engaged in a participatory evaluation, I like myself when: _____

_____

however:_____

My major expectation of this workshop is:_____

_____

The facilitator will request you to introduce yourself through this information to the audience.

....Cut here✂............................…...…........................

Name: _____

Institution: _____

Area of research:_____

When I am among new peers whom I perceive to be knowledgeable about monitoring, evaluation, and impact assessment, I:_____

_____

because: _____

My major expectation of this workshop is:_____

_____

The facilitator will request you to introduce yourself through this information to the audience.

....Cut here✂...........................…..……..........................

Name: _____

Institution: _____

Area of research:_____

When I participate in a group discussion on results of impact assessment, I tend to be: _____

_____

This is why I expect my team members to be:_____

My major expectation of this workshop is:_____

_____

The facilitator will request you to introduce yourself through this information to the audience.

....Cut here✂...........................…..……..........................

Name: _____

Institution: _____

Area of research:_____

I am sure I could do a better job evaluating impacts (production and institutional) if:_____

_____

because: _____

My major expectation of this workshop is:_____

_____

The facilitator will request you to introduce yourself through this information to the audience.

....Cut here✂..............................…...…….........................

Name: _____

Institution: _____

Area of research:_____

As a research manager of planning, monitoring, and evaluation activities, I dislike being frustrated. That
is why I _____

_____

to improve my morale.

My major expectation of this workshop is:_____

_____

The facilitator will request you to introduce yourself through this information to the audience.

....Cut here✂...........................…...…….........................

Name: _____

Institution: _____

Area of research: _____

During this exercise to share the participants' experience and feelings while working with monitoring, evaluation, and impact assessment issues, I feel: _____

_____

because: _____

My major expectation of this workshop is:_____

_____

The facilitator will request you to introduce yourself through this information to the audience.

....Cut here✂.........................…....…..........................

Name:

Institution:

Area of research:

While participating in this workshop on monitoring, evaluation, and impact assessment I promise myself: _____

_____

because: _____

My major expectation of this workshop is:_____

_____

The facilitator will request you to introduce yourself through this information to the audience.

....Cut here✂.........................…....…..........................

Note: You can use the workshop objectives, what you learn during the workshop, handouts, conversations with participants and facilitators etc. to come up with ideas.

Trainer's guide

Session 2:   Challenges of the R&D systems and changing paradigms

Purpose	To enhance the capacity of agricultural researchers to forge effective and efficient partnerships with other relevant stakeholders in the agricultural innovation system for achieving greater impacts
Objectives	At the end of this session participants will be able to: • List and explain the changing paradigms in research for development • Identify and describe the emerging challenges of agricultural research for development systems
Resources	• Flipcharts • White board • Blank transparencies • Flipchart and white board markers • Copies of handouts 2.1, 2.2, 2.3 and 2.4 for each participant • Computer and LCD projector • Overhead projector
Time needed	Two hours and 15 minutes

Method of facilitation

Activity		Time
Presentation	Distribute handout 2.1 (presentation slides) before you start your presentation	45 minutes
	Give a presentation on challenges of the R&D systems and changing paradigms	
	Allow some time for questions to make sure that participants understand what is presented	
	Distribute handout 2.2 (presentation text) to supplement your presentation	
Exercise	Distribute handouts 2.3 and 2.4 for exercise 2 Reflecting on contemporary scenario of agricultural research for development	85 minutes
	Ask a volunteer to read the exercise	
	Ask participants to answer the questions in groups	
	Remind them the time allotted to the exercise	
	Remind them that there will be a presentation and discussion session of the group discussion	
Transition	Make closing remarks and transit to the next session	5 minutes

Session 2:   Challenges of the R&D systems and changing paradigms: Summary of overheads

2.1

Challenges of the R&D systems

and

changing paradigms

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2.2

Objectives of the session

- List and explain the changing paradigms in research for development

- Identify and describe the emerging challenges of agricultural research for development systems

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2.3

Major goals of agricultural research

- Produce agricultural technologies to contribute to rapid economic growth

- Provide options for adaptation to changing global economy, changing policies, and emerging environmental concerns

- Contribute to the reduction of poverty by increasing the supply of staples

- Increasing international competitiveness of national economies

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Guiding principles of agricultural research for development

- Innovation Systems Perspective (ISP)
- Value Chain Approach (VCA)
- Impact Orientation (IO)
- Research for Development (R4D)

Complementary and mutually reinforcing

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Changing context

- Ongoing transformations
- Changing paradigms
- Emerging challenges

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Reform agenda within the R&D arena

- Redefinition of role of government in agricultural R&D
- Decentralization/privatization of agricultural R&D activities
- Broader and active stakeholder participation—pluralism in service provision, networks and partnerships
- New funding arrangements
  - Separation of financing from service provision and research execution
  - Changing the funding base to competitive funding
- Orientation of R&D to be more outward looking, client oriented and impact driven
- Embracing 'Systems' perspectives

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2.7

Reform agenda (cont'd...)

- Increased recognition of cross-sectoral linkages
- Globalization of research and emerging regional and continental bodies
- Increased use of networks and partnerships
- Commercialization of smallholder agriculture
- Changing attitude and mindset of change agents

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2.8

Exogenous trends contributing to the reform process

- Changes in the political and socio-economic context
- Changes in the market context
- Changes in the demand for R&D services
- Changes in research technologies, methodologies and approaches
- Changes in the organizational context

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2.9

Emerging agri-food systems

- Massive increase in food moving across national borders
- Rapid rise and economic concentration of supermarkets
- Creation of private standards in addition to public standards
- New technologies to extend shelf-life of produce
- Non-price competition among supermarket chains
- Increased differentiation of food products by class
- New forms of relationships between suppliers and buyers

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2.10

Paradigm shifts in agricultural R&D

- Led by:
  - Approaches for technology development
  - Framework for organizational analysis
  - Changing expectations

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2.11

Approaches to agricultural research

- Traditional linear model for research and extension
- Farming systems perspective (OFR/FSP)
- Participation/participatory research methods
- Action research
- Rural livelihoods
- IAR4D*
- Agrifood systems/value chain*
- Positive deviance

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2.12

Approaches to agricultural research (cont'd…)

- Knowledge development, dissemination and use continuum
- Doubly green revolution
- Rainbow revolution
- Knowledge quadrangle—participatory innovations, information, knowledge and education quadrangle with ICT playing a critical role

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2.13

Organizational analysis

- NARIs
- NARS (loose conglomerate of agencies and actors involved in agricultural research)
- AKIS (R,E,T in one system; knowledge triangle)
- Innovation systems perspective*

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2.14

Innovation system

Innovation, innovation system and

innovation systems perspective

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2.15

Application of systems thinking in agriculture

- Framework for Technology Development and Dissemination (TDD)
- Organizational analysis within R&D

Both are interlinked

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2.16

Systems thinking and its application in agriculture

Framework for technology development

- Cropping systems
- Farming systems
- Household production system
- Farming systems research (FSR) (Focus on research)
- Farming systems research and extension (FSR/E) (Focus on Research & Extens)
- Farming systems approach (FSA) Focus on research, ext. and training
- Farming systems development (FSD) R+E+T+Policy + Institutions
- Agricultural research for development (AR4D)

Framework for organizational analysis

- NARIs-Focus on generation of knowledge (public sector research institutes only)
- National systems framework
  - National agricultural research system (NARS)
  - National agricultural extension system (NAEs)
  - National agricultural Education and training systems (NAES)
- Agricultural knowledge and information system (AKIS)
  • Focuses on knowledge generation and diffusion

Agricultural innovation system (AIS) Focus on knowledge generation, diffusion and application

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2.17

Factors contributing to adoption of ISA in agriculture

A number of factors contributed to the adoption of AIS:

- Successful application of the concept in the industrial sector

- Inadequacy of the existing framework to be all inclusive in terms of coverage

- Multiple sources of innovation model

- Inadequacy of the linear model to explain the process of innovation

- Increase demand for demonstrated developmental impact–impact orientation

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2.18

Innovation vs. invention

- Invention—delivers new technology/knowledge as solution to a problem—things new to the world

- Innovation—economically successful use of invention is innovation, delivers social and economic change

- Knowledge cannot be regarded as innovation unless it is transformed into products and processes that have social and economic use

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2.19

Innovation

- Innovation
  - In its broadest sense, innovation covers the activities and processes associated with the generation/production, distribution, adaptation and use of new technical, institutional, organizational and managerial knowledge

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2.20

Innovation

- Innovation
  - Deals with product innovation, process innovation, management, organizational and institutional innovation and service delivery innovation
  - Two important factors are knowledge and networking
    - Value of knowledge increases with its use, and exchange can only be realised in a cooperative environment

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2.21

Organizations and institutions

- Organizations are entities created by individuals to support the collaborative pursuit of specified goals. Formal organization is that kind of cooperation that is conscious, deliberate and purposeful
- Institutions are the 'rules of the game' which prohibit, permit, or require certain actions. Whether formal or informal, they are recognized and generally followed by members of the community

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Innovation system

- An innovation system is:
  - a group of organizations and individuals involved in the generation, diffusion, adoption and use of new knowledge and their actions and interactions
  - the context and institutions that govern the way these interactions and processes take place
  - associated learning
- Not a theory, but an organizing principle
- Can be defined at different levels
- It is an analytical construct

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National Innovation System (NIS) (innovation ecology)

- The network of organizations in the public and private sectors whose activities and interactions initiate, import, modify and diffuse technologies (Freeman 1997)

- Those institutions that affect the process by which innovations are developed, delivered and adopted (laws, regulations, customs, norms)

- Incorporates actors, processes as well as products

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National innovations systems (cont'd...)

- Reveals that R&D organizations are one type of knowledge agents in a larger system

- Need for multiple roles for R&D organizations

- Importance of institutions and framework conditions

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2.25

Agricultural Innovation System (innovation ecology)

- A collaborative arrangement bringing together several organizations and individuals working towards a desired change in agriculture can be called agricultural innovation system (AIS)

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2.26

Agricultural innovation system

A dynamic processes of interacting embedded in specific institutional and policy contexts

Demand domain
- Consumers of food and food products in rural and urban areas
- Consumers of individual raw materials
- International commodity markets
- Policy-making process and agencies

Enterprise domain
Users of codified knowledge, producers of mainly tacit knowledge
- Farmers
- Commodity traders
- Input supply agents
- Companies and industries related to agriculture, particularly agroprocessing
- Transporters

Intermediary domain
- NGOs
- Extension services
- Consultants
- Private companies and other entrepreneurs
- Farmer and trade associations
- Donors

Research domain
Mainly Producing codified knowledge
- National and international agricultural research organizations
- Universities and technical collages
- Private research foundations Sometimes producing codified knowledge
- Private companies
- NGOs

Support Structures
- Banking and financial system
- Transport and marketing infrastructure
- Professional networks, including trade and farmer associations
- Education system

2.27

Agricultural innovation systems include

- Traditional sources of innovation (ITK)

- Modern actors (NARIs, IARCs)

- Private sector including agro-industrial firms and entrepreneurs (local, national and multinational)

- Civil society organizations (NGOs, farmers and consumer organizations, pressure groups)

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2.28

IS of a commodity chain (Innovation Ecology)

Enabling environment
Political stability, law and order, infrastructure,
Governance favorable micro-macro and
sectoral policies, etc.

Agro-industry
(Input supply)

Agricultural
production
(Farm production)

Agro industry
(Product marketing)
Processing
Value adding
Marketing

Facilitating Institutions
Policies, legal framework, market, information,
quality control Research, extension, training,
credit, etc.)

Facilitating Services
Transport, storage, packaging, facilitating,
equipment, import and export, communication,
promotion, etc.

2.29

Intervention based innovation systems

- An intervention-based innovation system incorporates
  - the invention system, as well as
  - the complementary economic processes required to turn invention into innovation and subsequent diffusion and utilization
- intervention-based Innovation systems do not occur automatically
  - it is the problem situation that defines a particular innovation opportunity

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2.30

Intervention based innovation systems (cont'd…)

- Intervention-based innovation systems are created for a purpose
- they will change in content and patterns of interaction as the problem situation evolves and
- they are constructed at mico- and macro levels
- Although the IS can be defined at different levels (national, sectoral, commodity and problem/intervention), the most relevant innovation system is the one that is constructed to address a particular problem, i.e. intervention-based

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2.31

Innovation systems perspective

- Using the innovation lens in analysing critical constraints; identifying, implementing and assessing appropriate interventions and; subsequent utilization of knowledge generated

- Suggests the analysis of three elements
  - Components (organizations and actors)
  - Relationships and interactions (institutions)
  - Competencies, functions and result of such interactions

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2.32

Key features of ISP

- Focus on innovation as its organizing principle
- Makes the distinction between 'organizations' and 'institutions' explicit
- Learning and role of institutions are critical
- Partnership and networks are integral parts
- Escapes the polarized debate 'demand driven' vs. 'supply push'

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2.33

IAR4D

- A new approach to help research contribute more effectively and efficiently to poverty reduction and sustainable NR use

- To mainstream a new way of doing business that ensures that research does not only lead to knowledge and publications, but also and most of all contributes to change and innovation for the betterment of people, while also preserving the natural resource base for future generations

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2.34

The 4 pillars of ARD
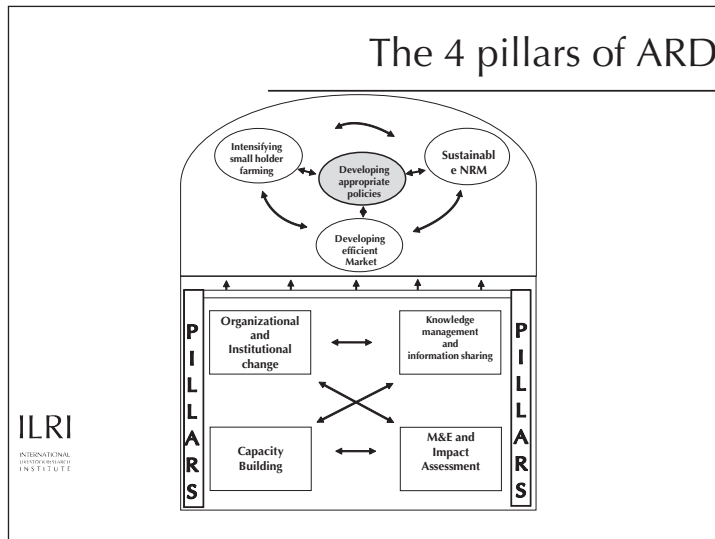
2.35

Major thrusts of IAR4D approach

- Set of principles for conducting research for development

- New research agenda that addresses interaction between NRM, production systems and agricultural markets and policies

- Institutional change for new partnerships involving all stakeholders in the agricultural innovation system

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2.36

Key steps in AR4D procedure
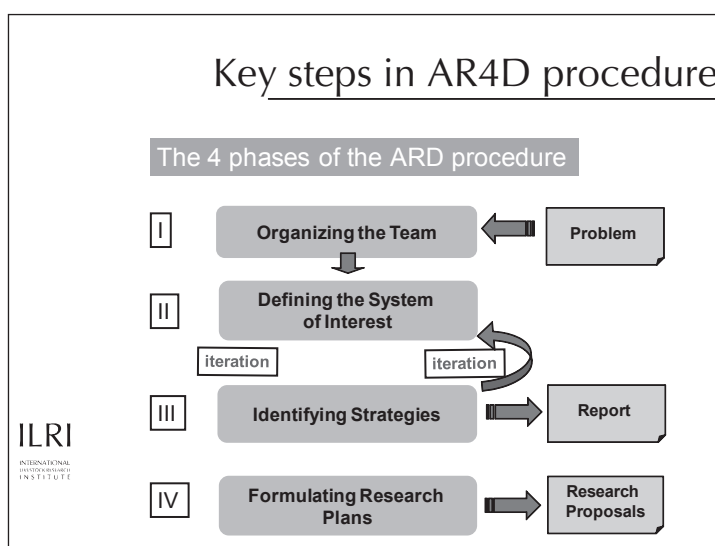
Value chain/commodity chain/agrifood chain

- A value chain describes the full range of activities which are required to bring about a product or service from design through the different phases of production, delivery to final consumers, and final disposal after use

- From 'hoe–fingers'

- From 'plough–fork'

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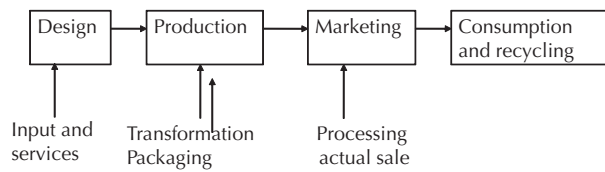
A simple value chain has four basic links

| Design | → | Production | → | Marketing | → | Consumption and recycling |

Input and services — Transformation Packaging — Processing actual sale

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Agricultural food chain: Value adding

Consumer

Feedback

Distribution, Exporting

Value

Marketing

Processing and packaging

On-Farm Production

Input
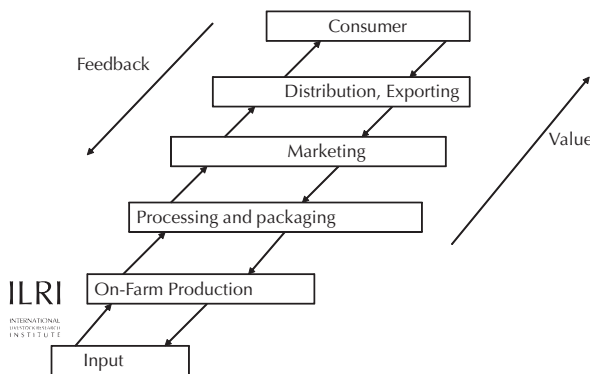
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2.40

Why is value chain analysis important?

- Value chain analysis plays a key role in understanding the need and scope for systemic competitiveness—growing division of labor, global dispersion of production of components
- Efficiency in production is only a necessary condition for successfully penetrating regional and global markets
- Entry into the various markets: national, regional, and global requires an understanding of dynamic factors within the whole value chain
- Commercialization of smallholder production system and market orientation
- To reap the maximum benefit it is important to understand the nature, structure and the dynamics of the value chain

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2.41

Value chain analysis (cont'd…)

- In the real world, value chains may be much more complex
- Intermediate producers may feed into a number of value chains, e.g. the forestry, timber

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2.42

The forestry, timber and furniture value chain

Extracted from Kaplinsky and Morris (2000).

2.43

Industry value chain

Primary production (farming) — Transport — Processing — warehousing and distribution — Retail and marketing — End Consumer

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2.44

Industry value chain

Available Margin

Primary production (farming) — Transport — Processing — Warehousing and distribution — Retail and marketing — End consumer

Innovative methodologies to process at the farm removes the need to transport 'raw' produce

New technologies reduce the cost of processing

Efficient retailing streamlines the cost of selling to the end consumer

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2.45

Emerging challenges

- Global financial crisis

- Emerging food and energy crisis

- Greater concern for the environment

- Climate change

- Trade, market liberalization and emerging agrifood systems

- Emerging diseases

- Growing need for inter-sectoral linkages

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2.46

Emerging challenges (cont'd…)

- Changing expectations from science, technology and innovation

- Underinvestment in agriculture and agricultural research

- Technological advances in biotechnology and ICT

- Globalization of private agricultural research and innovation

- Meeting commitments and targets

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2.47

Main messages

- Approach to research is changing

- What constitutes R4D systems (organizations and institutions) has changed

- Emerging challenges require R4D systems to be dynamic and flexible

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2.48

Thank you!

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Session 2: Challenges of the R&D systems and changing paradigms: Summary of presentation

2.1 Introduction

During much of the 1970s and 1980s, investments in agricultural research were largely motivated by concerns about growing population, a finite resource base, import substitution and food security at both global and national levels that required a clear focus on increased food productivity. In the 1980s, natural resources management and environmental preservation received much higher priority in the research agenda, as well as food safety in the industrialized countries. In the recent past, with the advancement of the Millennium Development Goals (MDGs), poverty alleviation has come to the forefront as one of the developmental goals. At present the major goals of agricultural research are: to produce agricultural technologies to contribute to rapid economic growth; to provide options for effective adaptation to a rapidly changing global economy and changing policies; to address emerging environmental concerns and to contribute to the reduction of poverty (and food and nutritional security) by increasing the supply of staple products and by increasing the international competitiveness of national economies (Rajalahti et al. 2008).

For a considerable period the public sector research investment and research policy has focused on national agricultural research organizations/institutes (NAROs/NARIs). In this paradigm, public funds were provided as a block grant, usually through the Ministry of Agriculture, to a centralized research department or institute who then set research priorities and executed research through a network of research centres under the control of NARO/NARI. In the 1990s, this paradigm has been challenged, since it failed to consider a variety of other public and private organizations that are involved in research policymaking and research execution (Byerlee 1997).

The research approach was also challenged as the traditional approach (often referred to as the top–down approach) to agricultural research and development was not having significant impact on the development of small-scale agriculture. The researchers and development practitioners argued that an appropriate technology could only be developed if it was based on full knowledge of the existing farming system and livelihood system, and technologies should be evaluated not only in terms of their technical performance in specific environments, but also in terms of their conformity with the objectives, capabilities and socio-economic conditions of the target group of farmers. As a response to these challenges, there is a gradual evolution of the central source model of innovation of the 1970s and 1980s to the current agricultural innovation systems approach. This evolution occurred as a result of the identified weaknesses of the predominant paradigm of the time, and the emerging challenges and needs of the society.

Over the years, the agricultural R&D arena has seen a number of paradigm changes and transformations. In this chapter, first we will discuss the reform agenda within the agricultural R&D arena, then the paradigm shifts and the changes in the global food systems. Currently, the knowledge generation, dissemination and the utilization process within the agricultural sector is guided by four complementary and mutually reinforcing principles. They are the innovation systems perspective, value chain approach, impact orientation and research for development. These concepts are briefly discussed so that the reader is familiar with these developments and effectively use this understanding in designing and implementing research. However, it is worth noting that impact orientation and research for development are implicit in the concept of innovation.

2.2   Reform agenda within agricultural R&D

The policy and institutional context within which agricultural research and innovation occurs have changed dramatically over the years. Rapid changes continue to take place in the structure and authority of governments, the global economy, the structure of the farming sector and in the global and local food industries. The institutional landscape is also changing dramatically with the third sector (such as non-governmental organizations, farmer organizations and civil society organizations) playing an important role in agricultural R&D.

The ongoing reform agenda within the agricultural R4D includes:

- Orientation of research to be more systems based, outward looking, client oriented and, impact driven
- Redefinition of the role of government
- Decentralization and privatization of agricultural R4D
- Broader and active stakeholder participation and pluralism in service provision
- Increased recognition of cross-sectoral linkages
- Globalization of research and emergence of regional, continental and global coordinating bodies
- Increased use of networks and partnerships
- New funding arrangements including separation of financing from service provision and research execution
- Commercialization and market orientation of smallholder agriculture and
- Changed attitude and mindset of the change agents (research, extension and other service providers)

Given the sweeping reforms that are taking place, the R&D systems are facing a transition period in which they will need to restructure themselves, confront new demands, and adjust to new political, scientific, institutional and economic environment.

2.3   Emerging agrifood system

The last several decades have also seen a profound change in the nature of the global food system. These changes include:

- Massive increase in the volume of food moved across national borders (both formal and informal)
- Rapid rise in supermarkets globally
- Economic concentration in the super market sector
- Creation of a multiplicity of private standards, often built on top of public standards
- Rise in third party certification of food production and entire supply chain
- Development of new technologies designed to extend shelf life of agricultural products
- Shift towards non-price competition among super market chains
- Greater differentiation of food products by class and
- Development of new forms of (contractual) relationships between suppliers and buyers

These changes offer both challenges and opportunities to the smallholder producers. In some instances they can force small producers to exit certain markets, contributing to greater poverty and inequality. On the other hand if the smallholder farmers respond positively, this can offer new sources of income and a marked improvement in the quality and safety of food.

2.4   Paradigm shifts in agricultural R&D

Agricultural research and development has been undergoing paradigm shifts over the years which is in fact affecting their organizational structure, management style, as well as the way the research is done. We have seen a shift from a single commodity and mono-disciplinary base to an innovation system and a multidisciplinary based approach together with a change from top–down research model to participatory approach to research for development.

The system thinking is not new to agricultural research and development. It has been applied since 1970s when a significant shift in paradigm occurred by moving away from the top–down, linear, technology development and transfer model to the introduction of Farming Systems Approach (FSA). Since then, the application has evolved gradually to the various participatory approaches to the current innovation systems approach. Now the use has been extended to the application in the organizational analysis resulting in the 'Agricultural Innovation System' concept. This evolution is traced in Figure 1, and it is the result of the changing needs and expectations of the society.

The origin and application of the Innovation systems perspective (ISP) in agricultural research can be traced to a number of sources. These include: the successful application of the concept in the industrial sector of the developed economies, the multiple source of innovation model for agricultural research and technology promotion as suggested by Biggs (1989); the inadequacy of the linear model to explain the actual process of innovation in the real world; the inadequacy of the existing organizational frameworks to be all inclusive in terms of the coverage of the various actors; and the increasing demand for demonstrated developmental impacts and the expanded mandate and expectations from the R&D communities (Research for Development).

The main attraction of Innovation Systems Framework stems from the fact that: it recognizes innovation as a process of generating, accessing and putting knowledge into use; explicitly recognizes the interactions and knowledge flows among different actors in the process; emphasizes that institutions are vital in shaping the nature of these innovations and learning as a means of evolving new arrangements specific to local contexts (Sulaiman 2008).

2.4.1   Innovation, innovation system (IS) and innovation systems perspective (ISP)

In the literature, different authors have defined the term innovation differently (ECm 1995; Drukker 1998; OECD 1999; Quintas 1977 cited in ISNAR 2001). The simplest definition is 'anything new introduced into an economic or social process' (OECD 1999). The most useful definition of innovation in the context of R&D is 'the economically successful use of invention '(Bacon 1998). Here invention is defined 'as a solution to a problem'. This allows us to make the distinction between knowledge and innovation. Taking a brilliant idea through, on an often painful journey to become something which is widely used, involves many more steps and use of resources and problem solving on the way.

Framework for technology development	Framework for organizational analysis

Cropping systems

↓

Farming systems

↓

Household production system

↓

Farming systems research (FSR) (focus on research)

↓

Farming systems research and extension (FSR/E) (focus on research and extension)

↓

Farming systems approach (FSA) (focus on research, extension and training)

↓

Farming systems development (FSD) R + E + T + policy + institutions

↓

Agricultural research for develoment (AR4D)

NARIs—Focus on generation of knowledge (public sector research institutes only)

↓

National systems framework

– National Agricultural Research System (NARS)
– National Agricultural Extension System (NAEs)
– National Agricultural Education and Training systems (NAES) (focus on generation of knowledge)

↓

Agricultural Knowledge and Information System (AKIS)

• Focuses on knowledge generation and diffusion

Agricultural innovation system (AIS) (focus on knowledge generation, diffusion and application)

Source: Anandajayasekeram et al. (2005).
Figure 1. *Evolution of systems thinking and its application in agriculture.*

In the past, science and technology generation were equated with innovation. It is crucial to recognize that innovation is strongly embedded in the prevailing economic structure, which largely determines what is going to be learned and where the innovations are going to take place. Moreover, such innovations are not limited to technological (both product and process) innovations, but also include institutional, organizational, managerial and service delivery innovations. This also emphasizes the notion that the responsibility of agricultural research organizations does not end with the production of new technology or knowledge. They can claim success when their 'innovations' are being disseminated, adopted and used (Chema et al. 2001).

Innovations are new creations of economic significance. They relate to the production of new knowledge and/or new combination of existing knowledge. The critical point to note is that this knowledge cannot be regarded as innovation unless it is transformed into products and processes that have social and economic use (Edquist 1997). This transformation does not follow a linear path but rather characterized by complicated feedback mechanisms and interactive relations involving science, technology, learning, production, policy and demand. The use of the term 'innovation', in its broadest sense, covers the activities and processes associated with the generation production, distribution, adaptation and use of new technical, institutional and organizational, managerial knowledge and service delivery (Hall et al. 2005).

The thinking up to early 1990s was that innovations were created by knowledge and technology production process and through formal R&D initiatives by firms and technology creating agents such as universities and public–private research institutes. The assumption was that the market would draw upon the technological resources it needs, as and when necessary. The demand for knowledge would be identified by the formal R&D systems, produced and passed down to those who necessarily apply it because of its usefulness (Hartwich and Meijerink 1999). In reality, however, innovations are not only associated with or stem from major scientific discoveries, but also often develop as a fairly minor scientific and technological advances and can occur without any research (e.g. through learning and adaptation process). Therefore innovations can be generated by different organizations, group or individuals and the conventional research institutions is only one such entity amongst them.

Innovation system

An innovation system is a group of organizations and individuals involved in the generation, diffusion, adaptation and use of new knowledge and the context that governs the way these interactions and processes take place. In its simplest, an innovation system has three elements: the organization and individuals involved in generating, diffusing, adapting and using new knowledge; the interactive learning that occurs when organizations engage in these processes and the way this leads to new products and processes (innovation); and the institutions (rules, norms and conventions, both formal and informal), that govern how these interactions and processes takes place (Horton 1990). People working on similar issues, be it in a specific commodity sector, at a particular location or in any problem area tend to form a chain or network that can be described as innovation system.

Agricultural innovation system

A collaborative arrangement bringing together several organizations working towards technical change in agriculture can be called 'Agricultural Innovation System'. Such a system may include the traditional sources of innovations (indigenous technical knowledge); modern actors (NARIs, IARCs, Advanced research institutions); private sectors including agro-industrial firms and entrepreneurs (local, national and multinationals); civil society organizations (NGOs, farmers and consumer organizations, pressure groups); and those institutions (laws, regulations, beliefs, customs and norms) that affect the process by which innovations are developed and delivered. Agricultural innovation system can be defined at three levels: national, commodity-based, and intervention-based. A typical national agricultural innovation system is presented in Figure 2. AIS within an agrifood chain is presented in Figure 3. An intervention-based innovation system can be developed based on the nature of the problem and the context in which the innovation is applied.
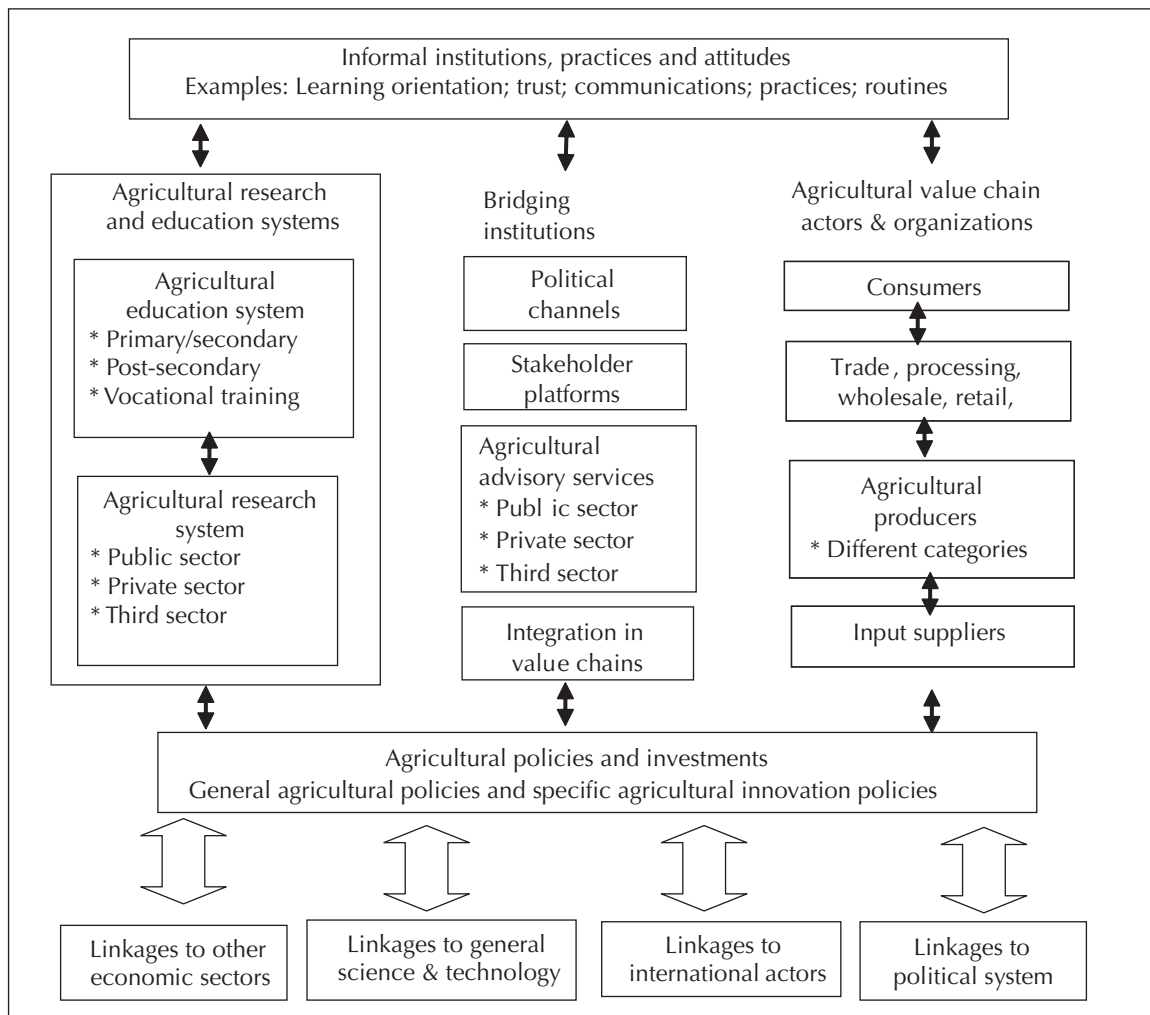
Source: World Bank (2007).
Figure 2. *A national agricultural innovation system.*
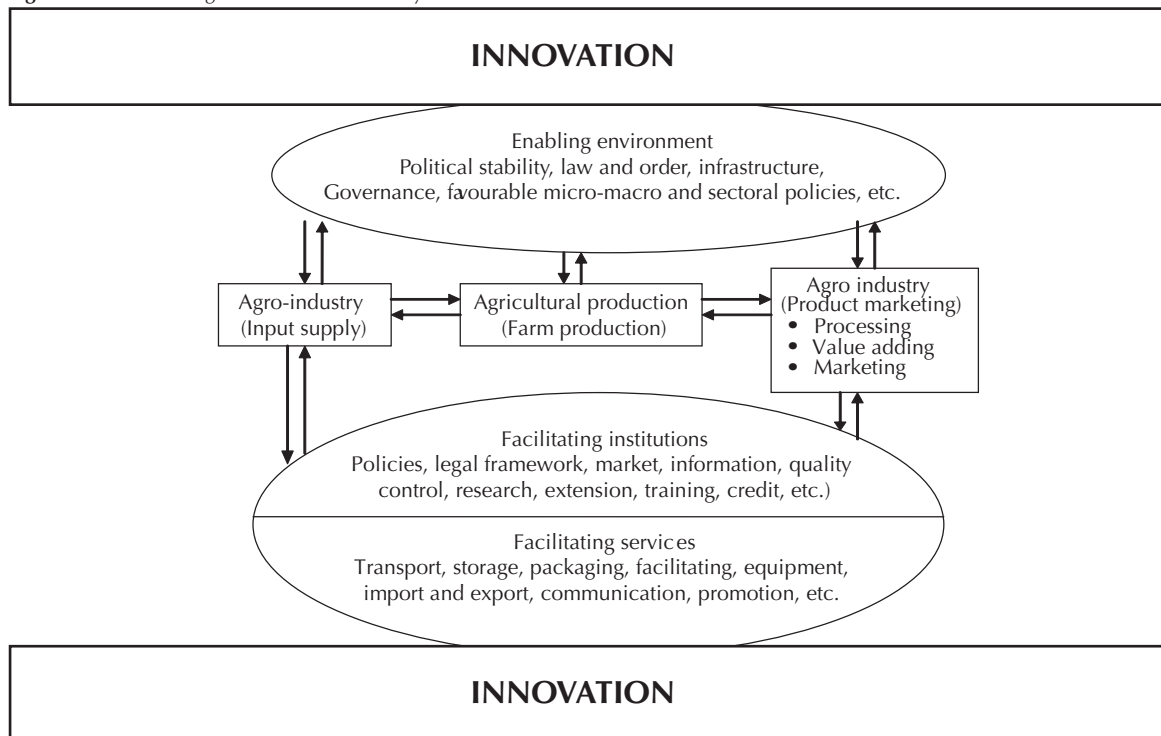
Source: Anandajayasekeram et al. (2005).
Figure 3. *AIS in an agrifood chain/agri business system.*

Intervention-based innovation system

It is important to make sure that the innovation system is not confused with the invention system. Innovation system incorporates the invention system as well as the complementary economic processes required to turn invention into innovation and subsequent diffusion and use. Innovation systems do not occur naturally; it is the problem situation that defines a particular innovation opportunity. Hence, innovation systems are created for a purpose. They will change in content and patterns of interaction as the problem sequence evolves and they can be constructed at micro- and macro levels. Thus, although the innovation systems can be defined at different levels (national, sectoral, commodity and problem/intervention), the most relevant innovation system is the one that is constructed to address a particular problem. As Antonelli (2001, 2005) argues, innovation systems are constructed to solve 'local' innovation problems and are constructed around a market problem (along the value chain).

Innovation systems are constructed to address specific problems. These systems are very specific in nature and they deal with the connection between the relevant components of the ecology as well as ensure that the flow of information is directed at a specific purpose. Depending upon the problem at hand, there can be multiple innovation systems supported by the same innovation ecology. Moreover, since the solution of one problem typically leads to different and new problems, we would also expect that as the problem evolves the actors in the system as well as their interconnectedness will also vary. Thus, while the ecologies are more permanent, the problem-focused innovation systems are transient or temporary in nature. Once a particular problem sequence is solved, the associated system can be dissolved. The dynamism of an economy/value chain depends on the adaptability with which innovation systems are created, grow, stabilize and change as problem sequence evolves (Metcalfe 2008, 442). A problem-focused innovation system can be transboundary in nature or cut across national boundaries and may be spatially unconstrained. This problem-focused, transboundary, dynamic nature of the innovation system is the most relevant one for the R&D community.

Innovation systems perspective

Innovation systems perspectives implies the use of innovation lens in the design, implementation and evaluation of the activities of the various actors involved in the innovation process. Innovation systems perspective (ISP) sees the innovative performance of an economy as depending not only on how individual institutions (firms, research institutes, universities etc.) perform in isolation, but on how they interact with each other as elements of a collective system and how they interplay with social institutions such as values, norms and legal frameworks. ISP suggests the analysis of three elements: the components of the system, principally its actors; the relationships and interactions between these components and the competencies, functions, process and results such components generate. Therefore the analytical implications of ISP are that there is a need to consider a range of activities and organizations related to research and development and how these might function collectively and the need to locate R&D planning and implementation in the context of norms and the cultural and political economy in which it takes place i.e. the wider institutional context.

The key features of ISP are (Hall et al. 2005):

• Focus on innovation (rather than research/technology/knowledge) as its organizing principle;
• Helps to identify the scope of the actors involved and the wider set of relationships in which innovation is embedded;
• Escapes the polarized debate between 'demand driven' and 'supply push' approaches;
• Recognizes that innovation systems are social systems, focusing on connectivity, learning as well as the dynamic nature of the process;

- Leads us to new and more flexible organizations of research and to a new type of policymaking for science, technology and innovation;
- Emphasize that partnerships and linkages are integral part of the innovation system;
- Emphasize that learning and the role of institutions are critical in the innovation process; and
- The dynamics do not depend on the agents 'expanding the frontier of knowledge' but on the innovative abilities of a large number of agents. This dynamics depends on the strength of information flows and the absorptive capacity of the individual agents of institutions and of society as a whole. The innovation processes depend on the interactions among physical, social and human capital, but mostly on the absorptive capacity of individual agents (Ekboir 2004).

A good understanding of the concept of innovation, innovation systems and the innovations systems perspective is vital to design and implement successful research; as most of the funding agencies are looking for developmental impacts of research.

2.4.2 Agricultural research for development (AR4D)

Agricultural research for development takes a systems approach that goes beyond integrated natural resources management to encompass the domains of policies and markets and the effects that these have on the productivity, profitability, and sustainability of agriculture. The four pillars of agricultural research for development and their important interactions are presented in Figure 4. The procedure recognizes that the general approach to rural transformation involves intensification of subsistence-oriented smallholder farming systems, better management of natural resources while intensifying their use, developing more efficient markets and enabling policies.
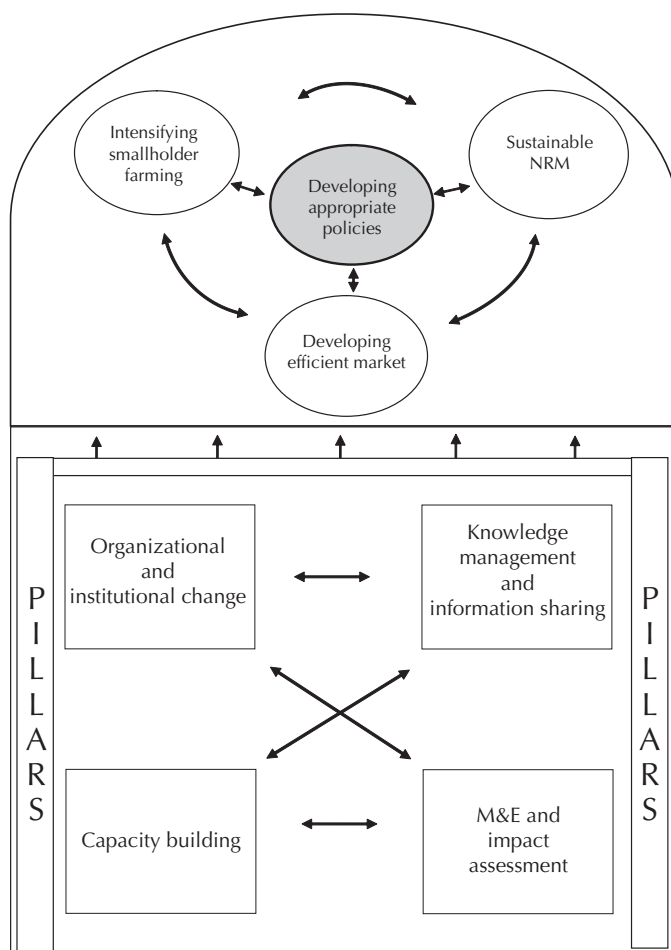
Figure 4. *The 4 pillars of ARD and their important interactions.*

Agricultural research for development requires additional mechanisms to foster integration of these four dimensions and a new way of doing research and development. Therefore, the support pillars of agricultural research for development include:

- Promotion of organizational and institutional change to enable cross-disciplinary research and development and multi-institutional collaboration.
- Capacity building of the various stakeholders (farmers, scientists, and other relevant stakeholders)
- Information and knowledge management and
- Continuous monitoring and evaluation and systematic approach to impact assessment.

Agricultural research for development in fact utilizes various participatory methods and tools. The four key steps in the agricultural research for development process are team organization, defining the system of interest, identifying strategies, and plan formulation (Figure 5). These steps are discussed in the following sections based on material prepared by International Centre for Development-oriented Research in Agriculture (ICRA).

The 4 phases of the ARD procedure
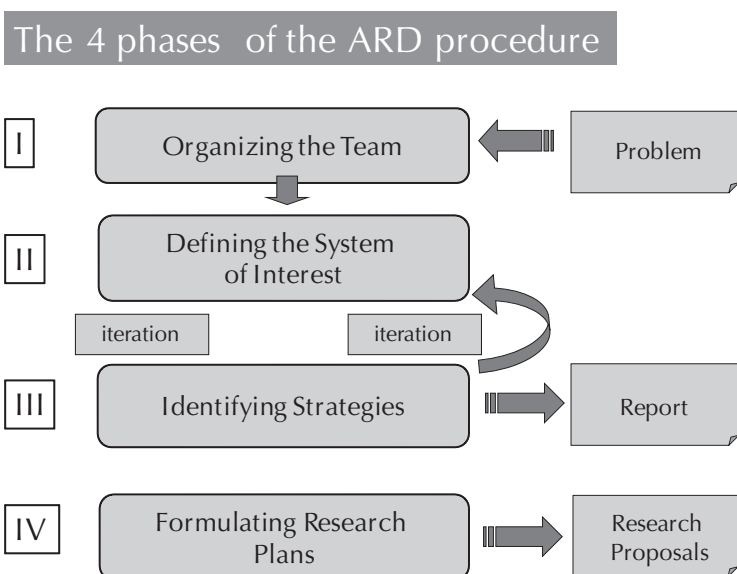
Figure 5. *The 4 pillars of ARD and their important interactions.*

Phase I—Team organization

The AR4D procedure starts from the assumption that one or more organizations (including your own) and other stakeholders have identified a problem or area of concern, or an idea for intervention. It also assumes that addressing this problem requires concerted action of these organizations and stakeholders. This may require a team of professionals from these organizations, comprising specialists in the various disciplines needed to address the problem. It is assumed that by using the various diagnostic procedures the 'clients' and stakeholders have agreed on a sufficiently well-defined specific problem. Clear planning requires that your team develops a good understanding of the problem statement and the output that the client expects at the end of the process.

As the end of this phase the team should have produced the following outputs:

- Team is composed, mandates are defined, and resources are made available (at least for planning)
- Agreed upon team work procedure established
- Problem is clearly stated and the expected output is clearly defined
- Work plan is formulated and approved by all partners
- Mechanism for monitoring is established.

Phase II—Define the system of interest

Here, it is necessary that the team looks at policy issues, markets, institutional issues and other macro-development in and outside agriculture that may have an influence on the problem and on attempts to solve it. It is also important to identify the 'system' that needs to change in order to address the problem that was defined in phase I. We have to look at all elements needed for the change that are within the mandate of the stakeholders involved. It is of little use to suggest changes that the stakeholders do not have the power to change or influence.

At the end of this phase the following outputs must be in place:

- Description of how the wider 'macro trends' influence the problem
- Redefinition or further elaboration of the problem as seen from the different perspectives
- Demarcation of the 'system of interest'.

Phase III—Identify strategies

Here, it is important to engage all stakeholders involved in the 'system of interest' defined in phase II to identify strategies that will bring about the desired changes, under different scenarios based on the external factors influencing the system of interest. There may be also a need to stratify the target group based on resource endowments, capabilities, strategies and vulnerabilities. It is also important to assess the anticipated effect of these alternative strategies on the environment (sustainability), vulnerable groups (social equity) and the competitiveness of the enterprises of the various stakeholders in the system of interest.

If this 'screening process' shows that strategies have anticipated negative effects, these need to be addressed through accompanying measures or the strategy should be dropped. Agreeing to some concrete strategies may usually require compromise between different stakeholders. Each strategy should be assessed in terms of their ecological, social and economic implications. These aspects should be considered simultaneously. The relative importance of each of these analytical perspectives is dependent on the problem and the usefulness of each in terms of finding a possible/viable solution. This integrated analysis should result in the following outputs.

- Description of two or more alternative scenarios for future
- Definition of what changes are needed in the system of interest to address the problem under the different scenarios
- Typology of the stakeholders affected differently by the problem who require different strategies
- Collective strategy to achieve changes in the system of interest that address the problem
- Careful documentation of the analysis completed.

Phase IV—Formulate plans

At this stage, it is essential to list the development and research activities needed to realize the strategy. The contribution of each stakeholder of the implementation of the agreed upon strategy that was defined in Phase III is identified. As available resources are usually not enough to implement all activities, there may be a need to prioritize the list of activities/options identified. The criteria for prioritization must deal with the balance between the extent to which each activity is likely to contribute to the solution of the problem, the cost and time needed for the activity as well as the risk of failure of the activity.

The final step is the formulation of convincing development and research proposals for the activities of highest priority and mobilization of resources to implement them. The process of implementation

(based on the operational plan), monitoring, evaluation and the eventual impact assessment of the intervention needs to be worked out as part of the planning process. As most of you are familiar with the participatory approaches to knowledge/technology development and transfer process, it may be possible to easily integrate the missing elements from the AR4D process described in this section. But a clear understanding of the process will certainly assist in the development of convincing/winning project proposals.

It is important to ensure that the innovation system perspective, value chain analysis, research for development and impact orientation are effectively integrated in the research design.

2.4.3 Value chain

A value chain describes the full range of activities which are required to bring a product or service from conception, through the different phases of production, delivery to final consumers, and final disposal after use (Kaplinsky and Morris 2000). It is worth noting that production is only one of a number of value added links in the agrifood chain (Figure 6). Some people refer to this chain as from hoe (plough) to the finger (fork). A simple value chain has four basic links.
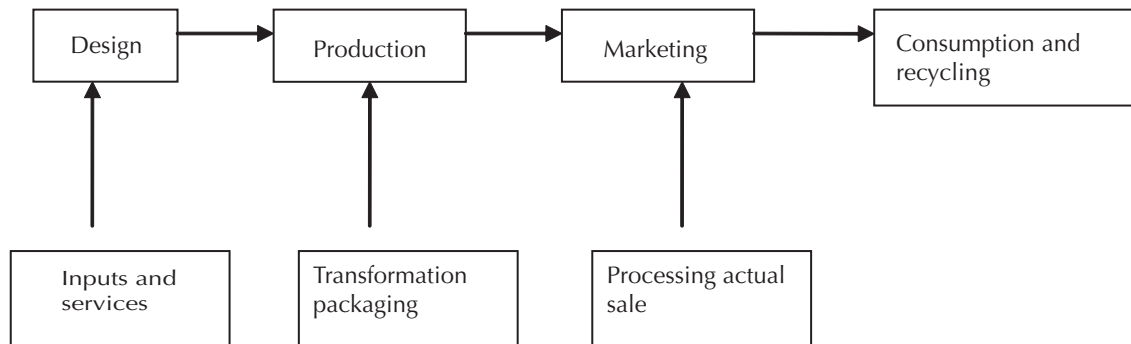
Figure 6. *Value links in the agrifood chain.*

In the real world, value chains are much more complex than this simple depiction. In many circumstances, the intermediary producers in a particular value chain may feed into a number of value chains.

Agricultural value chains are defined by a particular finished product or closely related products and includes all firms engaged in input supply, production, transport, processing and marketing of the product, and their associated activities, interactions and institutions governing the activities and interactions. It entails the addition of value as the product progresses from input supply to production to consumption. It includes input suppliers, producers, itinerant collectors, assembly traders, transporters, wholesalers, processors, exporters, and retailers. The key issue addressed in value chain analysis is vertical coordination: the way of coordinating and harmonizing the vertical stages of production, transformation and marketing

Porter (1985) distinguished two important elements of a modern value chain analysis:

- The various activities which are performed in a particular link in the chain and
- Multilinked value chain or the value system.

Both these elements are subsumed in the modern value chain descried in Figure 7.
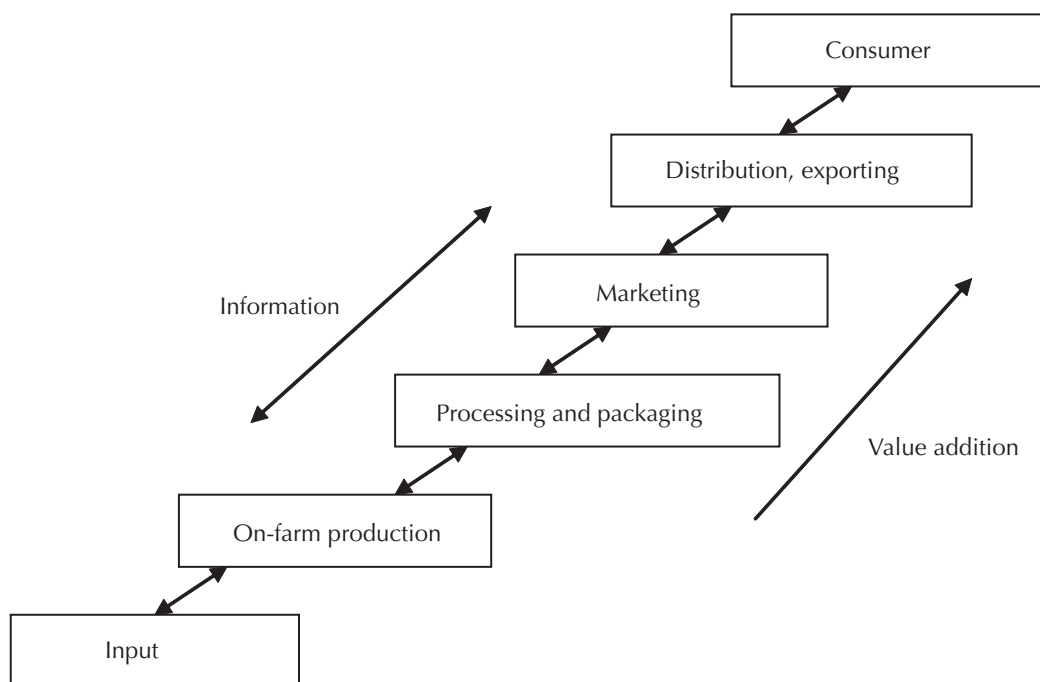
Figure 7. *Agricultural food chain: Value adding.*

In many developing countries there is heavy emphasis on the commercialization of smallholder production system; and production is increasingly becoming market oriented. In order to reap the immediate benefit, it is important to understand the nature, structure, and the dynamics of the value chain related to the various enterprises engaged in by the smallholder farmers. Given the new agricultural innovation system perspective, we need not only understand the dynamic but should also focus on the enabling environment, facilitating institutions as well as the facilitating services associated with a given value chain.

2.5   Emerging challenges

In the previous sections, we discussed the organizational and institutional transformations that are taking place within the agricultural research for development and the associated paradigm shifts to address the broadened agricultural agenda. In addition, the system is also confronted with a number of emerging challenges which shapes the priority agenda. Some of the key challenges currently facing the R&D communities are as follows:

2.5.1   Emerging food and energy crisis

In the recent past global food prices are increasing at an unprecedented rate and the analysts say that they will continue to remain high for a considerable period. Both the demand side and supply side factors contributed to the current price crisis. The demand side factors include: the economic growth and the associated changes in life style and eating habits in many countries; diversion of food crops (maize, sugarcane) for making biofuels: declining world stock piles, the financial speculation in commodity markets (a collapse of the financial derivatives market); and of course the increase in population (although at a slower rate). The supply side factors include: increased fuel and fertilizer prices and the associated increase in cost of production (and low input use); biofuel subsidies pushing production towards biofuel rather than food; idle crop land under a conservation program, export bans and tariffs by many grain exporting countries; production shortfalls from natural disasters and the long

term effects of climate change; trade liberalization making many developing nations depend on food imports (subsidized) which are cheaper; loss of crop lands due to mainly soil erosion, water depletion and urbanization and finally declining investments in agriculture.

The continuing increase in fuel prices is pushing countries towards biofuels. As a result of rising energy costs, inputs such as fertilizers become more and more unaffordable for small farmers who are at the centre of response to the world food crisis. The transport costs have become higher and higher once again resulting in higher consumer prices. Thus the rising fuel prices and the emerging food crisis are closely linked.

2.5.2   Environment and climate change

Since the 1992 Earth Summit in Rio, it is generally accepted that the environmental agenda is inseparable from the broader agenda of agriculture for development. Both intensive as well as extensive agriculture lead to environmental consequences. To address the expected climate change challenges and impact, R&D need to play a major role in increasing the adaptive capacity of the most vulnerable groups in different regions. The climate change could create changes in the geographical production patterns, as well as deterioration of natural resource base due to scarcity of water and rising temperature. It will also affect parasites like the tsetse fly and parasitic diseases such as malaria. With the increased risk of droughts and floods due to rising temperatures, crop yield losses are imminent. World agricultural GDP is projected to decrease by 16 percent by 2020 by global warming.

Although SSA produces less than 4% of the world green house gases, the regions diverse climates and ecological systems have already been altered by global warming and will undergo further damage in the years head. Sahel and other arid and semi-arid regions are expected to become even drier. A third of Africa's people already live in drought-prone regions and climate change could put the lives and livelihoods of an additional 75–250 million people at risk by the end of the next decades (Africa Renewal 2007). Climate change will create new food insecurities in the coming decades. Low income countries with limited adaptive capabilities to climate variability and change are faced with significant threats to food security.

2.5.3   Trade, market liberalization and the emerging agrifood system

The global and national food systems are increasingly being driven by consumer interests, changing consumption patterns, quality and safety concerns and the influence of transnational corporations and civil society organization. The changes in the emerging food systems such as rapid rise and economic concentration in supermarkets need for quality standards; a shift towards non-price competition among supermarket chains, biosafety issues and the development of new forms of (contractual) relationships between suppliers and buyers offer both challenges and opportunities. They can either squeeze small producers out of certain markets contributing greater poverty and inequality or can offer new sources of income and market improvement in the quality and safety of food.

2.5.4   Emerging diseases

The incidence and impacts of diseases such as HIV/AIDS and malaria are well documented. Additional threats and challenges are posed by emerging diseases. Approximately 75% of emerging diseases are transmitted between animals and human beings; the increasing demand for meat increases this risk of

transmission. Serious socio-economic consequences occur when diseases spread widely within human and animal populations.

2.5.5   Growing need for intersectoral linkages

One of the major constraints to getting agriculture moving in SSA is the general lack of comprehensive policies and weak intersectoral linkages. Now there is growing awareness that a number of sectors such as agriculture, education, health, water, and energy are very closely linked. Thus any agenda to transform the smallholder agriculture should follow a multisectoral approach and capture the synergies between technologies (seeds, fertilizer, livestock breeds), sustainable water and soil management, institutional services (extension, insurance, financial services) and human capital development (education and health)—all linked with market development (World Development Report 2008).

2.5.6   Changing expectations of science and technology and innovation

Over the years, there has been a significant change in the expectations of science and technology and innovations, from increasing crop and livestock productivity to creating competitive, responsive and dynamic agriculture, that directly contribute to the Millennium Developmental Goals.

2.5.7   Underinvestment in agriculture and agricultural research

Public spending on agricultural research as a proportion of agricultural GDP in Africa declined from 0.93 to 0.69% between 1980s and 1990s (ECA–OECD Review 2005). The current average level of public expenditure to support agriculture is around 4%. CAADP reports estimate that if the MDGs are to be met, 10% of the national budget should go to the agricultural sector and at least 2% of the GDP should go to national agricultural research and development by 2010.

2.5.8   Technological advances in biotechnology and ICT

Conventional biotechnologies have been around for a very long time, while genetic modification (GM) technologies have emerged more recently. GM technologies are making rapid progress worldwide. Biosafety is a highly technical field, which typically requires high initial investments for building the necessary human resource capacity and institutional infrastructure (including laboratories and green houses for risk assessment or testing and identification of genetically modified organisms).

The revolution in ICT technologies and increased access to them in developing countries is enabling a variety of new approaches to capacity building and knowledge sharing and exploitation of these opportunities require additional investments.

2.5.9   Globalization of private agricultural research and innovation

In the recent past there is a trend towards globalization of private agricultural research. Drivers of globalization of R&D are growing markets for agricultural products and agricultural inputs (reduced restrictions on trade in agricultural inputs), new technological opportunities due to breakthrough in biotechnology; improved ability to appropriate the gains from innovations, improved policy environment for foreign investments and technology transfer (tax breaks); and growth in demand due to increased income and policy changes (Pray 2008). If carefully nurtured and managed, this may offer additional opportunities for public–private partnership to mobilize additional resources and to move the poverty reduction agenda forward.

2.5.10 Meeting commitments and targets

Over the last several years countries in the regions are committed to a number of targets and goals. Under the United Nations Millennium Development Goals targets are set for: reducing hunger and poverty, achieving universal primary education, promoting gender equality, improving maternal health and nutrition, combating HIV/AIDS, malaria and other diseases and ensuring conservation and the enhancement of basic life-support systems including land, water, forests, biodiversity and the atmosphere. There is increasing evidence to show that we will not meet any of the targets set for 2015.

In 2001, African heads of state adopted the strategic framework to develop integrated socio-economic development framework for Africa—the New Partnership for Africa's Development (NEPAD) under the auspices of the African Union (AU). The agricultural agenda of NEPAD is driven by the comprehensive African Agricultural Development Programme (CAADP). This strategy calls for an annual growth rate of 6.5%. At least 10% of the national budget as defined in the Maputo Declaration (February, 2003) should be allocated to agriculture.

2.5.11 Global financial crisis

The current financial crisis is contributing significantly to the slow down of many countries resulting in reduction in the capital availability at a time when accelerated investment is urgently needed in the agricultural research and development arena. Although the current food and financial crisis developed from different causes, these two crises have fed into each other and could have significant impact on financial and economic stability and political security (von Braun 2008).

The projected low economic growth is likely to have negative second-round effects for investment and productivity with direct ramifications for food prices and food security around the globe. IFPRI (2008) has projected that under slow growth and declines in agricultural investment, the prices of major cereals increase significantly. According to the projections in SSA, the per capita consumption would be 10% lower in 2020 and its share of the number of malnourished children will increase from one fifth in 2005 to one fourth in 2020. The study concluded that if developing countries and investors can maintain agricultural productivity and investment under recession, they can avoid many of the negative effects of slower growth.

To sum up, there is a need for agriculturalists to grow intellectually and operationally from a narrow focus on agriculture and technological research and dissemination to a better understanding of rural societies and their needs. There is a need to seek greater understanding of alternative pathways for rural economic development, placing the role of agriculture in perspective, and redefining the role, mission and strategy of the agricultural institutes and agents as facilitators of rural economic growth. This calls for change in the mind sets of the change agents and greater flexibility and creativity in defining the agenda as well as in defining new public–private–civil society partnerships on the basis of whatever is necessary to improve opportunities, productivity and income generation capacity of poor rural households.

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Session 2: Exercise 2A: Reflecting on contemporary scenario of agricultural research for development

(Group exercise)

Group work (60 minutes)

1. Divide into your project teams and have each group elect a rapporteur. (5 minutes)
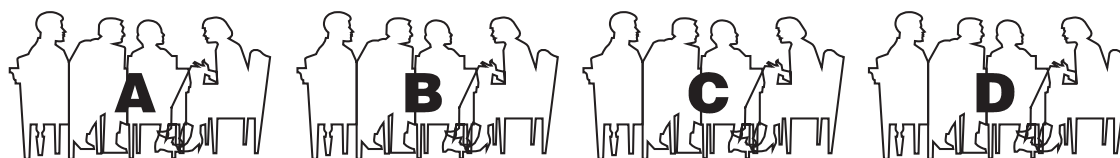
2. Brainstorm and answer the following questions in your groups:

3. Mention three major changes that have occurred in the agricultural sector in your country during the past 10 years.

   • How did the R&D organizations respond to this changed scenario?
   • Do you feel what is done was enough? If yes, give examples.
   • If no, write two to three actions/interventions that should be taken up to improve the responsiveness of R4D organizations to this changed scenario.

Reporting and discussion (30 minutes)

4. The rapporteurs present the group responses using cards on the soft board or wall (20 minutes).
5. The facilitator asks feedback on this exercise and closes the session (10 minutes)

Session 2:   Exercise 2A: Worksheet

(Group responses)

1. Major changes that have occurred in the agricultural sector during the last 10 years

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2. R&D organizations' response to this changed scenario.

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3. If no, list things that should be done to improve the responsiveness of R&D organizations to the changed scenario

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Session 2: Exercise 2B: Experience in innovation system thinking

(Group exercise)

Phase I. Group work (60 minutes)

1. Divide participants into two groups and ask each group to identify a chairperson and rapporteur.
   (5 minutes)
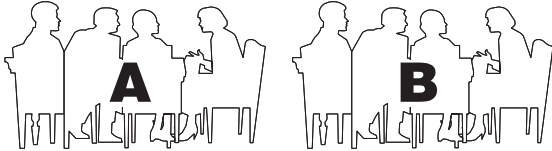
2. Each group should identify one familiar project and respond to the following questions.
   a. Was the project planned and implemented using innovation systems perspectives?
      i. If yes, please explain how the concept was used in planning?
      ii. If no, please indicate how you would modify the project design to incorporate innovation systems perspectives?

Phase II. Reporting and discussion (30 minutes)

3. The rapporteurs present the group responses (20 minutes).
4. The facilitator asks feedback on this exercise and closes the session (10 minutes)
• Note: *A case study is included in the Annex for your leisure reading to better understand the concept being discussed.*

Session 2:   Exercise 2B: Worksheet

(Group responses)

a. Was the project planned and implemented using innovation systems perspectives?

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    i.   If yes, please explain how the concept was used in planning?

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    ii. If no, please indicate how you would modify the project design to incorporate innovation systems perspectives?

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Trainer's guide

Session 3: Why partnerships in agricultural research for development?

Purpose	To enhance the capacity of agricultural researchers to forge effective and efficient partnerships with other relevant stakeholders in the agricultural innovation system for achieving greater impacts
Objectives	At the end of this session participants will be able to: • Explain the reasons for partnership • Describe factors enhancing and hindering impact of partnership
Resources	• Flipcharts • White board • Blank transparencies • Flipchart and white board markers • Computer and LCD projector • Overhead projector • Copies of handouts 3.1 to 3.3 for each participant
Time needed	45 minutes

Method of facilitation

Activity		Time
Presentation	Distribute handout 3.1 (presentation slides) before you start your presentation	30 minutes
	Give a presentation on 'Why partnerships in agricultural research for development'?	
	Allow some time for questions to make sure that participants understood what is presented.	
	Distribute handout 3.2 to supplement your presentation	
Exercise	Plenary discussion	10 minutes
Transition	Make closing remarks and transit to the next session	5 minutes

Session 3:   Why partnerships in agricultural research for development? Summary of overheads

3.1

Why partnerships in agricultural research for development?

3.2

Session objectives

- Understand the reasons for forming partnerships

- Describe factors enhancing and hindering impact of partnerships

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3.3

Why partnership?

Friday, September 11, 2009 / The Standard, KENYA
Coalition partners

Here is proof from Rongai town that the idea of forming coalitions is catching on.
[PHOTO: COLLINS KWEYU/STANDARD]

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3.4

What is partnership?

- 'A mutually beneficial dynamic relationship between or among two or more persons or organizations having similar vision, goal, objective and interest' *(Ojha and Morrin (2000))*
- Leverage resources and skills
- Recognize contribution and culture
- Maintain autonomy and independence
- Can be formal or informal

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3.5

Key considerations in entering partnerships

- Common interest space condition
- Cost–benefit condition
- Perceived benefit > investment cost + transaction costs
- Synergy through collaboration condition
- Economies of scale
- Cannot be achieved individually
- No conflict condition
- Proportional benefit condition

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3.6

Networks

Networking is a process by which two or more organizations and/or individuals collaborate to achieve common goals

Consist of nodes and links

- Contribute to social capital
- Various forms
- Partnerships are more formal than networks
- ICT encourages greater networking

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Why partnerships

- Partnership decisions in an organization are strategic in nature
- Motivation
  - To add value to activity
  - To augment competencies
  - To ensure continuous strategic flexibility
  - To avoid appropriation

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Why partnerships (cont'd…)

- Mobilizing and augmenting resources
- Augmenting competencies
- Augmenting markets—market share
- Increasing the scale of activities
- Enhancing strategic flexibility
- Reducing duplication

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3.9

Why partnerships (cont'd…)

- Increasing service integration
- Improving access to end users
- Expanding capabilities
- Increasing learning
- Improving access to donor resources

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3.10

General motivations for forming research partnerships

Type of partner	General motivation
Public sector	• Spur innovations that enhance public well-being and economy, satisfy customers • Leverage resources to maintain programs and fulfill agency mandates • Exercise stewardship of public money • Political considerations
Private sector and non-profit organizations	• Develop knowledge that results in cost savings or new products and services. • Develop new technologies that contribute to stockholder value • Hire best and brightest students
Academic institutions	• Develop new knowledge and convey that information to the next generation • Seek real-world context for new knowledge development

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Source: NCHRP (2001).

3.11

Factors contributing to increased use of partnerships in agricultural R4D

- Changing paradigms

- Increased use of system concepts and participatory research methods

- Increased complexity of the developmental challenges and changed expectations

- Increased competition

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3.12

Factors contributing to increased use of partnerships in agr. R4D (cont'd…)

- Globalization of agricultural R4D and the changing organizational landscape

- Emerging technologies—ICT and biotechnology

- Redefining the role of government and increased emphasis on privatization of public services

- Changing funding scenario and funding arrangements

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- Increased anecdotal evidence of socio-economic benefits of cooperation

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Factors enhancing impacts of partnership

- Direct contact with community
- A forum for regular meeting and sharing experiences
- Plan for impact
- Monitor and evaluate impact
- Making resources available— earmarked resources for IA

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3.14

Factors enhancing impacts of partnership (cont'd…)

- Commitment, competence, continuity and complementarity (4Cs)
- Mobilize local support for local sustainability
- Promoting, participatory, trans-disciplinary, multi-level, multi-stakeholder and gender sensitive approaches

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3.15

Factors enhancing impacts of partnership (cont'd…)

- Incentives
- Communication, dissemination and feedback strategies and skills
- Documentation
- Speaking the right language

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3.16

Factors hindering impacts of partnership

- Expert attitude and competition
- Fears and orientations
- Discontinuity
- Inflexibility of funding
- Lack of internal information and communication skills

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3.17

Factors hindering impacts of partnership (cont'd…)

- Internal tensions and conflicts
- Prejudices and mind sets
- Overambitious project design
- Overcommitted partner staff
- Insufficient support for partnership
- Lack of attention to the process of building the partnership and trust
- Lack of partnership and alliance competencies

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3.18

Thank you

Session 3: Why partnerships in agricultural research for development? Summary of presentation

3.1   Introduction

The major challenge facing the practitioners working in the agricultural innovation systems is to provide the goods and services to meet the diversified needs of ever increasing 'consumers' and society at large, effectively, efficiently and responsively. One of the key opportunities to achieve this is the better utilization of accumulated knowledge and the untapped resources around us. One of the untapped resources is the human, institutional and social capitals within the various R&D institutes, specifically the partnership that two or more institutes can forge to produce the synergy and unleashing of the accumulated energy to meet the needs of the society (Ojha 2002).

Innovation systems are about exploiting available and new knowledge for socio-economic use. Innovations emerge from systems of actors through a social process, in which networks of actors (players from the public, private civil society, research, enterprise and policy sectors—entire supply chain) play a crucial role. Innovation is a result of co-operation and is determined by interaction between them.

Partnerships form the core of the innovation systems and have primary purpose of knowledge sharing. This knowledge could be about constraints, opportunities, technology, production contexts and market conditions among others. This interaction and knowledge exchange leads to learning, development and deployment of new products and processes and ultimately, social and economic change. Therefore, very important in the process is how patterns of relationships, habits and practices either nurture or hinder knowledge flows, sharing and process of learning (learning by doing or by interacting).

Partnerships per se are not new. Partnerships and networks have been in existence since mankind started, and from the day that people began to create institutional and organizational structures. However, partnership activity on a wider scale as it now occurs is a relatively new phenomenon, having emerged over the past 15–20 years. In this chapter first partnerships and networks are defined. Then the factors which contributed to the increased use of partnership and networks in the agricultural R4D arena are discussed. Finally the benefits of partnerships are outlined, and some of the factors enhancing as well as hindering the impacts of partnership are listed.

3.2   What are partnerships and networks?

3.2.1   Partnerships

Conceptually, partnership is an extended form of group dynamics where two or more parties establish relationships, and leverage resources to work together with the expectation that each of the parties would achieve greater goal than working individually (Morse 1996). According to Ojha and Morrin (2000), 'partnership is a mutually beneficial dynamic relationship between or among two or more persons or organizations having similar vision, goal, objective and interest.' Partners leverage their time and resources, experience and expertise, and knowledge and skills to work together complementarily by dividing responsibilities based on comparative and competitive advantage and make decisions jointly. The partners recognize each other's contribution, respect each other's culture and strive to fulfil the assigned responsibilities. While working together they also maintain autonomy and independence and attain their goals and those of stakeholders. Partnership arrangements can range from informal

collaborating working relationships to formal contractual vehicles that detail alliances among diverse and dispersed organizations.

Hartwich et al. (2004) outlined some key considerations for entering into partnerships. These are:

- Common interest space condition — partners should have a common goal.
- The cost–benefit condition. One enters into partnership when the perceived benefits are greater than the sum of the investment costs plus the cost of interaction (the transaction cost).
- Perceived benefits > investment cost + costs of interactions.
- The cost in this case includes both direct and indirect cost (including opportunity costs) as well as tangible and intangible benefits. One enters into partnership when the perceived benefits are higher than those from equivalent investments in non-partnership arrangements.
- The synergy through collaboration condition
- Synergy results from economies of scale in the use of R&D resources (knowledge funding and infrastructure) which could not be obtained otherwise, from mixing complementary R&D resources, (e.g. Bringing knowledge about production and market together), from the effects of joint learning, from reduced costs in seeking and exchanging information.
- The no-conflict condition
- One enters into partnership when the generation of benefits does not substantially conflict with other interests. Partnerships may be very beneficial in terms of cost–benefit ratios (or returns to investment) that do not take into account the negative externalities (social and environmental conflicts).
- The proportional benefit condition
- One enters into a partnership when one's perceived benefits are not proportionately lower than those of their partners. Proportionality also takes into account the inputs that the partners provide, and therefore goes beyond fifty–fifty benefit sharing solutions or equal sharing of the pie.

One of the compelling reasons for forming partnership is the ability to achieve something together in a cost effective manner that no organization individually could have produced on its own.

Some of the key features identified in good partnerships and alliance programs are:

- Longer term commitment of partners based on mutual respect and trust.
- Common and shared vision of the problems to be tackled and the approach to be utilized.
- Transparent partnership based on effective and open communication and equitable sharing of resources and benefits.
- Flexible structure of collaboration.
- Balanced partnership where important decisions are taken with full consultation and consensus and
- Capacity building on management and negotiating skills especially regarding IPR (World Bank 2005, 18).

Forming and nurturing a successful partnership is an evolutionary process. Partnerships go through various stages during their evolution and operation. Different authors classify this evolutionary process differently. For example, Speckman et al. (1996) identified three distinct stages: the formative stage, metamorphosis, and staying the course, whereas Ojha (2002) identified five phases namely: pre-partnership phase, partnership identification, partnership negotiation, partnership implementation and post-partnership phase. Irrespective of the classification, a typical partnership process goes through a

number of key steps which are summarized in Box 1. These key steps are discussed in detail in sessions 4 and 5 of this module.

Box 1: Key steps/phases in partnering process

- Scoping—that is understanding the challenge, gathering information, consulting with stakeholders and resource providers, and building a vision.
- Identifying potential partners and motivating them.
- Building working relationships through agreed objectives and core principles.
- Planning the program of activities.
- Managing and exploring the optional long-term structure of the partnership.
- Resourcing.
- Implementing a pre-agreed work plan.
- Measuring and reporting on outputs, outcome, relevance, efficiency, effectiveness and impact.
- Reviewing the impacts of the partnership on partners' organizations.
- Revising the partnership in the light of experience and lessons learned (reflection).
- Institutionalizing and building appropriate structure and mechanisms.

Source: Tenyson (2003).

3.2.2 Networks

Networking is a process by which two or more organizations and/or individuals collaborate to achieve common goals (Waring 1997). Theoretically, a network consists of two things: nodes and links between those nodes. In social network analysis the nodes of concern are people, groups and organizations and the links may be social contacts, exchanges of information, political influence, money, joint membership in an organization, joint participation in specific events or many other aspects of human relationships (Davies 2003).

Networks in agricultural innovation can be seen as groups of agents with restricted membership. Network members choose each other; agree explicitly to co-operate in some way and to depend on each other to some extent. Often the members aim at exchanging information and knowledge that is of limited availability; however, the members pursue individual objectives which in the context of the network are likely to result in mutual gains. The difference between partnerships and networks can be found in the different degrees with which the collaboration is formalized: partnerships are often more formal, sometimes involving written contracts and agreements, whereas networks can range from very informal to formal arrangements. In this respect, partnerships can be seen as a formal type of networks (Hartwich 2005).

Networks may be informal or formal, but the main objective is to facilitate information flows. They also build social capital, confidence and trust and create preparedness for change, lowering barriers to forming new linkages and thus have broader objectives (Hall et al. 2006).

With respect to networks, Powell (1990) elaborated the following salient points:

- Networks seek to gain from pooling resources, but involve the dependence of each party on resources controlled by others;
- They are based on the agreement to forego the right to pursue one's own specific interests at the expense of that of others;

- In their evolution, they operate through the exercise of voice rather that exit;
- Their focus is on mutual orientation and on reciprocity emphasizing indebtedness and obligation;
- They seek to build trust within a long-term perspective—operate within Axelrod's notion (1984) of 'the shadow of the future';
- The information passing through networks are 'thicker' than that obtained in markets, and 'freer' than that communicated in hierarchies;
- Finally, given the potentiality of conflict at each point of contact within the network, networking is a contentious process in which both centrifugal and centripetal forces are at work.

Networking has been in existence from the day that people began to create organizational structures. Networks and networking continue to serve as a means of sharing information for competitive and cooperative reasons among organizations and individuals with common interests. According to Creech and Willard (2001), there has been a surge of experimentation with network models for fast-tracking sustainable development in the last 10–15 years with emergence of information and communication technology being a significant driver.

Networking to support small farmer development is not a new issue. Networking has in fact received substantial attention and resources, with a mixed record of success. There have been ebbs and flows over time in the importance attached to networking. Interest now appears to be on an upswing. This is because new information and communication technologies are improving opportunities while reducing the costs of networking. Governing decentralization, adoption of ISP, growing role of farmer organizations, NGOs and private sector in the R&D are also contributing to a resurgence of interest in networking.

Interest is also increasing in developing organizational partnerships to tackle the challenges of small farmer development. Multi-organizational partnerships—based on common objectives, interactive decision-making, resource sharing and formalized reciprocal obligations—have a potential for tackling a broader range of issues at more scales of action than is possible for any organization working independently. However, the process of developing organizational partnerships supporting small farmer development is not well understood, nor is there a record of success allowing easy or quick judgment.

'Innovation networks' is a term used to capture the impetus behind the immense web of collaborative relationships created between business and non-business entities: 'Networks involve a wide range of collaborative activities including joint ventures, research corporations, joint research and development (R&D), technology research agreements (such as technology sharing, cross-licensing, mutual second-sourcing), direct investment, customer–supplier relations, R&D contracts, one-directional technology flow agreements (e.g. licensing, second-sourcing) manufacturing agreements, and so forth. Innovation networks also often involve informal collaboration and knowledge exchanges across individuals in different organizations and systemic learning…' (Okamura and Vonortas 2004)

Various other forms of networks are: information sharing networks, research networks, and special purpose networks. Networking in research suggest mainly lateral interaction—that is, interactions between organizations engaged in similar activities, although, of course, activities of different organizations may be (partially) complementary in nature. Inter-organizational learning between research institutes is an example of these types of interactions.

According to Farrington et al. (1994), a network with a sectoral (e.g. agriculture) or subsectoral (e.g. irrigation or crop processing) mandate generally operates more closely with ultimate beneficiaries (like those deriving livelihoods from agriculture) than those concerned with generic or cross-cutting themes such as methods of agricultural research or extension.

The key processes involved in a networking are summarized in Table 1. It is abundantly clear that both partnerships and networks go through a similar set of activities and processes in their genesis and successful implementation. These key steps/stages are discussed in detail in sessions 4 and 5 of this module.

Table 1. *Core processes of inter-organizational networking*

Process	Underlying questions
Network creation	How the membership of the network is defined and maintained
Decision-making	How (when, where and who) decisions are taken
Conflict resolution	How (and if) conflicts are resolved
Information processing and sharing	How information flows or is managed
Knowledge capture	How knowledge is articulated and captured to be available for the whole network.
Motivation/Commitment	How members are motivated to join/remain in the network, e.g. through active facilitation, shared concern for development etc.
Risk/benefit sharing	How the risks and benefits are shared.
Integration	How relationships are built and maintained between the individual representatives in the network.
Continuity and sustainability	What mechanisms are put in place to ensure continuity and sustainability

Source: Rothwell (1992).

3.3   Why partnerships?

As identified by a number of reviewers and practitioners, partnership offers a number of advantages. These include: offering greater capacity, cost effectiveness, sustainability, addressing complex issues of common interest/concern, larger area coverage, educating stakeholders, reinforcement, reaching vulnerable groups, sharing and learning of new competence, avoiding duplication and overlap, complementarity of resources and skills, leveraging scarce resources, creating wealth and increased flow of information and knowledge Ojha (2002). Agter and Hage (1993) argued that four conditions are necessary (but not sufficient) for collaboration among two or more institutes: willingness to collaborate, a need for expertise, a need for financial resources and a need for adaptive efficiencies. The most important pre-condition is the willingness to collaborate.

Primarily organizations enter into partnership because this would increase the organization's potential to achieve its objectives. In other words, partnership decisions are strategic decisions that organizations make in order to fulfil their mission. Rangan and Yashiro (1996) argued that institutes enter into partnerships for four reasons: to add value to activity, to augment competencies by learning from partners, to ensure continuous strategic flexibility and to avoid appropriation by a partner of its core competencies or strategic advantage. The most common reasons given for forming alliances and partnerships are: to expand capabilities, allowing organizations to do more with less or to do something different from what their resource base permits; to leverage resources and have convenient access to other specialized resources; to expand geographically into other parts of the world; and to facilitate learning.

Partnerships help to improve an organization's potential to achieve its strategic objectives through various avenues:

- Mobilizing and augmenting resources
  Entering into partnership helps organizations mobilize additional resources and enhance the potential of the organizations' own resources to generate impact. Information, human capital, material, equipment (physical capital), technology and management are some of the resources that are frequently acquired or accessed through partnerships.
- Augmenting competencies
  Each organization has one or a set of core competencies i.e. very good in doing some tasks. When a new task requires additional competencies, which are not available in the institute, one solution is to obtain the needed competency through partnership with another organization. By pooling complementary know-how and skills both organizations gain. Problems to be solved by agricultural research are by nature very complex to be solved by one discipline, sector or organization.
- Augmenting markets
  In business ventures, co-operative arrangements often result in bigger market share, taking advantage of established brand names and territorial dominance. Faster entry into new markets and quick pay back are some key strategic advantages. In the case of R&D this deals with the coverage of larger geographical areas/regions.
- Increasing the scale of activities
  When two organizations engage in similar businesses through partnership, both could benefit from economies of scale. This may result in lower average costs and increased output by exploiting the synergy generated by relying on comparative advantage of each partner.
- Enhancing strategic flexibility
  This is often a secondary reason for an organization to enter into partnership. Augmenting resources, competencies or markets simply expands the range of strategic options available for an institute. An expanded set of options at a point in time also makes it possible for the organization to consider subsequent strategic moves which would not have been possible without the partnership.
- Reducing duplication
  Working together can help reduce the chances of duplication of effort.
- Increasing service integration
  The impact of research activities is often increased by working with the farmer in an integrated manner in which the farmers' needs are considered in a holistic way. Partnering can help achieve a better integration of services offered to resource-poor farmers.
- Improving access to the end users
  Getting research results into the hands of farmers in ways that encourage appropriate behavioural change has always been difficult. Partnering can help connect researchers and farmers in ways that strengthen results.
- Expanding capabilities
  In these days of limited and diminishing resources, partnering can allow organizations to do more with less or to do something entirely different from what their existing resource base permits.
- Increasing learning
  Often people talk about learning organizations. More and more institutes and individuals are seeking to learn from one another and from others involved in improving agricultural productivity

NRM and contributing to the developmental impacts. Creating opportunities for learning and strengthening the NIS are important mandates of institutes engaged in Agricultural R&D.

- Improving access to donor resources

  Donors often insist on broader partnerships in agricultural R&D. One of the criteria for selecting projects partnership can improve an organizations' ability to compete.

Partnerships and networks can improve the development and delivery of innovations that directly affect the livelihoods of resource-poor or vulnerable households if structured appropriately. Challenges of today's complex society are such that individual agencies and programs cannot succeed in delivering results on their own any longer. A collaborative effort that reaches across agencies, across levels of government, and across the public, nonprofit, and private sectors is needed to achieve results. The key tools for doing this are partnerships and networks. Communities are built on connections and better connections create an economic opportunity (Krebs et al, 2002).

Several recent studies illustrate the need for partnerships and networks to support the development and delivery of agricultural innovation. Studies of agro-industrial firms and agro-industrial opportunities, for instance, suggests that there is high demand for technologies to enhance the quality of value-added agricultural processing, for new marketable products, and for institutional and infrastructural improvement to enhance supply chain efficiency (Hall and Yogandand 2002; Chema et al. 2003). To meet these demands, the studies recommend further investment in partnerships and networks to improve strategic managerial and institutional capacity in the agricultural sector (ASARECA 2003; NARO 2003).

The overriding rationale for networks in agricultural research and innovation is the interdependence among organizations which enables mutual reliance upon one another to accomplish their joint goal as well as their individual objectives. The potential for synergy within networks enables actors to achieve more through co-operation than they would if they were alone. Knowledge creation through networks may better respond to the demands of agriculture in developing countries, which is characteristically riddled with complexity, uncertainty and risks (Chambers et al. 1989).

Different studies indicate that it is worth investing in networking of different actors in the society because their contribution to learning and innovation for sustainable development is tremendous. Moreover weak linkages among research, education and extension institutes result in systematic bottlenecks in national agricultural technology systems and limit their effectiveness to contribute to development (Crowder et al. 1997). Increased number of players entering the field is evidence that a synergy would be created by working in partnership (Biggs 1989).

Networking is also a means of giving greater regional, national or international impacts to the activities of community-based organizations. There is evidence to suggest that partnerships and networks are playing an increasingly important role in addressing global issues such as health, environment, finance and governance (World Bank 2002; UNF/WFE 2003). In the international agricultural R&D community, there is a similar interest in promoting greater collaboration among diverse actors in the sector, including key international organizations (CGIAR 1998; GFAR 2003; World Bank 2003), leading agricultural research firms (Barry and Horsch 2000; Shear 2000; Richer and Simon 2000), and non-governmental organizations engaged in agricultural science and technology (James 1996).

3.4 Factors contributing to increased use of partnerships and networks within agricultural R&D

Increasingly the challenge facing many organizations is to operate not in 'splendid isolation' but in relationship with others. Inter-organizational networking is becoming an issue of considerable interest amongst researchers, policymakers and development practitioners. Here, we deal with 'collective efficiency' as opposed to the efficiency and effectiveness of individual members.

Partnerships and alliances are hot topics in every major sector of business today. Without exception, private, public, academic and non-profit organizations are embracing the strategic mandate of collaboration. Partnerships are found extensively, both domestically and internationally, and on a local or national level. The use of partnerships to accomplish strategic and operational goals within the agricultural R&D arena has risen substantially over the last two decades. A number of factors contributed to the proliferation of partnerships and networks. This section briefly outlines these factors.

- Changing paradigms in R&D arena

Currently the R&D process is guided by four complementary but mutually reinforcing concepts: Innovation systems perspective, value chain approach, research for development and impact orientation. Managing innovation has become one of the key strategic tasks facing organizations of all shapes, sizes and sectors. Although technical innovations are important, so are organizational, managerial, institutional, service delivery and policy innovations. Partnerships that promote innovation are thus not only concerned with frontier research and technology but also concerned with incremental problem solving i.e., continuous process of minor adjustments and improvements that farmers and firms (institutes) make to survive, improve profits, and compete with other farmers and firms domestically and internationally, (Hall 2006). The emerging paradigms in agricultural research and development scene are rooted in participatory approaches and partnership amongst the various stakeholders/actors.

- Increased use of system concepts and participatory research methods

The evolution of systems thinking and participatory approaches (from farming systems research to participatory research methods to IAR4D and innovation system perspective) have changed the power relationships in decision-making and resource allocation. One of the most notable trends in development research over the past thirty years has been the move towards more multidisciplinary, interdisciplinary and transdisciplinary research. The movement has also contributed to the participation of stakeholders from diverse spectrum in the R&D processes within the agricultural sector.

Within the agricultural research and development arena, innovation systems have become increasingly complex. From 1960s onward, the traditional thoughts have been that S&T involves three inter-related actors—infrastructure, production structure and government policies for S&T. A current model of innovation system, however, must also include at least seven other types of actors—the financial system, technology brokers, industry and professions associations, the legal/institutional base, non-governmental organizations, media, public opinion and regional and international co-operation structures (Plonski 2000). Without adequate development and interactions of these actors and organizations in domestic and regional setting, the innovation structure remains under developed, weak, and inefficient.

- Increased complexity of developmental challenges and changed expectations

Over the years, the goal of agricultural research has broadened from an initial narrow focus on near term technologies to increased food production and productivity gains to incorporate a much larger agenda that includes environmental sustainability, poverty alleviation and social inclusion. The

complex and multifaceted nature of these problems and the diverse needs and interests of the society at large demanded expertise beyond the scope of an individual organization or group of actors. This has necessitated the pooling of resources and the need for working together.

The developmental challenges are increasingly complex calling for multidisciplinary multistakeholder participation. Furthermore, downsizing and reengineering (largely through economic structural adjustment program) of R&D organizations has created leaner organizations focusing on core competencies thus lacking in the broader technical capabilities outside their primary mission and mandate.

- Increased competition

In many cases, the mere survival of organizations due to their inability to face complexities brought about by globalization, hyper-competition and deregulations have forced them to form strategic alliances and partnerships. Kogut (1988) emphasized the role of competition and observes that competitor incentives are important for both the formation and termination of joint ventures. It has been argued that vulnerability in market conditions and fear of competition provide the seed for co-operative ventures.

- Globalization of agricultural R&D and the changing organizational landscape

In the recent past, there is a trend towards globalization of agricultural research. Drivers of globalization of R&D are decrease in global investments (leading to clear roles and responsibilities); growing markets for agricultural products, agricultural inputs, new technologies, improved ability to appropriate the gains from innovations, improved policy environment for foreign investments and technology transfer; and growth in demand due to increased income and policy changes.

There is also growing awareness that a number of sectors such as agriculture, health, education, water and energy are very closely linked. Thus the agenda for agricultural transformation should follow a multisectoral approach to capture the synergies and complementarities. In addition there are also a number of continental and regional bodies to co-ordinate agricultural R&D.

A reorganization of the global agricultural research systems to include stakeholders such as farmer organizations, civil society organizations, NGOs and private sector also calls for greater collaboration.

- Emerging technologies—especially information technology and biotechnology

The information communications technology revolution has made the exchange of information across boundaries easier and the increasing prominence of biotechnologies that call for new competencies not always available in one institute.

Biotechnology is a highly technical field, which typically requires high initial investments for building the necessary human capital and infrastructure including laboratories and green houses for risk assessment and identification genetically modified organization. Thus, a number of countries and institutes have opted to work in collaboration to derive the benefits of the emerging gene revolution.

- Redefining role of government and increased emphasis on privatization of public services

Over the last two decades, the policy and institutional context within which agricultural research and innovation occurs have changed dramatically. The reform agenda within the R&D arena include: redefinition of the role of government in agricultural R&D, decentralization/ privatization of agricultural R&D activities, broader and active stakeholder participation and pluralism in service provision, networks

and partnerships and new funding arrangement. Another key feature is the separation of financing from service provision and research executions. These changes provide increased opportunities for public, private and third party (such as civil society, farmer organizations and NGOs) collaboration and partnership.

Presentation of adequate legal frameworks and mechanisms for sharing benefits also contributed to increased private sector participation in agricultural R&D activities.

• Changing funding scenario and funding arrangements

The growth in agricultural research investments was very rapid in the 1970s and slowed down since the mid 1980. While the available R&D resources are declining, there has been a universal move towards the use of competitive funding for research. One of the criteria for selecting successful project is the multi-organizational, multistakeholder partnerships in the design and implementation of projects. There is an increasing demand from donors for regional alliances and partnerships.

• Increased anecdotal evidence of socio-economic benefits of co-operation.

There is growing realization that individual institutes and group of actors have limited capacity to address the multifaceted developmental challenges. It has been argued that the total value of the partnership efforts is greater than the sum of the values derived from individual efforts. This is basically the economic rationale behind partnership formation. Although the available evidence is mostly advocacy type, comprehensive studies of partnership process and benefits are still very limited.

3.5   Factors enhancing and hindering impacts of partnership

Although partnership and networks are gaining grounds in recent past in agricultural research for development, partnership has been a common phenomenon in the R&D arena in the other sectors for a considerable period of time. Over the years number of systematic reviews have been conducted (NCHRP 2001; Atkinson 2005; Masselli et al. 2006; Bradley 2007a, b) to identify the factors that enhance as well as hinder the aspects of partnership. This knowledge will assist a great deal in the design and management of effective research partnership and are presented in this section.

3.5.1   Factors enhancing impacts of partnership

• Direct contact with community

This helps create relationships with people and among research teams, change attitudes and trigger changes in behaviour. The contact with people also includes feedback exercises, and this results not only in validation of findings but also in follow-up for capacity building, analysis and action at community level.

• A forum for regular meeting and sharing experiences

This forum provides a space for researchers to share their research methods, approaches, findings and conclusions and for the partners to make plans for sharing these with the research and development community outside the research project.

• Plan for impact

In collaborative research projects, aspects related to domains such as capacity building and impact beyond scientific findings are important. But these are often neglected or completely overlooked. Planning for impact requires active inclusion of all concerned stakeholders and joint thinking about

desired and undesired project impacts. Unless the desired impacts are clearly spelled out, discussed, negotiated, agreed upon, and planned at the beginning they are unlikely to materialize and the undesired effects cannot be mitigated effectively.

• Monitor and evaluate impact

A M&E system looking beyond the output has to be developed as part of design and implementation. Impact monitoring helps to learn, reflect and adjust to improve the performance of all stakeholders involved (Hagmann et al. 2002). Stakeholder perceptions and expectations may vary. Participating impact assessment provides an opportunity for these different views, judgments and observations to come to the surface.

For each partnership project, an appropriate M&E system allowing to assess work in progress and to take corrective measures, if necessary, should be jointly developed at an early stage. There must be a strong commitment to make proper use of this M&E system by all those concerned.

• Making resources available—earmarked resources for IA

Even if effectively integrated, resources are needed to facilitate and evaluate impacts within a project. Impact should not be considered as a byproduct of research; it is the ultimate goal of conducting research.

• Commitment, competence, continuity and complementarity (4Cs)

Commitment and competence of involved research partners are crucial to the success of a partnership project. Equally the continuity of the commitment and the complementarity of the partners allow for long-term collaboration.

• Mobilize local support for local sustainability

Developmental impacts take time to realize. Therefore, it may be necessary to include some long-term support for responsible institutions to implant and follow up.

• Promoting, participatory, transdisciplinary, multilevel, multistakeholder and gender sensitive approaches

This is crucial for development-oriented research. It allows non-scientific actors to become active partners in the research projects. The diversity of perspectives stemming from different scientific disciplines as well as different representatives of the society helps balance values and ideologies. Through this collaboration, mutual learning process can be generated which may lead to a change in understanding, in attitude and finally behaviour.

• Incentives

To maintain or enhance the motivation and integrity of all partners and individuals involved, appropriate planning of incentives is crucial.

Incentives can be in the form of extra remuneration, free lunch/snacks, invitation to meetings, participation in meetings, overseas trips to attend professional meetings, and support for joint publications.

• Communication, dissemination and feedback strategies and skills

Effective communication and dissemination of results facilitates the achievement of desired impacts. There is a need for a clear-cut communication and dissemination strategy before, during and after the project. This strategy should cater for the needs and levels of different stakeholder groups and

audiences such as policymakers, the research community, the development community and (society at large) the user community. Appropriate feedback mechanisms have to be developed in order to satisfy the expectations of the targeted end-users. Creating mutual learning platforms are very useful.

- Documentation

Proper documentation is recommended to track the research for development process as a basis for mutual learning and self-evaluation with respect to improve the collaboration/performance in the future. Safe storage and maintenance of data and information collected during the process is vital to avoid delicate situations such as changes in personnel.

Each project has to develop jointly an appropriate reporting, documentation and communication strategy including an action plan in a proactive and transparent manner.

- Speaking the right language

Making an impact at different levels requires speaking the language of those that one seeks to influence. e.g. language of researchers, language of farmers, language of policymakers etc.

3.5.2 Factors hindering impacts of partnership

The following factors have been found to have had a negative impact on partnership.

- Expert attitude and competition

The competition between different researchers often results in inadequate support for innovative and new approaches from within the forum. The expert attitude inhibited researchers from relating to others. Thus engaging in one another's research was very limited.

- Fears and orientations

Fears, anxieties and prior orientations limit not only the formation of deeper partnerships, but also influence the opinions that one researcher held of another's research. Emotionally moving experiences were recognized as powerful change agents, and as positive influence both in research and development.

- Discontinuity

Stop and go policies, abrupt changes, or discontinuity of support due to policy changes, or instability of government could have a significant effect on the success of the project and the planned impact.

It may be useful to think about this in advance so that provision is made for decent termination of the collaboration. It is also worth noting that no legal recourse is possible in official national or international development co-operation commitment.

- Inflexibility of funding

Funding arrangements with rigid disbursement regulations hinder meaningful and flexible use of funds for the project duration.

Year to year carry over, adaptation between line items must be allowed or responding to emerging needs.

- Lack of internal information and communication (skills)

Sound knowledge of the project, its context, expected output and impacts is a fundamental pre-requisite of every partner in the process. Effort should be undertaken to maintain communication at all levels:

- Funding agency and researchers
- Researchers and end users
- Researchers of the various organizations (N–S; S–S).
- Internal tensions and conflicts

Conflict may arise due to disparities, imbalanced power distribution or budget allocation between institutes. Some of these disparities are unavoidable and need to be discussed, classified and made transparent. Compensation mechanism (national vs. international; North vs. South), cultural gaps, hierarchical positions, unclear roles and competencies required may cause international tensions and conflicts among the partners.

- Prejudices and mindsets

Some individuals are predisposed to some prejudices and have a fixed mindset. Lack of flexibility and unwillingness to change/reluctance to change may cause problems in partnership and hinder the achievement of desired impact. Inter-organizational bias especially in situations where partnerships involved research academic institutes, private sector and NGOs can affect the performance negatively.

- Overambitious project design

Increasing competition for research funds frequently leads to overambitious project designs with overly optimistic timing, overloaded activity plans etc. The consequences of such a design are that the expectations are not met. Commitments to the funding agencies and the end users cannot be fulfilled. This in turn leads to mutual deception and frustration, not only hampering successful project performance but often also leading to reduced commitment among all stakeholders involved, and even to negative impacts.

- Overcommitted partner staff

In many instances, one could observe that the staff resources have declined without corresponding decline in work load. These heavy workloads often lead to difficulties in maintaining partner accountability for work commitments and work quality.

- Insufficient support for partnership

Management may agree to new partnership anticipating additional resources, visibility and/or recognition. Very often commitments are made by individuals and senior and middle level managers to partnerships without realizing the implications of integrating these new partnerships into the existing portfolio of activities of the organization. As a result, the individuals and management may fail to give the required support. Leaders may find themselves ignoring these new partnerships rather than nurturing and supporting them.

- Lack of attention to the process of building the partnership and trust

Given the declining resources organizations often compete for resources, for visibility and for recognition. This survival strategy can endanger the trust needed for collaborative processes.

Partnerships often work better when all partners are equal in access to resources and staff skills and knowledge. Very often we find that the staff working in NARES and NGOs are paid much less than their counterparts in the CG systems and advanced institutes leading to feelings of unfairness and resentment that may be difficult for the partnership to overcome.

Often under the pressure of hectic schedules, partnerships immediately focus on the work tasks and neglect to spend time explaining how partners will work together.

• Lack of partnership and alliance competencies

Most staff in research partnerships are scientists or have been trained in technical subject matter areas. Often they may lack the skills and expertise required to manage and nurture partnership.

Paying attention to these factors during the design and implementation of partnership project will significantly enhance the impacts of collaborative research projects.

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Session 3: Exercise: Discussing the purpose of partnership in agricultural research for development

(Plenary session)
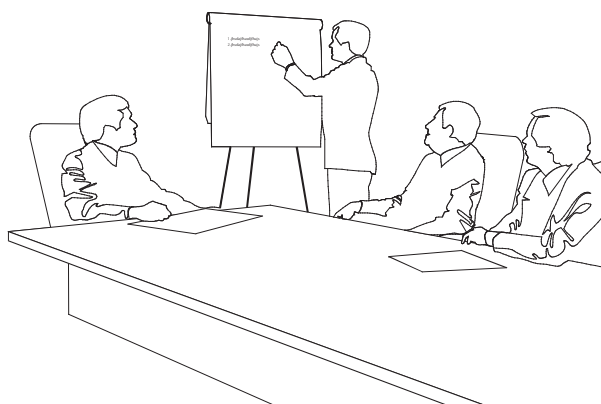
Plenary discussion (15 minutes)

While the facilitator makes the presentation, think about responding to the following questions:

a. Have you ever been involved in partnership? If yes, what kind of partnership? What was the motivation for establishing partnership?

b. Were your expectations met? Explain ——————————————————————————————
_____
_____
_____

Trainer's guide

Session 4:   Partnership typology and key research partnerships

Purpose	To enhance the capacity of the agricultural researchers to forge effective and efficient partnerships with other relevant stakeholders in the agricultural innovation system for achieving greater impacts
Objectives	At the end of this session participants will be able to: • Describe partnership types and categorization criteria • Discuss challenges of partnership • Mention some examples of research partnership
Resources	• Flipcharts • White board • Blank transparencies • Flipchart and white board markers • Copies of handouts 4.1 and 4.2 • Computer and LCD projector • Overhead projector
Time needed	One hour and 15 minutes

Method of facilitation

Activity		Time
Presentation	Distribute handout 4.1 (presentation slides) before you start your presentation Give a presentation on partnership typology and key research partnerships Allow some time for discussion to make sure that participants understand what is presented. Distribute handout 4.2 (presentation text) to supplement your presentation	50 minutes
Exercise	Plenary discussion Ask participants to discuss selected issues from the presentation	20 minutes
Transition	Make closing remarks and transit to the next session	5 minutes

Session 4: Partnership typology and key research partnerships: Summary of overheads

4.1

> Partnership typology
>
> and
>
> key research partnerships
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4.2

> ### Session objectives
>
> - Describe partnership types and categorization criteria
> - Discuss challenges of partnership
> - Mention some examples of partnerships
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4.3

> ### Individual partnerships
>
> - These are long-term cooperative arrangements between two or more organizations involving exchange or sharing of resources of various types.
>   - Focus is on inter-organizational relationships
>   - Terms and conditions usually spelled out in the form of an agreement (at times legally binding)
>   - Emphasizes long-term cooperative arrangements implying a stronger commitment by the organization/institute to the partnership
>   - Minimum number of partners is two, but there is no upper limit
>   - Partnership serves a common objective, which becomes critical in achieving the purpose of the institute.
>   - Exchange or sharing of resources demonstrates the extent of commitment of the parties
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4.4

Partnership types

- Partnerships can be classified using a number of variables/parameters.
  - Size (e.g. number of partners, size of the budget etc.)
  - Age (e.g. length of time in existence)
  - Geographical scope of activities (local, national, international)
  - Based on geographical origin of partners (North–South, South–South)
  - Type of partner (public, private, NGOs, CBOs)

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4.5

Commonly used classification

- Structure of ownership—based on management authority
- Nature of interdependence—pooled, sequential, reciprocal
- The rationale or the motivating factor for the ownership—resources, legitimacy, information exchange, risk sharing etc.
- Purpose of the partnership
- Partnership based on the 'nature' of the organizations involved
- Partnership based on the geographical location of the countries

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4.6

Classification based on purpose

- Research partnership —cooperative agreement for conducting joint research
- Exchange partnership —this partnership deals with formal arrangements for exchanging information, materials, staff, intellectual property etc.
- Service partnership —this type of partnership involve providing services to a partner institute but not as a market based transaction—training, consultancy, capacity building etc.

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4.7

> ## Partnership based on nature of organization
>
> - Public sector–private sector (NARIs and seed companies)
> - Public sector–public sector (NARIs and universities)
> - Private sector–private sector
> - Public sector–third sector
> - Private sector–third sector
> - Public sector–private sector–third sector
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4.8

> ## Partnerships based on geographical origin
>
> - North–North (biotechnology companies and advanced universities)
> - North–South (advanced institutes and developing country universities)
> - South–South (networks coordinated by subregional organizations)
> - North–South–South (number of partners in the South forming partnerships with advanced institutes)
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4.9

> ## ILRI's partnership typology – An example
>
> - Project based partnership
>   - Here ILRI works with another organization to implement a specific piece of research, usually within the context of a donor funded project
>   - Roles and responsibilities of each partner are clearly defined in the project proposal
>   - Arrangements may be formalized in a Collaborative Research Agreement (CRA)
>   - Partnership is time bound, limited to the duration of the project
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4.10

> ## ILRI's partnership typology—An example
>
> - Strategic partnership
>   - Here, the ILRI research managers establish longer-term strategic relationships with partners having complementary capacity and who share similar interests in their specific research area
>   - Considerable investments made in developing and cultivating such partnerships
>   - Objectives, roles of each partner and implementation modalities are usually recognized by a Memorandum of Understanding (MOU)
>   - Expectation for the partnership is that it will generate proposals for specific donor funded joint activities within the framework of an agreed research agenda
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4.11

> ## ILRI's partnership typology—An example
>
> - Organizational partnership
>   - Here, ILRI enters into partnership at institute level, consistent with ILRI's broader role as a research broker for poverty reduction in the developing world
>   - Such partnerships are established and managed by ILRI's management committee
>   - These partnerships are not motivated by mutual interest in a specific area of research but rather by ILRI's overall mandate
>   - They may be formalized if appropriate
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4.12

> ## ILRI's partnership classification based on management and partner roles
>
> - Contractual
>   - ILRI is in charge of the partnership and fully responsible for the output
>   - ILRI acts as a contractor with the other partner paid to contribute a component of research
> - Equal partnership
>   - All partners contribute mutually to a shared goal
>   - Partners will have varying degrees of equal footing and control over research
> - Service provider
>   - ILRI contributes to ongoing process led by the others
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A robust partnership capability requires…

- Organizations develop their partnership approach and capability over time
- Organizations that have robust partnership capability have two things in common
    - a partnership strategy (or strategic policy regarding partnerships)
    - a methodology for how the organization will create, operate and close a partnership

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A partnership strategy contains...

- Underlying strategy that shapes the logic and design of individual partnerships
- Dynamic perspective that guides the management and evolution of each partnership
- Portfolio approach that allows co-ordination and flexibility
- Internal infrastructure that supports and strives to maximize collaborations

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Research partnerships

- Research partnerships can encompass any research activity in which two or more organizations participate by providing a part of the resources for a research effort and share in the resulting benefits of the research

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Research partnerships

- Broadly there are two types of research partnerships
  - Focused: partnership is targeted to a specific stage of a research project where it is clearly defined beforehand
  - Broad: partnership can include the whole research cycle—from the identification of research issues through project implementation to project impact management.
    - The roles and tasks of the research parties might be loosely defined at the initial stage and the role may change as the cycle progresses.
    - In general, broad partnerships are much more expensive and require more time than the focused partnership.

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Research partnerships

- Research partnerships are simply part of a broader set of collaborative partnerships to enhance innovation.

- The process of joint innovation is not only confined to formal arrangements; it involves significant elements of informal collaboration, learning and exchange of knowledge between individuals in different organizations.

- The motivating force behind the creation of these collaborative relationships is the compelling need to innovate jointly.

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Important research partnership types

- Four types of partnerships are becoming increasingly important in their contribution to the achievement of the MDGs
  - North–South partnership
  - University–industry partnership
  - Public–private partnership
  - South–South partnership

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4.19

North–South partnerships

- Enable exchange and mutual learning on the basis of complementary skills and knowledge
- Lead to an increased quality of research
- Building of research capacity in the South and in the North

Major types of N–S research partnerships:

- Partnerships between individual researchers/research teams built to carry out specific project
- Capacity building partnerships—no direct research component, may be focused on individual or institute levels
- North—South research network (formal and informal)
- In some cases one could see a combination of all these three sets of activities

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Factors leading to increased North–South scientific collaboration

- Changing patterns or level of funding
- Researchers' desire to increase scientific popularity, visibility and recognition
- Increasing specialization in science
- The advancement of scientific disciplines which means that a researcher requires more and more knowledge in order to make significant advances—a demand which can only be met by pooling ones' knowledge with others

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Factors leading to increased North–South scientific collaboration

- Complex and multifaceted nature of the developmental problems and challenges
- Need to gain experience or to train apprentice researchers in the most effective way possible
- To increase the desire to obtain cross fertilization across disciplines
- Need to work in close physical proximity with others in order to benefit from their skills and tacit knowledge

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4.22

Why partner?

- Northern researchers
  - to gain access to data and field work opportunities
  - southern researchers contribute their own contacts, linguistic abilities, methodological expertise and knowledge of local conditions which often translates into nuanced theoretical insight

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4.23

Why partner?

- Southern researchers
  - funding and the chance for publishing in Northern peer-reviewed journals
  - access to electronic libraries and extensive data bases held in Northern universities
  - access to professional opportunities such as conferences and tailored training programs for junior staff
  - valuable source of contacts and advice
  - richer learning and scholarly output
  - present opportunities for international interaction and collegial debate which are especially valuable when domestic research communities are isolated or small

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Shortcomings and key Issues with N–S partnership

- Asymmetries or unbalanced partnership; South only providing 'laboratory' and interesting scientific data for the North

- Unbalanced power relations with regards to funding and scientific merit

- Imposing the dominating scientific paradigm from the North on the South.

- Potential for 'contract culture' (partner vs. data collector)

- The issue of agenda setting

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Issues in agenda setting

- Southern researchers' collaborative agenda setting is shaped by the structure of the development research funding system in which partnerships are the primary funding modality

- Financing is often devolved to short-term projects rather than long term core support; and donors have pre-defined substantive interest which changes periodically

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Issues in agenda setting

- Existence of pervasive inequalities between prospective partners in the North and South. Southern partners are disadvantaged in terms of their soft and managerial skills, and the Northern researchers time and efforts are extremely costly

- Individual partners also strive to move forward 'silent agenda', from padding their publication list in advance of a promotion; to increasing partnership advocacy role

- Changes in political situation often necessitate revision of the collaborative agenda

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Shortcomings and key issues with N–S partnership

- Good partnership practice is rarely rewarded

- Even when partners agree on broad content of their research agenda, pinning down viable research questions may be difficult, as many partners have been schooled in different academic traditions and theoretical frameworks depending on linguistic, cultural, geographic and religious backgrounds

- Difficulties of enabling co-operation between different actors including academics, grass root activists, policy makers, public and private sector officials

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Shortcomings and key issues with N–S partnership

- Negotiating agenda and moving research forward is often time consuming

- Measuring the success and impact of N–S partnership—methodologies are still evolving

- Evolving role of the Southern research leaders such as Brazil, India, China and South Africa. This will significantly change the roles of the partners in the N–S partnerships

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4.29

Lessons from past N–S partnerships

- Creating developing country ownership of research programs entails a shift of leadership responsibilities, decision-making power and resources from Northern to Southern partners. A concept that many find difficult to implement

- If asymmetries between North and South are recognized and properly addressed, ways can be found to balance the principles of ownership with the principles of partnerships

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Lessons from past N–S partnerships

- A broad-based consultative process, however painstaking and time-consuming it may be, should precede any partnership program, to be successful

- Helping developing countries to initiate dialogue among local scholars, government policymakers and representatives of civil societies on specific needs, sets off a process of discussing change and innovation and creates a learning environment and network for all the major actors involved

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4.31

> ## Enhancing the effectiveness of N–S partnership
>
> Funding organizations:
>
> - Pay due attention to impacts when designing new research partnerships
>
> - Make sure that (desired/planned) impacts are monitored and their achievement facilitated
>
> - Secure continuity in policy support and funding
>
> - Be more flexible in budget allocation
>
> - Allow pre-phase funding and sufficient time in order to set up the project proposal and clarify issues such as goals, intentions, roles, responsibilities, expectations, motivations etc.
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> ## Enhancing the effectiveness of N–S partnership
>
> Researchers and their institutes:
>
> - Plan for impact: discuss negotiate and strive for impacts
>
> - Monitor and evaluate the planned/desired impacts, identify indicators
>
> - Select the right partner(s) who show(s) commitment, competency, continuity and complementarity (4Cs)
>
> - Create mutual learning platforms
>
> - Secure internal information, communication and documentation
>
> - Aim for local sustainability and try to generate local resources
>
> - Address internal tensions and conflicts openly as normal features of an evolving partnership relation
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> ## Enhancing the effectiveness of N–S partnership
>
> Funding organizations and research community
>
> - Make specific, additional resources available for planning and assessing impact (finance, time, personnel)
>
> - Promote participatory, transdisciplinary, multi-level, multi-stakeholders approaches. Involve stakeholders right from the start in the design, implementation and interpretation of the project and its intended impacts
>
> - Create incentives (salaries, visits, participation in conferences) and strive for an enabling environment to promote a fruitful research culture that also enhances the inter-cultural competences of all partners and institutes involved
>
> - Develop a communication and dissemination strategy (feed back events). Make funds available for its implementation
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University–industry partnership

- Three main areas of activities that universities engage for developing partnership with industry
  - teaching and learning
  - research
  - innovation and knowledge transfer
- 'Industry' includes any private, public or voluntary (third sector) organizations involved in agricultural R&D

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Natural links between university and industry

- Universities produce a pool of well-educated graduates and post-graduates from which the professional workforce is recruited
- With the people come the ideas, skills and knowledge from which many companies derive their competitive edge
- Universities and companies have many similar assets at their disposal
  - physical resources (laboratories, equipment and facilities)
  - human resources (highly skilled and experienced staff)
  - other knowledge resources (information, data bases, libraries, management processes, ideas and network of contacts)
  - financial resources (own research funds or access to public funds)

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Natural links between university and industry

Both industry and university exist to transform knowledge, skills and materials into products and services involving trained people and both seek to add value in the process

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Partnership benefits—Industry

- Thinking longer term
- Benefiting from new ideas and past experience
- Going global
- Outsourcing
- Complementing the company's skill base
- Taking a multi-disciplinary approach
- Harnessing public funds
- Reducing risk
- Complementing the company's physical resource base
- Recruitment made easy

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Partnership benefits—Universities

- Improving market awareness
- Enriching teaching programs
- Maintaining research momentum
- Applying knowledge
- Complementing the university's skill base
- Learning business processes
- Harnessing private and public funding
- Building on excellence and reputation
- Complementing the university's physical resource base
- Sourcing job opportunities

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4.39

Public–private partnership (PPP)

- In the recent past, in many developed countries private enterprises have become important players in AR4D
- Limited PPP in developing countries
- Casual interactions
- Many partnerships induced by competitive funding
- Successful PPP are always context specific
- Great diversity in arrangements

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Main assumptions of PPP

Longer-term, development goals

Short-term, profit-maximizing goals

Public interest

Common interest area

Private interest

'Positive viewpoint' considers this common interest space as given: PPPs will evolve if benefits outgrow research and development and interaction costs

When the space of common interest is not evident, facilitation is required

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Source: Modified from Vernoica Gotrett's presentation.

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Factors contributing to successful PPP

PPPs are often successful when:

- developed as a long term flexible partnership between trusted partners

- used for capacity-building and development of marketable technologies

- common objectives and common interest space have been clearly identified

- readiness for institutional learning and change exists

- used for enhancement of social capacity and

- led by a facilitator

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Key challenges in promoting PPP

Key challenges:

- High transaction costs—management intensiveness

- Demand for human resources and operational funds

- Resistance to institutional change

- Complex operational setting, including disconnect between international and national laws and

- Farmer and civil society involvement in technology development

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How can we enhance PPP?

- Great efforts to foster openness and clarity, minimize risk and uncertainty and reduce red tape
- Including facilitator and/or facilitation organization
    - Reduces transaction costs
    - Bring clarity to the process
- Supporting policy measures IPR

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How can we enhance PPP? (cont'd...)

- source of synergetic R&D rather than as a means to supplement public sector funding
- greater participation of farmer groups and other stakeholders
- increased capacity strengthening
    - accumulate social capital
    - develop co-operation skills
    - analyse needs of particular value chains
- should include technical, institutional, managerial and policy level collaboration

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4.45

South–South partnerships

- For a long time the international co-operation was focused on partnerships between industrialized countries and the developing countries
- The industrialized world was economically well off and had access to advanced technologies and practices that could be shared with the developing countries for their development
- Over the years it has been realized that within the group of developing countries, there were marked differences, and even countries in the South can share technologies and practices and benefit from such sharing of experiences

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South–South partnerships

- Realization that countries in the South generally share certain commonalities such as similar developmental experiences and are faced with common challenges such as high population pressure, poverty, hunger, diseases, environmental deterioration etc.

- A number of developing countries such as Brazil, Argentina, Taiwan, China, India, Malaysia etc. have made tremendous economic progress and have the potential to contribute to the development of the rest of the developing countries

- Recognizing these realities, the developing countries have started to work together to meet their technology needs through South–South co-operation

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Factors contributing to enhanced South–South co-operation

- Realization that technological advances made in temperate zones may have little bearing on the emerging, complex multifaceted problems of the tropics ecological specificity of technology

- Gradual movement of agricultural research from public to private sector and reluctance of the private sector to share their technology freely—often protected by patency and intellectual property rights

- Developed countries confronting their own set of problems and trying to find solutions

- Increased awareness that the least developed countries could find economic and sustainable solutions to address their needs and problems by sharing and learning from the experiences of other developing countries

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Factors contributing to enhanced South–South co-operation

- Fast economic growth in a number of developing countries, and the expansion of trade among developing countries

- Increased number of research networks and regional and sub-regional organizations to support research for development within developing countries

- A number of international initiatives to support South–South co-operation and partnerships

- Science and technology are playing increasing role in international diplomacy

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Lessons and challenges of South–South partnerships

- Most of the funding support for agricultural R&D is channeled through regional and subregional communities and bilateral and multilateral agreements
- Developed countries and donor communities are still continuing to channel support and resources through triangular arrangements. Despite the increase in South–South initiatives, the triangular co-operation (North–South–South) will remain important in the foreseeable future
- Much energy and time is lost due to bureaucratic procedures. Governments should therefore work to improve the policy environment at the national level
- One of the challenges is the need to harmonize the design, development and implementation of policies and tools of South–South co-operation/partnership

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Factors affecting successful research partnerships

- Knowing how to lead and how to follow
- Excellent communication skills
- Capacity to select the right partners
- Trust
- Strong commitment
- Capability to share risks and benefits
- Top negotiating skills for dealing with a partner from another culture
- Understanding of how to collaborate for sustainability
- Organizational learning
- Conflict resolution skills
- Ability to focus on developing these skills before entering into partnership relationships

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Thank you!

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Session 4: Partnership typology and key research partnerships: Summary of presentation

4.1 Introduction

Research partnerships can take different forms depending on the purpose, nature of partnership, types of partners involved, geographical scope etc. This chapter describes the major research partnership types and briefly describes their characteristics and challenges.

4.2 Partnership typology

In general, partnerships can be studied from three separate but related perspectives:

- Individual partnership (micro)
- Portfolio of partnerships—where an organization deals with organizations made up of many individual partnerships.
- Structure of partnerships within an industry or sector. This is a network of relationships defining the structure of intra-industry linkages. Inter sectoral linkages are becoming important in the recent past.

The most relevant partnership type of concern is the individual partnership. These are long-term cooperative arrangements between two or more organizations involving exchange or sharing of resources of various types. It is important to note that in this type of partnership:

- Focus of attention is on inter-organizational relationships.
- Cooperative arrangement refers to relationships between organizations the terms and conditions of which are spelled out in the form of an agreement (at times legally binding).
- Definition emphasizes long-term cooperative arrangements because these imply a stronger commitment by the organization/institute to the partnership than short term or one-time contract relationship.
- Minimum number of partners is two, but there is no upper limit to the number of institutes that belongs to a partnership.
- Major distinguishing feature of partnerships is that the partnership serves a common objective. The significance of the partnership for each organization increases to the extent that the common objective becomes critical in achieving the purpose of the institute.
- Exchange or sharing of resources demonstrates the extent of commitment of the parties or partnership.

In the following section, we will discuss the commonly used typology covering the individual partnerships.

4.3 Partnership types

Partnerships can be classified using a number of variables/parameters. These include:

- Size (e.g. number of partners, size of the budget etc.)
- Age (e.g. length of time in existence)
- Geographical scope of activities (local, national, international)
- Geographical origin of partners (North–South, South–South)
- Type of partner (public, private, NGOs, CBOs)

The commonly used partnership classification is based on:

- Structure of ownership
- Nature of the interdependence
- Motivating factors/rationale for the ownership
- Purpose of the partnership
- Partnership based on the 'nature' of the organizations involved
- Partnership based on the geographical location of the countries.

4.3.1 Partnership classification based on structure of ownership
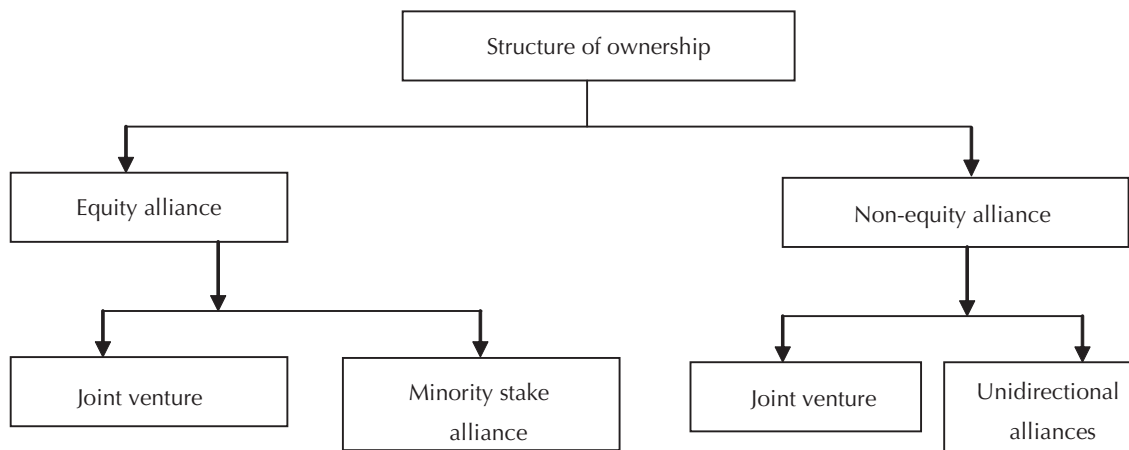
Source: Özgediz and Nambi (1999).

Based on the structure of the ownership alliances/partnerships can be grouped as equity alliances and non-equity alliances. Equity alliances are those inter organizational contractual arrangements that involve two or more distinct organizations investing in the joint activity and exercise management authority in the decisions of the jointly owned activity (Geringer 1991). Here the partners share the ownership, have legal right to manage the enterprise, receive compensation in the form of profits or dividends and assume the market and non-market risks.

The equity alliances can be joint ventures or minority stake alliances. The joint ventures involve equal or close to equal equity and participate in governance. A good example of a joint venture is a research consortium with equal participation. In the minority stake alliance, one or more parties have a minority stake with one party holding a majority stake. A good example of a minority stake alliance is a research consortium with a lead actor.

Non-equity alliances are those arrangements between firms to cooperate in some way without any shared ownership structure. This may involve some form of contractual agreement among partners who commit resources to a joint activity but do not share the ownership or profits of the venture. The non-equity alliances can be bi-directional (some form of exchange among partners) or uni-directional (flow only in one direction). A good example of bi-directional alliances is a germplasm exchange network of the international agricultural research centres; and a good example of a uni-directional alliance can be a service partnership such as a commissioned training activity.

4.3.2 Classification based on the nature of interdependence

The assumption here is that each partnership embodies some type of interdependence among partners. Thompson (1967) provided a simple typology based on interdependence.

Pooled interdependence

Here resources are provided by partners for a joint activity where each partner has access to the product.

Sequential interdependence

Here activities are carried on in sequence such that the output that is the responsibility of one partner becomes an input to a process that is the responsibility of another partner or partners, e.g. germplasm development of CGIAR centres is to some extent research and extension partnership.

Reciprocal interdependence

These are situations where assets are exchanged on a quid-pro-quo basis. E.g. information about genes associated with drought tolerance in rice for that in maize, but each partner continues to pursue their own dissimilar ends.

4.3.3 Classification based on motivating factors/rationale for the partnership

Here the classification is based on the primary reason(s) for participants entering into the partnership. In the context of the CGIAR, Winkelmann (1999) suggested the following as a draft typology of principal factors motivating participation in any partnership.

- To add (augment) like resources
- To add complementary resources
- To gain legitimacy
- To foster or facilitate information exchange
- To fortify training and
- To spread risks

Kogut (1988) offered a similar inventory of main motivating factors for entering into alliances and partnerships. This includes: minimizing transaction costs; and mutual learning and consolidating competitive position in the market.

4.3.4 Classification based on purpose

Here the classification is based on the common objectives of partnerships that is shared by all partners. Purpose-based partnerships are classified as follows:

- *Research partnership*—cooperative agreement for conducting joint research
- *Exchange partnership*—this partnership deals with formal arrangements for exchanging information, materials, staff, intellectual property etc.
- *Service partnership*—this type of partnership involve providing services to a partner institute but not as a market based transaction—training, consultancy, capacity building etc.

Most of the CGIAR–NARS partnerships fall within these categories.

4.3.5 Partnership based on nature of organization

The partners in partnerships and alliances can be grouped into one of the three categories public sector, private sector and social institutions (sometimes also called the third sector to include NGOs, FOs, CBOs, and civil society organizations).

While public sector organizations primarily focus on 'public goods', the private sector primarily focuses on 'private goods' (profit/rent seeking). The third sector is primarily interested in deriving the benefits. Depending on who is involved, the partnership can be:

- Public sector–Private sector (NARIs and seed companies)
- Public sector–Public sector (NARIs and universities)
- Private sector–Private sector
- Public sector–Third sector
- Private sector–Third sector
- Public sector–Private sector–Third sector

In all these partnerships the ultimate beneficiaries are always one of the partners. The strengths and weaknesses of the GOs, POs, NGOs in R&D partnership, are summarized in Table 1.

Table 1. *Strengths and weaknesses of GO, PO and NGO*

Sector	Strengths	Weaknesses
GO	Pervasiveness	Inefficiency
	Broader linkage	Rigidity
	Technical competence	Top–down
	State power to generate and mobilize resources	Risk-aversion
		Slow decision-making
	Have official standing with community	Not responsive enough
	Good infrastructure	Emphasis on physical target
	Abundant human power	Limited grasp of participation and partnership
	Service to all	Not oriented toward extending indigenous technology
PO	Market and supply	Oriented to short-term benefit
	Incentive through price	Price monopoly
	Risk-taker	Narrow linkage with scientific community
	Independent decision-maker	No direct political power
	Quick decision	Less human power
	Less bureaucratic	Inequality
	Innovative	Providing commercial information
	Acceptance of failure	
	Broad linkage with business owner	
NGO	Motivation and mobilization of weak people	Small scale
	Responsive	Narrow linkage with scientific community and business owners
	Effective in local area	Lack in technical competence
	Empowerment of people	Shortage of technical human power
	Flexible	Poor infrastructure
	Fast decision-making	Short-term project
	Participatory approach	No definite funding sources
	Closer and more equal relationship with people	Highly dependent on external resources
		High turnover of technical staff due to temporary nature of employment

Sources: Farrington et al. (1993); Turton and Farrington (1998); PPI, Nd; and Ojha (1999).

Partnerships based on geographical origin

Partnership can also be classified based on the place of origin of the partners Here the partnership can be:

- North–North (Biotechnology companies and advanced universities)
- North–South (Advanced institutes and developing country universities)
- South–South (Networks coordinated by subregional organizations)
- North–South–South (Number of partners in the South forming partnerships with advanced institutes)

4.3.6 Others

The additional characteristics that are considered in the partnership grouping are:

- Duration (short-term–long-term)
- Scale (Global, regional, national, local)
- Topics or issues addressed (e.g. soil fertility management network)
- Type of research (basic, applied, strategic etc.)

A further means of classifying the type of partnerships is examining whether the partners are internal to the agency to which the research unit belongs or external to the agency. An internal partnership is one in which the research unit works in partnership with other divisions within the agency. All other partners outside the research units' agency are termed as external partners.

The partnership typology used by ILRI is summarized in Box 1.

4.4   Partnership structure

Partnership or alliances have structures that are substantially different from the other contractual or internal research approaches familiar to research units. Creating partnership involves defining the structural elements usually specified by the partnership agreement or by the internally written work plan. Partner roles and relationships as well as all project resources must be customized for the unique situation of each collaborative venture. Özgediz and Nambi (1999) concluded that 'there is no single, simplified checklist by which any research and technology partnership can be structured. There are too many variables, individual circumstances, and nuances among the major issues and facts'.

In general, organizations develop their partnership approach and capability over time. However organizations that have robust partnership capability have two things in common: a partnership strategy (or strategic policy regarding partnerships) and a methodology for how the organization will create, operate and close a partnership (Özgediz and Nambi 1999). The partnership strategy contains four elements: (1) an underlying strategy that shapes the logic and design of individual partnerships; (2) a dynamic perspective that guides the management and evolution of each partnership; (3) a portfolio approach that allows co-ordination and flexibility, and (4) an internal infrastructure that supports and strives to maximize the collaborations. These elements form a framework from which an organization can approach partnerships.

Having a methodology for how an organization will create, operate and close a partnership is considered an important strength for enduring productive partnership. This methodology is not a rigid process, but instead a flexible guideline to accommodate the challenges and required freedom inherent in each collaborative effort. For many organizations, this methodology uses a series of tools, such as the capture and sharing of best practices, training in partnership formation and management and evaluation of partnership efforts. All of these tools assist with organizational learning and particularly institutionalizing the skills needed for more productive future partnerships. Available evidence indicates

that organizations could enhance the effectiveness of their partnership efforts by developing tools to guide the management operations of individual partnerships.

Box 1. ILRI's partnership typology

At ILRI, the term partnership is defined as 'a recognized relationship between ILRI and another institute to undertake activities jointly that contribute to each institute's mandate'. The 'Scope' and 'management/role' played by partners are used to classify ILRI's partnership.

Depending on the scope, ILRI's partnership can be classified under project-based, strategic and organizational.

- Project-based partnership. Here ILRI works with another organization to implement a specific piece of research, usually within the context of a donor funded project. The roles and responsibilities of each partner are clearly defined in the project proposal. The arrangements may be formalized in a Collaborative Research Agreement (CRA). The partnership is time bound, limited to the duration of the project.
- Strategic partnership. Here ILRI research managers establish longer-term strategic relationships with partners having complementary capacity and who share similar interests in their specific research area. Considerable investments must be made in developing and cultivating such partnerships. The objectives, roles of each partner and the implementation modalities are usually recognized by a Memorandum of Understanding (MOU). The expectation for the partnership is that it will generate proposals for specific donor-funded joint activities within the framework of an agreed research agenda.
- Organizational partnership. Here, ILRI enters into partnership at institute level, consistent with ILRI's broader role as a research broker for poverty reduction in the developing world. Such partnerships are established and managed by ILRI's management committee. These partnerships are not motivated by mutual interest in a specific area of research but rather by ILRI's overall mandate. They may be formalized if appropriate.

The second criterion for classifying partnership is based on how they are managed and the role played by each partner. Here the partnership can be grouped under contractual, equal partner and service provider.

- Contractual. Here, ILRI is in charge of the partnership and fully responsible for the output. ILRI acts as a contractor with the other partner paid to contribute a component of research.
- Equal partnership. Here all partners contribute mutually to a shared goal. The partners will have varying degrees of equal footing and control over research.
- Service provider. Here ILRI contributes to ongoing process led by the others.

An additional dimension that is considered in each of these groups is the degree to which ILRI or the partner is responsible for implementing a research activity, ranging from a limited facilitation or co-ordination role or implementing a relatively minor portion of activities, to having primary responsibility for carrying out the majority of the work.

4.5   Research partnerships

Although partnerships can be formed anywhere within the broader economy or the agricultural sector, the most relevant partnership for us is the research partnership. Research partnership can be defined as 'cooperative' arrangements engaging companies, universities and government agencies, NGOs, Civil Society Organizations and laboratories in varying combinations to pool resources in pursuit of shared R&D objectives. In particular, research partnerships can encompass any research activity in which two or more organizations participate by providing a part of the resources for a research effort and share in the resulting benefits of the research. Hagedoorn et al. (2001) defined research partnership as an innovation based relationship that involves, at least partly, a significant effort in research and development.

The term research is defined in its broadest context to include related activities such as development, testing and evaluation, technology dissemination (including training and education), deployment and implementation. These activities embrace policy, planning, financial, administrative, organizational, managerial, service delivery research. Partnership in a genuine research partnership occurs when an agency unit or organization in some tangible manner contributes to the conduct of research effort through resource sharing. Resources include technical, facilities, equipment, legal, marketing or variety of other relevant services.

There are broadly two types of research partnerships: Focused and broad. In a focused partnership, the partnership is targeted to a specific stage of a research project where it is clearly defined beforehand. The 'broad' partnership is a situation where the partnership can include the whole research cycle—from the identification of research issues, through project implementation to project impact management. Therefore, the roles and tasks of the research parties might be loosely defined at the initial stage and the role may change as the cycle progresses. In general, the broad partnerships are much more expensive and require more time than the focused partnership. Banji Oyelaran-Oyeyinka (2005) made three observations with respect to R&D partnerships:

- Research partnerships are simply part of a broader set of collaborative partnerships to enhance innovation.
- The process of joint innovation is not only confined to formal arrangements; it involves significant elements of informal collaboration, learning and exchange of knowledge between individuals in different organizations.
- The motivating force behind the creation of these collaborative relationships is the compelling need to innovate jointly.

Many research partnerships are creating value for their stakeholders through enhanced competitive advantage, gained knowledge and expertise and more effective leveraging of resources. The major categories of organizations involved in R&D partnerships are:

- Government agencies (federal, state, regional, local)
- Academic institutes
- Private sector organizations
- Non-profit organizations, foundation or associations.

Of the existing research partnerships, four types of partnerships are becoming increasingly important in their contribution to the achievement of the MDGs. These are the North–South partnership; the university and industry partnership, the public–private partnership and the South–South partnership. These partnerships are discussed in detail in the following sections.

4.5.1   North–South partnerships

North–South partnerships, if properly implemented, enable exchange and mutual learning on the basis of complementary skills and knowledge and therefore lead to an increased quality of research as well as to building of research capacity in the South and in the North (Kepe 2001, 37–38). The major types (structure) of N–S partnership relevant to research include:

- Partnerships between individual researchers/research teams built to carry out specific project
- Capacity building partnerships—no direct research component, may be focused on individual or institute levels
- North–South research network (formal and informal).

In some cases, one could see a combination of all these three sets of activities: research, capacity building and networking. These partnerships can vary in terms of duration, sources of financial support, the degree of focus on advocacy and policymaking and the frequency and intensity of interactions between the Northern and Southern Partner.

The main actors in the North–South development research partnership include:

- Individual southern and northern researchers
- Northern and southern research teams
- Southern and northern research organizations (universities, NGOs)
- Communities directly affected by the research issue
- Policymakers (local, national, international)
- International organizations (CGIAR, FAO)
- Donors (bilateral donors, foundations etc.)
- Private sector (biotechnology firms, seed and chemical companies).

In the recent past, there is increased collaboration between North and South. Based on extensive literature, Katz and Martin (1997) identified a number of factors that account for increased scientific collaboration between North and South. These factors include:

- Changing patterns or level of funding
- Researchers' desire to increase their scientific popularity, visibility and recognition
- Increasing specialization in science
- Advancement of scientific disciplines which means that a researcher requires more and more knowledge in order to make significant advances—a demand which can only be met by pooling ones' knowledge with others.
- Complex and multifaceted nature of the developmental problems and challenges
- Need to gain experience or to train apprentice researchers in the most effective way possible
- Increasing the desire to obtain cross fertilization across disciplines
- Need to work in close physical proximity with others in order to benefit from their skills and tacit knowledge.

The overriding concern today is the desire to contribute to the alleviation of poverty and the need to build up/strengthen national capacities to carry out research projects and channel the results of research into policymaking processes.

Why partner?

Researchers in the North seek North–South partnerships principally in order to gain access to data and field work opportunities, while southern researchers primarily look for funding and the chance for publishing in northern peer-reviewed journals. Access to funding seems to be the most determining factor and stood out as a principal impetus to partner. This is partially a reaction to the structure of the international research funding system in which most southern governments have insufficient resources available to support domestic researchers resulting on reliance on international donors who use North–South partnerships as a dominant funding modality.

Access to data proved to be a significant impetus to partner for southern researchers as well as their northern colleagues. N–S research partnerships often provide southern researchers with access to electronic libraries and extensive data bases held in northern universities. One benefit may include southern capacity building. Access to professional opportunities such as conferences and tailored training

programs for junior staff represented important motivations to partners. North–South partnerships are also a valuable source of contacts and advice. The southern researchers in turn contribute their own contacts, linguistic abilities, methodological expertise and knowledge of local conditions which often translates into nuanced theoretical insight.

Beyond funding, publishing, access to data and capacity building benefits, southern researchers confirmed that N–S co-operation holds out the possibility of richer learning and scholarly output, particularly when considering truly global issues such as climate change and the spread of pandemics. The opportunities partnerships present for international interaction and collegial debate are especially valuable when domestic research communities are isolated or small.

These kinds of research relations can lead to:

- Mutual learning opportunities
- Mutual opportunities for training
- Mutual cultural understanding
- Complementarities of expertise
- Prevention of brain drain

The additional benefits derived from N–S partnerships are:

- Increased visibility and attractiveness
- Better access to information
- Better access to new fields of research
- Reducing scientific isolation, enhanced confidence, international scientific outreach
- Easier access to communities and policymakers
- Better opportunities to give voice to delicate issues in particular through external partners.

Shortcomings and key issues with N–S partnership

There are a number of shortcomings and issues with N–S partnerships. These include:

- Asymmetries or unbalanced partnership; South only providing 'laboratory' and interesting scientific data for the North.
- Unbalanced power relations with regards to funding and scientific merit.
- Imposing the dominating scientific paradigm from the North on the South.
- Potential for 'contract culture' (partner vs. data collector)
- The issue of agenda setting. There are a number of factors that influence the agenda setting process. These include:
  - Southern researchers' collaborative agenda setting is shaped by the structure of the development research funding system in which partnerships are the primary funding modality. Financing is often devolved to short-term projects rather than long-term core support; and donors have pre defined substantive interest which changes periodically.
  - One of the major structural factors affecting southern agenda setting is the existence of pervasive inequalities between prospective partners in the North and South. Southern partners are disadvantaged in terms of their scholarly and managerial skills, and the northern researchers' time and efforts are extremely costly.
  - Individual partners also strive to move forward 'silent agenda', from padding their publication list in advance of a promotion to increasing partnership advocacy role.
  - Changes in political situation often necessitate revision of the collaborative agenda.

- Another systemic issue is that good partnership practice is rarely rewarded by the system. Managing diverse research teams and facilitating equitable, sensitive and rigorous agenda setting process require specific skills that are under emphasized in academic training (Ettorre 2000). Because of the existence of little structured incentives or expectations, harmful collaborative practices persist and passed down to new generations of researchers.
- Even when partners agree on broad content of their research agenda, pinning down viable research questions may be difficult, as many partners have been schooled in different academic traditions and theoretical frameworks depending on linguistic, cultural, geographic and religious backgrounds.
- There are also difficulties of enabling co-operation between different actors including academics, grass root activists, policymakers, and public and private sector officials.
- Negotiating agenda and moving research forward is often time consuming.
- Another key issue is how to measure the success and impact of N–S partnership. Methodologies are still evolving.
- Another contemporary issue is the evolving role of the southern research leaders such as Brazil, India, China and South Africa. This will significantly change the roles of the partners in the N–S partnerships.

Lessons from past N–S partnerships

A number of lessons can be learned from the past N–S partnership initiative. These lessons are summarized by Rawoo (2001).

- Creating developing country ownership of research programs entails a shift of leadership responsibilities, decision-making power and resources from Northern to Southern partners. This is a concept that many find difficult to implement.
- If asymmetries between North and South are recognized and properly addressed, ways can be found to balance the principle of ownerships with the principles of partnerships.
- A broad-based consultative process, however painstaking and time-consuming it may be, should precede any partnership program to be successful.
- Helping developing countries to initiate dialogue among local scholars, government policymakers and representatives of civil societies on specific needs, sets off a process of discussing change and innovation and creates a learning environment and network for all the major actors involved.

North–South collaboration assessments made a number of recommendations for funding organizations, researchers and their institute, and recommendations for both funding institutes and research community to make the partnership effective, efficient and impact oriented (see Box 2).

These recommendations are very useful in developing best practices for N–S partnerships.

4.5.2 University and industry partnership

As we discussed earlier, the context and the expectations and goals of the agricultural sector are changing and so are the challenges confronting the research and education system. There is growing awareness that while the agricultural education system is conventionally viewed as key to the development of human capital, it also has a vital role to play in building the capacity of organizations and individuals to transmit and adapt information, products and processes and new organizational cultures and behaviours. Thus the agricultural higher educational institutes have started aligning their mandate and mission with the national aspirations. One of the current challenges to agricultural education is

how to meet the challenge of providing education and training for rural development rather than for agriculture alone.

Box 2. Recommendations to enhance the effectiveness of N–S partnership:
Recommendation for funding institutes:

- Pay due attention to impacts when designing new research partnerships
- Make sure that (desired/planned) impacts are monitored and their achievement facilitated
- Secure continuity in policy support and funding
- Be more flexible in budget allocation
- Allow pre-phase funding and sufficient time in order to set up the project proposal and clarify issues such as goals, intentions, roles, responsibilities, expectations, motivations etc.

Recommendation for researchers and their institutes:

- Plan for impact: discuss negotiate and strive for impacts
- Monitor and evaluate the planned/desired impacts, identify indicators
- Select the right partner(s) who show(s) commitment, competency, continuity and complementarity (4Cs). CHECK THIS DURING INCUBATION PERIOD.
- Create mutual learning platforms
- Secure internal information, communication and documentation
- Aim for local sustainability and try to generate local resources
- Address internal tensions and conflicts openly as normal features of an evolving partnership relation

Recommendation for both funding institutions and research community

- Make specific, additional resources available for planning and assessing impact (finance, time, personnel)
- Promote participatory, transdisciplinary, multilevel, multistakeholders' approaches. Involve stakeholders' right from the start in the design, implementation and interpretation of the project and its intended impacts.
- Create incentives (salaries, visits, participation in conferences) and strive for an enabling environment to promote a fruitful research culture that also enhances the inter-cultural competences of all partners and institutes involved.
- Develop a communication and dissemination strategy (feedback events). Make funds available for its implementation.

Sources: Masselli et al. (2006); Bradley (2007).

There is a need to shift the paradigm for agricultural education system towards a much broader multidisciplinary systems approach (Muguire 2000) which could contribute to the developmental goals. The three main areas of activities that universities engage in for developing partnership with industry are: teaching and learning, research, and innovation and knowledge transfer. Here research refers to the generation of new knowledge, and innovation refers to the successful exploitation of new ideas or novel combination of existing ideas. The term 'industry' includes any private, public or voluntary (third sector) organizations involved in agricultural R&D.

There are long established natural links between universities and 'industries'. Universities produce a pool of well-educated graduates and postgraduates from which the professional workforce is recruited. With the people come the ideas, skills and knowledge from which many companies derive their competitive edge. Universities and companies have many similar assets at their disposal. These include physical resources (laboratories, equipment and facilities); human resources (highly skilled and experienced staff); other knowledge resources (information, data bases, libraries, management processes, ideas and network of contacts); and financial resources (own research funds or access to public funds). Both

'industry' and university exist to transform knowledge, skills and materials into products and services involving trained people and both seek to add value in the process.

Research in industry tends to be applied to develop new products, new processes or solving application or production problems. Often it is carried out for ultimate commercial benefit whereas university research often tend to be more fundamental or speculative in character and includes theories, models, understanding of scientific principles. It may have no specific time horizon and tends to be carried out.

- For the purpose of generating and disseminating new knowledge, without having an immediate application in mind,
- To train postgraduate through research and
- To update the relevance of the university's teaching program.

It is worth noting that in the recent past, the research programs (at least at the postgraduate level) in many agricultural learning institutes heavily focused on strategic applied and adaptive research confronting the public sector research and third sector organizations.

The types of partnership between industry and universities include: contract research; collaborative research; sponsored research; other research links associated with third party funding, postgraduate studentship; student projects and placements, sponsored and honorary posts and secondments, university consultancy and associated commercial services and partnerships in networks and associations.

The mutual benefits from partnerships and collaboration between universities and industries are summarized in Table 2.

In analysing the industry–university partnership, Les Hoel (2001) identified the following as being factors of success in long standing partnerships:

- Continuity of staff and faculty
- Peer relationships
- Stable funding
- Close proximity
- Problems resolved at the working level and
- Support of administration.

4.5.3 Public–private partnerships (PPP)

Public agricultural research was the primary source of new technologies for agriculture during most of the 20th century. It is now recognized that there are many grey areas where R&D products are neither pure public nor private goods. In recent decades, at least in many developed countries, private enterprises have become important players in agricultural R&D and are active in the fields formally dominated by public research. A large number of public–private partnerships for agricultural and agro-industrial research have emerged exploiting resources and skill synergies from the two sectors.

Table 2. *Partnership benefits*

For industry *		For universities	
Thinking longer term	Accessing current research programs. Gaining an inside track on emerging fields and enabling technologies developed in universities	Improving market awareness	Gaining insights into the research problems of interest to particular companies or industrial sectors
Benefiting from new ideas and past experience	Getting an alternative perspective on problems. Access to accumulated research and scholarly knowledge through people, libraries etc	Enriching teaching programs	Updating staff, sourcing ideas for student projects, developing curriculum material with practical examples, gaining new perspectives and new areas for teaching
Going global	Links with academics extensive national and international networks	Maintaining research momentum	Gaining status, prestige, keeping projects live and developing new ones
Outsourcing	Harnessing the efficiency and/or cost effectives of getting research done by a university. Can be used to smooth fluctuating in-house demand	Applying knowledge	A chance to apply skills and knowledge to solving real business problems. Widening the customer base for your work.
Complementing company's skill base	Access to skills within universities that company staff lack	Complementing the university's skills base	Learning new skills and techniques developed in industry
Taking a multi-disciplinary approach	Accessing a range of disciplines at once in a university (e.g. providing the background for technology integration projects)	Learning business processes	Learning new approaches to managing projects and how industry works, e.g. through sponsored positions, seconded staff, guest lectures etc.
Harnessing public funds	Bringing additional financial resources to bear on research and thereby spreading costs	Harnessing private and public funding	Drawing on a wider range of private funding. Access to public funds that require industry collaboration
Reducing risk	Sharing costs, releasing staff time, finding out what others are doing, keeping options open	Building on excellence and reputation	Establishing a track record with industry, breaking new ground and enhancing prospects
Complementing company's physical resource base	Accessing unique or specialist university-based equipment, facilities and services	Complementing the university's physical resource base	Accessing state of the art facilities and services that the university may lack
Recruitment made easy	Finding the right staff by getting to know students, post-doctoral researchers and academic supervisors	Sourcing job opportunities	Getting the inside track on possible work experience and job opportunities for students and staff

*Includes private, public and voluntary organizations.

Source: Partnership for research and innovation between industry and universities, 2001.

In practice, public–private innovations involve clusters or coalitions of organizations, including those from civil society, who together produce, adapt and use knowledge that drives innovation. These partnerships have usually emerged as a result of casual interaction between a private sector leader and a researcher, who know each other from the past giving them an initial level of trust that facilitates the start of a partnership. Recently, many partnerships have been induced by competitive grant schemes that condition funding on the existence of linkage between researchers, private producers or industries.

Research by IFPRI suggests that:

• Partners enter into public–private partnerships (PPP) when they perceive that the tangible and intangible benefits outweigh the costs of conducting research plus the transaction costs of collaboration among partners. Partnering is less likely when the innovations dealt with are controversial and when most partners perceive that one partner receives a share of the benefits larger than what the partner is entitled to.

- Partnerships for innovation evolve in a step-wise process leading from the identification of a common interest among partners through negotiation of a formal or informal partnership agreement on the governance, funding and legal aspects of the partnership to implementation, evaluation and the possibility of continuation or termination.
- Partnerships are usually built around long-term objectives and subsequently require reorientation from time to time, due to changes in the context that were unforeseen at the start. Sustainable partnerships are those characterized by a high degree of interaction, a strategic approach to problem-solving, good management practices and, in particular, extensive capacity in negotiation and conflict resolution.

Attraction of PPPs include: research being conducted that neither sector may attempt independently; privately owned knowledge and materials occurred for public good research; new sources of funding for public sector research; and near delivery mechanisms for public technologies. PPP may provide private developed country organizations access to emerging markets in developing countries; give them influence in the development of legal and regulatory regimes; and help them navigate country-specific research systems and regulatory environments (Spielman and von Grebmer 2004). In cases where PPP involves developing country organizations linking with foreign partners in areas of frontier sciences, partnership may be an important way of developing national scientific capabilities.

It has been recognized that successful PPPs are always context specific. There is a great diversity of arrangements dependent on the context in which partnerships arise and the needs that trigger the partnerships. It has been also argued that recipes for PPP formation will probably be of limited use, but developing principles to guide the process will be helpful.

The main assumptions in PPP are summarized in Figure 1. PPPs have been most successful when developed as a long-term partnership between trusted partners and when building capacity and developing marketable technologies. A number of case studies (ISNAR) indicate that the most appropriate basis for building PPP is the value chain, where the actors with common interest converge.
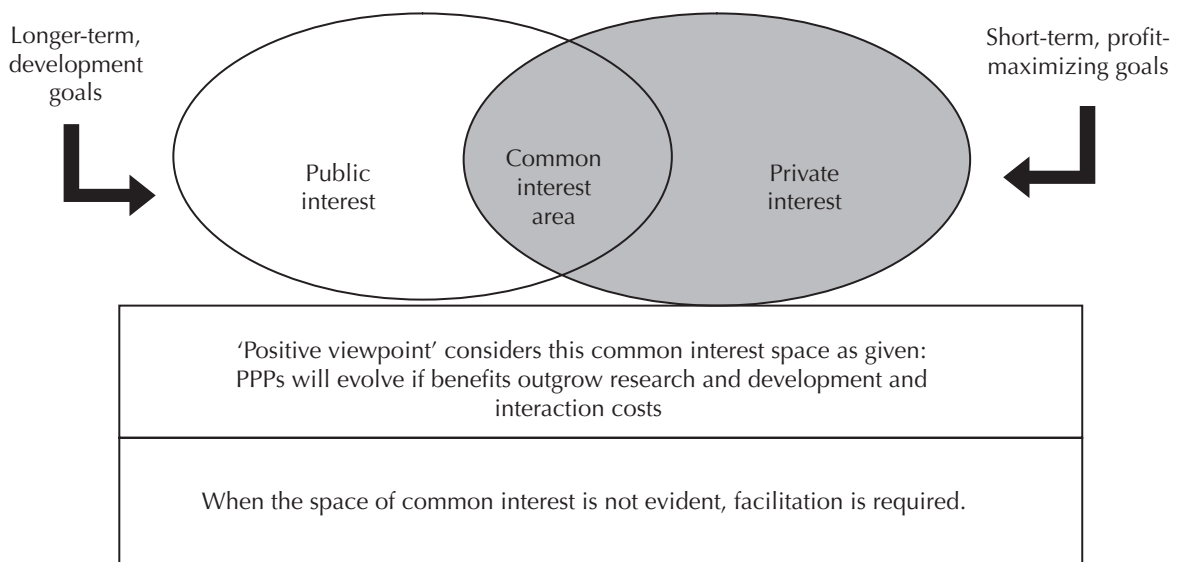
Source: Modified from Vernoica Gotrett's presentation.
Figure 1. *Main assumptions in PPP.*

The other factors that contribute to successful PPP include enhancement of social capacity, flexibility, leadership from a 'promoter group' or a facilitator, clear identification of common objectives or a common interest space. Effective partnerships generally require:

i. Facilitating organization and a facilitator with a mandate and ability to promote PPPs
ii. Visionary and innovative leader in the private sector with credibility and recognition within the sector
iii. Research organizations with good-will and recognition that offer knowledge and technological options relevant and responsive to the demands of the value chain and
iv. Researchers with a good knowledge of the value chain and available technological options and with an aptitude to relate to the private sector.

Constraints to public–private partnership

Although in the recent past, the number of PPP is on the increase, a number of generic problems still constrain the formation and successful management of such partnerships. These according to (Spielman and Von Grebmer 2004; Hall 2006) include:

- Bureaucratic procedures on the part of public sector
- Different working styles and reward structure
- Lack of business culture in the public sector and limited experience of working in commercial settings
- No tradition or experience of working with the private sector or even in partnership more generally
- Lack of trust, persistent negative perceptions across the two sectors
- Complex IPR issues, especially where multiple public and private partners are involved operating in a number of countries.
- Weak negotiation and IPR skills in the public sector
- Private sector concerns that unpredictable policy changes may affect partnership agreements
- Fragmentation of public scientific resources across different ministries and weak communication channels even within the public sector
- PPP that involve northern partner collaborating with public research partners in the South often do not lead to useful outcomes because of a failure to partner with the local private sector.
- Insufficient accounting of the actual and hidden cost of partnerships
- Insufficient information on existing partnership experiences and lessons
- Lack of appreciation of the need for brokers and third party actors to manage collaborations
- Undue competition over financial and intellectual resources
- Issues related to sharing benefits.

The key issues and challenges in promotion of PPP are summarized in Box 3. Human resources and operational funds to facilitate partnership are also crucial especially when the actors are heterogamous.

In many instances, the key constraints to PPP are of an institutional nature and require institutional change, particularly in public research systems, so that the new tradition of working together can emerge. Another key factor is the management intensiveness of the partnerships and the complexity of the rapidly changing international and national laws that govern intellectual property rights, technology transfers and regulation of plant varieties. The third factor is the transaction costs. These transaction costs are further increased with polices on competitive research grants that require capacity building beyond that provided by training on the identification of common interests, the negotiation of financial, governance and legal aspects and the design of partnerships.

Box 3. Key issues and challenges in promotion of public–private partnerships (PPPs)

PPPs are often successful when:
- developed as a long-term, flexible partnership between trusted partners;
- used for capacity-building and development of marketable technologies;
- common objectives and common interest space have been clearly identified;
- readiness for institutional learning and change exists;
- used for enhancement of social capacity; and
- led by a facilitator.

Key challenges:
- High transaction costs— management intensiveness;
- Demand for human resources and operational funds;
- Resistance to institutional change;
- Complex operational setting, including disconnect between international and national laws; and
- Farmer and civil society involvement in technology development

Source: Rajalahti et al. 2005.

Factors enhancing PPPs

PPPs have much potential in agricultural R&D and in S&T in general, but have been slow to develop primarily because of a lack of clarity among partners. In addition, the private sector investment in agricultural R&D is the lowest in SSA. A number of things can be done to enhance the PPP:

- Greater efforts are needed from both the public and private sectors to foster openness and clarity, minimize risk and uncertainty and reduce red tape associated with partnerships
- Including a facilitator and/or facilitation organization in the process can reduce the transaction costs and bring clarity to the process.
- Supporting policy measures such as intellectual property rights is vital to shape PPP.
- There should be a stronger emphasis on partnerships as a source of synergetic R&D rather than as a means of supplementing public sector funding.
- PPPs should allow greater participation of farmer groups and other stakeholders groups (consumer organization, NGOs, environmental groups etc.) to balance private sector influence and power over priority setting
- Increased capacity strengthening efforts are needed to help innovation actors to accumulate social capital, develop co-operation skills and build capacity to analyse needs to their particular value chains
- Partnerships should not be considered for technical innovations only but should encompass institutional, managerial and policy level collaboration.

However, it should be noted that partnerships are neither appropriate to every R&D situation nor are a panacea to resource or capacity limitations in the public sector. However, effective and meaningful partnerships can create valuable synergies through knowledge sharing, joint learning, scale economies, resource pooling and risk sharing.

Although the number of documented PPP experiences are limited, a recent conference in ICRISAT (2003) identified a number of factors that have contributed to successful PPP.

- Shared values and the development of trust
- Prior knowledge about the partners and existing relationship

- Complementary resources, skills, values and cultures.
- Explicit efforts to change culture of science.
- Partners with common goal, e.g. developmental impacts, new products, new markets
- Explicit efforts to learn and learn about learning

At a gathering of PPP practitioners in Washington (pro-poor public–private partnerships for food and agriculture: An international dialogue, September 2005), participants generally agreed that more knowledge and information is needed to determine how partnership can efficiently and effectively organized and managed. They emphasized:

- Need to identify common interests; agree on feasible outcomes; map complementarities; estimate potential costs, risks, and benefits; and calculate available alternatives early in a partnership;
- Need to promote partnerships on different levels (local, national, and international), with different actors (public, private, and civil society), and in different fields within the agricultural sector (crop science and agro-industrial research, market and product development, and dissemination and distribution);
- Need for consistent methods of monitoring, evaluation, and impact assessment to assess the value of a partnership, prior to, during and after the undertaking;
- Importance of effective mechanisms to manage risks associated with legal and regulatory frameworks, difficult political environments, volatility in donor or private financing, limited institutional capacity or infrastructure, overruns in cost and time, and human error or other idiosyncratic factors;
- Value of exploring organizational alternatives, such as non-profit 'hybrid organizations' to bridge the objectives and values of diverse partners, combine resources and competencies, and provide effective and independent management;
- Importance of establishing the credibility, legitimacy, and inclusiveness of the partnership, and to ensure a constant dialogue with all stakeholders involved;
- Need for business-like approaches to partnerships, including mechanisms to ensure priority setting, planning, accountability, transparency, flexibility, and, if necessary, termination of the partnership; and
- Distinction between partnerships for product development (e.g., drugs and vaccines or improved crop varieties) and those for sectoral development (e.g., integrating smallholders into value chains or private delivery of extension services).

A number of areas were identified for further action in order to promote pro-poor partnership in food and agricultural development.

These include:

- Continued dialogue on the opportunities for, and impediments to, pro-poor partnerships for food and agriculture in developing countries that include policymakers, public research organizations, the private sector, non-governmental organizations, and civil society groups;
- Identification of immediate opportunities where a partnership approach would be both an appropriate and efficient means of promoting specific agricultural research and innovation projects;
- Greater emphasis on developing tools for monitoring and evaluating partnerships, analysing partnership performance and outcomes, and conducting research on policy options and organizational mechanisms to manage risks and distribute costs and benefits in partnerships; and

- Specific analysis of the performance of partnerships within the CGIAR, and on the organizational and structural changes needed within the CGIAR to facilitate more opportunities for partnerships with the private sector and civil society.

Research issues under PPP that warrant further investigations are:

- How the benefits of innovation partnerships are distributed among actors in agri-chains?
- How partnerships can be evaluated with regard to their design, results and evolution?
- What policy options exist for local governments and donors to support partnership building efforts that address the needs for pro-poor development?

Although conceptually there is ample scope for PPP, available evidence so far suggests that PPP in agricultural research have been less extensive and more difficult to promote (Byerke and Echeverria 2002; Hartwich et al. 2003; Velho 2004; Spielman and von Grebmer 2004). Clashes of working styles, complex IPR arrangement and institutional inertia in public research organizations are among the reasons cited for this (Hall 2006).

A small number of frequently cited examples of PPP in agriculture involve large life science companies. However, within the developing country context, in the agricultural sector, most PPPs will probably concern local or regionalized companies with limited research capacity. In addition, the practice of innovation often involves clusters or coalitions of organizations including those from the civil society sector, who together produce, adopt and use the knowledge that drives continuous innovation.

Although technical innovation is important, so is institutional, managerial, organizational, service delivery and policy innovations. Partnerships that promotes innovation are thus not only concerned with frontier research and technology but also are concerned with incremental problem solving, i.e. the continuous process of minor adjustments and improvements that ferments and firms make to survive, improve profits and compare with other farmers/firms, domestically and internationally.

The limited involvement of PPP is concentrated in a relatively small number of global life science companies. These investments tend to be in such niche areas at hybrid vegetable and cereals and global commodities such as soybean and cotton. These have less relevance to developing country farmers. It has been argued that while private sector will never entirely replace the public sector (Praj and Umali-Deninger 1998), its research does however present possibilities for technological spillovers relevant to poor farmers.

In the recent past, we have noticed the blurred and changed boundaries between public and private sector roles in agricultural research (van der Meer 2002). He argues that while some goods can be viewed as purely public and produced by public sector and others purely private and left to the market, increasingly there are goods that have elements of both hybrid goods.

The main constraints to promoting partnerships are often institutional (relates to habits, practices and patterns of trust) in nature. Byerlee and Echeverria (2002) suggested that reforms within the national agricultural research organizations are probably a prerequisite for pursuing partnership approaches. In many instances, these organizations form the principle/critical knowledge bases for supporting innovations at the national level.

4.5.4 South–South partnerships

This chapter on partnership typology will not be complete if we did not discuss the South–South co-operation, which is on the increase in the recent past but there is very little documentation on the

lessons and experiences. For a long time, the international co-operation was focused on partnerships between industrialized countries (often termed the North) and the developing countries (termed South) because of the obvious fact that the industrialized world was economically well off and had access to advanced technologies and practices that could be shared with developing countries for their development—the linear technology transfer model. Over the years, it has been realized that within the group of developing countries, there were marked differences, and even countries in the South can share technologies and practices and benefit from such sharing of experiences.

It was also realized that countries in the South generally share certain commonalities such as similar developmental experiences and are faced with common challenges such as high population pressure, poverty, hunger, diseases, environmental deterioration etc. In addition, in the recent past, a number of developing countries such as Brazil, Argentina, Taiwan, China, India, Malaysia etc. have made tremendous economic progress and have the potential to contribute to the development of the rest of the developing countries. Recognizing these realities, developing countries have started to work together to meet their technology needs through South–South co-operation. It is driven by the emergence of countries such as Brazil, China, India and South Africa as serious regional actors seeking to assert their diplomatic influence using their growing technological powers.

The idea of South–South co-operation allows for the possibility that poor nations may find appropriate, low-cost, sustainable solutions to their problems in the experiences of other developing nations, rather than solely in the rich North. There is a notion that, for every problem in the developing world, there is a potential solution in other developing countries. The ongoing South–South partnerships involve working together on common challenges such as agriculture, adaptation to climate change, water and health and can lead to huge strides forward in reducing poverty and sustainable development. With respect to agricultural development, Asia has made considerable headway on many fronts that are relevant to Africa, including agroprocessing; drought and famine management; water harvesting and management; agricultural research and technology transfer; the establishment of rural knowledge centres and; the setting up of micro credit and financing systems.

Factors contributing to enhanced South–South co-operation

The South–South co-operation currently covers a broad spectrum of fields and issues. Most of these activities have occurred within the framework of international, regional, subregional and most recently through bilateral arrangements. A number of factors have contributed to this enhanced level of co-operation and partnership.

- Realization that technological advances made in temperate zones may have little bearing on the emerging, complex multifaceted problems of the tropics ecological specificity of technology (Sachs 2002). In many instances, developing countries share similar problems, challenges and opportunities. In these circumstances, technologies and practices are much more relevant and appropriate.
- Increased participation of the private sector in agricultural research in most industrialized countries—gradual movement from public to private sector. The private sector is much more reluctant to share their technology freely—often protected by patency and intellectual property rights. This is an impediment for the scope of potential international research collaboration with developing countries, which depends heavily on the public sector.
- Diminishing interest in many developed countries in finding solutions to the problems of the developing countries in the tropics as they confront their own set of problems.

- Increased awareness that the least developed countries could find economic and sustainable solutions to address their needs and problems by sharing and learning from the experiences of other developing countries. After examining the rise of emerging economies in the Asia-Pacific region, the UN Millennium Project Task Force on Science recommended that 'these countries and economies could and should help other developing countries meet the (Millennium Development) goals by sharing their best practices and experiences in the spirit of South–South Co-operation' (Millennium project 2005).

- Fast economic growth in a number of developing countries, and the expansion of trade among developing countries. Empirical evidence shows that the South–South trade has been growing steadily over the years. Trade between Africa and Asia seems to have also increased over the years. However, the volume of exchanges between Latin America and Africa remains very low.

- Rapid economic growth in major developing countries, complex trade issues exacerbated by globalization, and growing capacities in various fields have given rise to a new era of partnership in the South. South–South co-operation is gradually being integrated into the development strategy of a number of countries. This has become an effective tool of economic development co-operation and foreign policy. A systematic approach to delivery of South–South co-operation is under way in major developing countries.

- Increased number of research networks and regional and subregional organizations to support research for development within the developing countries. Most of the South–South co-operation in agricultural research and development has occurred through these subregional frameworks. This include organizations such as Asia-Pacific Association of Agricultural Research Institutions (APAARI); South Asian Association for Regional Co-operation (SAARC); Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA); West and Central African Council for Agricultural Research and Development (CORAF/WECARD); Association of Agricultural Research Institutes in the Near East and North Africa (ARINENA); Southern African Development Community's Food, Agriculture and Natural Resources Directorate (SADC–FANR); The Association of Southeast Asian Nations (ASEAN); New Partnerships for Africa's Development (NePAD), The Economic Community of West African States, COMESA etc. For example NePAD has developed a comprehensive African Agricultural Development Program (CAADP) seeking to build strong and healthy South–South Partnership with Asia and China based on common interest and Comparative advantages; using the four pillars (see Box 4). CAADF wants to establish inter-regional co-operation between Asian and African subregional organizations to stimulate the exchange of information, experiences and best practices.

In addition, major developing countries from different regions such as India, China, Brazil, and South Africa are beginning to team up to address common problems or co-ordinate their responses to common challenges. Large individual Southern countries are putting in place framework for co-operation that would allow them to formulate collaborative arrangements with multiple developing countries across regions. For example, China set up a co-operation framework with African countries known as China–Africa Co-operation Forum. In 2004, Brazil designed a policy framework to deal with Africa. Brazil, Mexico, Thailand and India are all preparing major initiatives to materialize the new era of co-operation with Africa. India, Brazil and South Africa have formed IBSA Grouping to address common challenges.

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┌─────────────────────────────────────────────────────────────────────────┐
│         Box 4.    Priority investment areas to foster agricultural development in Africa │
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│  ┌──────────────────┐   ┌──────────────────┐   ┌──────────────────┐       │
│  │     Pillar 1     │   │     Pillar 2     │   │     Pillar 3     │       │
│  ├──────────────────┤   ├──────────────────┤   ├──────────────────┤       │
│  │ Land and water   │   │ Rural infra-     │   │ Increasing food  │       │
│  │ management       │   │ structure        │   │ supply and       │       │
│  │                  │   │ and trade-related│   │ reducing hunger  │       │
│  │                  │   │ capacities for   │   │                  │       │
│  │                  │   │ market access    │   │                  │       │
│  │                  │   │                  │   │                  │       │
│  └──────────────────┘   └──────────────────┘   └──────────────────┘       │
│      ⬆    ⬇               ⬆    ⬇               ⬆    ⬇                    │
│  ┌─────────────────────────────────────────────────────────────────┐     │
│  │                          Pillar 4                               │     │
│  ├─────────────────────────────────────────────────────────────────┤     │
│  │     Agricultural research, technology dissemination and adoption │     │
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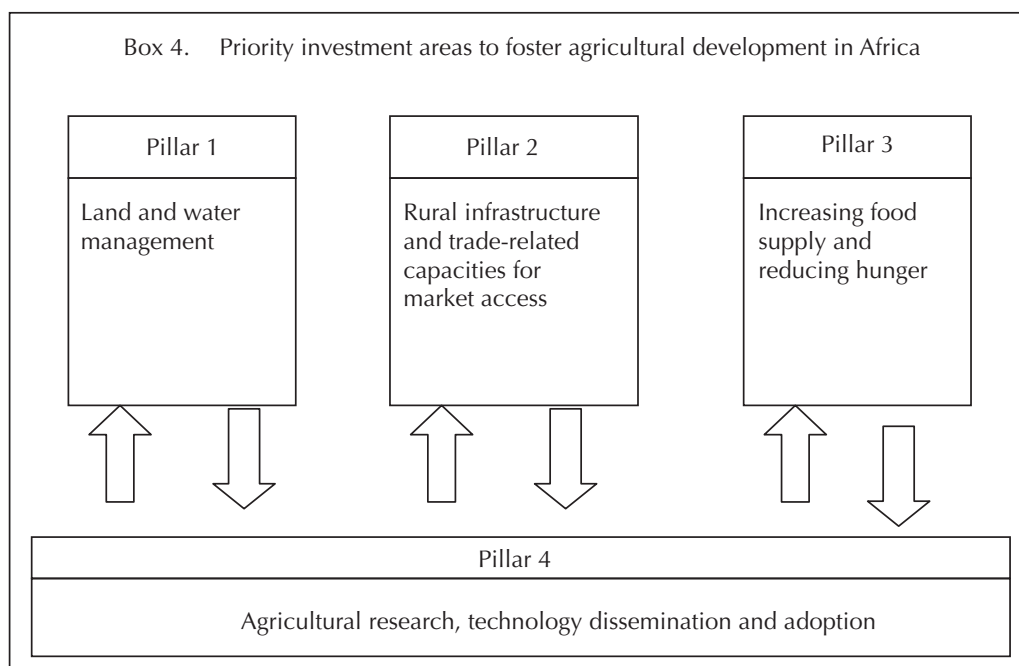
There are also a number of international initiatives to support South–South co-operation and partnerships. Donor countries still continue to support South–South co-operation through triangular arrangements— often also using UN agencies and other international organizations as a support channel. Especially in the area of science and technology, a number of international initiatives/and commitments have been made in the recent past (see Box 5 for details).

Box 5. Recent S–S collaborative initiatives in science and technology

- In 1979, the Vienna conference on science and technology for development pledged to establish a fund for science and technology projects in developing nations.
- In 2000, the Seoul Accord on South–South co-operation in science and technology also recommended the establishment of networks and mechanisms among Southern countries.

In October 2002, the group of 77 convened its first high-level conference on South–South co-operation in science and technology in Dubai with the participation of member states and more than 150 scientists from developing countries and discussed how to intensify co-operation. The meeting adopted the declaration on the Promotion of Science and Technology in the South calling for establishing S-S networks, trust funds, and consortium for the explicit purpose of creating and spreading scientific knowledge

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Science and technology are playing increasing role in international diplomacy. China for example, is placing science and technology at the centre of its diplomatic relations (Juma et al. 2005, 63). Many of these countries see China as a role model in the use of S&T for rapid economic transformation. China on the other hand considers such co-operation to extend its diplomatic reach.

Lessons and challenges of South–South partnerships

There is increased South–South co-operation in areas such as human resource development, collaborative research and technology transfer, organizational capacity building, private sector development, local governance and food security. Most of the funding support for agricultural R&D is channelled through regional and subregional communities and bilateral and multilateral agreements. Developed countries

and donor communities are still continuing to channel support and resources through triangular arrangements.

Leading organizations in agricultural development like the International Fund for Agricultural Development (IFAD) and the UK Department for International Development (DFID) believe that the key that unlocks the door to successful development of agriculture is the successful transfer, adaptation and take up of agricultural technologies to developing countries through both South–South and North–South co-operation. However, some also argue that, despite its utility and necessity, South–South co-operation has been a second-best solution because the developed world is less than forthcoming (due to their private sector orientation) with sharing of technologies. Thus, despite the increase in South–South initiatives, the triangular co-operation (North–South–South) will remain important in the foreseeable future.

Although, the willingness to co-operate exists, in many instances, much energy and time is lost due to bureaucratic procedures. Governments should therefore, work to improve the policy environment at the national level. One of the challenges is the need to harmonize the design, development and implementation of policies and tools of South–South Co-operation/partnership.

It is important to note that the South–South co-operation and partnership on issues related to technology cannot be isolated from the wider trends of globalization. Such partnership should be designed as a strategic approach to leverage technical knowledge from wherever it is located; but not as an exclusive political device that could further isolate developing counties. To be effective and relevant, South–South partnership should be initiated within the existing subregional organizational framework, and then be extended to other developing countries as well as the global community. In the final analysis, it is the ability to leverage global resources and knowledge that gives strategic meaning to South–South partnership in agricultural R&D. This still remains to be an issue.

4.6   Factors affecting successful research partnerships

Although there is no single correct set of guidelines, many factors have been cited in the literature as success factors of research partnerships. Smith and Ahmed (2000) suggested the following are essential elements in successful partnerships:

- Knowing how to lead and how to follow
- Excellent communication skills
- Capacity to select the right partners
- Trust
- Solid commitment
- Capability to share risks and benefits
- Top negotiating skills for dealing with a partner from another culture
- Understanding of how to collaborate for sustainability
- Organizational learning
- Conflict resolution skills and
- Ability to focus on developing these skills before entering into partnership relationships.

According to Kanter (1994) intra organizational relationships seem to work best when they are more family like and less rational. Obligations are more diffuse, the scope of collaboration is very open, understanding grows between specific individuals, communication is frequent and intense, and the

interpersonal context is rich. Studies also reveal that personnel committed in managing the partnership and top management involvement in partnership formation as primary factors for successful partnership. Based on an in-depth study in the transport sector in North America 2001 identified a number of factors strongly correlated with success of research partnerships. These are summarized in Table 3.

Table 3. *Factors correlated with success of research partnerships*

Strongly correlated	Weakly correlated*
Well defined goals and expectations	Type of agreement, formal agreements or MOU, or informal agreement
Excellent communication and effective or good working relationships among partners	
Implementable results and internal partnerships that provide	Structure of partnership
Length of time in existence: the greater the time in existence, the more opportunity to build mutual trust, and adding/providing value. However, the opposite is not necessarily true	Internal or external partnership
	Type and sources of resources, as well as which partner contributes to what resources
Experience in forming and sustaining partnerships	
Experience in being a partner within a successful partnership and learning the qualities of being a good partner	Motivation for entering into partnership—how clearly they were stated or how reasonable they were may be factors that leads to success or failure
Organizational commitment to the project	
Key player's individual commitment to the project	
Number of partners: fewer seen as better	
Need for technical expertise and leverage of funding by public research units	
Sufficient resources to accomplish the project	
Alliance manager assigned to the partnership	
Trust among partners at all levels	
Strong personal relationships among partners at all levels	

Source: NCHRS (2001).

* These were present in both beneficial partnerships as well as less than successful partnerships but useful and practical to have them.

Some of the good practices in the partnership process such as deciding on the objectives together, building up of mutual trust, sharing information, sharing responsibility, and creating transparency and accountability help to enhance mutual trust and increases inter-cultural understanding and competencies. These attributes in fact enhance the impacts of partnerships. A good research partnership culture also positively influence the empowerment of all partners.

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Session 4:   Exercise: Issues in partnership typologies

(Plenary session)
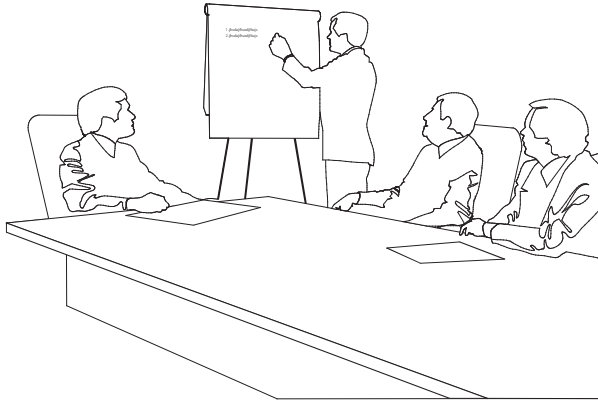
Plenary discussion (15 minutes)

While the facilitator makes the presentation, think about responding to the following questions:

a. Have you ever been involved in any of the partnership types that are mentioned in the presentation? If yes, what type of partnership? What was the basis for the classification?

b. Does your organization have a partnership strategy? If yes, what are the similarities and differences with what was presented?

c. Do you have lessons or challenges related to your partnership experience which you would like to share?

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Trainer's guide

Session 5: Partnership design: Key steps and tools

Purpose	To enhance the capacity of agricultural researchers to forge effective and efficient partnerships with other relevant stakeholders in the agricultural innovation system for achieving greater impacts
Objectives	At the end of this session participants will be able to: • Describe partnership cycle in the context of a project cycle • Understand the processes and issues in research partnership design
Resources	• Flipcharts • White board • Flipchart and white board markers • Copies of handouts 5.1, 5.2, 5.3 and 5.4 for each participant • Computer and LCD projector
Time needed	Two hours

Method of facilitation

Activity		Time
Presentation	Distribute handout 5.1 (Presentation slides) before you start your presentation	60 minutes
	Give a presentation on partnership design: Key steps and tools	
	Allow some time for discussion to make sure that participants understand what is presented	
	Distribute handout 5.2 (presentation text) to supplement your presentation	
Exercise	Distribute handouts 5.3 for exercise 5A, 5B and 5C	55 minutes
	Ask a volunteer to read the exercise	
	Ask participants to answer the questions in the exercise in group	
	Remind them the time allotted to the exercise	
Transition	Make closing remarks and transit to the next session	5 minutes

Session 5:   Partnership design: Key steps and tools: Summary of overheads

5.1

> Partnership design:
>
> Key steps and tools
>
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5.2

> ## Session objectives
>
> - Understand the relationship between a project cycle and partnership cycle
>
> - Understand the processes and issues in research partnership design
>
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> LIVESTOCK RESEARCH
> INSTITUTE

5.3

> ## Project-based partnerships
>
> Project-based partnerships—mostly donor-funded
>
> - closest to the classic partnerships between researchers and development-related partners with a very clear function of getting things done on the ground
>
> - main function is to generate the project outputs, outcomes and impacts outlined in a project document
>
> - function and contribution of each partner is defined by the function they have to play within the innovation system and impact pathways
>
> - In most cases the partnership is limited to the duration of the project, but longer-term partnerships can also arise from good collaborations at this level
>
> **ILRI**
> INTERNATIONAL
> LIVESTOCK RESEARCH
> INSTITUTE

Approach to partnership management

- Organization in question is acting as the 'contractor', i.e. where the project is initiated and led by the organization or where it has the convening role of the partnership in a different arrangement

- Focus is limited to external partners who would be directly involved in implementing activities

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Project cycle
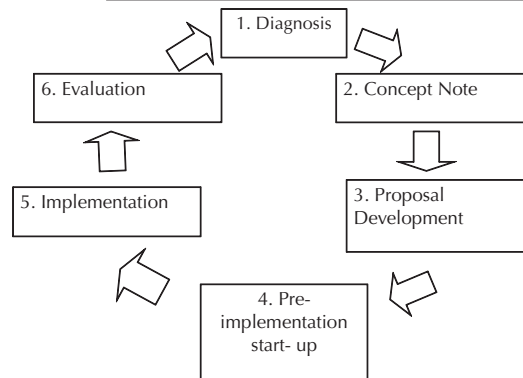
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Project and partnership cycles
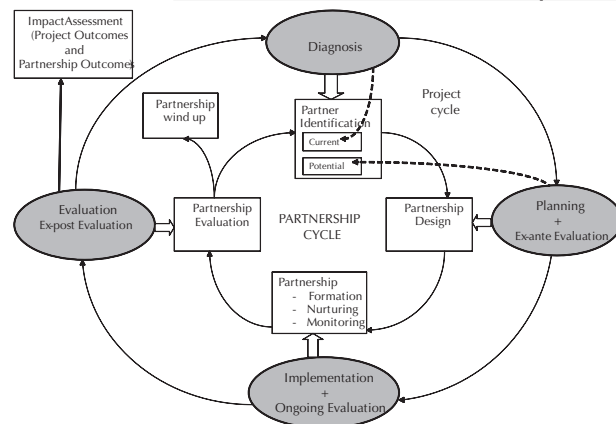
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5.7

Partnership cycle

- Partnership formation and implementation are an integral part of the project processes
- Means to an end
- Partnership and project cycles are intertwined and are parallel/simultaneous processes
- Partnerships go through various stages during their evolution and operations
- Each of these phases has a specific set of activities/steps that have to be undertaken
- These require specific sets of skills and tools

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5.8

Partnership cycle

- Pre-partnership phase
- Partnership initiation phase
- Partnership formation phase
- Partnership nurturing and monitoring
- Partnership assessment
- Partnership wind up

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5.9

Diagnosis stage

Project cycle phase	Partnership cycle phase	Objectives	Skills and tools
Diagnosis Idea/concept note	Pre-partnership Phase	Context/needs analysis Stakeholder identification Partnership readiness assessment	Rich pictures Stakeholder/ actor analysis tools Partnership readiness questionnaire Partnership needs analysis Preliminary partnership analysis

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5.10

Context/needs analysis

- It is important to define the problem that the organization is embarking on addressing and understand the context around it
- This would lead to defining the needs whether and what kinds of partnerships are required
- Contextual thinking is a method of diagnosis in which the practitioner evaluates a problem as an individual segment in a complex continuum rather than an effect of a specific cause or influence
- This includes the analysis of the environment – internal and external (including political, policy, demographic, socio-economy, technology amongst others) in which the innovation system is embedded
- This allows the researchers to gain insights into the strengths and weaknesses and also the opportunities and threats posed by the environment in which they operate
- A Rich Picture would be a useful tool to provide a visual of the problem context

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5.11

Rich pictures

- 'Rich pictures' were developed as a tool for exploring a complex situation in soft systems analysis
- They are called 'rich' because the idea is to gain the 'richest possible picture of the problem situation
- It shows:
  - Important actors and their relationships (but it is not just an actor or Venn diagram)
  - Elements of structure and process, (but it is not just a system model or flow chart)
  - Relationships between problems, (but it is not just a problem-causal diagram)
  - Influences on the situation, (but it is not just an influence diagram)

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5.12

Rich pictures

- All these other sorts of diagrams try to clarify the situation, and it is precisely the lack of clarity that can be important at an early stage of exploring the situation
- Anything that seems relevant can be included in a rich picture and it should include subjective information such as:
  - Stakeholder perspectives, prejudices, concerns and conflicts (without trying to represent a 'truth')
  - Questions and uncertainties that seem relevant to the problem situation

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Rich pictures

Rich pictures can be useful to:

- Keep an open mind, broaden your thinking, and think creatively

- Help understand and summarize a complex situation

- Unearth the critical issues—unearth the 'real' problem

- Build a common understanding of the situation within the team

- Help communicate your team's understanding of the situation to others

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Stakeholder/actor analysis

- Stakeholder and actor analysis tools would help identify the key actors and stakeholders, their objectives and interests, their attitudes and behaviours, their relative importance and influence etc.

- This would help in drawing up a long list of potential actors/stakeholders to partner with

- An intervention-based innovation system will help identify the key partners to be included

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Pre-partnership phase

- Determine if a partnership is right for your situation

- Examine your strategic motives

- Determine if your organization is 'partner ready'

- Conduct preliminary partnership analysis

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5.16

Proposal development stage

- Ensure a common understanding or consensus is achieved on the objectives, outputs, outcomes and impacts of the research
  - preliminary visioning exercise
- Redo the partnership analysis together with the partners, using it as a mechanism to clarify roles and expectations and ensure everyone is 'reading from the same page'
  - in-depth partnership analysis
- Clarify, to the extent possible, resource requirements in terms of human and financial resources needed for the desired achievements.
- As the budget proposal is being finalized, identify which partner is expected to be allocated or to administer which components.
- Propose and agree upon a governance mechanism
- For each partner, identify and adhere to any internal review and approval processes normally required for proposal submission

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5.17

Partnership initiation phase

- Selection of partners
  - Criteria for selecting partners
    - Strategic fit—a common understanding of the business rationale among the partners
    - Capability—the necessary skills that go into enhancing the value of the partnership
    - Compatibility—the complementary strengths of the partners that is mutually beneficial, including the match of organizational cultures
    - Commitment—a strong motivation to sustain the partnership in terms of furthering its prospects and solving its problems
    - Control—potential for having an effective means of governing the partnership

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5.18

Project pre-implementation and start-up

- Organize an initial team meeting of the main partners for planning and team-building
- Before the team meeting, the following should be prepared:
  - draft CRAs
  - an appropriately adapted financial systems guide
  - adapted protocol forms, particularly those related to overall project management and data management
- During the team meeting, ensure that the following topics are addressed:
  - A review and reconfirmation of the visioning exercise
  - Agreement on a clear definition of roles and responsibilities
  - Identification of stakeholders and key non-core partners to be recruited into project activities
    - Outcome Mapping
- Conduct a team-building exercise
  - Team health check questionnaire

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Partnership formation phase

Steps	Skills/tools
Develop vision and strategic direction based on shared problem definition and approach	Conducting effective meetings
• Agree on partnership principles (or code of ethics)	Facilitation skills
• Develop mutual understanding and knowledge	Interpersonal skills
• Agreement and understanding upon necessary leadership roles and responsibilities including resource commitment	Leadership skills
	Management skills
• Creating a partnership covenant or MoU	M&E tools (including process monitoring)
• Work plan preparation	
• Develop governance structures	
• Develop M&E systems	
• Establish Communication linkages	
• Sharing of rewards/benefits	

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Partnership formation phase

- Setting direction
  - Defining the problem
  - Brainstorming solutions
  - Identifying local allies
- Creating a partnership code of ethics
- Creating a partnership covenant

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Content of MoUs

- Partner organization details
- Goal and objectives
- Operating principles
- How conflict will be resolved
- How the agreement can be renewed, modified or terminated
- End date of the agreement
- Roles and responsibilities of partners
- Accountability
- Partnership governance
- Managing the partnership
- Developing and agreeing to a code of ethics or principles of partnership
- Holding key partnership meetings
- Monitoring and evaluating partnership performance
- Handling of authorship, IPRs etc.
- Handling conflicts, how decision will be made

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Content of MoUs (cont'd)

- Building a work plan
- Developing governance structures
  - specific roles and responsibilities of partners as well of their relevant supporting units
  - key elements of governance such as frequency of meetings, decision-making processes, participants, need for working groups, outreach to stakeholders/ beneficiaries, monitoring systems etc.
  - how to resolve differences should these arise

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5.23

Resolving differences

- Anticipate conflicts among partners
- In the interest of good governance it is appropriate to address the issue and identify, at a minimum, principles that should be followed in the event of disagreement
- Such principles include:
  - always proceeding with respect for the other party
  - clarifying underlying issues
  - identifying options for resolving the disagreement
  - being inclusive, not exclusive, of stakeholders who might be able to propose solutions
  - agreeing at the outset on a procedure for resolving the disagreement
  - agreeing on time limits with which the problem should be resolved

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5.24

Thank you!

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Session 5:   Partnership design: Key steps and tools: Summary of presentation

5.1   Introduction

Given that we are focusing on project-based research partnerships in this module, this chapter looks at the design of partnerships in the context of the project cycle. Partnership formation and implementation are an integral part of the project processes. They are the means to an end and not an end in itself. The partnership and project cycles are intertwined and are parallel/simultaneous processes. Partnerships need to be nurtured and managed during the implementation of project activities.

Partnerships go through various stages during their evolution and operations. Each of these phases has a specific set of activities/steps that have to be undertaken. And these in turn require specific sets of skills and tools. This chapter describes these phases and steps in detail while identifying the skills and tools needed.

In this section it is assumed that the reader is familiar with the project cycle. The emphasis is placed on the aspects that should be considered in the design, nurturing, implementation and evaluation of partnerships as an integral part of project cycle.

5.2   Functions of project-based partnerships

One category of partnerships is project-based partnerships—mostly around donor-funded projects. Project-based partnerships are closest to the classic partnerships between researchers and development-related partners with a very clear function of getting things done on the ground. The main function of this type of partnership is to generate the project outputs, outcomes and impacts outlined in a project document. The function and contribution of each partner is defined by the function they have to play within the innovation system and impact pathways. In most cases the partnership is limited to the duration of the project, but longer-term partnerships can also arise from good collaboration at this level. Please note that in this context, partnership is a means to an end.

This chapter outlines an approach for design of project-based partnerships which will enable scientists as partnership managers to lead these processes successfully. It gives a structure for managing partnerships against the background of the project cycle (Figure 1).
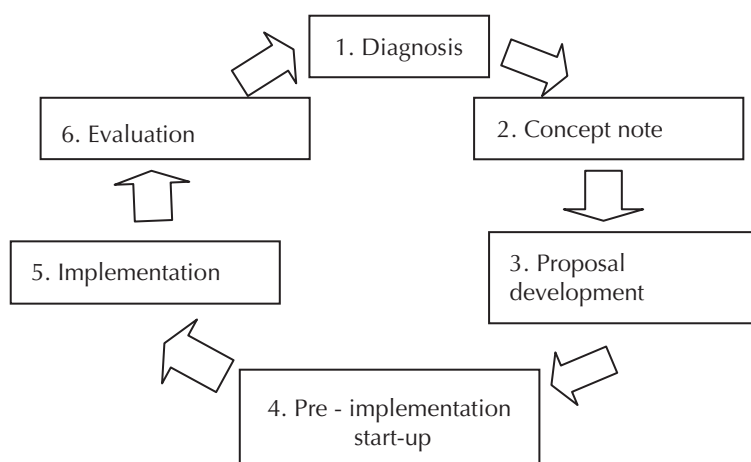
Figure 1. *The project cycle.*

The different stages of the project cycle present different stages and issues in terms of partnerships, from initial partner identification though to various aspects of effective management of partnerships to achieve the objectives, and enhancing linkages for future collaboration. Figure 2 depicts the same.
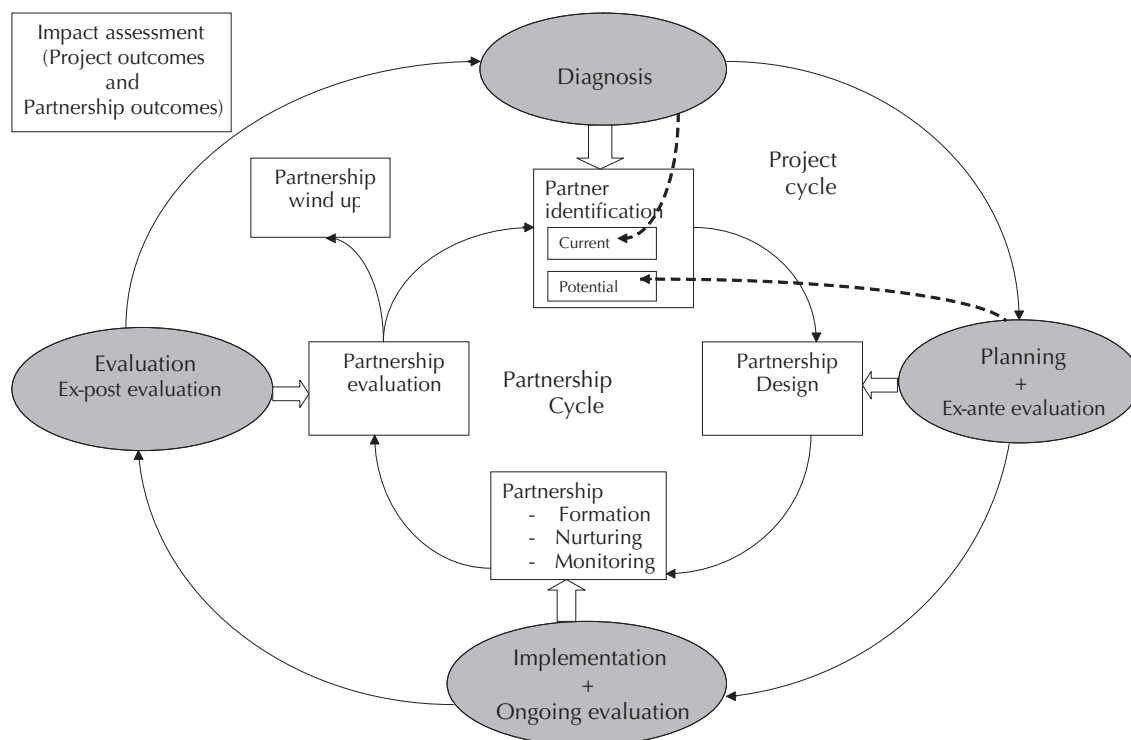
Figure 2. *Project cycle and partnership cycle.*

The following guidelines for partnership management therefore follow the stages of the project cycle in international centres which compete for donor funds for research. The stages could be slightly different for research organizations in national systems as they rely more on core funding.

Approach to partnership management in the project cycle

This section outlines the approach to management of project-based partnerships in which the organization in question is acting as the 'contractor', i.e. where the project is initiated and led by the organization, or where it has the convening role of the partnership in a different arrangement. In terms of partnerships, the focus is limited to external partners who would be directly involved in implementing activities.

The main decision-making criteria for choosing to engage into such partnerships are:

• capacity to contribute effectively to a specific function in the innovation system and impact pathway as described by the needs of the project
• track record of capacity to deliver on promises
• track record in managing funds
• position to leverage collaboration in the setting of the project (standing of the partner, reputation, partner's own networks of influence etc.)
• considerations from the financers of the project
• shared values and commitment to development and the desired outputs.

5.3   Instruments and processes

The suggested considerations, instruments and processes are intended to translate into action the principles in cultivating and maintaining healthy and productive partnerships with other organizations, including ensuring that partnerships are based on expected mutual benefits, promoting transparency and equipping staff with the needed competencies. This section outlines particular key considerations, questions and tools/skills required that should be considered at each stage of the project cycle and corresponding partnership cycle (Table 1).

Table 1. *Summary of considerations for project-based partnership management*

Project cycle phase	Partnership cycle phase	Objectives	Skills and tools
(Diagnosis) Idea and concept note	Pre-partnership phase	Context/needs analysis	Rich pictures for contextual analysis
		Stakeholder identification	Stakeholder/actor analysis tools
		Determine if a partnership is right for your situation	Partnership readiness questionnaire
			Partnership needs analysis
			Partnership analysis
Proposal development stage	Partnership initiation phase	Selection of partners	Visioning exercise: agree on goals and outputs, and work backwards to the activities
		Cultivate shared understanding and ownership	
		Assess motives and roles	Partnership analysis
		Establish transparency for budgetary expectations and arrangement	Facilitate discussion on budget and administration
			Purpose and facilitate discussion on governance
			Keep everyone informed of the evolution and fate of the proposal
			Lead post-mortem self-evaluation of the proposal development effort
Start up stage	Partnership formation phase	At the initial project planning meeting, a team building session should be held with core partners	Repeat team-building exercise
			(Visioning partnership analysis)
		Develop/validate vision and strategic direction based on shared problem definition and approach, ownership motives and roles, agree on operating principles	Conduct simplified outcome mapping to identify secondary partners
			Team health check to agree on behavioural values
		Promote transparency	Conducting effective meetings
		Agree on partnership principles (or code of ethics)	Facilitation skills
			Interpersonal skills
		Agreement and understanding upon necessary leadership roles and responsibilities including resource commitment	Leadership skills
			Management skills
		Creating a partnership covenant or MoU	M&E tools (including process monitoring)
		Work plan preparation	
		Agree on governance mechanism for monitoring and evaluation	
		(M&E) and conflict resolution	
		Clarifies expectations regarding credit-sharing, data access and after project collaboration	
		Establish spirit of self assessment, promote monitoring and self evaluation and agree on how poor performance should be handled	
		Establish good communication practices	

Imple-menta-tion stage	Partner-ship im-plemen-tation phase	Encourages regular proactive rather than reactive communication and feedback	A project newsletter
			Team health checks or solicit feedback from partners
		Promote monitoring and self-evaluation	
		Recognize contributions and achievements	Participatory review of progress and achievements relative to agreed work plan, possibly as an ongoing outcome mapping exercise
		Document lessons/experiences	
			Celebrate successes
			Conducting effective meetings
			Facilitation skills
			Interpersonal skills
			Leadership skills
			Management skills
			M&E tools (including process monitoring)
Wind-ing-up stage	Partner-ship evalu-ation phase	Enabling partners to successfully meet project commitments	Final team health check and self-assess-ment
		Promote continued self-assessment	Final outcome mapping session
		Cultivate shared understanding	Discussion on next steps after the project ends
		Recognize contributions and achievements	Feedback to partner organization on col-laborators' performance

5.3.1 Idea stage/diagnosis

The project cycle begins with a researcher or research team wanting to contribute to agreed outputs by conceiving an activity that will achieve their objective, based on a systematic diagnosis. At this point, the activity is described in a brief idea note without details about the who, where or how, e.g. field trials in several countries to establish proof-of-concept. This idea note is then used by the research team and management, firstly to circulate for discussion and to identify possible collaborative opportunities within the research organization, and secondly to market the idea and seek either potential collaborators or donors.

a. Context/needs analysis

It is important to define the problem that the organization is embarking on addressing and understand the context around it. This would lead to defining the needs whether and what kinds of partnerships are required. A rich picture would be a useful tool to provide a visual of the problem context (in the tool kit). Contextual thinking is a method of diagnosis in which the practitioner evaluates a problem as an individual segment in a complex continuum rather than an effect of a specific cause or influence. This includes the analysis of the environment—internal and external (including political, policy, demographic, socio-economy, technology amongst others) in which the innovation system is embedded. This allows the researchers to gain insights into the strengths and weaknesses and also the opportunities and threats posed by the environment in which they operate.

b. Stakeholder identification

Based on the context analysis, the organization should identify the key stakeholders and actors involved in the problem context. Stakeholder and actor analysis tools would help identify the key actors and stakeholders, their objectives and interests, their attitudes and behaviours, their relative importance and influence etc. This would aid in drawing up a long list of potential actors/stakeholders to partner with (in the Toolkit). An intervention-based innovation system will help identify the key partners to be included.

c. Determine if a partnership is right for your situation

Partnerships are not a panacea to address all problems and might not be suitable for all contexts. So it is important to identify whether the situation/needs warrant partnerships. Usually organizations seek to form partnerships to:

- Access specialized resources, add or augment like resources, add complementary resources
- Reducing duplication
- Increasing service integration
- Improving access to the end user
- Expanding capabilities
- Gain legitimacy
- Foster or facilitate information exchange
- Spread risk
- Mutual learning
- Consolidating competitive position in the market

Although there are many reasons why partnerships could add value, prospective partners should carefully consider several issues before plunging ahead.

Firstly, examine your strategic motives.

Ask some important questions:

- Considering all that we know and have read about partnerships, why do we think this form of structure could be the best way to get the results we want?
- What are our strategic motives?
- What organizations might be a good fit for this partnership? (strategic fit can be defined by partners' skill/knowledge contributions, their underlying motives, their ability and willingness to commit resources, and their organizational culture)
- What are the resource implications of forming a partnership?
- Is our own organization 'partner ready'? Do we have the motivation and partnering skills to champion this partnership?

Secondly, determine if your organization is 'Partner ready'.

Although partnerships offer compelling opportunities to achieve desired results, they also demand resources and require a good deal of leadership and management attention. Thus the decision-to embark upon a partnership is not one to be taken lightly. Ask a few questions before making such decisions.

- Does your organization have the resources (financial, human, and technological) the partnership venture requires?
- Does it have the willingness and ability to cooperate, share control, share credit/recognition, and collaborate with the other organizations making up the partnership?
- Does it have the commitment to devote the required resources to this effort? Would the effort be a valuable part of the organization's portfolio? Would senior leadership be willing and able to provide necessary support and nurturing required for success?

Samples of partnership readiness questionnaire (provided in the Tool kit) can be useful to do this.

While not citing specific names of potential partners, the idea note should identify the type of partners that would be targeted. For example, 'An ARI partner with specific expertise in... will be needed to help develop the diagnostic tool; NGO partners will be sought locally to help implement on the ground.'

Key partnership-related questions that should be considered at this stage, and included in the idea note include:

- What do we want to achieve and which functions in an innovation systems perspective are required to make the system work and achieve the desired output outcome?
- What capacities are needed or required for each of the identified functions and activities, which are either not present or limited within the research organization?
- How could poverty-reduction outcomes be enhanced by bringing in partners to work on the envisaged research?
- What generic types of partners will be critical to the envisaged research and what essential contribution is expected from them?

5.3.2 Concept note stage

If a specific opportunity for a research activity is identified, then the next step is to prepare a concept note that sketches out the purpose, contribution to organizational outputs, general approach, timing, location, partners (both organizations and individuals), research organization's role and internal collaborators and the donor targeted. In many cases, the concept note will be the product of a very preliminary brainstorming with one or more key potential partners but often other potential partners will not yet have been approached. The purpose of the concept note is not only to present an exciting research idea, but also to provide an initial opportunity to critically review the proposed activity in terms of its fit within the organizational research agenda. This should also provide an opportunity to think critically about which partners are appropriate and to take advantage of existing intelligence within the organization (i.e. other researchers' experiences or information about potential partners).

A key partnership-related activity that should be considered at this stage includes:

Conducting an initial partnership analysis from the organization's perspective that identifies: (i) Contributions needed from different partners; (ii) candidate partners, their capacities and possible alternative suppliers; and (iii) the perceived benefit to the partner. This is not intended as a major exercise; it could be captured in a very simple table incorporated directly into the concept note to be circulated. At this point, depending on the context, the research team may want to make its own preliminary assessment without any consultation with other partners or alternatively may already want to open consultations with external advisors and potential partners.

Either way, the team needs to give some initial thought to the appropriateness of the proposed partners or how they will be identified, and provide an opportunity for others within the organization to offer their feedback or inputs. A possible approach for a preliminary partnership analysis is outlined in the toolkit in this module.

5.3.3 Proposal development stage

Selection of partners:

Once an organization makes a decision to partner and clarifies why it wishes to partner, the next key decision is to choose the partner(s) one would collaborate with.

Good partners have much in common. Mutuality and adaptability are central to the wellbeing of partnership relation. Willingness of the partnering parties to reach out to others in an effort to share competencies rather than imposing conditions on each other is vital for a healthy relationship.

Some questions to ask while selecting partners:

- Does this partner possess the resources (financial, human and technological) necessary to contribute to partnership?
- Does this partner overlap with our primary work or pose potential threatening competition?
- What are the weaknesses and/or strengths this partner might bring to the partnership?
- What do we know about this partner's previous experiences with partnerships? Did the organization meet its commitments? Was the work of good quality? Was the organization seen as a cooperative partner?
- How culturally compatible would this organization be with your own? Do we have goals, culture and values in common? Are our work practices and styles compatible?
- Will this organization be willing and able to devote the resources required for successful implementation? Will the organization deliver what it promises?
- Does this partner's senior management support this particular partnering effort? Will they give effort the attention it requires?

Seeking answers to these questions will require thoughtful information gathering. Partnership conversations must occur at several levels so that you and your potential partner have plenty of opportunities to discover if there is a strategic and compatible fit between you.

Medcof (1997) identified the following set of criteria for selecting partners:

- Strategic fit—a common understanding of the business rationale among the partners
- Capability—the necessary skills that go into enhancing the value of the partnership
- Compatibility—the complementary strengths of the partners that is mutually beneficial, including the match of organizational cultures
- Commitment—a strong motivation to sustain the partnership in terms of furthering its prospects and solving its problems
- Control-potential for having an effective means of governing the partnership

Bronder and Pritzli (1992) emphasized the importance of strategic synergy among the partners. They emphasize three factors in picking up a right partner:

- fundamental fit: complementary activities and expertise in a way that increases value potential
- strategic fit: harmony of business plans
- cultural fit: readiness of partners to accept the geographically and internally grown culture of the partner

The criteria noted above on how organizations choose a partner illustrate some of the difficulties inherent in establishing partnerships between public and private organizations. There is usually less strategic fit between public and private organizations than in the case of private–private or public–public couplings. This is because public organizations principally pursue production of public goods and private organizations pursue private goods. There are also major cultural differences between public and private organizations.

When a public–private partnership is a necessity, the challenge is to find a common objective that can serve as the backbone of partnership. If the fundamental differences between the organizations eliminate the possibility of reaching a common ground, the only option available would be to enter into an agreement using market norms or contractual engagements.

As the project concept moves into proposal development, contact is made with potential partners and respective roles and expectations become the key subject of discussion and negotiation. In some cases,

the partners will have the luxury of meeting in person for these discussions; more often, it will be done by email or telephone.

Key partnership-related considerations and activities during this phase include:

- Ensure a common understanding or consensus is achieved on the objectives, outputs, outcomes and impacts of the research. The process of drafting, circulating and reviewing a research proposal among partners contributes to developing a shared understanding. To achieve this shared understanding early on in the process, and to facilitate the subsequent discussions, a preliminary visioning exercise could be conducted. This will be especially useful when there is likely to be a wide range of different activities and partner types and can help to link all partners' activities to the overall 'vision' or purpose. A possible approach to visioning is outlined in the toolkit.

- Redo the partnership analysis together with the partners, using it as a mechanism to clarify roles and expectations and ensure everyone is 'reading from the same page'. In addition to identifying the main types of capacity needed and the contribution of each partner, this exercise will also list expected benefits for partners (including intellectual property [IP]) from their participation and could go further to explore strengths and weaknesses. In some cases, donor applications have a specific section requesting information on partner capacities and roles; the results of this exercise can serve as the basis for that section. A possible approach for a more in-depth partnership analysis is outlined in the toolkit.

- Clarify, to the extent possible, resource requirements in terms of human and financial resources needed for the desired achievements.

- As the budget proposal is being finalized, identify which partner is expected to be allocated or to administer which components. Constructing a proposal budget is often a very dynamic and iterative process and the expected allocation of budget can become confused. For the sake of transparency, it is therefore essential to make sure that budget components are identified by expected recipients in the near final version circulated among the partners, and consensus confirmed. For any partner that is expected to manage project funds, are there any particular requirements that must be met, such as overhead charges? If so, these must be reflected in the budget.

- Propose and agree upon a governance mechanism. Governance mechanisms are likely to vary depending on the type and scale of a project. For larger projects, the International Fund for Agricultural Development (IFAD) formula of a steering committee has proven quite effective. The membership of the steering committee includes representatives from the participating partners together with external stakeholders and, if possible, the donor. This offers several advantages and functions, but especially a) an in-built monitoring and external review mechanism; and b) a conflict resolution forum (since it includes independent members).

- For each partner, identify and adhere to any internal review and approval processes normally required for proposal submission. This should be clarified early in the proposal development process to ensure that deadlines are met.

- In consultation with the Human Resource, Finance and Administration Section, identify what contractual arrangements with partners may be appropriate if the proposal is successful. Make sure that the partners are aware of the proposed arrangements. This information must be made available to partners before they sign off on the proposal submission.

- Briefly evaluate the proposal development process immediately after submitting the proposal. Asking partners to identify any lessons learned from the proposal development stage will help cultivate a spirit of self-assessment and internal monitoring within the project.

- Regularly communicate with partners to update them on the fate of the proposal, even if nothing has happened.
- If the proposal is not successful, ask each partner to evaluate the reasons why and to suggest next steps.

5.3.4   Project pre-implementation and start-up

Partnership formation phase

The first step after selecting your partners would be to convene them for an exploratory meeting. Generally the partner that is initiating the partnership will take this step. The goal is to build consensus, trust and commitment. When contemplating an initial meeting with the partners consider the following:

- Who convenes? It is important to identify an organization or individual that is well regarded by all parties. The convening individual or group needs to have credibility with all prospective partners.
- Who attends? It is also important that those with appropriate organizational responsibility and position attend the meetings. Oftentimes, such meetings require attendees possessing clear authority to speak on behalf of their organization.
- Where? The actual meeting location must be considered. For an initial few meetings, it may be best to identify neutral grounds. This prevents the meeting from being perceived as under one organization's control, some circumstances may require that participation by one or more members are by teleconference or electronic conferencing.
- Who moderates? The convener often fills this role. If choosing a moderator for the initial meetings, find a facilitator who allows partners to raise issues without getting bogged down in unproductive discussions.
- What is discussed? An agenda for the first meeting might just focus on two things: personal and organizational introductions and a sharing of viewpoints about the common cause or issue that has brought an partnership together. If the organizations have not had a history of interaction, the meeting might appropriately end with only a summary of viewpoints written for distribution. If the meeting members already know each other, they might move directly to determining their collective vision of the problem and its solution. It would be important to discuss the following:
- What is/are the problem/s to be solved, and what value added might we achieve if we worked together?
- What would each organization want and expect to get out of a partnering effort?
- What might be the downsides of being a part of this partnership for each organization?
- What strengths do each of our organizations bring? What weaknesses?
- What lessons learned do each of us bring from previous partnerships?
- In what ways are our organizational practices and styles compatible? Incompatible?
- How compatible are our organization's longer term strategic ambitions?
- How would the work of this partnership fit into the larger priorities of our respective organizations?
- What roles do we see each organization playing? And what should be our next steps?

In many cases, other stakeholders may be invited to participate to initiate a process of engagement. If such a broader meeting is being held, an initial team meeting of main partners should be held before this.

Organize an initial team meeting of the main partners for planning and team-building. This meeting provides an important opportunity to carry out a number of activities and exercises in support of the partnerships. An approach and activities for the initial team meeting is outlined in Box 1.

Box 1: Approach for initial team meeting (pre-implementation stage)

Following a successful proposal stage, the initial team meeting provides an important opportunity to carry out a number of activities and exercises in support of the partnerships. During this meeting, the following activities should be undertaken, taking great care to record faithfully and as fully as possible the actions and principles agreed.

- Briefly review and re-confirm the outcome of the visioning exercise (goal and purpose of the project).
- Review the partnership assessment and agree on a clearer definition of roles and responsibilities, and, if relevant, how these might change over the life of the project. It may be appropriate to add a new layer that identifies the roles, expectations and perceived benefits to the individual researchers on the team as well.
- Identify stakeholders and key non-core partners to be recruited into project activities. At this stage, consider whether an **outcome mapping exercise** would be appropriate. If adopted, the outcome mapping would be used to develop a strategy for influencing and changing mindsets of key actors, including partners, and would also then be updated periodically as a measure of progress.
- Conduct a team-building **values exercise**, with questions such as: *Do you agree/disagree with the statement 'An email that starts simply 'John, could you....' is impolite.').* This could lead to discussion and consensus on partnership and operating principles and could be particularly valuable for practices regarding performance evaluation, dealing with poor performance, conflict management and communication. Understanding ways of working, values and motivations of staff at various levels of the partner organizations will be critical for maintaining effective working partnerships.
- Propose a protocol-based project management system, explaining how it works and its advantages. Getting acceptance of such a system will be key to establishing a systematic use of annual work plans and activity budgets.
- Go over in more detail the overall project management and data management protocols to agree on communication, monitoring, data sharing and documenting principles. A team-building exercise may be a good way to solicit suggestions and agree on indicators, timing and mechanisms for periodic self-assessment (monitoring) of the project, including partnership dynamics.
- Present and allow discussion of administrative and financial arrangements, especially those related to Letters of Agreement (LoA), if relevant. Key commitments in the LoA should be highlighted, such as those regarding reporting requirements. A financial systems questionnaire should be distributed and explained to the partners who will be managing project funds.
- Even at this stage, it may be useful to facilitate and record a brief discussion of expectations after the project ends:
  - Are the partners' expectations that the project will engender continued or related research projects based on the same partnerships?
  - Do the partners expect that their individual or collective partnership will evolve or expand to focus on collaboration in other research areas or topics?
  - If there are expectations for continued active partnerships, what steps need to be taken during the life of the current project to foster the additional collaboration?

Before the team meeting, the following should be prepared:

- draft collaborative research agreements
- an appropriately adapted financial systems guide

- adapted protocol forms, particularly those related to overall project management and data management. By having these prepared, they can be explained and discussed during the meeting rather than trying to explain them later via email.

During the team meeting, ensure that the following topics are addressed:

- A review and reconfirmation of the visioning exercise.
- Agreement on a clear definition of roles and responsibilities.
- Identification of stakeholders and key non-core partners to be recruited into project activities, including possible use of outcome mapping approaches. An approach to outcome mapping and its potential use in partnership management is outlined in the toolkit.
- Conduct a team-building exercise using a team health check questionnaire to reach consensus on partnership and operating principles, and in preparation for performance evaluation and conflict management.
- Negotiate and agree on how credit for project outputs and achievements are expected to be shared (e.g. authorship vs. ownership). This agreement should be detailed and be part of the written partnership agreement to avoid any later conflicts or disappointments. Credit sharing is one of the most critical points of a partnership and one that can easily destroy a collaboration if not handled with great care and mutual respect. Issues like authorship of papers, use of logos etc. are essential parts of this agreement.
- Facilitate and document consensus on what would constitute unacceptable partner performance and how it would be addressed.
- Agreement on project management systems and protocols, and data management and sharing.
- Agreement on administrative and financial arrangements, including the assets and their transfer to the partner should be formalized.
- Initial discussion of end-of-project expectations, i.e. do partners view their participation in the current project as an investment in future collaborative activities. Would they feel 'abandoned' if the organization did not ensure such follow-up?
- Great care must be taken to record fully and faithfully the actions and principles agreed during the meeting.
- Consider initiating an electronic newsletter or similar mechanism that establishes the spirit of regular communication and transparency. Especially in larger projects with three or more partners, such a newsletter is extremely effective for confirming and reinforcing agreed principles within the team, recognizing the contributions of partners—both institutions and individuals—while at the same time providing a mechanism to communicate plans and progress to others within the partner institutions and more widely. A first newsletter should be produced immediately following the first team meeting to highlight the principles agreed.

The next step would be setting direction. A subsequent meeting could be planned to help achieve this.

Partnerships often encourage looking at old problems in new ways, bringing energy and creativity along with shared solutions. This happens mostly if the members begin with a shared understanding about the nature of the problem and ideas about possible solutions. The steps involved in setting direction are:

- Defining the problem: Successful problem definition involves identifying a meaningful junction of the interests and needs of partners. Bringing representatives of all interested parties to the table is highly desirable.

- Brainstorming solutions: Noting the importance of having the beneficiaries' support, describe each member's stake in the problem and identify solutions to it (without getting bogged down in tasks, resources, personalities and histories). This is the time to clarify the vision of the partnership, its goal and strategic objectives, and establish a climate of hope and a willingness to work together.
- Identifying local allies: There are often local level organizations already active in solving the problem. They may already be working in partnership with other public or private entities. In the public sector, different agencies at various levels of government often collaborate to address a particular issue, based upon their mandate, interests and resources. In business, joint ventures, trade associations, and federations are common and in civil society, NGO coalitions are often formed around common issues or relationships to more effectively utilize resources. Some questions to answer in this case are:
  - what are the local organizations active in solving the problem (and who are the key actors in these organizations)?
  - are these organizations with capacity to become implementing partners?

For advancing the partnership, in subsequent meetings, further develop goals and objectives. Key questions to be considered are:

- How should actions be implemented? Open lines of communication are vital, as are clearly defined planning rules. The implementation of major action plans may involve recruiting new implementing partners who may not have been part of the earlier problem-solving discussions.
- How will resource allocation take place? Each member has distinct financial, human resource and technology capabilities. This issue often becomes a sticking point during the implementation process. Partners need to discuss resources continuously—who's providing what and when—in order to ensure that the issue remains well understood from the outset.
- How can partners implement detailed plans in ways that respect their particular interests? Action planning may bring out further points of difference between the partners. It is important to respect these differences at all times. Differences exist in every partnership and accommodating them is a necessary component of successful partnerships.

A note on joint planning:

There is no formula for a successful joint planning process.

- It can take place on-site or off.
- It can involve all partners or only key partners
- It can start with only the vaguest notion of what can be done, or with a well-articulated proposal developed by one or more potential partners.
- It can follow a systematic structured process or evolve in a more ad hoc fashion.
- The crucial ingredients are a willingness to consider a range of ideas, a clear-eyed view of each partners' objectives, an ability to identify where there could be overlapping areas of interest, and time to allow for problem solving by and among partners as the process proceeds.

The following are the six foundation elements that have to be addressed during initial stages of partnerships formation. If dealt with successfully, a climate of openness and trust begins to develop.

1. Compelling vision—a compelling vision and a strong sense of purpose is the glue that binds the partnership. A clear vision:
   - Defines problems or change opportunities to be addressed and strategies to be used.
   - Defines the scope of work, clarifies boundaries, and helps the partnership to hold to its original intent

2. Strong, participatory leadership
   • Demonstrate eagerness to develop a collaborative relationship and to build shared ownership of the problem and outcomes
   • Not only must leaders see the potential for the partnership; they must also communicate this in inspiring ways
   • Leaders need to understand and address the differing interests of all organizations the partnership comprises, and work to facilitate management of boundaries and resources in ways that are seen as fair and equitable.
   • Have to help members to understand and appreciate the different motivation, interest, skills, concerns and social/cultural norms of the individual members and home organizations
   • At the onset of relationship, they must model trust-building actions:
      • Involving others
      • Using the input or opinions of others and giving them credit
      • Demonstrate a willingness to exchange ideas as well as explore different or new ideas
      • Sharing feeling/opinions honestly
      • Exhibiting sensitivity, both cultural and emotional
   • Skilled facilitation is critical, either by leader or another group member, or an outside facilitator who is skilled in group process and understands the complexity of forming a collaborative process
3. Shared problem definition and approach
   • Agree on nature of problem(s) being addressed and the desired results
   • Achieve a shared definition of problem, by trying to understand the problem from other points of view
   • Reach agreements on analytical framework to be used and appropriate actions/strategies to be implemented
   • Doing this requires time and a commitment to learn (and value) how each partner approaches issues.
4. Power equity
   • For a partnership to be genuinely successful, it is vital for all parties to sense that other partners respect them and value their contributions.
   • Each organization needs to feel that it can influence the direction and focus of the partnerships' vision and strategy
   • Not to be intimidated by others' positions and affiliations
   • Important behavioural factors to create power equity, which can signal to partners how much status and power the others are according them.
      • Active and full participation with input into decision-making
      • Frequent information sharing
      • Negotiated priorities
      • Clear assignment of roles and responsibilities
      • Fair and transparent distribution of funds and other resources
      • Win–win negotiation approaches
      • Consideration of all partners' interests, needs and concerns during planning and decision-making

   • All organizations need to speak explicitly about why they are joining and what they expect to gain from the partnership. State clearly its own reasons for joining and listen carefully to

understand the needs and expectations of other organizations. Collective agreement on what each can expect from the relationship. This will make partners feel empowered and valued as legitimate contributors.

5. Interdependence and complementarity
   - Complex challenge—requiring broad base of knowledge, new technology and diverse expertise.
   - Each member needs to bring in skills, knowledge and resources to complement those of other members.
   - Partnership should create a new value
   - Organizations should choose to work together from a position of individual strength
   - Organization that enters into a partnership because of weakness or to aid its own survival will put too much dependence on other partners and create unrealistic expectations

6. Mutual accountability and mutual respect
   - Success depends on each member fulfilling its responsibilities and commitments in timely fashion
   - Shared ownership and personal stake in outcome are two strong motivational elements for holding partners accountable
   - Many times the only leverage partners have is the appeal of the vision and good will that has been developed
   - Partnerships with agreed upon norms and sanctions, with enough power and authority vested in the group to exercise these sanctions are better able to hold members accountable than are those appealing only to good will.
   - Other actions that can inspire, motivate, and sustain partner commitments:
     - i. Establishing milestones
     - ii. Developing short and long-term indicators
     - iii. Setting quality standards
     - iv. Identifying benefits
     - v. Producing clear time frames
     - vi. Monitoring for results
     - vii. Celebrating small wins
     - viii. According appropriate recognition and credit to all involved
   - Accountability can be undermined in two major ways:
     - i. Members fail to carry out their planned activities or do them poorly, leading others to believe that resources have been squandered
     - ii. Partners are highly sought after and feel more independent than interdependent

Creating a partnership code of ethics

Many partnerships find it useful to agree upon a code of ethics or guiding principles to define a common vision of how partners will work together and interact with partners in order to capitalize on the respective strengths of the partners. Such guidelines can help to guide staff behaviour and address the inevitable misunderstanding and conflicts that arise during the life of the partnership. The guidelines can be used as a standard or best practice for the partnership and can be monitored and evaluated periodically. It is usually best to keep the guiding principles short, limiting them to no more than five to eight statements of intention.

Creating a partnership covenant or MoU or letter of intent

Whereas a contract focuses on ways to meet the independent needs and interest of each party, a covenant concerns the accomplishment of mutual purposes and a shared mission. These are legally non-binding, non-obligatory agreements. MoU describes the intentions of the partners to proceed with a given course of action. MoUs vary greatly in degree of specificity and no standard format exists.

Covenants or MoUs capture the intent of partnership, the commitment to stay with it through both good times and bad. Some times they are written and signed by the partners, at other times they are less formal. The typical contents of an MoU are presented in Box 2.

Box 2: Generic contents of an MoU

1. Partner organization details: name of each partner, contact person with contact details, and brief description of the organization
2. Goal and objectives: description of the problem the partnership was formed to solve and why the partnership is a good way to address the problem, what the partnership's goal is in solving the problem and, what the partnership strategies are for reaching the goal.
3. Operating principles: partners must have a general understanding of how they will manage its program. This includes:
   • description of any special administration structure required by the partnership (including anticipated working groups and committees)
   • how decision will be made
   • how conflict will be resolved
   • how the agreement can be renewed, modified or terminated
   • end date of the agreement
4. Roles and responsibilities of partners: describe what each member gives to and gets from the partnership, provides a preliminary view of the resources that each member will commit—core resources, program and/or project resources (financial and non-financial) and sets out the partnership's implementation timeline.
5. Accountability: notes how the program performance of the partnership is expected to be measured, whether an independent audit of the partnership's financial arrangements will be undertaken, and how adjustments will be made.
6. Partnership governance: if there is a governing body, membership, roles and responsibilities are defined
7. Managing the partnership: how the senior leadership-individual or team—will be selected and the roles and responsibilities for these positions
8. Developing and agreeing to a code of ethics or principles of partnership
9. Holding key partnership meetings: how many, who attends and so on
10. Monitoring and evaluating partnership performance
11. Handling of authorship, IPRs etc.
12. Handling conflicts: usually through agreed-upon protocols.

In addition to setting out the operational framework for the partnership, an agreement of this nature can be an important document because it conveys the objectives and intent of the partnership and may be used to explain the partnership to others and potentially leverage increased resources. A generic MoU used by the International Livestock Research Institute is presented in Annex 1.

Building a work plan

While it is important for the partnerships to focus on process issues to establish clarity and agreement on how partners will work together, it is also important to focus on how the work will get done. Generally big picture work plans are best developed at partnership gatherings; however the more detailed work plans should be laid out at the level where the work is occurring. During the early partnership planning stages, it is important to balance the efforts towards planning the work and building an effective process for working together.

Organizing partnership

According to Killing (1988), two critical factors have to be considered while organizing a partnership: Organizational Complexity (OC) and Task Complexity (TC). OC is high when interaction among partners is non-routine (when task uncertainty is high and inputs from many partners are needed simultaneously) and the partners interact frequently. When OC is low, simple structures which require little co-ordination are sufficient. When complexity is high, there is a need for structures with complex co-ordination and integration components.

Factors affecting task complexity

- scope of the partnership activity: depends on partnership objectives, number of functions and products involved and the duration of the partnership
- degree of environmental sensitivity: stability and predictability of operational environment (markets, policies, technology, customer preferences etc.) in which the partnerships would function. This influences the degree of uncertainty attached to the tasks the partnership would carry out.
- relevant partner resources and skills: physical and technical assets that the partners bring. If there is mutual understanding of the comparative advantages and commitments of the partners, carrying out tasks jointly becomes more complex.

Organizational complexity depends on task complexity. Tasks requiring complex sequencing or coordination would call for organizational forms that would ensure efficient flows and integration arrangements. It also depends on:

- Number of partners: the more the members, the higher is the complexity. Ensuring participation while seeking simplicity of co-ordination is a perennial challenge in partnerships.
- Nature and frequency of interactions among partners: determined by nature of tasks and expectations/demands
- Level of trust: lack of trust results in dysfunctional interaction which complicates the relationship.

Nature of interaction	Non-routine	Moderate complexity	Great complexity
	Routine	Low complexity	Moderate complexity
		Low	High
		Frequency of interaction	

Figure 3. *Interactions and levels of complexity in partnerships.*

There are also three organizational models proposed based on skills that partners bring and their contributions. This is illustrated in Figure 4.

Equality of partner contributions	Equal	Split control	Shared decision-making
	Unequal	Dominant partner of split control	One partner probably dominates
		Non-routine	Routine
		Similarity of partner skills	

Figure 4. *Organizational models based on partner skills and contributions.*

The form the partnership organizational model would take should follow the function.

Developing governance structures

Management of a partnership will be greatly facilitated when the basic governance structure established by the MoU is clearly defined. It can be assumed that the partners have achieved a high level of trust and have a shared commitment to achieving results. They can maintain openness and accountability to one another by establishing clear agreements on governance procedures. At a minimum, it is desirable to address the following areas:

- specific roles and responsibilities of partners as well of their relevant supporting units.
- key elements of governance such as frequency of meetings, decision-making processes, participants, need for working groups, outreach to stakeholders/beneficiaries, monitoring systems etc.
- how to resolve differences should these arise.

Addressing governance issues in writing, at the outset of the partnership, will prove invaluable as partner personnel rotates during the life of the partnership, or as new partners are brought in. It should be a living document to be amplified or modified as the parties gain more experience working together.

While defining roles and responsibilities, the following key questions have to be asked:

- Who are the principal players? Who is authorized to make decisions, convene meetings, address implementation issues, and provide substantive technical information? It is a good idea to provide a formal list of names, contact information, and level of authority to all relevant participants.
- Who has a supportive role, and how should they be kept in the loop (and by whom)? Decisions should be made on the mode and frequency of participation in or information on partnership issues.
- Partners should agree on and practice direct communication on all aspects of partnership implementation, at executive and working levels. It may be important to inform each other on the relevant internal processes of each partner, and any changes therein.

Clear 'rules of the game' make it easier for partnership partners to focus on their role in implementation.

Other questions that could be addressed include:

- What is the frequency of meetings of the principal governing body of the partnership? Are teleconferences acceptable?
- Who convenes and who participates (actively or with observer status) in meetings? Should there be working committees (if so, what are their specific responsibilities)? Should periodic open

meetings be convened for information sharing and gathering purposes with parties relevant to partnership progress (including beneficiaries)?

- Who is empowered to make binding decisions? Will decisions be made by consensus, by vote?

- Who is responsible for the agenda, preparing minutes and circulating them? Should minutes be signed by the principals?

- In partnerships, where partners are pooling their funding, what is the process for making funds available? The level and timing of funding needs should be discussed, as well as the likely burn rate of the activity.

- How will partnerships work with beneficiaries and potential new partners? To what extent will partners inform each other when they have separate contacts with such groups? A voluntary code of conduct is one way partnership partners signal commitment to partnership percepts.

- What kind of public outreach is relevant? Should the partnership develop a joint approach? Does each partner prefer to publicize its efforts separately? Should outreach be aimed at informing, garnering public support?

- How will partners monitor and report partnership progress? Is there a limited set of performance indicators, or 'metrics', that all partners are willing to adopt and use notwithstanding any additional indicators that they may wish to identify and track? Do partners have reporting requirements that the partnership can help them meet?

Resolving differences

Conflicts among partners in a partnership must be anticipated. In the interest of good governance it is appropriate to address the issue and identify, at a minimum, principles that should be followed in the event of disagreement.

Such principles include respect for the other party; clarifying underlying issues; identifying options for resolving the disagreement ; being inclusive, not exclusive, of stakeholders who might be able to propose solutions; agreeing at the outset on a procedure for resolving the disagreement; and agreeing on time limits with which the problem should be resolved. The module includes a section on conflict resolution/management in another chapter, which deals with this topic in greater detail.

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Session 5: Exercise A: Partnership design: Key steps and tools

(Group exercise)

Phase 1. Group work (30 minutes)

1. Break into your project teams and have each group elect a rapporteur. (5 minutes)

2. In your group, please review how the partnership was formed in your project.
3. Based on what you learnt, what additional steps would you undertake to improve the design process.
4. Capture the summary of your group discussions on a flipchart (25 min).

Phase 2. Reporting and discussion (35 minutes)

5. Rapporteurs present the group responses using flipcharts (25 minutes).
6. Facilitator asks feedback on this exercise and closes the session (5 minutes)

Session 5:   Exercise B: Partnership readiness questionnaire—A

Please use the following seven-point scale. 1 = low degree of confidence. 7 = highest level of confidence. At the end, total up your points. The scores reflect the degree of confidence in your readiness. Lower scores indicate a real concern, perhaps the partnership is not right for you right now; middle score says you have some concerns, but with special attention devoted to what concerns you most, you think you should proceed; and the higher scores—'go for it'—it's a winner.

(Circle one)

1. Does my organization have the resources—financial, people, and technology—needed to contribute our portion of the partnership being considered?

1–2–3–4–5–6–7–NA

2. Can we honestly say these resources can be accessed when required? (Meaning they have not already been committed to several efforts and are seriously overloaded.)

1–2–3–4–5–6–7–NA

3. If we cannot contribute our entire share of financial resources, do we feel we have a good chance of obtaining additional donor funds?

1–2–3–4–5–6–7–NA

4. Are we willing and able to work in collaboration and mutuality with the other organizations that comprise this partnership?

5. Are we willing and able to share control and participate in shared decision-making?

1–2–3–4–5–6–7–NA

6. Are we willing and able to be flexible about how things get done and not to be too insistent that it be done our way?

1–2–3–4–5–6–7–NA

7. Have we in the past and are we now able to work with our less resourced partners with mutual respect, avoiding any sense of domination and superiority? Would these organizations give us a high rating in this regard?

1–2–3–4–5–6–7–NA

8. Is there support for this project within our organization, and would this partnership become a valuable part of our organization's portfolio?

1–2–3–4–5–6–7–NA

9. Can we commit to devote the leadership and management time required of us in this partnership effort?

1–2–3–4–5–6–7–NA

10. Have we had sufficient experience in working in partnerships so that we can say that our 'partnering' competencies are good enough to carry out our performance commitments?

1–2–3–4–5–6–7–NA

Total: _____

Session 5: Exercise C: Partnership readiness questionnaire—B

Rate each of the eight items listed using the following five-point scale as a guideline. Place the appropriate number from this scale in the space located to the left of each item. Obtain a total readiness score by adding together you eight ratings.

Five Points Scale:

5 = Strongly agree

4 = Moderately agree

3 = Indeterminate

2 = Moderately disagree

1 = Strongly disagree

I.   Efficiency and effectiveness
   1. Effectiveness. Our product or service could be offered on a greater scale if we were able to combine efforts with one or more organizations.
   2. Quality. Our product or service could be offered at a higher quality if we were able to combine efforts with one or more organizations.
   3. Cost. Our product or service could be offered at a lower cost if we were able to combine efforts with one or more organizations.
   4. Resources. Our organization needs resources that we do not currently posses that could be accessed through other organizations.
   5. Sustainability. Our products, product or service could be provided on a more sustainable basis if we were able to combine efforts with one or more organizations.
II. Personal fulfilment
   1. Gratification. Other members of this organization and/or I would become much more involved in, have more control over, and/or be more satisfied with the work environment if our organization were to enter into some form of partnership with another organization.
   2. Gratification. I believe that other members of this organization and/or I would find a partnership with one or more organizations a source of challenge, excitement, personal learning, and/or professional development.
III. Organizational culture
   1. Decision-making. Our organization has a culture of collaborative decision-making that would support a partnership with one or more organizations.

Source: DFID (2003).

Trainer's guide

Session 6:   Partnership implementation: Key steps and tools

Purpose	To enhance the capacity of the agricultural researchers to forge effective and efficient partnerships with other relevant stakeholders in the agricultural innovation system for achieving greater impacts
Objectives	At the end of this session participants will be able to: • Explain the partnership implementation phase and identify skills and tools needed for implementing effective partnerships
Resources	• Flipcharts • White board • Flipchart and white board markers • Copies of handouts 6.1, 6.2, 6.3 and 6.4 for each participant • Computer and LCD projector
Time needed	Two hours and 15 minutes

Method of facilitation

Activity		Time
Presentation	Distribute handout 6.1 (presentation slides) before you start your presentation	60 minutes
	Give a presentation on tools for innovation systems understanding and analysis	
	Allow some time for questions to make sure that participants understand what is presented.	
	Distribute handout 6.2 (presentation text) to supplement your presentation	
Exercise	Distribute handout 6.2 for exercise 6 partnership implementation: Key steps and tools	85 minutes
	Ask a volunteer to read the exercise	
	Ask participants to work on the group exercise	
	Remind them the time allotted to the exercise	
Transition	Make closing remarks and transit to the next session	5 minutes

Session 6:   Partnership implementation: Key steps and tools: Summary of overheads

6.1

Partnership implementation:

key steps and tools

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6.2

Session objectives

Understand the processes and issues in research partnership implementation in the context of a project cycle

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6.3

Project implementation and monitoring stage

- Practice proactive rather than reactive communication
- Facilitate 'partnership health checks' at project meetings
- Use project governance mechanism to address poor performance and resolve conflicts
- Complete a simple partnership report to management every time a project report is submitted to the donor
  - Have all reports been submitted and on time?
  - Has program collaboration been smooth? If not, describe any problems that have arisen
  - Have there been any issues related to management of project funds held by the partner?

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6.4

Project implementation and monitoring stage

- A related assessment questionnaire should be sent occasionally to partners, asking them to report back to the project management on the organization's performance as a partner

- Collectively monitor and document progress in influencing mindsets and working towards impact within the output mapping framework

- Remind, motivate and monitor to ensure that the required reporting and documentation is kept up to date and submitted on time

- Make efforts to recognize and showcase partnerships that are working well and celebrate their successes

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6.5

Winding-up phase

- Give several early reminders about any final reporting commitments

- Anticipate final administrative arrangements that may be of concern to partners

  - project assets whether (i) their recovery is expected; or (ii) how their transfer to the partner should be formalized

  - an independent financial audit and it may be useful to review partners' project accounts carefully to help them prepare in advance

- Facilitate collective self-evaluation of the project and partnerships

- Facilitate a final Outcome Mapping session to assess progress achieved and capture lessons

- Agree on any next steps that are planned for follow-up collaboration

- Ensure that the partnerships and the contributions of the individual partners are clearly recognized and acknowledged

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6.6

Team contributions and competencies required for partnership management

- Strategically identify partnership needs
  - Identify strategic gaps
  - Actively scan for opportunities
- Actively explore partnership opportunities
  - Initiate discussions with potential partners
  - Facilitates a consensus on mutual benefits to be gained through partnership
  - Clarifies expectations

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6.7

Team contributions and competencies required for partnership management

- Lead or contribute to implementation of commitment within partnerships
  - Sets performance objectives/define roles
  - Establishes ground rules
  - Creates a learning environment
  - Formulates action plans
  - Planning and organizing
  - Delegating responsibility

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6.8

Team contributions and competencies required for partnership management

- Successfully motivate participation and commitment within partnerships
  - Subordinates own area's agenda
  - Communicating effectively
  - Negotiation
  - Developing teams
- Monitor and cultivate performance and health of partnerships
  - Track performance
  - Evaluate performance
  - Recognize work of partners

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6.9

Thank you!

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Session 6: Partnership implementation: Key steps and tools: Summary of presentation

6.1 Introduction

This chapter looks at the nurturing of partnerships in the context of the project cycle. This chapter describes these phases and steps in detail while identifying the skills and tools needed. The issue of partnership monitoring is covered in another chapter of this module.

6.2 Project implementation and monitoring stage

As the project is implemented, considerations for managing and nurturing the partnership aspects should follow directly from the principles, procedures and practices agreed during the initial team-building and planning meeting. For the Partnership Manager (usually the project manager), it is important to follow through and monitor that these are respected. Key partnership-related considerations and activities during this phase include:

- Practice proactive rather than reactive communication. The project manager sets the tone in terms of communication and so must make a particular effort to keep up with one-on-one communication with individual partners and with sharing information more widely. Again, some type of periodic electronic project newsletter or project webpage would be ideal for this purpose.
- Facilitate 'partnership health checks' at project meetings. In addition to the standard review of progress and planning done at project meetings, the project manager should periodically plan and facilitate a session using standard team-building techniques to lead a collective self-assessment of the partnership dynamics within the project.
- Use the project governance mechanism to address poor performance and resolve conflicts.
- Complete a simple partnership report to management every time a project report is submitted to the donor. This would be a very simple questionnaire naming the partners, the individuals involved (to keep organizational database up to date), and the following questions:
  - Have all reports been submitted and on time?
  - Has program collaboration been smooth? If not, describe any problems that have arisen.
  - Have there been any issues related to management of project funds held by the partner?
- A related assessment questionnaire should be sent occasionally to partners, asking them to report back to the project management on the organization's performance as a partner.
- Collectively monitor and document progress in influencing mindsets and working towards impact within the output mapping framework.
- Remind, motivate and monitor to ensure that the required reporting and documentation is kept up to date and submitted on time.
- Make efforts to recognize and showcase partnerships that are working well and celebrate their successes. A project newsletter or webpage offers an effective mechanism for public recognition of successful partnerships: make sure to highlight the role of the partnership in any success achieved by the project.
- Systematically document the experiences and lessons learned.

6.3   Evaluation phase

It is very important to pay close attention to partnership issues during the winding-up phase. In the rush to compile and submit final reports and close out budgets, less attention is often paid to partnership issues. But careful consideration of these issues can make sure that the project ends on a positive note, that lessons are captured and learned, and that the partnership is strengthened for future collaboration.

Key partnership-related considerations and activities during this phase include:

- Give several early reminders about any final reporting commitments. There is often an extra heavy load of reporting needed at the end of a project; early, repeated reminders can help to avoid missed deadlines and bad feelings.
- Anticipate final administrative arrangements that may be of concern to partners. If partners are holding any project assets (i.e. equipment purchased with project funds or lent for project activities), clarify with organizational administration whether (i) their recovery is expected; or (ii) how their transfer to the partner should be formalized. Some projects may require an independent financial audit and it may be useful to review partners' project accounts carefully to help them prepare in advance.
- Facilitate collective self-evaluation of the project and partnerships. Some projects are able to hold a final wrap-up or feedback workshop, and this opportunity can be used for such an evaluation. Lessons captured during this evaluation can often contribute to the narrative of the final report on the project process and management. If no dedicated meeting is possible, it may be possible to solicit feedback from partners through a facilitated email discussion.
- Facilitate final outcome mapping session to assess progress achieved and capture lessons.
- Agree on any next steps that are planned for follow-up collaboration.
- Ensure that the partnerships and the contributions of the individual partners are clearly recognized and acknowledged. A letter should be sent to the director of the partner institution to transmit formally any final reports and to recognize the contribution of individual collaborators from that institution.

The six stages of the project cycle are a useful concept to demonstrate explicitly what partnership management at project level means in practice. It serves as a checklist for project managers and partners to consciously deal with partnership issues.

6.4   Competencies specific to partnership management and nurturing

Most research staff members will in some way be asked to contribute to partnerships. For partnership managers and other closely associated staff, it is essential that they are able to:

- Strategically identify partnership needs
- Actively explore partnership opportunities
- Lead or contribute to implementation of commitment within partnerships.
- Successfully motivate participation and commitment within partnerships.
- Monitor and cultivate the performance and health of partnerships.

The key abilities required by project staff to address these are explained in this section.

6.4.1 Strategically identifies partnership needs

They should be able to analyse the institute's and one's own area to identify key internal and external relationships that should be initiated or improved to further the attainment of goals within one's area of responsibility. This will include:

- Identifying strategic gaps: be able to articulate the critical research gaps that need to be filled by leveraging capacity through partnership
- Actively scan for opportunities: continuously seek new contacts and information about other organizations active in own area of responsibility, assessing what they may offer to the organization (and vice versa)

6.4.2 Actively explore partnership opportunities

One needs to exchange information with potential partners to clarify benefits and collaboratively determine the scope of mutual expectation; seek ways to collaborate with diverse group (internal or external to the organization); and develop sustainable strategic partnerships and collaborative agreements with external organizations. This involves:

- Initiating discussions with potential partners
- Facilitating a consensus on mutual benefits to be gained through partnership
- Clarifying expectations: (agreements for agreed activities, follow-up activities once current collaborative activity has ended)

6.4.3 Effectively lead or contribute to implementation of collaborative activities

This will involve managing performance; focusing and guiding others in accomplishing work objectives; fostering trust and dialogue to enhance performance of self and others; acting as an advocate for personnel development opportunities and resources; managing in a frank and open manner and applying the same standards of treatment to everyone.

This requires:

- Setting performance objectives/defining roles: Collaboratively works with partners to set meaningful performance objectives and align them with agreed priorities, sets specific performance goals and identifies measures for evaluating goal achievement; clearly defines roles and responsibilities for member of the partnership.
- Establishing ground rules: Collaboratively works with partners to identify the behaviours, knowledge, and skills required to achieve goals; identifies specific behaviour, knowledge, and skill areas of focus and evaluation.
- Creating a learning environment: As necessary, helps secure resources required to support development efforts; facilitates opportunities for development to build capacity; offers to help individuals overcome obstacles to learning. Provides equal growth opportunities within the collaborative activities for individuals across all cultural and demographic backgrounds.
- Formulating action plans: Collaboratively determine courses of action to realize mutual objectives; facilitates agreement on each partner's responsibilities and needed support. Define and clearly communicate performance expectations; collaboratively identify coaching opportunities, training, workshops, seminars etc. that will help partners achieve important goals.

- Planning and organizing: Establishing courses of action for self and others to ensure that work is completed efficiently and effectively in accordance with the organization's core values.
  - Prioritize: Work with others to identify more critical and less critical activities and assignments; coordinate project assignments, coordinate project assignments, roles and responsibilities; adjust priorities when appropriate.
  - Determine tasks and resources: Determine project/assignment requirements by breaking them down into tasks and identifying types of equipment, materials, and people needed; coordinate project assignments, roles and responsibilities.
  - Schedule: Allocate appropriate amounts of time for completing own and others' works; avoids scheduling conflicts; develop timelines and milestones; prepare detailed project plans including timelines and objectives.
  - Leverage resources: Take advantage of available resources (individuals, processes, and tools) to complete work efficiently; coordinate with internal and external partners; delegate appropriately while maintaining accountability for work; manage resources within the framework of short- and long-range budget plans and other resources.
  - Stay focused: Use time effectively and prevent irrelevant issues or distractions from interfering with work completion; maintain focus when faced with competing agenda.
- Delegating responsibility: Allocating decision- making authority and/or responsibility as appropriate to maximize the organization's and individual's effectiveness; inspiring collective ownership of decisions and required actions.
  - Share appropriate responsibilities: Allocate decision-making authority in a timely manner in appropriate areas (considering positive and negative impact, organization values and structures, and the enhancement of the individual's knowledge/skills, while retaining appropriate ownership); delegate assignments to appropriate individuals based on their skills, roles and interests
  - Define parameters: Clearly communicate the parameters and context of the delegated responsibility, including decision-making authority and any required actions, constraints, or deadlines
  - Provide support without removing responsibility: Suggest resources and provide assistance or coaching as needed; express confidence in the individual and communicate their role to others in the organization.
  - Follow-up: Establish appropriate procedures to keep informed of issues and results in areas of shared responsibility; follow up to ensure that actions are completed properly and within the period allotted

6.4.4 Motivating participation and commitment within partnerships

This involves placing higher priority on partnership's objectives than on own objectives; anticipating effects of own action and decisions on partners; influencing others to support partnership objectives. This requires:

- Communicating effectively: Clearly conveying information and ideas through a variety of media to individuals or groups in a manner that engages the audience and helps them understand and retain their massage.
  - Impact: Diplomatically, clearly, and logically, convey information and ideas through a variety of media to individuals or groups in a manner that engages the recipient/audience and helps them understand and retain the massage; adjust words or terminology to ensure audience

understanding (e.g. explaining policies, strategies, processes, plans etc. to diverse groups); able to deal with others with tact and sensitivity; consider translating documents into other languages (French, Spanish) when the communication is intended to reach an audience at the country office level.

- Clarify: Ask questions to obtain information or to gain clarification to ensure understanding
- Oral communication: Communicate clearly the organizational policies effectively in a group or public setting; participate actively in meetings; be sensitive to words used (culturally and to people's feelings).
- Written communication—(day-to-day): Convey information and massages clearly, concisely and effectively through both formal and informal (email) documents.
- Listen effectively: Demonstrate ability to comprehend communication from others; attend to messages from others including paying attention to nonverbal clues (e.g. body language, facial expressions); correctly interpret messages and responds appropriately.
- Show respect for others: Establish good interpersonal relationships, communicate, empathize, involve, disclose, support and offer suggestions to achieve group objectives.
- Volunteer assistance: Offer to provide appropriate assistance on a task that is not part of own responsibility because it will help a partner
- Build/maintain relationships: Demonstrate ability to balance or focus on task with attention to relationships; identify and cultivate relationships with key stakeholders representing a broad range of functions and levels; establish and promote trust to facilitate collaboration; share information with others.

- Negotiation: Effectively exploring alternatives and positions to reach outcomes that gain the support and acceptance of all parties, and building collective support or agreement
  - Clarify current situation: Explore each party's needs, concerns, and initial position, including own; be sensitive to cultural or gender differences
  - Identify points of agreement/disagreement: Build common ground by highlighting areas of agreement; focus efforts by identifying areas of disagreement.
  - Keep discussion focused: Manage the interpersonal to stay focused on the task; constructively address emotions and areas of potential conflict
  - Develop all ideas: Engage in mutual problem solving by brainstorming alterative positions or approaches and evaluating them openly and fairly. Build support for preferred alternative: build value of preferred alternatives by relating them to each party's needs; respond to objections by emphasizing value; expose problems with undesirable alternatives; communicate with others regarding the merits of a particular approach or method to be in line with organization's and the partnership's overall priorities; obtain cooperation and commitment from others for working with a new strategic plan.
  - Facilitate agreement: Seek a win-win solution through a give-and- take process that recognizes each party's needs.
- Developing teams: Using appropriate methods and a flexible interpersonal style to help build a cohesive team; facilitating the completion of team goals
  - Develop direction: Ensure that the purpose and importance of the team are clarified (e.g. team has a clear charter or mission statement); guide the setting of specific and measurable team goals and objectives
  - Develop structure: Help to clarify roles and responsibilities of team members; help ensure that necessary steering, review, or support functions are in place

- Facilitate goal accomplishment: Make procedural or process suggestions for achieving team goals or performing team function; provide necessary resources or help to remove obstacles to team accomplishments. Involve others: listen to and fully involve others in team decisions and actions; value and use individual differences and talents; ensure that others from different levels among the partners and from different backgrounds have equal opportunity to participate in strategic processes (interview/recruitment panels, task forces, working groups, strategic planning/visioning exercises etc.)
- Develop others: Identify areas in which partners need to increase knowledge; provide opportunities to develop skills and competencies when needed; provide feedback on individual and team performance
- Inform others on team: Share important or relevant information with the team
- Model commitment: Adhere to the team's expectations and guidelines; fulfil team responsibilities; demonstrate personal commitment to the team.

6.4.5 Monitor and cultivate performance and health of partnerships

Promote and implement effective means for monitoring and evaluating the partnership process, relationship and attainment of mutual objectives; advocate for internal and external partners to ensure that their need are being addressed; ensure that areas within the partnership act in the best interest of the organization and the other partner organizations as a whole (in line with mission, vision and values).

- Track performance: Propose and help implement standard performance management processes to track performance against goals; facilitate discussion about performance with partners regularly and in a timely manner. Ensure performance management takes into account diverse work styles, approaches and contributions
- Evaluate performance: Hold regular formal and informal discussions with each partner to discuss progress toward goals and review overall performance
- Recognize the work of partners: Ensure that the work of partners is recognized by the organization/others when appropriate; do not take credit for the work of others.

The required individual competencies to carry out the responsibilities detailed above are very similar to what is required of managers in today's workplace: ability to build, lead and manage teams, collaborate with others, build commitment, communicate effectively, plan and organize, delegate, coach, manage performance, adapt, innovate or make effective decisions.

The partnership context where at least two different organizational cultures come together requires an even higher level of skill in those areas as creating and maintaining a partnership takes the manager out of his/her organizational comfort zone where the structures, lines of communication and decision-making mechanisms are all clear. Communication is a perfect example of the added challenge of working with outside organizations who may value or prefer other means of communication than the one favoured by the parent organization's scientists (e.g. verbal vs. written) and where misunderstandings can easily lead to the failure or the partnership.

A separate Annex in this module deals with some of these skills in more detail.

Key references

ILRI (International Livestock Research Institute). *ILRI's partnership strategy and management system*. ILRI, Nairobi, Kenya.

USAID. 2004. *Tools for alliance builders*. Prepared by the Global Development Alliance Secretariat.

Session 6: Exercise: Reflecting on our partnership experience

This exercise will be based on the individual assignment given in the previous afternoon called 'Partnership Self-Assessment Inventory'

Phase I. Individual exercise

1. Participants are expected to come to the session completing the individual assignment given to them the previous day on 'Partnership Self-Assessment Inventory.'
2. If there are still some participants, who have not completed the exercise, ten minutes will be given to allow them complete.

Phase II. Group work (30 minutes)

3. Form four groups
4. Each group will discuss the results from the individual exercise and agree on the two elements that are the strongest and two elements, which need improvement for the group (this will be based on 'Interpreting Your Questionnaire Responses' part of the ' Partnership Self Assessment Inventory').
5. Each group will also identify two specific changes/actions that should be taken to improve the condition.
6. Rapporteurs are expected to present the results of the group discussion to the plenary.

Phase III. Reporting and discussion (30 minutes)

7. Rapporteurs present the group responses (20 minutes).
8. Facilitator asks feedback on this exercise and closes the session (10 minutes).

Partnership self assessment inventory

(This exercise will be distributed in hard copy one day before session six is presented)

This is a tool to get feedback on the partnership's strengths and weaknesses. The results should be shared during a discussion in which members discuss the information and explore ways to improve weaknesses. Both in new as well as established partnerships, members can identify elements of weaknesses, and focus attention on these areas for future improvement.

Partnerships are complex relationships that require deliberate formation and maintenance. Research shows there are predictable characteristics or elements found in successful partnerships. By focusing on these elements in the beginning, new partnerships can 'get started' faster and with less difficulty. Existing partnerships can assess whether they have overlooked any of these elements which might be contributing to current difficulties. Either way, new or established partnerships can take a moment, reflect on which of these elements are strengths, and identify through this self assessment inventory where to focus attention for future improvement.

It is suggested that this self-assessment inventory be used as a means for all members to provide feedback on the partnership's strengths and weaknesses. The results of the inventory should be shared during a facilitated discussion where members can discuss the information and explore ways of improving targeted areas. Please note that this inventory is intended to help partnerships prioritize their limited time and resources by acknowledging where they are doing well and by targeting selected areas for improvement.

Remember that this is not an evaluation of the partnership's capacity. This is feedback that will help focus the partnership's attention and energy to increase effectiveness in areas that are not current strengths.

Use the following 7-point rating scale to indicate your partnership's current level of skill and effectiveness.

1= We need to focus on this immediately

2= We will need to focus on this in the next couple of months

3= We need to get better at this, but it is not our priority

4= We are doing this inconsistently

5= We are doing this with regularity

6= We are doing this well, to an advanced level

7= We do this in an exemplary way and can be used as a 'best practice' or model to others

N/A = Not seen in action or not observed

Partnership self assessment inventory

Compelling vision

1—2—3—4—5—6—7—N/A	1. Partnership has a clear and compelling vision that is exciting, worthy of the combined efforts, and will have impact
1—2—3—4—5—6—7—N/A	2. It is clear how these organizations can create the value added impact desired from the partnership and the role of each member
1—2—3—4—5—6—7—N/A	3. Members can articulate partnership goals and how each parent organization contributes to achieving that goal
1—2—3—4—5—6—7—N/A	4. The vision is used as a reference point in prioritization of activities and resources and keeping the partnership on track

Strong and shared leadership

1—2—3—4—5—6—7—N/A	1. Members share leadership where appropriate, not overly relying on any one person for all of the leadership functions
1—2—3—4—5—6—7—N/A	2. Leadership is facilitative rather than directive, involving members in decisions, problem solving, and planning
1—2—3—4—5—6—7—N/A	3. Members are willing to support followers, contributing to planning, problem solving and assisting the leader in other ways
1—2—3—4—5—6—7—N/A	4. Members use both successes and mistakes as learning opportunities to increase skills in analysis and future decision-making

Shared problem definition

1—2—3—4—5—6—7—N/A	1. All partners participate in the definition of the problem being addressed
1—2—3—4—5—6—7—N/A	2. Members can articulate others' concerns and/or interests in the problem being addressed
1—2—3—4—5—6—7—N/A	3. Members have and use a common approach or framework for addressing the problem
1—2—3—4—5—6—7—N/A	4. Partnership meetings are held with the frequency required to ensure full communication, adequate problem solving, and efficient progress towards project goals

Interdependency and complementarity

1. The partnership uses and respects the diverse skills, knowledge and backgrounds of its members	1—2—3—4—5—6—7—N/A
2. The partnership can create new value—something that individual members could not achieve on their own	1—2—3—4—5—6—7—N/A
3. Members believe that each member's contribution is essential for the total outcome of the partnership goal	1—2—3—4—5—6—7—N/A
4. Members and/or their parent organizations have the skills necessary to achieve the partnership goal	1—2—3—4—5—6—7—N/A

Mutual accountability

1. Members share a sense of responsibility for partnership results, not just the results for which they are individually responsible — 1—2—3—4—5—6—7—N/A

2. Members have agreed upon norms and processes for holding each other accountable — 1—2—3—4—5—6—7—N/A

3. Partners pitch in and help others who are experiencing problems or needing assistance to meet deadlines or outputs — 1—2—3—4—5—6—7—N/A

4. Members give timely and specific feedback to each other when appropriate — 1—2—3—4—5—6—7—N/A

Attention to process

1. Members respond to feedback and criticism without getting defensive — 1—2—3—4—5—6—7—N/A

2. Members express ideas openly and honestly without irritating others — 1—2—3—4—5—6—7—N/A

3. Members monitor that all voices are heard before decisions are made — 1—2—3—4—5—6—7—N/A

4. Partnership has agreements for how it will work together and these are used and periodically checked for consistency of use — 1—2—3—4—5—6—7—N/A

Communication

1. Members keep other partners appropriately informed about work, contacts, problems, accomplishments, and progress — 1—2—3—4—5—6—7—N/A

2. In partnership discussions, members emphasize the open, inclusive and respectful sharing of thoughts and ideas — 1—2—3—4—5—6—7—N/A

3. Members deal openly and constructively with problems and conflict that hinder the partnership's performance — 1—2—3—4—5—6—7—N/A

4. Members keep their parent organization informed about partnership activities, challenges and progress — 1—2—3—4—5—6—7—N/A

Decision-making/power equity

1—2—3—4—5—6—7—N/A — 1. Decision-making process is clear and transparent to all members

1—2—3—4—5—6—7—N/A — 2. Members can provide input and have equal opportunity to influence decisions and the direction of the partnership's strategy

1—2—3—4—5—6—7—N/A — 3. Resource allocation within the partnership is transparent and in line with principles agreed upon by the partnership

1—2—3—4—5—6—7—N/A — 4. Decisions are recorded and shared with all those involved or affected by the decisions

Trust and commitment

1—2—3—4—5—6—7—N/A — 1. Members share and act according to agreed upon values regarding the expected output of the partnership and the processes for carrying out the work

1—2—3—4—5—6—7—N/A — 2. Members deliver on promises and commitments made

1—2—3—4—5—6—7—N/A — 3. Members are direct about organizational interests and expectations; keeping covert or hidden agendas to a minimum

1—2—3—4—5—6—7—N/A — 4. Members are willing to compromise or make organizational sacrifices of self-interest so that the needs of other partners are met

	Credit and recognition
1—2—3—4—5—6—7—N/A	1. Partnership has explicit agreements on how to handle visibility, authorship and intellectual property of individual members and the partnership
1—2—3—4—5—6—7—N/A	2. Members recognize contributions to the partnership by individuals and their organizations
1—2—3—4—5—6—7—N/A	3. Members share responsibility to ensure parent organizations demonstrate commitment to broader partnership goals
1—2—3—4—5—6—7—N/A	4. Members are watchful for opportunities to acknowledge others for their contributions

Scoring your questionnaire responses

After completing your ratings, transfer the points for each question to the appropriate box below.

Elements	Q1	Q2	Q3	Q4	Total
Compelling vision					
Strong and shared leadership					
Shared problem definition and approach					
Interdependency and complementarity					
Mutual accountability					
Attention to process					
Communication					
Decision-making and power equity					
Trust and commitment					
Credit and recognition					

Interpreting your questionnaire responses

Based on your ratings, which two elements are the strongest for your partnership?

1.

2.

Which two elements need improvement?

1.

2.

What specific changes/actions would improve these areas?

Share your assessment with others in your partnership for a collective look at the strengths and needed improvements.

Trainer's guide

Session 7:   Key skills for effective partnership management—Interpersonal relations, feedback and communication

Purpose	To enhance the capacity of the agricultural researchers to forge effective and efficient partnerships with other relevant stakeholders in the agricultural innovation system for achieving greater impacts
Objectives	At the end of this session participants will be able to appreciate the role of:

- interpersonal relations,
- feedback skills and
- communication skills in partnership management

Resources	

- Flipcharts
- White board
- Blank transparencies
- Flipchart and white board markers
- Copies of handouts 7.1, 7.2, 7.3 and 7.4 for each participant
- Computer and LCD projector
- Overhead projector

Time needed   Two hours

Method of facilitation

Activity		Time
Presentation	Distribute handout 7.1 (presentation slides) before you start your presentation	45 minutes
	Give a presentation on key skills for effective partnership management-interpersonal relations, feedback and communication	
	Allow some time for questions to make sure that participants understand what is presented	
	Distribute handout 7.2 (presentation text) to supplement your presentation	
Exercise	Distribute handout 7.3 and 7.4 4 for exercise 7 self and pair analysis	One hour and 45 minutes
	Ask a volunteer to read the exercise	
	Ask participants to work individually and in pair exercise	
	Remind them the time allotted to the exercise	
Transition	Make closing remarks and transit to the next session	5 minutes

Session 7: Key skills for effective partnership management—Interpersonal relations, feedback and communication: Summary of overheads

7.1

Key skills for effective partnership management:
Interpersonal relations, feedback and communication

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7.2

Session objectives

- Discuss interpersonal skills

- Describe feedback skills

- Describe communication skills

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7.3

Key skills

- Interpersonal skills *
- Facilitation skills *
- Conflict management skills *
- Feed back skills *
- Negotiation skills *
- Active listening skills
- M&E skills
- Listening skills
- Communication skills

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7.4

Interpersonal skills

- One key skill required to manage an efficient and effective partnership process is interpersonal skill

- A skill that strengthens interdependence and relationships

To succeed with others, it is important to explore different ways to make your relationships productive

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7.5

Developing your emotional intelligence

- Self awareness

- Self management

- Interpersonal skills

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7.6

Self awareness

- Identifying your feelings, moods, values and ambitions

- Pinpointing what caused them

- Recognizing what effect they may have on you and others

- Monitoring fluctuations in your moods and emotions

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7.7

Self management

- Controlling your moods and feelings in light of your goals

- Delaying gratification for specific reasons

- Motivating yourself

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7.8

Interpersonal skills

- Reading emotional cues about feelings and moods of others

- Responding appropriately

- Using a resonant leadership style to influence behaviour

- Building relationships and teamwork

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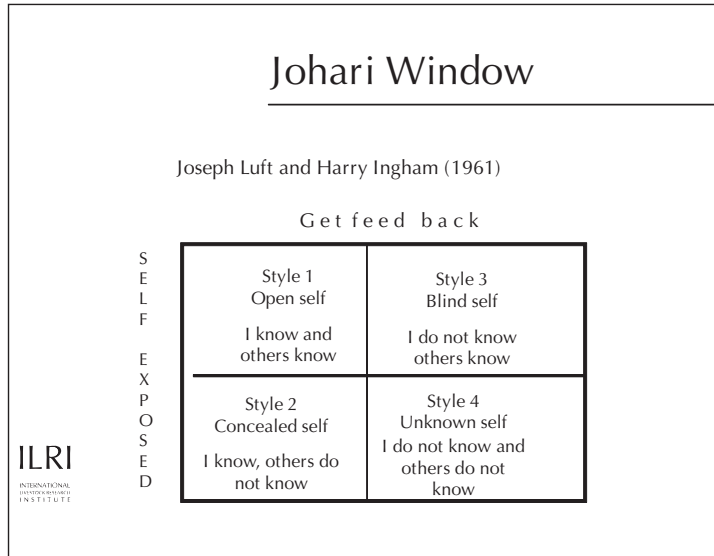LIVESTOCK RESEARCH
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7.9

Strengthening interdependence and relationships

The quality of our interactions and communication depends on:

- Level of self perception and of others

  - Do you succeed to see yourself through the eyes of others?

  - Do you succeed to see others like they see themselves?

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7.10

Johari Window

Joseph Luft and Harry Ingham (1961)

G e t f e e d b a c k

S
E
L
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E
X
P
O
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E
D

Style 1 Open self I know and others know	Style 3 Blind self I do not know others know
Style 2 Concealed self I know, others do not know	Style 4 Unknown self I do not know and others do not know

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7.11

Interpersonal style 1
Open self

Characteristics
- Personal potential is not exploited
- Creativity is suppressed
- Persons hardly ask feedback or exercise self-exposure
- They present rigid behaviour, hardly take risks
- They are usually quiet, reserved, and avoid group participation

Analysis
- This behaviour seems to be related to interpersonal anxiety/lack of self-confidence
- Persons prefer to withdraw rather to self-expose and "grow"

Consequences
Persons usually:
- attract hostility
- develop loneliness
- show dissatisfaction
- live isolated avoid friendship

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Interpersonal style 2
Concealed self

Characteristics
- They hardly self-expose
- They hardly express their ideas, judgments, and actions
- They ask feedback from others about their performance and behaviour
- Consequently, they reduce 'blind self'
- They do not share experience and prevent people from learning from them

Analysis
- They seem to be afraid of being rejected or receiving aggressiveness from others
- They are afraid of not receiving support if others get to know their thoughts and feelings of ambition
- They show lack of self-confidence and believe they are able to manipulate and control others (power) through the process of omitting information

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7.13

Interpersonal style 2 (cont'd)

Consequences
These persons usually:

- generate tension and negative feeling among peers

- develop rejection and antipathy among others, including avoidance

- are considered selfish and useless in terms of group development

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7.14

Interpersonal style 3
Blind self

Characteristics

- These persons often use the process of self-exposure
- They hardly ask feedback
- They participate actively in groups giving information
- They give feedback to others easily, tell others what they think and feel towards them
- They are very critical
- They have high concept of themselves. They like to boast and put people down. 'They are the best in life'

Analysis

- This kind of people hurt others easily as they assume the behaviour of being frank, honest, and constructive to others
- In general, others perceive these individuals as very self-centered
- They are insensitive to feedback. They do not care about how people perceive/see them
- Unconsciously, they are afraid of knowing their self-image

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7.15

Interpersonal style 3 (cont'd)

Consequences

These persons usually:

- generate negative feeling among peers

- cause peers to feel disrespected by them

- cause peers to often develop lack of confidence, hostility, and to become very defensive when dealing with them

- tend to increase their 'blind self' as they lack a chance of receiving feedback from others on their behaviour

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Interpersonal style 4
Unknown self

Characteristics

- These persons maintain an IDEAL behaviour to facilitate an interpersonal relationship

- They frequently exercise both processes: ask feedback and self-exposure

- They permit frankness, sincerity etc.

- They use emphatic communication very often

- They have an open communication in groups, discussing thoroughly any issue to avoid misunderstanding

Analysis

- In general, they are self-confident, ready to take risks and evaluate results

- They promote chances for innovation, implementation of new ideas

- They are *not* afraid of losing face, because they believe that they are in a constant process of learning

- They help to promote and develop effective and modern organizations

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Interpersonal style 4 (cont'd)

Consequences

These persons usually:

- generate high expectation of productivity, supportiveness among the peers

- can also generate defensive behaviour of others who are not used to deal with authentic behaviour

- contribute to change ways and interpersonal relationship within the environment, implementing openness, genuineness etc. However, this is a very slow process

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Feedback

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7.19

Feedback and its importance

- Process of receiving and evaluating information about our behaviour

- Gives others information about their behaviour and its impact

- Helps to get information how our actions/behaviour is affecting others

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7.20

Elements of feedback

- Describe the action/behaviour
- Explain the impact it had on you
- Tell the result/consequence

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7.21

How to give feedback?

Feedback is more effective when the following criteria are used:

- Specific rather than general
- Descriptive rather than judgmental
- Take into account needs of both the receiver and the giver of feedback
- Directed towards behaviour which the receiver can do something about
- Well-timed
- Ensure clear communication
- Ensure accuracy

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Communication

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What is communication?

Communication is a process by which a source sends a message to a receiver by means of some channel in order to produce a response (behavioural change) from the receiver in accordance with the intention of the source

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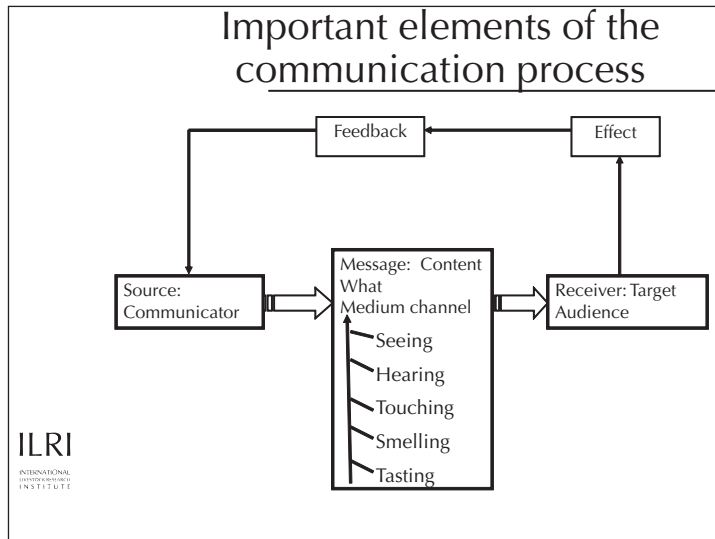

What is communication? (cont'd)

The five key elements are:
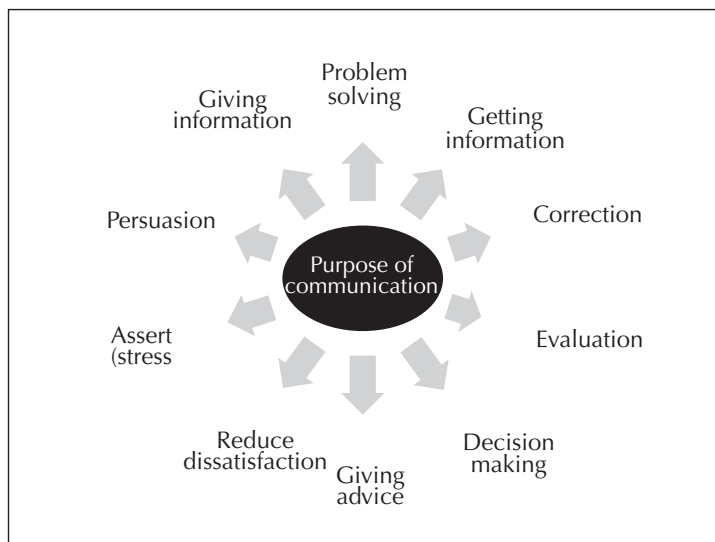- source
- message
- receiver
- channel and
- response
- Communication is a two-way multidimensional, interactional activity

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7.25

Important elements of the communication process

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7.26

7.27

Four ways to improve the "self" through communication

- Accept yourself as in process. Accept who you are now. Realize that the you of today will not be the you of tomorrow because your are changing.

- Accept others as in process. Accept others as they are, and also they will continue to develop.

- Self-disclose when appropriated. Self-disclosure is a special kind of communication that is more revealing than most.

- Engage in constructive risk taking. Seek new experiences and new relationships

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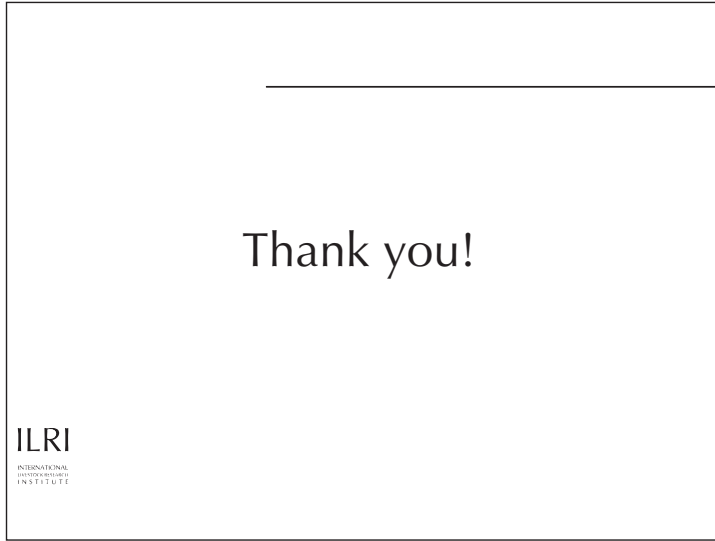
7.28

Thank you!

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Session 7:   Key skills for effective partnership management—Interpersonal relations, feedback and communication: Summary of presentation

7.1   Introduction

The emerging innovation systems paradigms require new partnerships and network in the design and implementation of agricultural research for development. For an organization to realize the full potential of the collaborative advantage of partnerships, it must be skilled not only in identifying the right partners, but also should be able to manage these partnerships very effectively. This requires a new set of skills and tools. Among others, the key sets of skill required are: interpersonal skills, feedback skills and communication skills. These skills are presented and discussed in this chapter.

7.2   Interpersonal skills

One of the key factors to successful partnership is developing your interpersonal skills. This involves both self awareness and self management. The interpersonal skills deals with: knowing about yourself; reading emotional cues about feelings and moods of others; responding appropriately; using a resonant leadership style to influence behaviour and building relationships and team work.

Self awareness involves: identifying your feelings, moods, values and ambitions; pinpointing what caused them, recognizing what effect they may have on you and others; and monitoring fluctuations in your moods and emotions. This knowledge will assist you in self management. This deals with controlling your moods and feelings in the light of your goals; delaying gratification for specific reasons, and motivating yourself for the new challenges.

Johari's window

It is difficult to understand the complexity of human personality, especially during interpersonal communication. The crucial factor in the challenge is the perception we have of ourselves and of other people. To facilitate interpersonal communication, it is important that we develop the awareness of how we see ourselves and other people, and how we see ourselves as others see us. Equally important is how far we see the others as they see themselves. To address this issue, Joseph Luft and Harry Ingham (1961) created the 'Johari Window' to illustrate this process of 'interpersonal knowledge'. Their research results identified that, in looking at the perceptions we have of ourselves and others, it is useful to think of a person as having several parts like a window. This window has four components.

The more we get to know about ourselves the more effective we are likely to become. The effect of feedback and self disclosure promotes people's change from concealment to openness. The more open a person is to the environment of other people with whom he/she interacts, the more successful he/she is likely to be. Johari window illustrates these parts in the following ways.
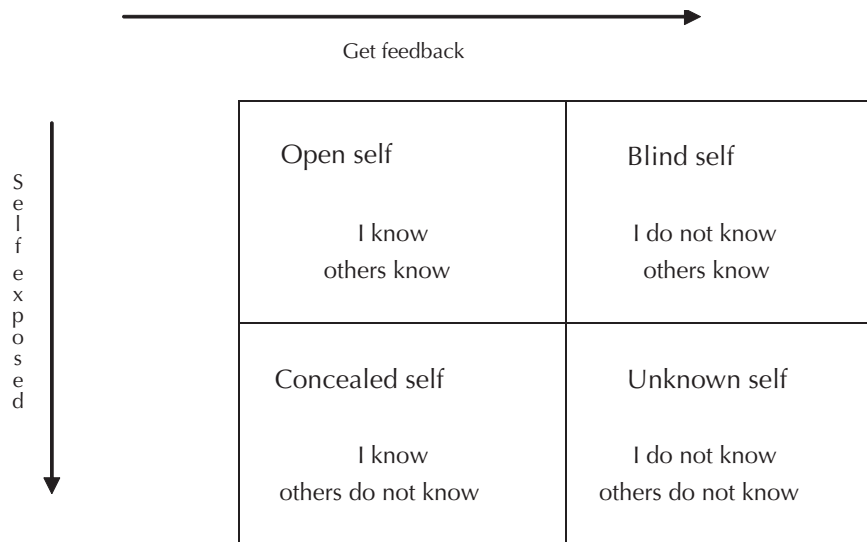
```
                    Get feedback  →

         ┌─────────────────┬─────────────────┐
         │  Open self      │  Blind self     │
  S      │                 │                 │
  e      │  I know         │  I do not know  │
  l      │  others know    │  others know    │
  f      │                 │                 │
         ├─────────────────┼─────────────────┤
  e      │  Concealed self │  Unknown self   │
  x      │                 │                 │
  p      │  I know         │  I do not know  │
  o      │  others do not  │  others do not  │
  s      │  know           │  know           │
  e      │                 │                 │
  d      └─────────────────┴─────────────────┘
  ↓
```

Figure 1. *Johari's window.*

Based on the attitudes and behaviour of people, their studies identified four types of interpersonal styles. Each interpersonal style has special characteristics and generates the related consequences as discussed below.

Interpersonal style 1: Unknown self

Unknown self is the situation of the things that I do not know and the others also do not know the characteristics, analysis and the consequences of this situation is presented below.

Characteristics
　　a. Personal potential is <u>not</u> exploited
　　b. Creativity is suppressed
　　c. The persons hardly ask for feedback or exercise self-exposure
　　d. They present rigid behaviour, hardly take risks
　　e. They are usually quiet, reserved, and avoid group participation

Analysis
　　a. This behaviour seems to be related to
　　　　* interpersonal anxiety, and
　　　　* lack of self-confidence
　　b. These people prefer to withdraw rather to self-expose and 'grow'

Consequences
These people usually:

　　a. attract hostility
　　b. develop loneliness
　　c. show dissatisfaction
　　d. live isolated
　　e. avoid friendship

Interpersonal style 2: Concealed self

Situation: I know, but others do not know.

Characteristics

    a. These people hardly self-expose

    b. They hardly express their ideas, judgments, and actions

    c. They ask feedback from others about their performance and behaviour

    d. Consequently, they reduce 'blind self'

    e. They do not share experience and prevent people from learning from them

Analysis

Persons who maintain this kind of behaviour

a. seem to be afraid of being rejected or receive aggressiveness from others
b. are afraid of not receiving support if others get to know their thoughts and feelings of ambition
c. show lack of self-confidence and believe that they are able to manipulate and control others (power) through the process of omitting information

Consequences

These persons usually:

    a. generate tension and negative feeling among peers

    b. develop rejection and antipathy among others, including avoidance

    c. are considered selfish and useless in terms of group development

Interpersonal style 3: Blind self

Situation: I do not know but the others know.

Characteristics

    a. These people often use the process of self-exposure

    b. They hardly ask for feedback

    c. They participate actively in groups and give information

    d. They give feedback to others easily. They tell others what they think and feel towards them

    e. They are very critical

    f. They have a high idea of themselves. They like to boast and put people down. 'They are the best in life'

Analysis

    a. This kind of people hurt others easily as they assume the behaviour of being frank, honest and constructive towards others

    b. In general, others perceive these individuals as very self-centred

    c. They are insensitive to feedback. They do not care about the way people perceive and see them

    d. Unconsciously, they are afraid of knowing their self-image

Consequences

These persons usually:

    a. generate negative feelings among peers

    b. cause peers to feel disrespected by them

    c. cause peers to often develop lack of confidence, hostility, and to become very defensive when dealing with them

    d. tend to increase their 'blind self' as they lack the chance of receiving feedback from others on their behaviour

Interpersonal style 4: Open self

Situation: I know and others also know.

Characteristics

    a. These people maintain an IDEAL behaviour to facilitate an interpersonal relationship

    b. They frequently exercise both processes: ask for feedback and self-expose

    c. They permit frankness, sincerity etc.

    d. They use emphatic communication very often

    e. They have open communication in groups and discuss any issue thoroughly to avoid misunderstanding

Analysis

    a. In general, such people are self-confident. They are ready to take risks and evaluate results

    b. They promote chances for innovation, implementation of new ideas

    c. They are not afraid of losing face because they believe that they are in a constant process of learning

    d. They help to promote and develop effective and modern organizations

Consequences

These people usually:

    a. generate high expectation of productivity, supportiveness among the peers

    b. can also generate defensive behaviour of others who are not used to dealing with authentic behaviour

    c. contribute to changing practices and interpersonal relationships in an environment by implementing openness, genuineness etc. However, this is a very slow process

The knowledge of these styles and consequences will assist a great deal in establishing successful partnerships.

7.3   Feedback[1]

Feedback is a *process of receiving and evaluating information* about our behaviour. It comes from our environment. In particular, it is information about how our behaviour affects others.

Feedback from another person is one important source of data which helps to tell you how your actions are affecting others. Even if you 'disagree' with the feedback, it is important for you to hear it clearly and understand it.

Feedback tells you how another person sees your actions and gives you the chance of trying to change your behaviour. People act on their perceptions of your actions and there may be times when you communicate in unintended ways.

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1. Extracted from WARDA Training of agricultural trainers. Course handouts. Module 4. pp. 2–3.

Giving feedback

Feedback is a way of helping another person to understand the impact of his behaviour on others. It is communication to a person (or a group) which gives information about how he (or they) affects others. It helps others to keep their behaviour on target, thus better achieving their goals.

Feedback is more effective when the following criteria are used:

- *It is specific rather than general.* To be told that one is talkative will probably not be as useful as being told: 'Earlier, when we were deciding the issue, you talked so much that I stopped listening.'
- *It is descriptive rather than judgmental.* By describing one's own reaction, it leaves the individual free to use it or not to use it as he sees fit. By avoiding judgmental language, the potential for a defensive reaction by the person receiving the feedback is lessened.
- *It takes into account the needs of both the receiver and the giver of feedback.* Feedback can be destructive when it serves only our own needs and fails to consider the needs of the person at the receiving end.
- *It is directed towards behaviour which the receiver can do something about.* Frustration will only increase if a person is reminded of some shortcoming over which he has no control.
- *It is well-timed.* In general, feedback is most useful at the earliest opportunity after the given behaviour has been observed (depending, of course, on the person's readiness to hear it, the support available from others etc.).
- *It is checked to ensure clear communication.* One way of doing this is for the receiver to rephrase the feedback to see if it corresponds to what the giver had in mind.

It is checked with others to ensure accuracy. Both the giver and receiver should check the accuracy of the feedback with others in the group. Is this one person's impression or an impression shared by others? These criteria have been adapted from Feedback Guidelines, originally published by National Training Laboratories.

7.4   Communication[2]

Communication is one vital activity in human life. Our life is full of communication and it is difficult to think about mankind devoid of communication. In our family, community, organization etc. our interaction is carried out through communication mainly to enhance understanding.

7.4.1   What is communication?

Communication is a process by which a source sends a message to a receiver by means of some channel in order to produce a response (behavioural change) from the receiver in accordance with the intention of the source.

Therefore the five key elements are: source, a message, a receiver, a channel and a response. The effectiveness of communication is achieved if the receiver's response matches with the intention of the source. Communication is a two-way multidimensional, interactional activity (Figure 1).

In other words, it is a process in which people exchange meaning. A process used by people to exchange experiences and ideas. Hence it is a vital trigger for altering knowledge and perception of various kinds.

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2. The document is largely adapted from Leeuwis 2004 Communication for rural innovation: rethinking agricultural extension.
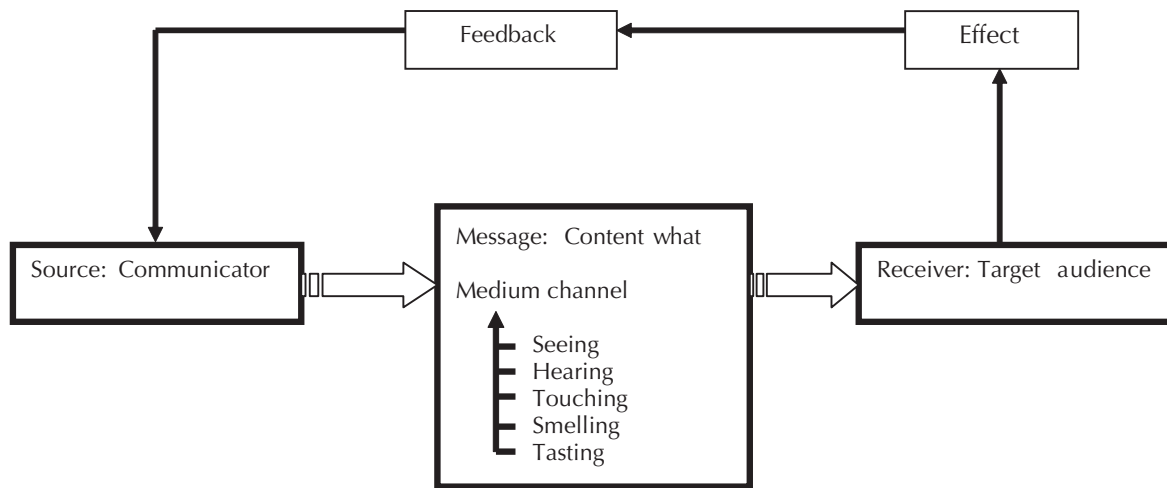
Figure 1. *Important elements of communication process.*

7.4.2   Purpose of communication

Communication can have various purposes but the major reasons why people communicate include:

1. getting information
2. giving information
3. persuasion
4. problem solving
5. giving advice
6. decision-making
7. evaluating
8. correction
9. assert (stress) and
10. reduce dissatisfaction.

Ingredients or key attributes of communication

1. Communication is about using symbols
    To exchange meaning and interact with each other, human beings use variety of devices: words, and language, pictures, letters of alphabets, body language etc. These devices or signals are symbolic, which means that they refer to something else.
2. Communication can be through verbal and intentional 'message'
    Human beings can make deliberate attempts to communicate meanings to others. In such cases they combine several signals into message (i.e. information). However, it is also possible to use non-verbal forms of such as the ones listed below to transmit message. These include;
    *   Appearance (e.g. wearing a particular style of closing);
    *   Posture (e.g. standing tall or 'shrinking');
    *   Gesture (e.g. rapid movements of eyes , impatient ticking of fingers);
    *   Spatial position (e.g. standing close to someone or keeping distance).
3. Symbolic signals are transferred through channels and media
    Message which has different intentions and which is verbal or noon-verbal can be transmitted through variety of transmission media or channel.
    These include visuals, audio, tactile, and olfactory signals. Communication media, then, can be composite devices which incorporate several channels at once.

4. Communication takes place in a historical and relational context
   Communication always happens with context which is based on the earlier experiences people have while communicating with each other or with others. This implies that communicating parties make their communication based on the following scenarios:
   a. knowledge of the other person or group
   b. knowledge of each other's identity
   c. relationship (like or dislike)
   d. kind of trust on each other
   e. conflict situation etc.
5. Communication can take place synchronically or asynchronically
   Regardless of level of interactivity, communicative responses can be immediate or delayed. When people meet face-to-face or talk to each other on the telephone, they respond to each other straightaway and reply to converse moment by moment. This is synchronically communication, as both parties are involved in the process at the same time. However, there are many forms of communication where responses are 'delayed', because communication takes places in the forms of letters, emails, articles etc. Here the communicating parties engage in the process at different times so it is called asynchronical communication.

7.4.3 Communication models

Different models of communication are developed by different authors based on different criteria used to classify the process of communication. In line with this, three models of communication are described based on classification made by (Leeuwis 2004) as follows;

1. The objectives or 'transmission' model
   This model takes communication as information transfer process. It considers that there is a 'sender' who composes a 'message' and sends it through a 'channel' to a receiver. In this process, the information (captured in the message) is assumed to have a fixed ('objectives') meaning. Therefore, it considers that what is sent from the sender is received by the receiver intact and understood having similar meaning with the sender (Figure 2)
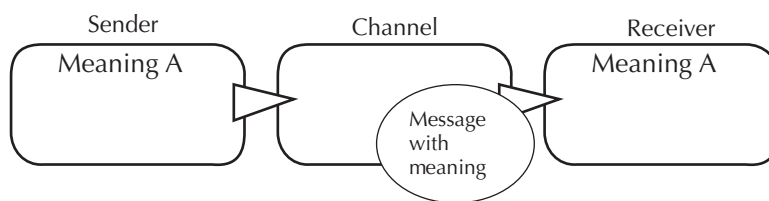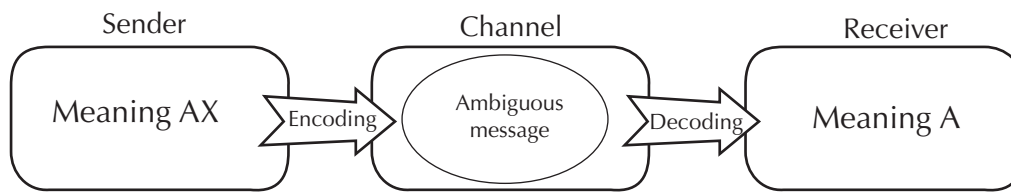

Source: Leeuwis C. 2004.
Figure 2. *The objective or transmission model of communication.*

1. The 'subjective' or 'receiver-oriented' model
   This model is a refinement of the transmission model and it recognizes the difference in pre-existing knowledge difference between sender and receiver. The sender and receiver are seen as havening a different life-world or stock of knowledge. When a sender composes or encodes a message, he or she tends to draw upon his or her own frame of reference, whereas there is a good chance that the receiver makes use of a totally different stock of knowledge when interpreting ('decoding') the message (Figure 3) . Therefore, effective communication can only take place if a sender makes an effort to anticipate the frame of reference of the receiver.

Source: Leeuwis (2004).
Figure 3. *The subjective or receiver-oriented model of communication.*

1. The 'social network' or 'negotiation' model. This communication model is building on the subjective model and improving the shortcomings of the model related to its failure to capture the influence of previous and/or more or less simultaneous communications in the wider social network of the sender and receiver. Furthermore, this model recognizes the influence of power that has come as a result of people's endowment with knowledge, money, status etc. on communication. Therefore, recognizing the influence of the above factors in communication it proposes a model which helps to understand how meanings and perceptions come about through 'negotiation' or 'transaction' within a wide social network and context.

Though the above mentioned three models have their own merits and demerits, in every days practice, all of them are still being used, either implicitly or explicitly.

7.4.5 Communication skills

Since communication is an important activity in human interactions, performing it effectively produces a lot of reward. It is also said that 'communication skill is the most important skill in life'. In partnership the benefit of effective communication is very high. Therefore, it is essential to know communication skills that will lead to effective communication.

Important skills in communication

In different literatures various communication skills are mentioned; however, they can be classified into three main categories. These are expressive skills, listening skills and skills for managing the overall process of communication.

Expressive skills are required to convey message to others through words, facial expressions and body language.

Listening skills are skills that are used to obtain messages or information from others. These help to clearly understand what a person feels and thinks about an issue and is wanted to be transmitted. Skills for managing the overall process of communication help to recognize the required information and develop a strong hold on the existing rules of communication and interaction.

Most of us are trained on how to express ourselves or how talk or give public lecture. However, it is said that we have little knowledge on how to listen.

Though the intention of listening could be different, Covey (2004) advised that if our intention is mainly to understand and work effectively, we need to learn the skill of emphatic listening.

Empathic listening is a structured listening and questioning technique, which helps us to develop and enhance relationships through a stronger understanding of what is being conveyed both intellectually and emotionally.

Honest and effective use of empathic listening helps to win the trust of team members, helping us to address the root cause of problems rather than superficial but potentially damaging symptoms.

Sometimes, this ability to see beneath the surface of people's obvious behaviour can make the difference between seeming harsh and unsympathetic on one hand, and being humane and well-respected on the other.

Empathic listening is built on first understanding the issue or deeply understanding other people and their views. It is a different level of listening from evaluating, probing, advising and interpreting based on our frame of reference. Emphatic listening goes beyond this and helps to understand the emotions behind the information. This will help to create emotional bondage with people whom we are working with and get accurate information. Furthermore, it also helps people involved in the communication to get the physiological air they need and makes them work together effectively.

Four ways to improve the 'self' through communication.

- Accept yourself as in process. Accept who you are now. Realize that the you of today will not be the you of tomorrow because your are changing.
- Accept others as in process. Accept others as they are, and also they will continue to develop.
- Self-disclose when appropriated. Self-disclosure is a special kind of communication that is more revealing than most.
- Engage in constructive risk taking. Seek new experiences and new relationships

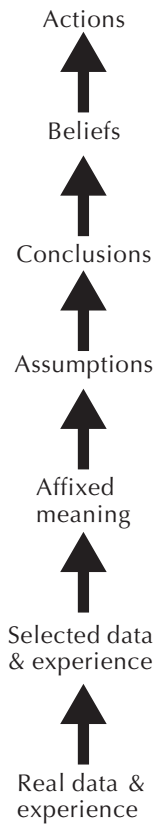## 7.4.5 Ladder of influence and better communication

The concept of the ladder of inference (Figure 4) developed by Chris Argyris explains common thinking and communication processes to help us become more aware of how we interpret the world around us, and make our communication effective to build better understanding.

The core message of the concept is that in a communication process the sender and receiver interpret data to make meaning and make sense of it. We make sense and draw conclusion based on selection and processing of available data and interpretation made subjectively. The conclusions we draw is a reflection of our experiences coupled with our world views. Therefore, it is not objective but very much subjective since at each step it is influenced by the experiences, knowledge and world views of the communicating parties.

Therefore, 'what we take from a communication is what WE create.'

Unfortunately, as the communicating parties go up the ladder of inference, they often are not aware of the background of the interpretations they make. As a result, they often consider their conclusions as objective reality of their perception. 'That makes it difficult to communicate when two people draw conclusions, apparently from the same information, and see these conclusions as objective reality.'

'The ladder of inference is a reminder that, when communicating, we need to communicate not just our subjective conclusions, but our reasoning process and assumptions that underlie the conclusions. Otherwise we cannot get at the real sources of disagreement which lie in our assumptions rather than our conclusions' Bacal (2009).

Actions

↑

Beliefs

↑

Conclusions

↑

Assumptions

↑

Affixed
meaning

↑

Selected data
& experience

↑

Real data &
experience

Source: Gene Bellinger (2004).

Figure 4. *Ladder of inference.*

Key references

Leeuwis C. 2004. *Communication for rural innovation: Rethinking agricultural extension*. Blackwell Science Ltd., Oxford, UK.

Luft J. 1970. *Group processes: An introduction to group dynamics*. 2nd ed. Palo alto, CA: National Press Books.

Stephen CR. 2004. *The seven habits of successful People*. Simon and Schuster UK. Ltd., London, UK.

Session 7: Exercise: Self and pair analysis

(individual and in pairs)

Phase 1. Individual work (30 minutes)

1. Reflect on how you relate to people in your organization and at home. To facilitate your analyses, think of you responding to the following questions:

    a. Do I seek and ask people feedback about my attitude, behaviour, and performance? How frequently do I do it?

    b. Do I expose my thoughts, ideas and feelings towards things to people? How often do I do it?

2. From a scale of 1 to 5, respond to the questions above in the following figure. Then close the areas as a result of your analysis.
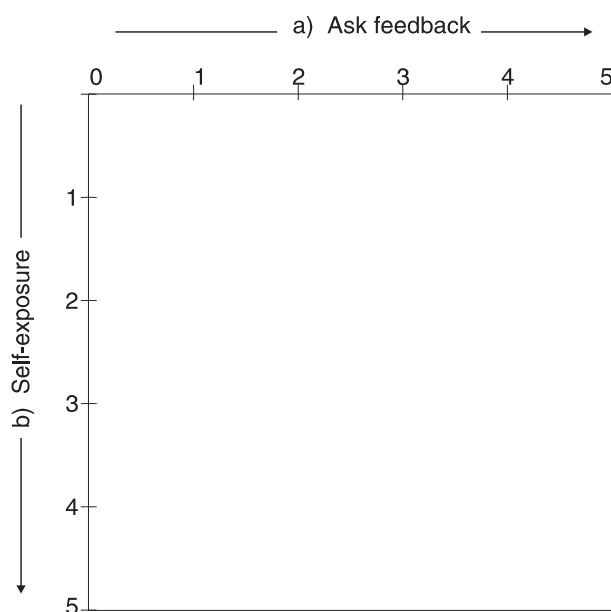
Phase 2. Work in pairs (45 minutes)

3. Pair up with a participant and exchange your analysis and the design and make conclusions about your needs to reinforce and/or change your way of relating to people.

4. Summarize the results of this session by writing the three major lessons learned in this exercise. Use the worksheet (handout 2.6.4).

Phase 3. Plenary work (30 minutes)

5. The facilitator will invite some responses from the pair exercise, summarize major lessons learned, ask for feedback, and close the session.

Session 7:   Exercise: Worksheet

(a) Notes:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

(b) Three major lessons learned:

_____

_____

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_____

Trainer's guide

Session 8: Key skills for effective partnership management—Conflict management, negotiation and facilitation

Purpose	To enhance the capacity of the agricultural researchers to forge effective and efficient partnerships with other relevant stakeholders in the agricultural innovation system for achieving greater impacts
Objectives	At the end of this session participants will be able to: appreciate the role of • conflict management skills • negotiation skills • facilitation skills in partnership design and management
Resources	• Flipcharts • White board • Blank transparencies • Flipchart and white board markers • Copies of handouts 8.1, 8.2, 8.3 and 8.4 for each participant • Computer and LCD projector • Overhead projector
Time needed	2 hours

Method of facilitation

Activity		Time
Presentation	Distribute handout 8.1 (presentation slides) before you start your presentation	1 hour and 25 minutes
	Give a presentation on key skills for effective partnership management, conflict management, negotiation and facilitation	
	Allow some time for questions to make sure that participants understand what is presented.	
	Distribute handout 8.2 (presentation text) to supplement your presentation	
Exercise	Distribute handout 8.3 and 8. 4 for exercise 8 self and pair analysis	30 minutes
	Ask a volunteer to read the exercise	
	Ask participants to work individually and in pair exercise	
	Remind them the time allotted to the exercise	
Transition	Make closing remarks and transit to the next session	5 minutes

Session 8: Key skills for effective partnership management—Conflict management, negotiation and facilitation: Summary of overheads

8.1

Key skills for effective partnership management: Conflict management, negotiation and facilitation

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8.2

Session objectives

Appreciate the role of:
- conflict management skills
- negotiation skills
- Facilitation skills in partnership design and management

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8.3

Key skills

- Interpersonal skills *
- Facilitation skills *
- Conflict management skills *
- Feedback skills *
- Negotiation skills *
- Active listening skills
- M&E skills
- Listening skills

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8.4

Conflict management and partnership

- Partnership process involves engagement of different actors

- These actors have different competencies, roles and interests

- Involvement of different actors, though it creates synergy, it could also be source of conflict

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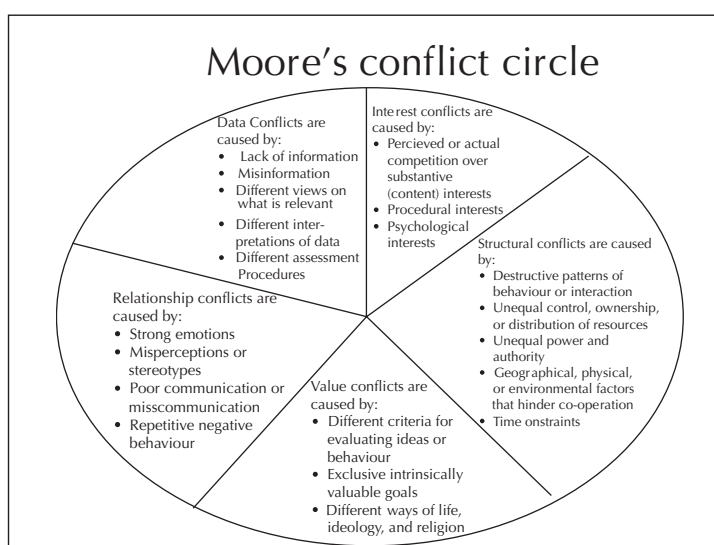LIVESTOCK RESEARCH
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8.5

What is conflict?

- Conflict is a disagreement that:
  - may arise between two or more parties
  - resulting from an incompatibility of:
    - goals
    - interests
    - perceptions or values

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8.6

Moore's conflict circle

Data Conflicts are caused by:
- Lack of information
- Misinformation
- Different views on what is relevant
- Different inter-pretations of data
- Different assessment Procedures

Interest conflicts are caused by:
- Percieved or actual competition over substantive (content) interests
- Procedural interests
- Psychological interests

Structural conflicts are caused by:
- Destructive patterns of behaviour or interaction
- Unequal control, ownership, or distribution of resources
- Unequal power and authority
- Geographical, physical, or environmental factors that hinder co-operation
- Time onstraints

Relationship conflicts are caused by:
- Strong emotions
- Misperceptions or stereotypes
- Poor communication or misscommunication
- Repetitive negative behaviour

Value conflicts are caused by:
- Different criteria for evaluating ideas or behaviour
- Exclusive intrinsically valuable goals
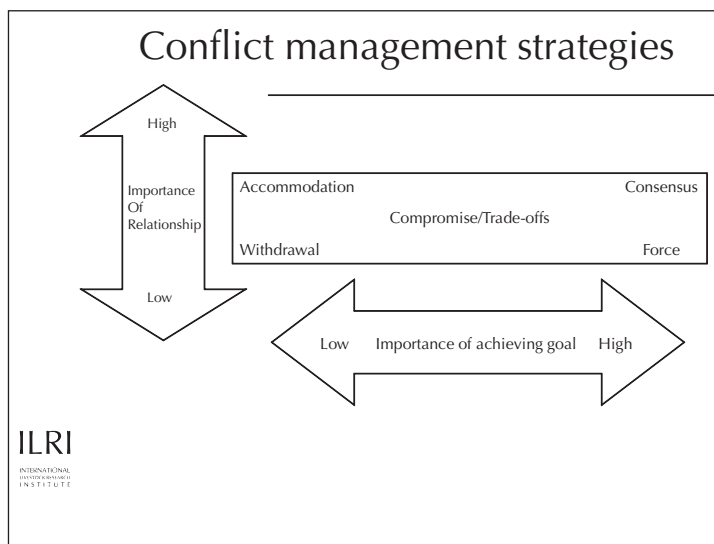- Different ways of life, ideology, and religion

8.7

Sources of conflict

- Data conflicts
- Interest conflicts
- Structural conflicts
- Value conflicts
- Relationship conflicts

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8.8

Conflict management strategies

High

Importance
Of
Relationship

Low

Accommodation	Consensus
Compromise/Trade-offs	
Withdrawal	Force

Low   Importance of achieving goal   High

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8.9

Conflict management strategies (cont'd)

Approach	Objective	Your posture	Supporting raionale	Likely outcome
I. Collaborating/ consensus	Solve the problem together	'This is my position, what is yours?' 'I am committed to finding the best possible solution.' 'What do the facts suggest?'	The positions of both parties are equally important (though not necessarily equally valid). Equal emphasis should be placed on the quality, outcome and fairness of the decision-making process	The problem is most likely to be resolved. Also, both parties are committed to the solution and satisfied that they have been treated fairly
II. Accommodating	Don't upset the other person	'How can I help you feel good about this encounter?' 'My position isn't so important that it is worth risking bad feelings between us.	Maintaining harmonious relationships should be our top priority.	Other person is likely to take advantage.

8.10

Conflict management strategies (cont'd)

Approach	Objective	Your posture	Supporting rationale	Likely outcome
III. Competing/ force	Get your way	'I know what's right' 'Don't question my judgment or authority'	It is better to risk causing a few hard feelings than to abandon an issue you are committed to	You feel vindicated, but other party feels defeated and possibly humiliated
IV. Avoiding	Avoid having to deal with conflict	'I'm neutral to this issue.' 'Let me think about it.' 'That's someone else's problem'	Disagreements are inherently bad because they create tension	Interpersonal problems don't get resolved, causing long-term frustration manifested in many ways
V. Compromising	Reach an agreement quickly	'Let's search for a solution we can both live with so we can get on our work.	Prolonged conflicts alienate people from their work and engender bitter feelings	The participants become conditioned to seek expedient rather than effective solutions

8.11

Developing skill in conflict management

- Listening, listening, more listening
- Build and maintain rapport
- Acknowledging perceptions, accommodating cultural differences
- Understanding and describing the viewpoints of others
- Identifying needs, interests, concerns and fears
- Encouraging conflicting parties to listen to each other
- Setting and getting agreement on rules
- Starting and keeping constructive discussions

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Negotiation skills

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Benefits of negotiation

- Conflict resolutions

- Cost reductions

- Better relationships

- Enhanced performance

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8.14

Types of negotiations

- Distributive negotiation
  - Zero sum or constant sum negotiation
  - Distribution of fixed sum of value

- Integrative negotiations
  - Create as much value as possible
  - Claim value for yourself
  - Win–win negotiations

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- Most negotiations are integrative

8.15

Key concepts in negotiation

- BATNA: Best alternative to a negotiated agreement—The fall back position

- Reservation price (walk away position)—the least favourable point at which you will accept an agreement

- ZOPA: Zone of possible agreement—A range in which a deal will satisfy both parties

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Reservation

price of A

Reservation

price of B

8.16

Preparing for negotiation

- Define a good outcome for you and other side

- Identify potential value creation opportunities

- Identify your and other side's BATNA and reservation price

- Store up your BATNA

- Anticipate authority issues

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8.17

Preparing for negotiation (cont'd)

- Learn all you can know about other side

- Build flexibility into the process

- Gather fairness standards and criteria

- Alter the process in your favour

The process requires time and careful thought

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8.18

Negotiation is a non-linear process

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Skills for reshaping the negotiation process (Glaser and Ruso)

- Maintain your composure

- Getting time to think

- Developing data

- Refocusing the discussion

- Handling information strategically

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Common mental errors in negotiations

- Irrational escalation

- Partisan perception

- Irrational expectations

- Overconfidence

- Unchecked emotions

ILRI Focus on issues and problems instead of individuals
and their personalities

Facilitation

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8.22

Facilitation

- Process of making something easier or less difficult

- Consensus building and participatory decision-making

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8.23

Facilitation skills for feedback and collective decision-making

- Effective facilitation skills are linked with feedback

- It supports teams/groups/individuals to do their best thinking

- Leaders and managers need facilitation skill for giving and accepting feedback

ILRI • Enable to reach group consensus and
INTERNATIONAL   collective decisions
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8.24

Benefits of facilitation skills

- Increased ability to manage diverse groups at all stages of the project cycle

- Improved skills for managing conflict

- Better use of local knowledge, resources and capacities

- Enhanced collaboration, co-ordination and understanding amongst project stakeholders

- More committed and timely group action

- Increased management capacity of partners

- More effective meetings and partnerships

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Roles of facilitator

- Main role is setting the initial mood or climate of the group
- Helps to elicit and clarify the purposes of the individuals in the group as well as the more general purposes of the group
- Relies upon the desire of each participant to implement those purposes that have meaning for her or him as the motivational force behind significant learning
- Organizes and makes available a wide range of resources for learning
- Act as a flexible resource to be utilized by the group
- May share opinion without any imposition, the group member may take it or leave it
- Should be alert to expression that indicate deep or strong feelings
- Should recognize and accept his or her own limitations

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8.26

Attributes of a good facilitator

- Is neither a content expert or a lecturer
- Keeps the group focused on task and processes
- Remains as objective as possible
- An informed guide help the group to chart its course and accomplish its goals
- Listens more than talks
- Adopts to various learning styles
- Encourage maximum participation of all individuals
- Protects members of the group from attack by others
- Gender and culturally sensitive
- Energizes a group or slows it down, as needed
- Recap periodically to make connections between sessions

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Tools and technique include

- Mirroring
- Paraphrasing
- Summarizing
- Asking question

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Mirroring

- Facilitator repeats the exact words of what the speaker says

- Can only be used for one or two words or short sentences

- It helps the speaker to understand what he/she was saying is correctly captured

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Paraphrasing

- The listener, using his/her own words, reflects what the speaker is saying and how the speaker is feeling
- Confirmation of shared understanding

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8.30

Summarizing

- Listener identifies and verbalizes key elements or details of the conversation

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8.31

Asking questions

The listener asks open-ended and closed questions

Open-ended	Closed
• Begin with: when, where, what, how • Can 't be answered with yes or no • Needs explanation, clarification and elaboration	• To get specific information • Answered with yes or no

8.32

Attributes of a good facilitator

- Be alert to signs of confusion/body language
- Don't do the group's work
- Circulate but don't become part of a group
- Spend sufficient time in each group to ensure that they have grasped the tasks
- Review tasks if groups are having difficulties
- Frequently check whether there are questions
- Give members time to answer questions
- You are not an expert/don't pretend that you are an expert, frequently remind the group that you are a facilitator
- Be flexible: Changing something does not mean that you planned poorly; but probably means you are listening, watching and adjusting your plan to fit the situation
- Relax!!!

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8.33

Thank you!

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Session 8: Key skills for effective partnership management—Conflict management, negotiation and facilitation: Summary of presentation

8.1   Introduction

The emerging innovation systems paradigms require new partnerships and network in the design and implementation of agricultural research for development. For an organization to realize the full potential of the collaborative advantage of partnerships, it must be skilled not only in identifying the right partners, but also should be able to manage these partnerships very effectively. This requires a new set of skills and tools. Among others, the key sets of skill required are: interpersonal skills, facilitation skills, conflict management skills, feedback skills and negotiation skills. These skills are presented and discussed in this chapter.

8.2   Conflict management

Innovation system requires the involvement of different actors in the process. The engagement with different actors will increase the possibility of entering into some sort conflict with one another. If this conflict is left unresolved the innovation process will be disrupted and will be hard for innovation to happen. Therefore, competency in conflict management is a key skill required by actors in the innovation system.

Conflict management offers approaches that help in preventing or resolving conflicts. Conflict management could only be understood and managed in the context of culture. Different communities have different ways of perceiving, acknowledging and resolving a conflict.

We all have gone through some sort of conflict in our life time. This shows that conflict is pervasive and normal part of our life. Moreover, if well managed and handled skilfully it can be harnessed to lead into positive and higher level of trust, understanding and productive engagement. When dealing with conflict management it would be good to take this into consideration.

8.2.1   Sources of conflict[1]

The widely used approach to conflict management is a model developed by Christopher Moore and associates in the 1980s. The approach helps in analysing causes and finding solutions by positioning the problem in the centre. The approach categorizes conflict into five categories based on the underlying causes (see Figure 1). These are:

Data conflicts

These are caused by lack of clear information on the issue, misinformation, interpretation of available data differently, different interpretations of available data, or by using assessment procedures in understating the meaning of data.

One step in managing this kind of conflict is reaching an agreement on the data that will be relevant for the issue at hand, deciding and agreeing on method of data collection analysis. Furthermore, getting

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1. This section is heavily drawn from participatory planning, monitoring and evaluation course material. http://www.cdic.wur.nl/UK/Courses/Overview+Courses+2009/.

expert opinion will also help in filling the gap, clarifying the methodological issue that would lead to disagreement and resolving the power issue related to who has the correct skill and knowledge.

Figure 1. *Moore's conflict circle*

Needs and interest conflicts

This kind of conflict can arise as a result of perceived or actual competition between substantive (e.g. the land), procedural (e.g. fairness, openness, transparency,) or psychological (e.g. respect, recognition, dignity, professionalism) interests.

Possible solutions are reached by focusing on interests instead of on the positions, looking for objective criteria, developing integrative solutions addressing the needs of all parties, searching for ways of expanding options or resources, and by developing trade-offs satisfying interests of different strength.

Structural conflicts

This kind of conflict can be inflicted by spatial occurrences that are related to uneven distribution of proceeds from geographic, physical or environmental factors as well as time constraints that hinder co-operation. It can also manifest as a result of 'general set up and role distribution of a situation, from unequal power and authority in the decision-making process, form negative patterns of behaviour and interaction, or from the unequal control, ownership or distribution of resources'. Moreover, what causes the real conflict is the absence of appropriate rules, regulation and procedures that could have helped the handling of the issues.

Therefore, the solutions will also be based on creation of rules, regulations and procedures. As it is always difficult to reach to amicable solution which satisfies both parties the involvement of an external mediation or arbitrage is highly recommended. This can help in reaching comprise and 'clearing definition and acceptance of roles and levels of authority'. Some of the specifics include; 'the reallocation of rights and entitlements, the relocation of the negotiation platform at a convenient distance from the field, the establishment of a fair, transparent and acceptable decision-making process'. This involves confidence building, trust that leads to avoidance of animosities which will mainly be 'interest-based persuasive trade-off bargaining negotiation in an appropriate timeframe'.

Value conflicts

These are conflicts caused due to cultural differences that exist between the disagreeing groups.

Values are basis of people's choices and priorities. People give value to things and phenomena influenced by their upbringing, teaching, religious beliefs and experiences. Therefore, it is difficult to define criteria and evaluate or judge value. Direct attempt to change, disdain and criticize an individual's or a community's values can result in strong opposition.

Challenging values directly, in attempt to change it, will not result the intended goal. Therefore, 'issues should be redefined in other terms than cultural values'. It is good to allow people to hold their values without being criticized and humiliated. Therefore, this shouldn't be a source of contentions. On the other hand, they could work to create a common cause and goal that will help them resolve the disagreement.

Relationship conflicts

Though these kinds of conflicts are frequently seen, they are also baseless and trivial. They are caused most of the times due to personal dislikes, misconceptions and stereo types, repetitive negative encounters.

Therefore, it is good to create forums that help to come together and understand each other to avoid stereotyping and misconceptions. Sharing information and transparency will also help misinformation and rumours. Furthermore, people should also be trained on working in diversity, interpersonal skills and emotional intelligence so that they 'build positive perception skills in order to develop a positive problem-solving attitude'. Moreover, appropriate measure should be taken on people who are unable to control their emotions and disrupt the normal functioning of work.

8.2.2   Conflict management strategies[2]

It is not always possible to see most conflicts being categorized in one of the above categories. There could be an overlap and sometimes a certain conflict can be caused by more than one cause.

People use different strategies to resolve conflicts. These strategies could be grouped as in Figure 2. The basis for the grouping is the combination of the level of importance given to the relationships and achievement of goals. The desired state is consensus which values relationships as well as achieves the goal but hard to achieve every time. Moreover, compromise is also the way of life. The option for constructing the most practicable strategy for managing conflict is summarized in Box 1.

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2. Grieshaber C. 1991. Step by step group development. A trainer's handbook. DSE/ZEL, Feldafing, Germany. pp. 118–120.

Box 1: Options for constructing a most practicable strategy for managing conflict	
Force	Adversarial 'uncompromising' negotiation
	Legal channels
	Electoral system
	Use of mass media to rally public support
	Public protest
	Threat of withdrawal
	Lobbying
Withdrawal	Avoidance
	Opting out
	Deployment of delaying tactics
	Postponement of decision
	Temporary boycott
	Strikes
Accommodation	Relationships dominate
	Goodwill nurtured
Compromise	Trade-off
	Arbitration
Consensus	Direct consensual negotiation (no facilitator)
	Third party facilitated negotiation
Source: DFID (2003).	
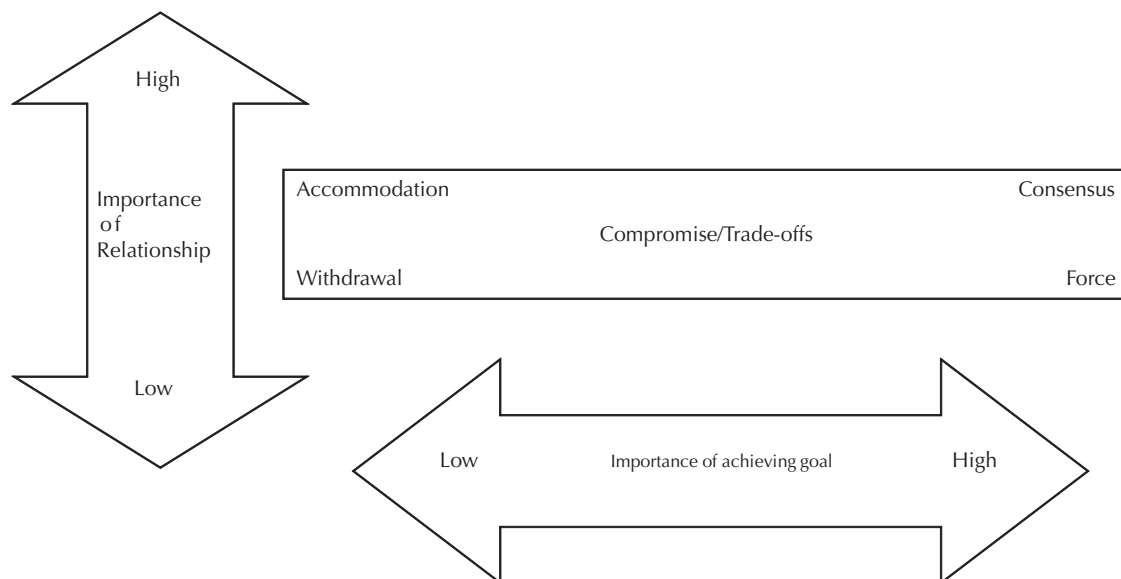
Source: DFID (2003).
Figure 2. *Conflict management strategies.*

There are different ways of handling a conflict, depending on the type of conflict and on the atmosphere in the group. But, in general, the conflict-resolution strategies listed below provide a constructive way of finding solutions. The first and most important step is that every group member should be involved in solving the group's conflicts.

The following strategies are listed in the order of preference, one being less preferred, although the goal is actually very difficult to reach!

1. Avoiding conflict

   Groups that avoid conflicts remain on the surface of their relationships: they don't allow opposition or submit themselves to any arising opposition. Their conflicts are denied, kept hidden, or suppressed.

2. Elimination of the conflicting party/parties

   Members that oppose or disrupt the group's aims and objectives are driven out of the group. This can happen through punishment, bad talk, or just ignoring their wishes. The thoughts of the opposition are: 'We give up,' 'We are insulted,' or 'We are going to make a group of our own.'

3. Suppression of the minority

   The group suppresses those with other opinions by any means they have. The minority is expected to listen and obey what the majority wants and thinks is best for the group (e.g. for them). For some time this strategy will work, because the minority is afraid, but sooner or later tensions and hostility will become so strong that the group will break apart. Voting is actually a smoother form of suppression, because there will always be a winning majority and a losing minority.

4. Agreement

   The majority rules and decides, but the minority does not feel oppressed by that and agrees to what is proposed.

5. Alliance

   Different parties do not give up their different opinions, but they agree on a common point to reach a step both think is good for them. The conflict is still there, it is just asleep, until the step or the short-term goal is reached. If that is done and the conflict is still there, it will arise again.

6. Compromise

   When the parties involved in a conflict have about the same amount of power and cannot oppress each other, they will look for a compromise. Each group gives in as much as it thinks it can in order to reach a better solution in the end. Conflicts are very often solved in this way. The parties think 'better to give in a little bit to reach some sort of solution than none at all.' But they are not fully happy about the final solution, as it is often less than they expected.

7. Integration of the different views into a new one

   This form of solving a conflict is the best, but also the rarest. The different opinions are discussed, weighed against each other, and measured against the common aim. The whole group is involved in the conflict-solving process and each member takes care that his/her wishes are recognized as much as possible. This solution can differ from the views of the conflicting parties, but the new-found common solution could be even better than the ones that existed before: something new was created by involving everyone.

The different strategies of the different parties, i.e. the approaches used differ depending upon the extent to which:

- The party values the maintenance of good relations with other parties; and
- The importance the partner places on achieving its own goal. Each of the five possible strategies (accommodation, consensus, compromises/tradeoffs, withdrawal or force) has its advantages and disadvantages. Ideally one should look for consensual negotiations.

It is important to build and maintain an open dialogue in any situation, when dealing with conflicts.

8.3   Negotiation skills

Irrespective of where you work, negotiation is an ever-present feature in any organization. Given the role of negotiation in the workplace, it is important for all actors within an innovation system to improve their negotiations skills. In forming and managing effective partnership, negotiation is a key element. Given its importance, many organizations make negotiation as a core competency.

8.3.1   Benefits of negotiations

- Conflict resolutions: Conflicts often lead to poor performance. Ability to negotiate and resolve conflicts can enhance the morale and productivity.
- Cost reductions: When organizations develop competence in negotiation, they can reduce costs and inefficiencies associated with flawed contracts/agreements.
- Better relationship: Negotiations enhances interactions between partners. Successful negotiation leads to mutually agreeable purposes and consensus. This will strengthen the relationship and builds a sense of trust.
- Enhanced performance: In some negotiations, people and organizations represent their own interest. In other cases people may use an agent—a third party is representing the interest of one group. Irrespective of the type of negotiation the common issues centred around any negotiation are: information asymmetry, divided interest among principles and conflict of interest.

Information asymmetry—refers to a situation in which one partner has more information than the other.

Divided interest—many agents face the challenge of serving divided internal interest.

Conflict of interest—Every agent is bound to have a personal agenda and that agenda my conflict with the principal's agenda.

8.3.2   Types of negotiations

There are two primary kinds of negotiations: Distributive and integrative.

Distributive negotiations: Here the parties compete over the distribution of a fixed sum of value. The negotiation centres around the question of who will claim the most value. This type of negotiation is also referred to as zero-sum or constant sum negotiation. The term win–lose is more appropriate here. Examples: Buying a motor vehicle, wage negotiations.

Integrative negotiations: In an integrative negotiation, the parties co-operate to achieve maximum benefits by integrating their interests with an agreement, while also competing to divide the value. The negotiator has to be skilled at both creating value and claiming it.

The growing use of joint ventures and outsourcing has likewise motivated organizations to think more about relationship and less about winning what often appears to be a zero-sum game.

In an integrative negotiation, there are two tasks.

1. Create as much value as possible for yourself and for the other party and
2. Claim value for yourself.

These types of negotiations are also called win–win negotiations. Here, each makes trade-offs to get the things that they value most, while giving up other, less critical forms of value. Finding opportunities for mutual benefit naturally requires information sharing. If the partners have common interest then negotiation becomes much easier and the parties may not compete at all.

An integrative negotiation encourages participants to do the following:

- Provide significant information about their circumstances
- Explain why they want to make a deal.
- Reveal and explain in general terms their preferences among issues or options.
- Consider and reveal any additional capabilities or resources they have that might meet the other side's interests and could be added to the deal.
- Use what they learn to find creative options that will meet the interest of both parties to the greatest extent possible.

Note: Only few negotiations are purely distributive or purely integrative. Most are integrative to some degree, containing opportunities for competition and collaboration.

Multiparty negotiations

Many of the R&D negotiations involve more than two parties. Multiparty negotiations can significantly differ form two-party negotiations in one important aspect: Coalitions can form among parties.

In a multiparty negotiation there are at least two types of coalitions: a natural coalition of allies who share a broad range of common interests and a single issue coalition in which parties that differ on other issues unite to support/co-operate in one issue. The challenge of multiparty negotiation is managing coalitions. Here it is important to understand the goals, interests and relationships of many parties and work from there. A natural coalition of allies is hard to break and on the other hand single-issue coalition is more vulnerable.

No matter which type of negotiations you are faced with, it's bound to become more complex if it is multiphased or involve multiparties. If the negotiation is multiphased, use the early phases to build trust and to familiarize with the other partners. If many parties are involved, consider the benefits of forming a coalition to improve your bargaining power, or breaking up coalition that is opposed to your proposal.

In order to accomplish a successful negotiation one must have some clear ideas about the following.

- The best alternative to a negotiated agreement (BATNA)—the fall back position. Always know your BATNA before entering into any negotiations.
- The minimum threshold of terms for a negotiated settlement
- How flexible the other party is willing to be, and what tradeoffs they are willing to make.

The three concepts that are important to establishing this framework are: BATNA, Reservation Price, and ZOPA.

BATNA determines the point at which you can say No to an unfavourable proposal and how advantageous that point is to win vary depending on the strength of your BATNA. If your BATNA is strong, then one can negotiate for more favourable terms, knowing that you have something better to fall back on, if a deal cannot be arranged. A weak BATNA, on the other hand, puts you in less powerful bargaining position. Whenever you are faced with a weak BATNA, it becomes difficult to walk away from a proposal—no matter how paltry its terms.

A weak BATNA is not the end of the world. There are three possible strategies that you can employ to strengthen your position:

- Improve your BATNA.
- Identify the other side's BATNA
- Weaken the other parties BATNA.

Assessment tool: Identifying your BATNA

1. What are your alternatives to a negotiated agreement? List what your alternatives will be if the negotiation ends without agreement.
   a)
   b)
   c)
   d)

Review the list. Which of these alternatives would be best?

2. What could improve your BATNA? Consider

- Are there any better arrangements you can make with parties other than the party you are currently negotiating with?

- Is there any way to remove or alter any constraint that makes your current BATNA unfavourable? What? How?

- Is there any other way to change the terms you bring to the negotiation that could improve your BATNA? What? How?

3. Write what your new BATNA will be if you succeed in improving it.

Source: Harvard Manage Mentor$^{®}$Negotiating.

Reservation price

The reservation price or position (also referred to as your walk-away) is the least favourable point at which you will accept an agreement.

ZOPA—Zone of possible agreement

This is the area or range in which a deal that satisfies both parties might take place. It is the set of agreements that potentially satisfy both parties.

ZOPA

Reservation   Reservation

Price of A   Price of B
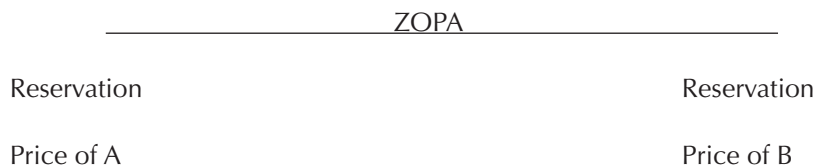
8.3.3   Preparing for a negotiation

There are nine steps in preparing for a negotiation.

1. Know what a good outcome would be—from your point of view and that of the other side.
2. Look for opportunities to create value in the deal.
3. Know your BATNA and reservation price. Make an effort to estimate those bench marks for the other side.
4. If your BATNA is not strong, find ways to improve it.
5. Find out if the person or team you will be dealing with has the authority to make a deal.

6. Know those with whom you are bargaining/negotiating. Learn as much as you can about the people and the culture on the other side and how they have framed the issue at hand.
7. If a future relations with the other side matters to you, gather objective standards and criteria that will show your offer to be fair and reasonable.
8. Don't expect any negotiations to follow a linear path to a conclusion. Anticipate hitches in the negotiation process.
9. Alter the agenda and intended negotiation process in your favour.

In any negotiation, preparation means understanding your own position and interest, those of the other party, the issue at stake and alternative solutions. It means learning as much as possible your BATNA and reservation price and those of other party's; the zone within which an agreement can be forged, and opportunities to create new forms of value.

Step 1:   Define a good outcome for you and the other side

Never enter into a negotiation without first asking yourself, 'What would be a good outcome for me? What are my needs? And how do I prioritize them?' Then ask the same questions from the perspective of the other party. If you cannot identify the other side's interests, use every communication opportunity to probe for them.

Step 2:   Identify potential value creation opportunities

Once you understand what a good outcome would look like from your own and other party's vantage point, you can identify areas of common ground, opportunities for compromise and ways of making favourable negotiation. Any time you create a new value, we also need to answer the question of who will claim that value.

Step 3:   Identify your and other side's BATNA and reservation price

To prepare for a successful negotiation, you need to define your strongest possible BATNA.

Step 4:   Store up your BATNA

Think about anything that you can do to improve your best alternative to a negotiated deal that will put you in a stronger bargaining position. Storing up you BATNA is an important part of preparing for a negotiation, but it is not limited to the pre-negotiation phase. In any good negotiation you always work to improve your BATNA before and during deliberations with the other party.

Step 5:   Anticipate authority issues

It is important to make sure that your negotiation counterpart must have full authority to forge an agreement. When you negotiate with the person who has the power to close the deal, you have real advantage:

- All of your reasoning is heard directly by the decision-makers.
- The benefits of the good relationship you have built during the bargaining will likely to be reflected in the agreement and its implementation.
- You reduce the likelihood of disputes or misrepresentation of any parts of the negotiated settlement or particular provision.

- If you want the other party to personally desire a deal with you, you will stand a better chance of making that happen by ensuring that the real decision-maker is not somewhere in the background of the negotiation. During the negotiation you need to do whatever you can to identify the real decision-maker. If your final decision-maker is participating in discussions, point out that fact and press the other side to reciprocate.

Try to find out how the other die will make their decision. Is the decision up to one individual? A team? A committee? Find out the existing decision-making process. In many instances we may not be able to negotiate with individuals who retain the final authority. This may also have some advantage. You can explore all opportunities but also can refrain from committing to any agreement. Under these circumstances:

- Confirm the ground rules that all parties will be committing their stakeholders/institutes to any agreement during the negotiation.
- Suggest using the discussion to explore your respective interests to come up with creative options.
- Leave some room in case if the final decision-maker pushes harder in a second round of negotiation.

It is important to determine the authority level of the person with whom you will be negotiating. That will help you to plan your negotiating strategy. Try to ascertain the answers to the following questions:

- Who will participate in the negotiations?
- What is the responsibility of the individual (s)?
- How long she/he is working with this organization/group?
- The organizational structure of the institute? Degree of decentralization in decision-making.
- How is the other negotiator viewed within his/her organization? Is he/she generally respected and listened to, or not?

It may be difficult to obtain all the information. Try to collect as much information as possible. If you learn that the negotiator from the other side has very little formal authority and is not respected or listened to by the real decision-makers, then you have got a problem. Working with this person may simply be a waste of your time. So you need to create a strategy to handle this situation.

Assessment tool: Authority—theirs and yours

Their authority

(Learn as much as possible about the other individuals representing the various stakeholders)
- Who will participate in the negotiation?
- What is the position (title) and the areas of responsibilities of the individuals with whom you will be negotiating?
- How long have they been with this institute? Relevant experiences, and how they are being viewed within the organization.
- Structure of the organization and modalities of operation—decision-making process.

Your authority (Confirm in as much detail as possible)
- Commitment to pre-determined agreement
- Final decision subject to formal review and approval.

It is also important to know exactly how much authority you have in the negotiation. If you don't get the authority you seek in a particular negotiation you should not worry about this. Less authority has

its advantages also. Checking with your supervisor can be strategically helpful. It may also free you to exercise more of your own creativity in inventing options for a mutually beneficial agreement.

Step 6: Learn all you can about the other side

Interpersonal relationship is key in any successful negotiation. As much as possible fine answers to:

- Who are the people who will be involved?
- Are they aggressive or are they conflict-avoiding accommodators?
- Is the culture of the organization bureaucratic or entrepreneurial?
- Are they authorized to make a deal or reach an agreement or they will have to get back to seek approval?
- What are they hoping to achieve and how critical is this negotiation for them?

You need to seek answers to these questions not only while preparing for a negotiation but also during the negotiation process.

In order to place yourself in the best bargaining position possible you will still need to anticipate that the other person's interests, goals, concerns, and hopes—as well as how he or she perceives the significance of the upcoming negotiations. The more you know about the other individuals, the better is your ability to come up with an agreement that serves the interest of all parties.

Step 7: Build flexibility into the process

Negotiations do not always follow a predictable or linear path. Unanticipated development can occur. So you must be prepared to be flexible in handling these unforeseen circumstances. To build flexibility into your negotiation process:

- Start with the assumption that the process will not unfold in a predictable, linear fashion.
- Be prepared to change to handle unanticipated developments.
- Treat every change as an opportunity for learning. It is important to be patient when unanticipated delays occur. But never allow these developments to interfere with your ultimate goal.

Step 8: Gather fairness standards and criteria

In any negotiations all parties want to believe that the agreement they reach will be fair and reasonable. If the partners want to have a continuing relationship, a sense of fairness and reasonableness in the negotiations is much more important.

- Research which criteria might best apply
- Be prepared to show why those criteria are relevant. Convince the others that certain criteria and standards are fair and reasonable and be incorporated in the negotiations.

Step 9: Alter the process in your favour

There may be instances where your ideas were being ignored during meetings or formal negotiations. If that happens, it is important to take steps to change the negotiation process. Don't address the substantive issues in the negotiations. Kolb and William make the following specific recommendations about the process moves.

- Work behind the scene to educate others on your ideas. Try to do this outside formal meetings. Concentrate on people who are respected and convince them that your ideas have merit. If possible form a coalition of support outside the negotiations.
- Reframe the process.

As you prepare for a negotiation, recognize that the process requires time and careful thought.

Skills for reshaping the negotiation process

Glaser and Russo (1998) identified a number of skills that could reshape the negotiation process.

1. Maintain your composure. This will encourage the other party to focus on goal of the negotiation: a mutually beneficial accord. Some ideas to consider:
   - Think for a moment about something good in your life. Anything that helps you distance yourself from the discussion.
   - Lighten up the situation with humour if you think the other person will appreciate a good chuckle or laugh.
   - Mentally take inventory of your interests and needs in the negotiation.
   - Take a moment to sum up the goals of the negotiation for the other person.
   - Count up to ten silently.
2. Getting time to think.
   Consider the following techniques for gaining time.
   - Pause and say nothing for several or many seconds.
   - Play back the conversation; for example 'Let me just make sure that I understand what you are saying'.
   - Take careful notes of what your counterpart is saying
   - Suggest a quick break
   - Resist any urge to make important decisions on the spot.
3. Developing data.
   Try to accumulate as much objective knowledge about the situation as you can during the proceedings. The strategies that can help:
   - Use 'feelers' (e.g. what do you think about this idea) instead of presenting direct firm offers.
   - Make notes about your bottom line on important issues and refer to them during bargaining.
   - Ask the other person(s) what his or her priorities are? Time? Cost? Reputation?
   - Pay attention to other person's body language
4. Refocusing the discussion.
   When the discussion starts focusing on irrelevant topics or emotional issues that cannot be resolved, refocus it on objective information and the underlying needs of both parties. Some ideas:
   - Ask problem-solving questions that prompt you and other persons to collaborate to address an issue.
   - List the underlying needs of each goal/objective and brain storm ways of meeting those needs—there may be other ways of meeting that need.
   - Stop and recall your own needs.
   - Bring outside objective data with the discussion.
   - Work together to list all the common interests you can think of.

5. Handling information strategically.
   Most unprincipled negotiators don't communicate openly during the discussion. In such cases, how you release and ask for information itself for making the other person feel comfortable exchanging information.

Consider the following ideas for handling information thoughtfully.

- Give the other person reason to trust you by revealing some information. But don't reveal it all at once in the earliest stages of the negotiation (bargaining).
- Give the person enough time to digest the new information you are introducing.
- Provide one or more strong reasons for proposals you are making, rather than listing as many reasons as possible, including weak ones.
- Watch your counterpart for signals that he or she feels positive about the direction the negotiation is taking.
- Gather objective information to verify the validity of the other person's statements.

8.3.4 Mental errors in negotiation

There are a number of mental errors that many people commit during a negotiation process. It is good to know them and take corrective actions. Most of them are amenable to self correction.

1. Irrational escalation
   Continuing a previously selected course of action beyond what rational analysis would recommend—over commitment.
   Possible reasons:
   - Their egos cannot abide 'losing'
   - Don't want to be seen coming home empty handed particularly when that outcome is highly visible.
   - Auctions and other bidding contests that pit individuals against each other encourage irrational behaviour.
   - A principal/agent problem is at work.
   - People deal with other peoples' money. Many agents who fall victims to this error take credit for the 'win' and charge the costs to their principals.
     Remedy:
     - Get a firm handle on your alternatives to the deal before you negotiate.
     - Before bargaining/negotiation takes place, objectively set a price beyond which good sense dictates walking away.
     - Set clear breakpoints at which you and your team will stop and assess where you are in the negotiation and where you are headed.
     - Use additional information gained during negotiation to review you walk away price.
     - With respect to the principal/agent problem, the best solution is to align the negotiator's rewards with the economic interest of the share holder.
2. Partisan perception
   Partisan perception is a psychological phenomenon that causes people to perceive the world with a bias in their own favour or towards their own point of view. (e.g. Soccer match, cricket match — the behaviour of the referee, Presidential Debate—Both Democrats and Republicans claim that they won).
   Effective negotiators know how to stand outside a situation and see it objectively, thus avoiding partisan perception.

Use the following guideline to handle partisan perception.

- Recognize partisan perception as a phenomenon to which we all fall prey.
- Put yourself in the other side's position. How would the issue look to you then?
- Pose the issue to colleagues (without revealing which side you are on) and solicit their opinions.
- To convey your position to the people in the other party
- Try to pose the problem as it appears to you, and ask how they view it.
- Use an analogy or a hypothetical situation to frame the problem as you see it.

    Another technique to reducing partisan perception is to REVERSE THEIR ROLES.

3. Irrational expectation

    It is difficult to achieve agreements when one or more of the parties have expectations that cannot be fulfilled. Irrational expectations eliminate any ZOPA (Zone of possible agreement)

    Possible ways to handle this situation include

    - Educational dialogue
    - New information
    - As you consider upcoming negotiations ask yourself what your expectations are? Are those expectations realistic? Will the other side have similar expectations on key negotiating points? If there are significant differences in expectation, it is impossible to arrive at an accord. Then think about ways to bring both parties' expectations in line with fact based reality.

4. Overconfidence

    Overconfidence encourages us to overestimate our own strengths and underestimates the strengths of our partners. This may lead to unsuccessful negotiations.

5. Unchecked emotions

    Anger and irrational behaviour are often triggered by an offence to one party's sense of fairness. People will sometimes forgo tangible personal gains rather than be party to an agreement that treats them unfairly.

    Bad things can happen when anger takes control of a negotiation. The parties stop focusing on logic and rational self interest. Partners can cause huge damage when they allow their emotions to run rampant. Ways to handle unchecked emotions include:

    - Agree to a cooling-off period.
    - Determine what is making other partner angry.
    - Acknowledge the problem. Respond to what appears to be the emotional problem. Express empathy for what the problem means to the other partners.
    - Keep the focus on issues and processes.

        Remember people are most often angered and frustrated at a personal level by perceived deception, unfairness, humiliation, or loss of pride or lack of respect. Avoid these landmines by focusing the negotiation on the issues and problems instead of an individual and their personalities.

8.5   Facilitation skills[3]

In broad terms, facilitation is the process of making something easier or less difficult. In development activity, 'facilitation' is used in the context of group meetings or workshops in which basically a neutral person with no decision-making authority helps the group to be more efficient and effective when planning, implementing and monitoring and evaluating meetings and workshops.

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3. By James A McCaffery. Facilitation skills. Training Resources Group, Inc. pp. 11–15.

Meetings are held for a variety of purposes. Some are held simply to pass information from the leader to the group, and are straight forward. Special leadership is needed for planning or problem-solving meetings or whenever group participation and involvement is required. For these meetings, leaders must be able to use facilitation skills competently. In addition to encouraging participation, facilitation skills insure that communication will be clear and more accurate.

When a meeting leader uses facilitation skills well, people contribute, meetings are productive, and the leader's work appears effortless. It looks natural. Because it looks so natural, people often assume that meeting leaders are born and not made. Although there is some truth to this, it is also accurate to say that certain skills can be learned that will significantly improve your ability to lead meetings. The facilitation skills contribute to partnership management in a number of ways. These are summarized in Box 2. The roles of a facilitator are summarized in Box 3 and the attributes of a good facilitator are presented in Box 4.

Box 2: Benefits of facilitation skills

- Increased ability to manage diverse groups at all stages of the project cycle
- Improved skills for managing conflict
- Better utilization of local knowledge, resources and capacities
- Enhanced collaboration, co-ordination and understanding amongst project stakeholders
- More committed and timely group action
- Increased management capacity of partners
- More effective meetings and partnerships.

Source: DFID (2003).

Box 3: Roles of facilitator

- Main role is setting the initial mood or climate of the group
- Helps to elicit and clarify the purposes of the individuals in the group as well as the more general purposes of the group
- Relies upon the desire of each participant to implement those purposes that have meaning for her or him as the motivational force behind significant learning
- Organizes and makes available a wide range of resources for learning
- Act as a flexible resource to be utilized by the group
- May share opinion without any imposition, the group member may take it or leave it
- Should be alert to expression that indicate deep or strong feelings
- Should recognize and accept his or her own limitations

Source: DFID (2003).

There are four very important facilitation skills that a meeting leader must use effectively: asking questions, mirroring, paraphrasing, and summarizing. These skills are simple in concept, but they are not necessarily simple to carry out. With continued practice, meeting leaders can become very adept in using these skills.

Asking questions

Asking questions is a critical facilitation skill. You can ask questions in two ways: as closed questions or as open-ended questions.

Closed questions

Participants can answer a closed question with yes, no, or another one word response. You should only use this type of question when you want precise, short answers. Otherwise, such questions tend to inhibit discussion. Here's an example of an exchange based on closed questions.

Meeting leader: *Do you think that recommendation will work?*

Participant: *No.*

Open-ended questions

Open-ended questions require the respondent to elaborate. The question 'What do you like about that recommendation?' seeks information and therefore is open-ended. How, what, and why are words that begin open-ended questions.

Meeting leader: *What did you like about that recommendation?*

Participant: *I think it is a good strategy for resolving the issue, and one we can implement without expending a lot of resources.*

Meeting leader: *What kind of progress are you making against your financial goals for this quarter?*

Participant: *Let's consider the first goal… our results are as follows…*

Mirroring

Mirroring is a process of capturing and repeating the exact words told by the speaker. It is also considered as a formal version of paraphrasing. It helps to make people feel that they are heard. It can also help the facilitator to be perceived as neutral to the ideas or views being mentioned by participants.

It sometimes helps to speed up the process of discussion when discussions are slowed down and people are silent.

In practice if a speaker says a single sentence the facilitator repeats it without altering the words.

E.g. Speaker: The issue should be resolved today.

Facilitator: You said 'The issue should be resolved today'.

However, if the speaker says more sentences beyond what the facilitator can repeat as they are, the facilitator should repeat key words or phrases.

Speaker: The issue should be resolved today. However, it is up to the participants to decide what is worthy for them. I don't want to dominate the proceeding.

Facilitator: You said 'The issue should be resolved today, participants deciding what is worthy and without you dominating '.

Paraphrasing

Paraphrasing is simply restating in your own words what another person has said. The prefix *para* means *alongside,* as in the word *parallel.*

The process of paraphrasing is very much like catching a ball and throwing one back—except the ball you throw back is your own and perhaps a bit different from the original ball. Nonetheless, it is still a ball. You can throw back the other person's ideas by using such beginning phrases as:

> You are saying...
> In other words...
> I gather that...
> If I understood what you are saying...

The best way to paraphrase is to listen very intently to what the other person is saying. If, while the other person is talking, we worry about what we are going to say next or are making mental evaluations and critical comments, we are not likely to hear enough of the message to paraphrase it accurately.

It is helpful to paraphrase, so that you develop a habit of doing so. You can even interrupt to do so, since people generally don't mind interruptions that communicate understanding. For example, you might say:

> Pardon my interruption, but let me see if I understand what you are saying...

Or, you might respond as illustrated in the following examples.

Example 1

Participant: *The basic problem seems to be that some people don't know how to use the management information system.*

Meeting leader: *In other words, you see the problem as lack of know-how.*

Example 2

Participant: *I think the most important thing is to tell the staff member clearly and directly how (s)he is contributing to the problem.*

Meeting leader: *So you are saying it's important to tell the staff member directly what kind of impact (s)he is having on the problem.*

Summarizing

The purpose of summarizing is to:

- pull important ideas, facts, or data together
- establish a basis for further discussion, or to make a transition
- review progress, and
- check for clarity or agreement.

By using the summarizing technique in a meeting, you can encourage people to be more reflective about their positions as they listen for accuracy and emphasis.

Summarizing requires you to listen carefully in order to organize and present information systematically. Summaries ensure that everyone in the meeting is clear about what transpired in the just completed portion of the discussion.

For example, as a meeting leader, you may summarize to ensure that participants remember what has been said or to emphasize key points made during a group discussion. Or, perhaps most importantly, you may use summarizing as a way to reach a decision or bring closure to a topic and move the meeting on to the next agenda item. In these instances summarizing is very useful.

Here are some starter phrases you can use to begin a summary.

- There seem to be some key ideas expressed here...
- If I understand you, you feel this way about the situation...
- I think we agree on this decision — what we are saying is that we intend to...

A real value of summarizing is that it gives you the opportunity to check for agreement. If people do not agree, it is better for you to know during the meeting than to find out later when a task is not completed or a deadline is missed. One of the most common meeting complaints occurs when participants think an agreement has been reached, yet things do not occur as planned afterwards. In many instances, this problem occurs because there was not really agreement during the meeting.

As an example of summarizing, assume that someone named Joan has talked for three or four minutes, and you summarize as follows:

> *Let me see if I have it straight, Joan. First, you say the work is boring, not carefully scheduled, and finally, you are concerned about the number of hours people are expected to work, correct?*

In another example, the meeting discussion has gone on for several minutes and you summarize as follows:

> *In talking about this issue, we have come up with three main points...*

Other facilitation skills

There are a number of other helpful facilitation skills. Some are verbal, others non-verbal. Here are some examples.

- Nodding one's head or saying *Uh-huh.*
- Picking up on the last word or two of someone else's sentence.
- Repeating a sentence, or part of a sentence.
- Saying *That's good, does anyone have anything else to add?*

Some of the useful tips to follow during facilitation are summarized in Box 5.

Box 5: Tips for effective facilitation

- Be alert to signs of confusion/body language
- Don't do the group's work
- Circulate but don't become part of a group
- Spend sufficient time in each group to ensure that they have grasped the tasks
- Review tasks if groups are having difficulties
- Frequently check whether there are questions
- Give members time to answer questions
- You are not an expert/don't pretend that you are an expert, frequently remind the group that you are a facilitator.
- Be flexible: Changing something does not mean that you planned poorly; but probably means you are listening, watching and adjusting your plan to fit the situation.
- Relax!!!

Key references

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Session 8: Exercise: Understanding the techniques for effective negotiation

Phase 1. Individual exercise

Divide participants into groups each with three members.

1. Allocate one role for each member (Dr PW Mutinga or Dr Banta or Observer.)
2. Ask the observers from all the groups to come together. Then give them the handout, which explains their role. Ask them if the instructions are clear and give explanation if required.
3. When the explanation to the observers is over ask them to join their group.
4. (Make sure that each group has one Dr PW Mutinga, one Dr Banta and one Observer). Place the groups far away from each other.
5. Give the handouts meant for Dr PW Mutinga and Dr Banta and allow them to read and understand their role. (Make sure that the handouts distributed are given to the correct person playing the role). (7 minutes).
6. When they are through with their reading, ask them to start designing their tactics to negotiate with Mrs RH Thelo. (7 minutes).
- Note: make sure that all groups start the discussion process at the same time.
- *Instruction to groups:*
    - Explain that they should not reveal the 'answer' to the other group members after finishing the discussion in their groups.
    - Ask each group to come back after 7 min and negotiate with Mrs R.H. Thelo about the 3000 Ugli oranges.

Phase 2. Plenary discussion

7. When all are back, organize the negotiation process with Mrs R.H. Thelo (rich farmer, South America who has the only 3000 Ugli oranges left in the world). Each group will come one after the other and negotiate with Mrs R.H. Thelo.
- Note: Start with those groups which have been indicated by the observer as not discovering 'the solution' yet.
8. Explain which group came up with the best negotiation tactic and why. Indicate the problems of the groups which failed to get the correct answer.

Phase 3. Closure

9. Discuss the importance of focusing on interest rather than positions.
10. Move on to explaining the principles of negotiation.

A role for Dr Banta—Ugli orange case

You are Dr Banta, a biological research scientist employed by a pharmaceutical firm. You have recently developed a synthetic chemical useful for curing and preventing Rudosen. Rudosen is a disease contracted by pregnant women. If not caught in the first 4 weeks of pregnancy, the disease causes serious brain, eye, and ear damage to the unborn child. Recently, there has been an outbreak of Rudosen in your State and several thousand women have contracted the disease. You have found, with volunteer victims, that your recently developed synthetic serum cures Rudosen in its early stages. Unfortunately, the serum is made from the juice of the Ugli orange, which is a very rare fruit. Only a small quantity

(approximately 4000) of these oranges was produced last season. No additional Ugli oranges will be available until next season, which will be too late to cure the present Rudosen victims.

You have demonstrated that your synthetic serum is in no way harmful to pregnant women. Consequently, there are no side effects. The Food and Drug Administration has approved the production and distribution of the serum as a cure for Rudosen.

Unfortunately, the present outbreak was unexpected and your firm had not planned on having the compound serum available for 6 months. Your firm holds the patent on the synthetic serum and it is expected to be a highly profitable product when it is generally available to the public.

You have been recently informed on good evidence that RH Thelo, a South African fruit exporter, is in possession of 3000 Ugli oranges in good condition. If you would obtain the juice of the 3000, you would be able to both cure the present victims and provide sufficient inoculation for the remaining pregnant women in the State. No other State currently has a Rudosen threat.

You have recently been informed that Dr PW Mutinga is also urgently seeking Ugli oranges and is also aware of Thelo's possession of the 3000 available. Dr Mutinga is employed by a competing pharmaceutical firm. S/He has been working on biological warfare research for the past several years. There is a great deal of industrial espionage in the pharmaceutical industry. Over the past several years, Dr Mutinga 's firm and your firm have sued each other for infringement of patent rights and espionage law violations several times.

You have been authorized by your firm to approach Thelo to purchase the 3000 Ugli oranges. You have been told s/he will sell them to the highest bidder. Your firm has authorized you to bid as high as USD 250,000 to obtain the juice of the 3000 available oranges.

Before approaching Thelo, you have decided to talk with Dr Mutinga so that you will not be prevented from purchasing the oranges.

A role for Dr Mutinga—Ugli orange case

You are Dr PW Mutinga, a biologist for a pharmaceutical firm. The firm is under contract with the government to do research on methods to combat enemy uses of biological warfare.

Recently, several World War II experimental nerve gas bombs were moved from the USA to a small island just off the US coast in the Pacific. In the process of transporting them, two of the bombs developed a leak. The leak is presently controlled, but government scientists believe that the gas will permeate the bomb chambers within 2 weeks. They know of no method of preventing the gas from getting into the atmosphere and spreading to the other islands, and very likely to the West coast as well.

You have developed a synthetic vapour that will neutralize the nerve gas if it is injected into the bomb chamber before the gas leaks out. The vapour is made with a chemical taken from the rind of the Ugli orange, a very rare fruit. Unfortunately, only 4000 of these oranges were produced this season.

You have been recently informed, on good evidence that RH Thelo, a South African fruit exporter, is in possession of 3000 Ugli oranges. The chemical from the rinds of this number of oranges would be

sufficient to neutralize the gas if the serum is developed and injected efficiently. You have also been informed that the rinds of these oranges are in good condition.

You have also been informed that Dr JW Banta is also urgently seeking to purchase Ugli oranges and s/he is also aware of Thelo's possession of the 3000 available. Dr Banta works for a firm with which your firm is highly competitive. There is a great deal of industrial espionage in the pharmaceutical industry. Over the years, Dr Banta's firm and your firm have sued each other for infringement of patent rights and espionage law violations several times. Litigation of two suits is still in process.

The Federal Government has asked your firm for assistance. You have been authorized by your firm to approach Thelo to purchase the 3000 Ugli oranges. You have been told s/he will sell them to the highest bidder. Your firm has authorized you to bid as high as USD 250,000 to obtain the rinds of the 3,000 available oranges.

Before approaching Thelo, you have decided to talk with Dr Banta so that you will not be prevented from purchasing the oranges.

Role of 'observer'

(for 'two-person bargaining': The Ugli orange case)

You will be observing a bargaining between Dr Mutinga and R Banta, both of whom are research scientists for competing pharmaceutical companies. Both are urgently in need of securing 3000 Ugli oranges possessed by Ms Thelo, a fruit exporter form South Africa. In an attempt to resolve the conflict, the scientists are meeting at the request of Dr Mutinga who hopes to persuade his counterpart to let him have the oranges. In reality, however, their needs are not in direct conflict, since Dr Mutinga needs the rind of the oranges and Dr Banta needs the juice.

As the observer you should remain as unobtrusive as possible. Simply listen to the conversation, but DO NOT TRY TO INTERVENE OR INFLUENCE IT IN ANY WAY. At the end of the exercise you will be asked to comment on the bargaining session you observed. Below are some suggestions for what to notice about Dr Banta and Dr Mutinga's interaction.

How did the bargaining begin? What tone was set by the early remarks?

Did the participants readily exchange information or were they more guarded?

When (if ever) did disclosure about their specific needs (e.g. rind or juice of the oranges) occur?

What prompted this disclosure? Note approximately how long this discovery took and how it occurred.

What factors operated to prevent such disclosure or to enhance it?

During the negotiations:

The facilitator will come around and ask you to indicate to him/her 'yes' if the negotiations have made the rind/juice discovery and 'no' if they have not. This will help the facilitator in the debriefing of the exercise.

Trainer's guide

Session 9: Monitoring, evaluation and impact assessment of partnerships

Purpose	To enhance the capacity of the agricultural researchers to forge effective and efficient partnerships with other relevant stakeholders in the agricultural innovation system for achieving greater impacts
Objectives	At the end of this session participants will be able to:

- clearly differentiate three concepts: monitoring, evaluation, and impact assessment
- explain different types of evaluation in relation to the project cycle and the activities involved
- explain different types of impact of R&D intervention and methods and techniques used to assess them
- discuss a conceptual framework to assess the impact of partnership programs

Resources	

- Flipcharts
- White board
- Blank transparencies
- Flipchart and white board markers
- Computer and LCD projector
- Overhead projector
- Copies of handouts 9.1 to 9.4 for every participant

Time needed	2 hours

Method of facilitation

Activity		Time
Presentation	Distribute handout 9.1 (presentation slides) before you start your presentation	60 minutes
	Give a presentation on monitoring, evaluation and impact assessment of partnerships allow some time for questions to make sure that participants understand what is presented.	
	Distribute handout 9.2 (presentation text) to supplement your presentation	
Exercise	Distribute handouts 9.3 and 9. 4 for exercise 9 on Studying key features of evaluation activities	55 min
	Ask a volunteer to read the exercise	
	Ask participants to actively participate in completing the exercise.	
	Remind them the time allotted to the exercise	
	Invite the rapporteur to present their the group response	
Transition	Make closing remarks and transit to the next session	5 minutes

Session 9: Monitoring, evaluation and impact assessment of partnerships: Summary of overheads

9.1

Monitoring, evaluation
and
impact assessment
of partnership programs

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9.2

Objectives

- To clearly differentiate three concepts: monitoring, evaluation, and impact assessment

- To explain different types of evaluation in relation to the project cycle and the activities involved

- To explain different types of impact of R&D intervention and methods and techniques used to assess them

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- To discuss a conceptual framework to assess the impact of partnership programs

9.3

Monitoring

- Continuous assessment

- Project activities
- Use of project
- inputs

Conventional implementation/progress monitoring

- Outputs → Performance assessment

- Outcome → Against baseline and
          indicators

- Process

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Monitoring

- Is an internal management tool
- Purpose:
  - to take timely corrective action
  - Facilitate subsequent evaluation

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Monitoring is closely linked to evaluation

Monitoring involves:

- Recording of data
- Analysis
- Reporting
- Storage

Data collected include:
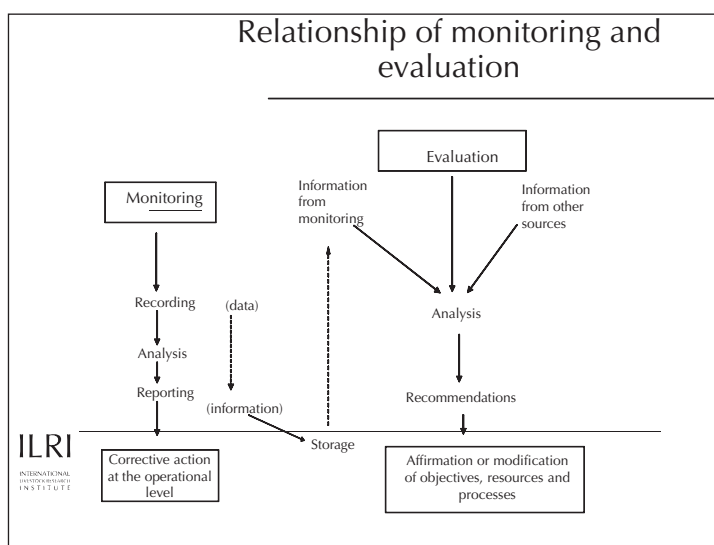
- Physical and financial information
- Inputs and services provided } (Against
- Data obtained from surveys   baseline)
- Socio economic indicators
- Information on key process

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Relationship of monitoring and evaluation

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9.7

Process monitoring

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9.8

What is a process?

- A series of steps and interrelated work activities, characterized by specific inputs, and tasks which add value, and make up a procedure for a set of specific outputs

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9.9

Process monitoring

What is it?

- Careful and systematic observation of activities
- Continuous process of observation, interpretation and organizational learning

Assumption:

- There is an ideal way in which a process should develop
- There is an objective where the process ought to lead

Why do it?

- Identify problems and bottlenecks
- Identify deviations from 'ideal' to tackle corrective action
- Institutional learning

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9.10

Why process monitoring?

- Emphasis of the research on the *process* as part of an evolutionary adaptive system

- requires an action research orientation and the need to think about *progressive change*, where the different progressive stages need to be defined and redefined throughout the project

- Develop best practices

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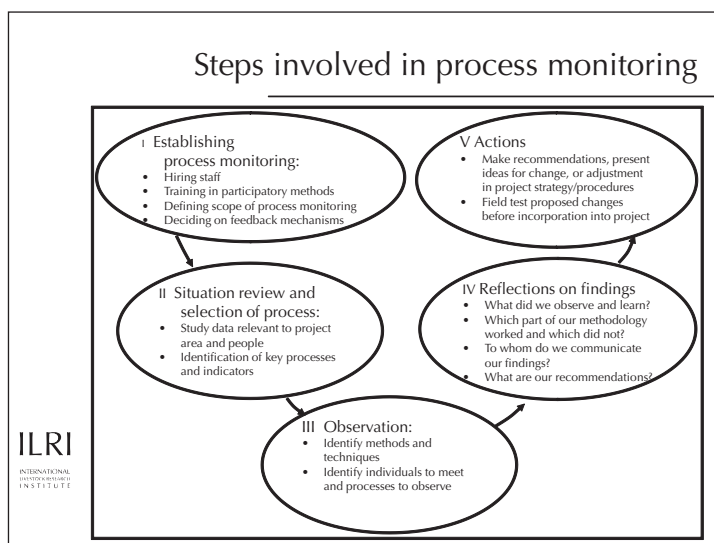INTERNATIONAL
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9.11

What is process monitoring?

- Focus on critical processes which are directly related to project objectives

- Continuous process of observation, interpretation and institutional learning

- Selection of activities and processes to be monitored is iterative

- Main focus is on qualitative indicators

- Information flows back and forth between field staff and management

- Process monitoring investigates processes within the community, project and wider socio-economic context

- Both internal and external processes

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9.12

Steps involved in process monitoring

I Establishing process monitoring:
- Hiring staff
- Training in participatory methods
- Defining scope of process monitoring
- Deciding on feedback mechanisms

V Actions
- Make recommendations, present ideas for change, or adjustment in project strategy/procedures
- Field test proposed changes before incorporation into project

II Situation review and selection of process:
- Study data relevant to project area and people
- Identification of key processes and indicators

IV Reflections on findings
- What did we observe and learn?
- Which part of our methodology worked and which did not?
- To whom do we communicate our findings?
- What are our recommendations?

III Observation:
- Identify methods and techniques
- Identify individuals to meet and processes to observe

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9.13

Key steps in process monitoring

- Break up the innovation process that we are seeking to address into a number of distinct monitoring domains
- Identify key processes and indicators that are closely linked to project objectives and project cycle
- Limited number of processes should be selected, includ those which may prove to be bottlenecks during the course
- In each domain ask essential questions that need to be revisited as the project/intervention evolves

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9.14

Useful tools for process monitoring

- Participant observation
- Participatory discussion (focus group)
- Semi-structured interview
- Transect walks
- Participatory resource mapping
- Participatory need assessment
- Process monitoring working groups
- Project planning meetings
- Special studies
- Topical sessions

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9.15

To note...

- ideal process monitoring methods and indicators should be effectively integrated into the project's M&E system
- clear criteria for monitoring processes, with clearly defined roles, responsibilities, methodology, realistic time frame and resources for implementation
- open mindedness and willingness to listen to the views of others
- flexible and adaptive
- should operate at all levels focusing only on one level can be misleading by obscuring the impact of other forces on project effectiveness

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9.16

Evaluation

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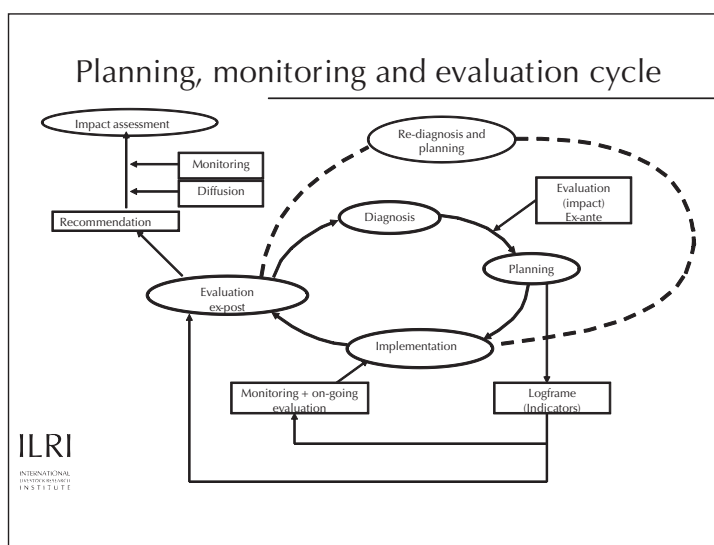LIVESTOCK RESEARCH
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9.17

Evaluation

- Broader concept
- Aspects covered
  - Performance
  - Quality
  - Relevance
  - Efficiency

Impact: during priority setting, eventual effect on development objectives

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9.18

Planning, monitoring and evaluation cycle

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9.19

Types of research evaluation

Related to timing

- Occurs before: ex-ante
- Occurs during: ongoing
- Occurs immediately after completion: ex-post
- Occurs several years later: Impact
  - At different levels

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9.20

Ongoing evaluation/mid-term evaluation

- Activities are reviewed at critical stages to determine if they should be continued, modified, or aborted

- Operational management tool

- Largely conducted through peer reviews, stakeholder reviews

- Indicates how efficiently resources are used and identifies implementation problems

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9.21

Ongoing evaluation/mid-term evaluation

- Activities are reviewed at critical stages to determine if they should be continued, modified, or aborted

- Operational management tool

- Largely conducted through peer reviews, stakeholder reviews

- Indicates how efficiently resources are used and identifies implementation problems

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9.22

Ongoing evaluation/mid-term evaluation (cont'd)

- Addresses problems associated with day-to-day management of research and can indicate the need for change in project objectives and targets

- Monitoring is fundamental for ongoing evaluation

- Feedback from target groups

- Often accomplished through a series of meetings

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9.23

Ex-post evaluation/end of project review

- Assesses the performance, quality, relevance, and immediate outcome immediately after project completion

- Best conducted where a baseline was originally defined, targets projected, and data collected on important indicators

- Often done by professional evaluators

- Classical criteria need to be broadened to include user satisfaction

- Should be an integral part of project implementation

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9.24

Ex-post evaluation/end of project review (cont'd)

- Advance preparation is essential

- Use a blend of interviews, field visits, observations, and available reports

- Lessons learned could be systematically incorporated in future activities, e.g. ex-ante evaluation as well as project planning

- Usually only done for more important, innovative, or controversial projects?

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Impact assessment

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Impact

- Special form of evaluation
- Deals with effects of research output on target beneficiaries
- Attempts to look at both intended and unintended effects
- Basic concepts of impact assessment are:
  - causality
  - attribution
  - incrementality
- Impact begins to occur when there is behavioral change among potential users

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Evolution

Current

1970s

Germplasm adoption and crop mgt research

1980s
- Formal rates of return studies
- Spillovers and intersectoral impacts

1990s
- Gender
- Environmental impact assessment
- Institutional / organization impact
- Poverty–related work

- Intermediate products
- Direct product
- People-level; developmental
  - Economic
  - Sociocultural
  - Environmental
  - spillovers

9.28

Impact

- Some cases used in a very restricted manner
- Long term effects of research on people, economy, society and environment
- More recently focus on ultimate development goals— food security, poverty alleviation, protection of the environment etc.

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9.29

Purpose of impact assessment

- Purpose depends on when the assessment is done
  ex-ante
  - To study likely economic impact of proposed intervention
  - To identify optimal portfolio
  - To collect information for ex-post evaluation

- *Ex-post* after completion of the program
  - To study the impact
  - For accountability purposes
  - Incorporate lessons learned in future planning
  - Establish credibility of public sector research
  - Justify increased allocation of research resources

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9.30

Definition

- Means different things to different people
  - Direct product of the activity
  - Effect of the direct product on ultimate users– people-level impact

- People-level impact cannot be assessed without
  - Information on the number of users
  - Degree of adoption
  - Incremental effect on the production costs and outputs

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9.31

Levels of impact

- Impact studies can include
  - Innovation/technology/research program
  - Program plus complementary services
- Different level
  - Household
  - Target population
  - Regional and national level
  - Primary sector, secondary sector, or overall economy

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9.32

Production technology

Broadly refers to all methods that farmers, market agents, and consumers use to cultivate, harvest, store, process, handle, transport, and prepare food crops, cash crops, livestock etc. for consumption and other purposes

Production technology   Production impact

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9.33

R&D technology

The organizational strategies and methods used by research and extension programs, including scientific procedures, organizational modes, institutional strategies, inter-disciplinary research etc.

Organizational impact refers to the effect of new R&D technology on the capacity of research and extension programs to generate and disseminate new production technology

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9.34

Types of impact

- Production impact
- Economic impact
- Socio-cultural impact
- Environmental impact
- Institutional/organizational impact

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9.35

Impact checklist

Institutional impact

- Changes in organizational structure
- Change in number of scientists
- Change in composition of the research team
- Multi-disciplinary approach/improvement
- Changes in funding allocated to the program
- Changes (increase/decrease) in public and private sector participation
- New technique/method
- Enhanced capacity for partnering

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9.36

Product and income effect

- Risk reducing
- Yield increasing
- Cost reducing
- Reduction in inputs needed
- Employment creation
- Implication for other sectors of the economy

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9.37

Socio-cultural impact

- Contributes to food security
- Poverty reducing
- Improves status of women
- Changes knowledge and skill level of people
- Creates (number and types of) jobs
- Destroys (number and types of) jobs
- Distributes benefits across gender and geographical locations
- Changes in resource allocation
- Changes in cash requirement
- Changes in labor distribution
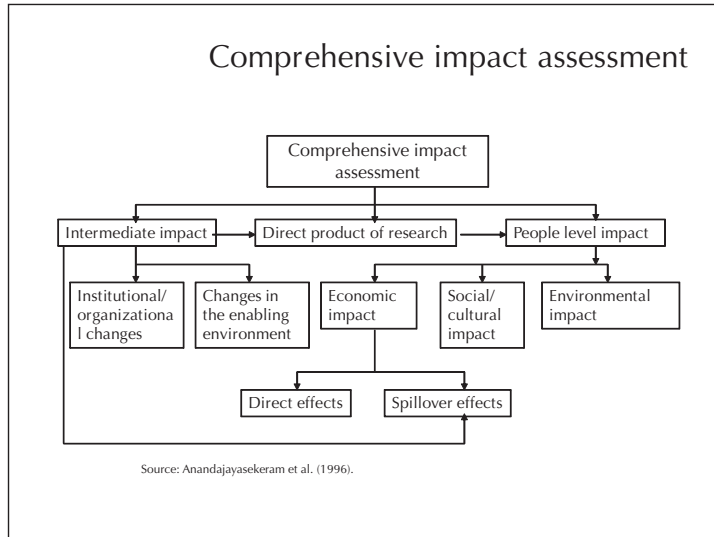- Nutritional implications
- Empowerment

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9.38

Environmental impact

- Erodes/degrades soil
- Silting
- Compacts soil
- Contaminates soil
- Contaminates water resources
- Changes hydrological regimes
- Effects on biodiversity
- Pollutes air
- Contributes to greenhouse gases

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9.39

Spillover effects

- Effects on farmers outside the target area within a country
- Regional implications—SADC, ASARECA, CORAF, APAARI
- International implications
- Cross-commodity effects
- Cross-sector implications

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9.40

Comprehensive impact assessment
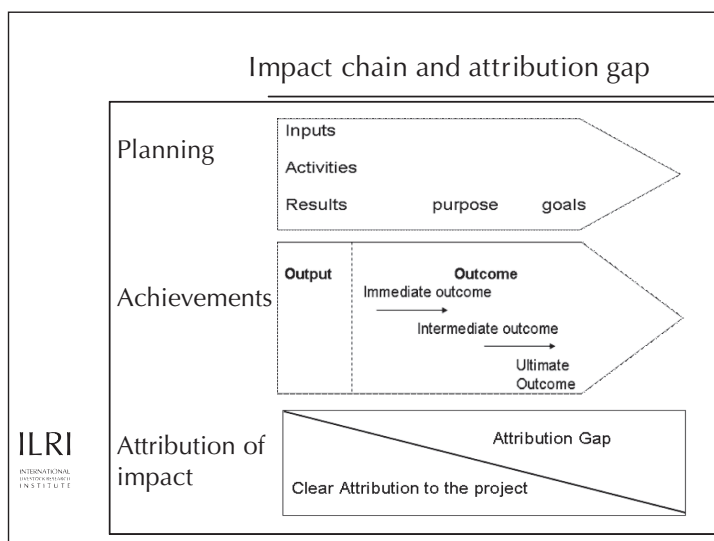

Source: Anandajayasekeram et al. (1996).
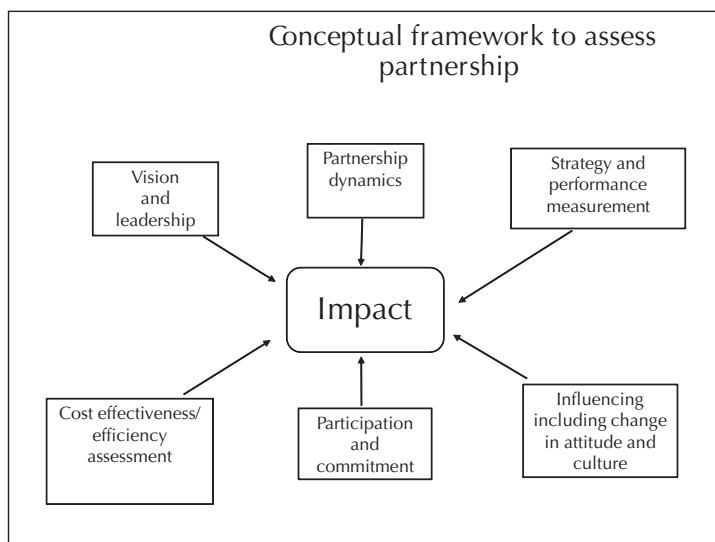
9.41

Impacts of partnership programs

- Partnership is a means to an end
- Assessment of the partnership process and associated organizational and institutional impact
- Assessment of the impact of the intervention/project
- Value addition in terms of processes, outputs and outcomes

9.42

Impact chain and attribution gap

9.43

Conceptual framework to assess partnership

Vision and leadership

Partnership dynamics

Strategy and performance measurement

Impact

Cost effectiveness/ efficiency assessment

Participation and commitment

Influencing including change in attitude and culture

9.44

Conceptual framework to address partnership projects

Joint interventions

Processes *

- Vision and leadership
- Participation
- Partnership dynamics
- Influencing

R&D impacts*

- Institutional and organizational changes
- Changes in the enabling environment
- Individual and organizational capacity

Performance

- Outputs / results

Outcome and impact

- Economic impact
  - Direct
    - Individual
    - Society
  - Spillovers
- Socio-cultural impact
- Environmental impact

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9.45

Impact types, techniques and methods

Impact type	Method	Technique
Intermediate impact • Institutional/organization al changes • Changes in the enabling environment	Survey, monitoring including processes	Simple comparison/trend analysis
Direct product of research	Effectiveness analysis using logical framework	Simple comparison—target vs. actual
Economic impact micro, macro, spillovers	Econometric approach surplus approach	Production function total factor productivity index number methods and derivatives
Socio-cultural impact	Socioeconomic survey/ adoption survey	Comparison over time
Environmental impact	Environmental impact assessment	Various • Qualitative • Quantitative

9.46

Multi-criteria analysis often recommended

- An 'effect table' or 'effect matrix' can be used for priority setting

- In a matrix table:

– columns represent alternative projects/activities rows represent criteria used for evaluating alternatives

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9.47

Special considerations

- Input level monitoring—resources leveraged from multiple partners

- Output level monitoring—need to track activities carried out by each partner

- Assessing intermediate results—different partners may define partnership success differently

- Assessing the outcomes—responsibilities of the partners
  - Need intensive consultation
  - Balance between the value of the information collected and the cost in terms of time and money
  - Agree how M&E activities are funded; who will manage, and how to share data and information

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9.48

Attribution

- Problem arises when there are alternative plausible explanations for the effects observed or measured

- Under these circumstances:
  - identify the most likely alternative explanations
  - present evidence to discount these alternative explanations
  - present evidence that the program is the more likely explanation for observed outcome

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9.49

Objectives of M&E revisited

- Checking implementation
  - Record inputs, activities, and outputs
  - identify deviations from work plans
  - Identify constraints/bottlenecks

- Assessing performance, quality, relevance and impact:
  - Overall efficiency (cost effectiveness)
  - Overall effectiveness (achieving objectives)
  - Suitability of new methods and technologies under testing at the field sites
  - Long-term impact (contribution to development objective)

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9.50

Objectives of M&E revisited (cont'd)

- Reflecting and learning
  - Learning from achievements and mistakes
  - Increase capacity to perform better in the future and
  - Take corrective action

- Communication
  - Share progress and results with others

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9.51

Comprehensive assessment

- Considers all aspects
  - Organizational
  - Institutional
  - Individual
  - Target group

- Key issues
  - Attribution
  - Causality
  - Incrementality

- Focus on processes, outputs and outcomes

- Institutional and organizational impacts are critical

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9.52

Note

Any assessment must:

- Demonstrate value of partnership
- Achievements of partnership
- Ensure priority objectives are aligned across partner organizations
- Challenge/address poor performance of partnership
- Improve decision making by providing feedback
- Provide basis for learning and development.

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No single evaluation framework is applicable to assess all partnerships

9.53

Thank you!

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Session 9:   Monitoring, evaluation and impact assessment of partnerships: Summary of presentation

9.1   Introduction

The process of monitoring, evaluation (M&E) and impact assessment (IA) is the primary means of collecting and analysing information, and is thus essential for good project management. It informs the project management whether implementation is going as planned and whether corrective action is needed to adjust implementation plans. In addition, M&E systems should provide evidence of project outcomes and justify project funding allocations. The focus of M&E has shifted from monitoring implementation to tracking results and outcomes. Traditionally, M&E systems were implementation-focused and included tracking of input mobilization, activities undertaken and completed, and outputs delivered. However, the implementation-focused approach does not provide managers, stakeholders, or policymakers with an understanding of failure or success of the project in reaching the desired outcomes (Kusek and Rist 2004).

Impact assessment is a special case of evaluation that could be carried out both ex-ante and *ex-post*. This chapter attempts to provide a clear understanding of the various concepts and then focus on a conceptual framework that could be used in empirical studies to assess networks and partnership.

Partnerships and networking have implications for resources and are critical for innovation. It is therefore very important to monitor how they are functioning and evaluate if they are achieving the joint goals that were defined. Developing an M&E system is a crucial step in the design stage and should be an integral part of the implementation process.

9.2   Monitoring

Monitoring is a continuous assessment of both the functioning of project activities in the context of implementation schedules and of the use of project inputs by the targeted population in the context of design expectations. The goals of monitoring are:

- To ensure that inputs, work schedules and outputs are proceeding according to plan, i.e. that project implementation is on course
- To provide record of input use, activities and results and
- Early warning of deviations from initial goals and expected outcome.

Thus, monitoring is a process which systematically and critically observes events connected to a project in order to control the activities and adapt them to the conditions. Key steps in the monitoring process are:

1. Recording data on key indicators, largely available from existing sources, such as time sheets, budget reports, supply records.
2. Analysis performed at each functional level management. This is important to assume the flow of both resources and technical information through the system.
3. Reporting, often through quarterly and annul progress reports, oral presentations organized by project staff.
4. Storage, whether manual or computerized, should be accessible to managers at different levels of the system.

Monitoring is an internal project management tool. Integrating monitoring into implementation increases the accuracy of the collected information, reduces the cost of acquisition, increases the focus (alertness) of the participating scientists and reduces the time lag for management corrections. The major objectives of M&E are summarized in Box 1 below.

Box 1: Objectives of M&E

Checking implementation
- Record inputs, activities and outputs
- Identify deviations from work plans
- Identify constraints/bottlenecks

Assessing performance, quality and relevance
- Overall efficiency (cost effectiveness)
- Overall effectiveness (achieving objectives)
- Suitability of new methods and technologies under testing at the field sites (relevancy)
- Long-term impact (contribution to development objective)

Reflecting and learning
- Learning from achievements and mistakes
- Increase capacity to perform better in the future and
- Take corrective action

Communication
- Share progress and results with others

In the context of research, monitoring includes the periodic recording, analysis, reporting, and storage of data about key research and extension indicators. Data includes physical and financial information, details of inputs and services provided to beneficiaries, and data obtained from surveys and other recording mechanisms. Monitoring primarily provides information on project performance and gives signals on whether an activity is proceeding according to the plan. Monitoring is essential for evaluation.

It can also provide information on the socio-economic indicators for *ex-post* evaluation assessment. One could simultaneously monitor the resource use, i.e. of funds and personnel, as well as the process. Monitoring of the process may be accomplished through inter alia review meetings and periodic seminars. This permits management to compare the progress of work against planned activities, detect deviations, identify bottlenecks, and take corrective action while research is in progress. Monitoring and evaluation are closely linked and are an integral part of project cycle. The key differences between implementation monitoring and results monitoring are summarized in Box 2.

9.3   Process monitoring

In the recent past a distinction has been made between process monitoring and progress monitoring. Conventional progress monitoring focuses on physical, financial and logistical aspects of projects whereas process monitoring deals with critical processes which are directly related to the project objectives. An ideal M&E system should contain elements of both progress and process monitoring. The development of process monitoring was part of social science's response to the need for field research data relevant for decision-making within a learning process approach.

> Box 2: Key features of implementation—focused vs. results—based monitoring
>
> Elements of implementation monitoring (traditionally used for projects)
> - Description of the problem or situation before the intervention
> - Benchmarks for activities and immediate outputs;
> - Data collection on inputs, activities, and immediate outputs
> - Systematic reporting on provision of inputs
> - Systematic reporting on production of outputs
> - Directly linked to a discrete intervention (or series of interventions) and
> - Designed to provide information on administrative, implementation, and management issues as opposed to broader development effectiveness issues
>
> Elements of results monitoring (used for a range of interventions and strategies)
> - Baseline data to describe the problem or situation before the intervention
> - Indicators for outcomes
> - Data collection on outputs and how and whether they contribute toward achievements of outcomes
> - Timelines expressed such as at mid-term and end-term
> - More focus on perceptions of change among stakeholders
> - Systematic reporting with more qualitative and quantitative information on the progress towards outcomes
> - Done in conjunction with strategic partners and
> - Captures information on success or failure of partnership strategy in achieving desired outcomes.
>
> Source: Kusek and Rist (2004).

An underlying assumption of process monitoring is that there is an ideal way in which a process should develop; that there is an objective where the process ought to lead. Process monitoring tells the project staff and management that what was being observed is close to ideal. If not, then what needs to be done to steer the process closer to that 'ideal'? Process monitoring is a continuous process of observation, interpretation and institutional learning. The core of process monitoring is addressing key project processes and identification of problems and bottlenecks resulting from them.

Process monitoring is participation-oriented. Participation in the systematic monitoring of processes is designed to promote the autonomy and self-responsibility of the actors. It is therefore essential that we approach process monitoring together with the actors, that we seek their participation.

9.3.1 Key feature of process monitoring

The difference between the conventional progress monitoring and process monitoring are summarized in Table 1 below.

The four basic activities of process monitoring are: Process selection, observation, reflection, and process steering/action. The sequence: process selection–observation–reflection–action requires coordination. We need to know when we have to get together with whom and why. A core task of process monitoring is therefore to organize and—again on the basis of observations—steer this meta-process. The quality of process monitoring is dependent on this being done regularly and systematically.

Table 1. *Process monitoring and progress monitoring*

Process monitoring	Progress monitoring
Concerned with key processes for project success	Primarily concerned wit physical inputs and outputs
Measures results against project objectives	Measures results against project targets
Flexible and adaptive	Relatively inflexible
Looks at broader socio-economic context in which the project operates, and which affects project outcome	Focuses on project activities/outcomes
Continuous testing of key processes	Indicators usually identified up front and remain relatively static
Selection of activities and processes to be monitored is iterative, i.e. evolves during process of investigation	Monitoring of pre-selected indicators/activities
Measures both quantitative and qualitative indicators, but main focus is on qualitative indicators	Measures both qualitative and quantitative indicators, but main focus is on quantitative indicators
A two-way process where information flows back and forth between field staff and management	A one-way process where information flows in one direction, from field to management
People-oriented and interactive	Paper-oriented (use of standard formats)
Identifies reasons for problems	Tends to focus on effects of problems
Post-action review and follow-up	No post-action review
Includes effectiveness of communication between stake-holders at different levels as a key indicator	Takes communication between stakeholders for granted
Is self-evaluating and correcting	Is not usually self-evaluating and correcting

Source: World Bank (1999).

Process monitoring can be setup at various levels, and can address the interplay between these levels:

- An individual activity within a project, e.g. tree nursery
- Relations of cooperation within an organization, e.g. between extension team and management of the forestry service
- Cooperation between various actors, e.g. local government, forestry service, user groups, project team
- Institutional and socio-economic environment, e.g. effects of import restrictions or trends of national programs

In practice, process monitoring operates on all levels. Usually we observe both processes closely related to projects, and processes related to the wider context. Moreover, the levels move at different speeds, and are interconnected like spiral staircases. The basic features of process monitoring are the same at all levels. In practice, however, different terms are used: project process monitoring; strategic process monitoring (for context monitoring).

As a rule, we observe processes within an operational project cycle, from planning via implementation through to evaluation (including results-oriented M&E). To take into account the perspectives and interests of the various actors, we need to look beyond this cycle. What this means is: various groups of actors observe, reflect on and steer what we can term their projects. The standard construct project then breaks down into a number of projects or sub-projects of individual actors. Seen from this angle, the project then resembles a platform on which we need to negotiate joint projects with the actors.

The salient features of process monitoring are:

- Process monitoring observes features of process in each project phase and provides feedback for management for making necessary changes
- Process monitoring investigates processes within the community, project and wider socioeconomic context.

- Process monitoring helps projects to learn from their own experiences and adapt to improve their effectiveness over time
- Process monitoring looks at both internal and external processes
- Process monitoring evaluates the quality and effects of project interventions and outcomes
  - Involves participant observation and critical assessment
  - Helps understand the motives, intentions and actions of different actors in a project
- Process monitoring can be used at different levels (individuals, within project, interaction between projects and other actors, wider institutional and socio-economic context) and to analyse the interaction between these levels.
- Process monitoring is also used to assess the impact of changes in project strategies, rules and procedures

9.3.2   Key steps in process monitoring

In networks and partnerships assessment, one of the key elements to be assessed is the partnership process itself. The key steps in the process monitoring are summarized in Figure 1 and discussed below.
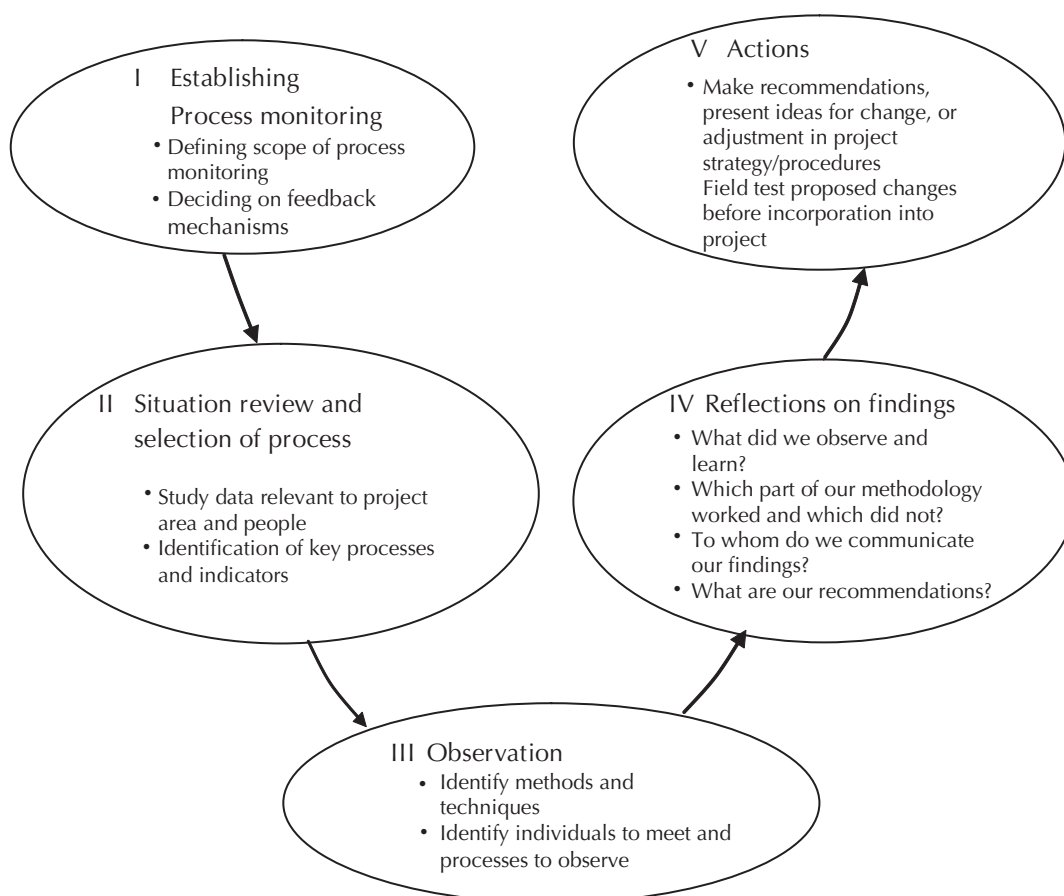
Source: World Bank (1999).
Figure 1. *Steps involved in process monitoring.*

Step 1: Defining scope of process monitoring

It is important to define the scope of process monitoring from the very beginning. In defining the scope it is important to note that process monitoring cannot be carried out independently of progress monitoring. Process monitoring should be an integral part of the projects' own M&E system. Process

monitoring activities should focus on project rules and procedures and communications between key actors and levels. The scope should define the objectives, boundaries, information recording as well as sharing of such information. In defining the scope

- It is useful for process monitoring to be both 'internal' to project, but with 'external' linkages and independent reporting channels
- It is necessary to establish channels and procedures for information flow to and from the unit
- Information should be recorded and shared with key stakeholders
- Findings should be presented in an easily readable and usable form

The ultimate test of the success of process monitoring is whether the information it generates leads to concrete decisions and actions to address critical issues to improve project performance.

Step 2: Situation review and selection process

This step enables the group to reach a common understanding of which processes are important and why? Primarily the step involves collecting data on projects, project area, beneficiaries, discussing issues with key resource people and stakeholders.

There are basically two approaches for selecting key processes for monitoring

- Key processes should be closely linked to project objectives and the project cycle. Key indicators are then identified for each stage in the project cycle. The number of processes selected for monitoring should be limited.
- Process not previously identified for monitoring, but in which the project experiences problems and/or bottlenecks may be added to the key processes identified earlier

The selection of processes to be monitored should be made in consultation with project management, staff, as well as beneficiaries and other relevant stakeholders.

Step 3: Observing key processes

It is important to observe processes as objectively as possible. At times specialized training may be required to minimize biases in people's ability to observe objectively. Collection and analysis of qualitative information also requires relevant skills and experience. Therefore, it is important that process monitoring staff receive appropriate training before they begin their work.

In addition, a number of other questions also need to be answered in order to implement an effective process monitoring.

- Who makes the observation?
- What methods will be used for process monitoring?

The best methodology should be identified and agreed upon in advance. If the issue deals with community processes, then methods such s transect walks, participatory need assessment, participatory discussions, and participatory resource mapping are suitable. Some of the common tools used in process monitoring are summarized in Box 3.

Step 4: Reflections on analysing findings

When the observation is completed, it is necessary to assess the information collected. The team has to address a number of issues when analysing observations. These include:

Box 3: Useful tools for process monitoring

- Participant observation
- Participatory discussion (Focus group)
- Semi-structured interview
- Transect walks
- Participatory resource mapping
- Participatory need assessment
- Process monitoring working groups
- Project planning meetings
- Special studies
- Topical sessions

- What turned out differently than expected?
  - Which part of the strategy to gain insight into the process produced desired results and which didn't?
- Was a cross section of views sought and accommodated?
- With whom do the findings need to be shared?
- In what form should these be presented?

It is crucial to document answers to these questions and communicate to the relevant stakeholders.

Step 5: Follow up action

Based on the observations and analysis the unit/group should make recommendations for project management/institution. It is also imperative to identify and discuss the implications of the proposed changes.

9.3.3 Developing process monitoring indicators

One of the crucial steps in the M&E process is the identification of relevant and critical indicators. Indicators are variables that describe or measure changes in an activity or situation over time. They are useful tools for monitoring the effects of a process intervention.

Developing a set of indicators follow a three - step approach:

- Defining project objectives
- Asking relevant questions (What? Whom? When?)
- Identifying indicators.

a. Defining project objectives and activities

It is practically impossible to identify indicators and use them in the monitoring and evaluation process if the objectives, activities and output of the project are not clearly defined and understood by all stakeholders. Developing an 'objective tree' (based on the problem analysis/problem tree) and distinguishing priority immediate, intermediate and long-term objectives is a good way to start the process. A useful tool for defining objectives is the logical framework analysis.

b. Asking questions

Once the objectives are sorted out and agreed upon, a number of questions need to be answered before identifying indicators.

- What do we want to know? (and how does it relate to the project objectives)
- What information do we need and for what purpose?
- What is the minimum number of indicators that will tell us that we have accomplished the objectives
- How, when and by whom is the information to be collected?
- What are the cost (resource) implications?

Answers to these questions will help us to identify the indicators and establish an M&E system for the project/institution.

c. Identifying indicators

Identification of the final set of indicators should be done in a participatory manner. While identifying indicators it is worth noting that

a. Each objective or activity can be measured by different indicators
b. Indicators may change over time as projects internal and external environment change and as the project activities change
c. Developing useful indicators is a process sometimes involving negotiation between conflicting interests

A final test for the indicators selected is to make sure that they are SMART (specific, measurable, attainable, relevant and timely)

Note:

- Ideally process monitoring methods and indicators should be effectively integrated into the projects M&E system;
- There should be clear criteria for monitoring processes, with clearly defined roles, responsibilities, methodology, realistic time frame and resources for implementation;
- An essential prerequisite for effective process monitoring is open mindedness and willingness to listen to the views of others. Process monitoring must be flexible and adaptive in response to changes; and
- Process monitoring should operate at all levels. Focusing only on one level can be misleading by obscuring the impact of other forces on project effectiveness.

Process monitoring might not be easy, but it does have many advantages:

- We gain access to the perceptual world and experiences of the actors.
- We identify the various interests and action strategies of groups and organizations.
- We become familiar with the passive and active resistance to processes of change.
- We promote the willingness of the various actors to respect different viewpoints.
- We elaborate practical solutions based on the experiences and action strategies of the actors.
- We promote the assumption of responsibility.
- We simplify complex and dynamic processes, which facilitates communication with the actors.

9.4   Evaluation

Evaluation is a much broader concept and is used to assess the following:

- The potential impact of research in priority setting and planning exercises;
- The performance and quality of activities in progress;

- The successful completion and relevance of activities; and
- The ultimate impact of results on the achievements of development objectives.

Any assessment, appraisal, analysis or reviews are in a broad sense evaluative. Evaluations result in a set of recommendations, which may address issues of planning, such as a shift in program objectives or contents or program implementation. Information from an evaluation is used in the management of technical programs, personnel, and financial resources.

Table 2 and Figure 2 below highlight the complementary roles and relationships between monitoring and evaluation.

Table 2. *Complementary roles for monitoring and evaluation*

Monitoring	Evaluation
- Routine collection of information	- Analysing information
- Tracking project implementation progress	- Confirming project expectations
- Measuring efficiency	- *Ex-post* assessment of effectiveness and measuring impact
- Question: 'Is the project doing things right?'	- Question: 'Is the project doing the right things?'

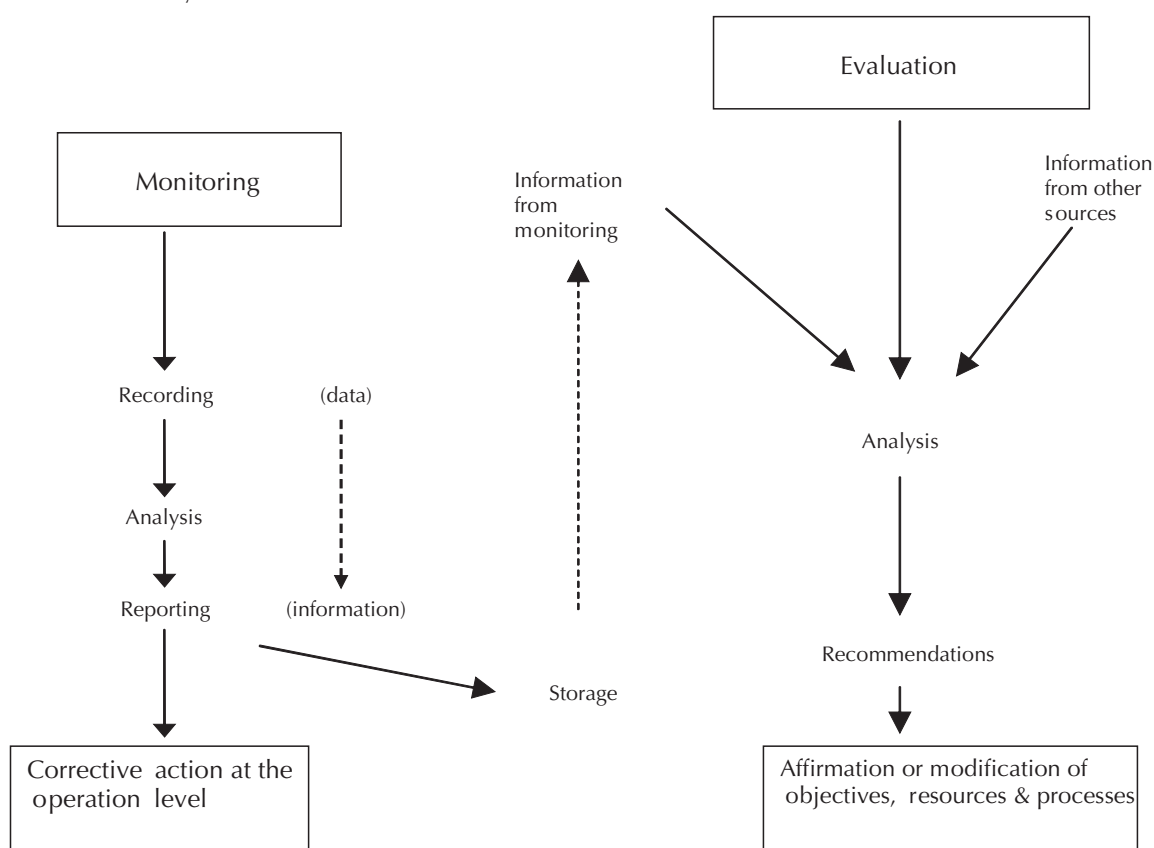Source: Alex and Byerlee (2000).

Figure 2. *Relationship of monitoring and evaluation.*

Evaluation in general addresses four important aspects of the program, namely: performance, quality, relevance and eventual impact.

- Performance compares achievements with expected output. It is primarily concerned with the use of resources and the timelines of the activity and is determined mostly through monitoring and ongoing evaluation. However, assessing the success or failure of research goes far beyond determining whether resources were used according to plan or activities were carried out on time.

- Quality deals with the adherence to accepted standards of scientific work and precision. The quality of research is determined almost exclusively through some form of peer/expert review.
- Relevance of research at each level of the research investigates on research relevance to objectives, which ultimately reflect on the developmental objectives. Relevance is closely related to the problem being addressed and the target group under consideration. Relevance is primarily assessed through peer or expert review and beneficiary assessment.
- Impact deals with the effect of the research output on the ultimate users often referred to as *'People level impact.'*

9.4.1 Types of evaluation

Evaluations are most often categorized according to when they occur in the project cycle and their purpose.

- Occurs before (*ex-ante*) the event—to assess the potential impact of research.
- Occurs during (ongoing) the event—to evaluate the performance and quality of the research project in progress.
- Immediately after the event (*ex-post*)—to determine the successful completion and relevance of research project.
- Several years after research results have been achieved (impact)—to assess its ultimate impact on development.

Ex-ante evaluation

Ex-ante evaluation is a research planning process which includes a comprehensive analysis of the potential impact of alternative activities before implementation. As the name implies the evaluation is done prior to the initiation of the project; at this stage not too much is known about the proposed project and estimates of costs and benefits are sketchy and the values assigned to them are only 'ball-park' figures based on informal judgment.

Methods used are peer or expert reviews using checklists, scoring models, and even cost–benefit analysis. To make *ex-ante* evaluation more effective, there should be participation from different disciplines and more comprehensive criteria must be applied. Through *ex-ante* evaluation, one could define the baseline against which progress will be measured, set targets, and state the assumptions used in making the projections. The indicators to be monitored should also be specified in order to assist *ex-post* evaluation.

Ongoing evaluation

Ongoing evaluations that are conducted throughout the technology development and transfer process are more useful for research management than *ex-ante* and *ex-post* assessments. Here ongoing activities are reviewed at critical stages to determine if they should be continued, modified or aborted. They are used to analyse the use of resources, the quality of research, and the continuing relevance of research programs and projects. Ongoing evaluation is often conducted through peer reviews. Ongoing evaluation addresses problems associated with the day-to-day management of interventions and also can indicate the need for changes in project objectives and targets.

Monitoring is fundamental for ongoing evaluation. It primarily tracks down the provision and delivery of inputs and services, the generation of information on the ability and deployment of staff, infrastructure, equipment, supplies, services, and funds for projects within a program. In on-farm research, the ongoing evaluation is used to obtain feedback from the target group; and is largely accomplished through a series of meetings at the site with peers, farmers, extension staff and NGOs.

Ex-post evaluation (immediately after the completion)

An *ex-post* evaluation, or final evaluation, assesses the project's performance, quality, and relevance immediately after the project completion. It attempts to measure the effectiveness and efficiency of a completed activity and includes an analysis of the original assumptions used in planning. A good *ex-post* evaluation is linked to *ex-ante* evaluation, and can best be conducted where a baseline has been originally defined, targets have been projected, and data has been collected on important indicators. *Ex-post* evaluation is analysed for the project from beginning to end, determining whether project objectives were attained, causes for discrepancies, costs, and the quality and relevance of the research. *Ex-post* evaluation often considers such aspects as the cost effectiveness of research, its potential relevance to national development goals, the response of the research to an urgent and important problem, the acceptance of the results by farmers (end-users) and development agencies, and the contribution of the research to scientific progress.

Common criteria for evaluating scientific research are most notably number and quality of journal publications and instances of citation (citation index). These are not comprehensive enough to consider the appropriateness of the technology or its value to development. Therefore, the classical criteria need to be broadened to include user (i.e. farmers') satisfaction.

The methods typically used for *ex-post* evaluation are statistical evaluation, economic evaluation, agronomic assessment, and farmers/community assessment. Advanced preparation for *ex-post* evaluation should include precise plans on documentation needed, people to interview and sites to visit. Some supplementary information may need to be gathered through surveys or interviews. Most evaluations use a blend of interviews, field visits, observations, and report writing. *Ex-post* evaluation also tries to clarify the internal and external factors affecting the outcome of the project. *Ex-post* evaluation can provide important insights into the research process and provide a basis for comparing alternative organizational methodological approaches. The lessons learned could be systematically incorporated into subsequent evaluations making the processes much more relevant and efficient.

9.5   Impact evaluation

This is a form of *ex-post* evaluation. Impact evaluation attempts to determine the extent to which Technology Development and Transfer (TDT) programs have contributed to larger development goals, such as increased farm production, or improved food security, poverty alleviation etc. Typically, it is conducted several years after the results have been released making it less useful as a management tool than the other types of evaluation. *Ex-post* impact assessments are often used to convince policymakers to allocate more resources to research. If the project and program evaluations are to be used to support impact evaluations, this should be considered during *ex-ante* evaluations and the necessary baseline data and an M&E system should be set up in advance to serve this purpose.

Impact evaluation must distinguish between the contribution research make to national development from the contributions made by other factors such as existence of good extension services, agricultural inputs, adequate infrastructure, and favourable marketing and pricing policies. It has been shown that benefits are relatively easy to attribute in the case of single commodity technologies, such as high yielding varieties of rice under irrigation in Asia. It has proved more difficult to do this in more diverse and complex systems as seen in most of sub-Saharan Africa. The key concepts in *ex-post* impact assessments are causality, attribution and incrementality. These aspects are discussed in subsequent chapters.

Ex-post impact assessments usually require extensive and often expensive data collection and a thorough analysis of socio-economic factors. The results of impact evaluations have broad implications for future priority setting, not only for research, but also for development support services. The types of impacts and methods used are discussed in the following sections.

9.5.1 Meaning of impact

The term 'impact' means different things to different people. In discussing the impact of any research program, one can identify two broad categories of interpretations (Anderson and Herdt 1990). In the first category, some people look at the direct output of the activity and call this an impact, e.g. a variety, a breed, or a set of recommendations resulting from a research activity. Most of the biological scientists belong to this category. The second category goes beyond the direct product and tries to study the effects of this product on the ultimate users, i.e. the so-called people level impact. The people level impact looks at how fit the program is within the overall R&D to discover facts (research) that have practical beneficial application (development) to the society. Impact begins to occur only when there is a behavioural change among the potential users. This second type of impact deals with the actual adoption of the research output and subsequent effects on production, income, environment and/or whatever the development objectives may be. The people level impact of any research activity cannot be assessed without information about the (extent) number of users and the degree (intensity) of adoption of improved techniques, and the incremental effects of these techniques on the production costs and output. The adoption of any technology is determined by several factors, which are not part of the original research activity.

In any comprehensive IA, there is therefore a need to differentiate between the research results and the contributions of research to development, i.e. the people level impact, and both aspects should be addressed. IA is directed at establishing, with certainty, whether or not an intervention is producing its intended effect. A program that has positive impact is one that achieves some positive movement or change in relation to objectives. This implies a set of operationally defined goals and a criterion of success. There is also a need to establish that the outcome is the cause of some specified effort. As such, it is important to demonstrate that the changes observed are a function of the specific interventions and cannot be accounted for in any other way. As pointed out earlier, the three basic principles to be observed in any impact study are causality, attribution, and incrementality.

9.5.2 Purpose of impact assessment

The purpose of IA of agricultural TDT activities depends on when the assessment is done. IA can be undertaken before initiating the research (*ex-ante*) or after the completion of the research activity (*ex-post*) including the technology transfer.

The purpose of undertaking an impact assessment prior to starting a research project/program is to assist the research manager/research team in planning and priority setting activities. This will enable one to:

• Study the likely economic impact of the proposed research activity/project;
• Formulate research priorities by examining the relative benefits of different research programs;
• Identify the optimal combination of research program; and
• In addition, an *ex-ante* assessment can also provide a framework for gathering information to carry out an effective *ex-post* evaluation.

Given the resource constraints confronting the research managers and researchers, *ex-ante* impact assessment is becoming a powerful planning tool in research management.

The various purposes for conducting an impact assessment after the completion of the program (*ex-post*) include:

• To study the impact and to provide feedback for researchers, research managers, planners and policymakers;
• Lessons learned can be used to improve the management and decision-making process with respect to priority setting, implementation, and management of research activities as well as technology transfer;
• For accountability purposes;
• To establish the credibility of the public sector research; and
• To justify increased allocations of research resources.

To sum up, there are four products of concern of collaborative R&D activities: outputs, outcomes, changes in institutional performance, and the final welfare impacts. They are sequentially produced and more difficult to document, articulate, measure, and attribute as one moves from outputs to impacts. Attribution remains one of the methodological challenges in IA studies. Looking into attribution, as far as possible joint impact of various players should be measured rather than trying to separate out the contribution of individual institutions, which may not be feasible in most cases. However, it is important to make sure that the inputs and contribution of all partners are appropriately acknowledged.

Three basic types of impact evaluation are possible: qualitative, quantitative, and a mixture of both. Qualitative evaluations describe the process by which the outputs of research and development activities have influenced institutional innovations and the eventual social impacts. It seems that the most appropriate approaches to IA should involve a mixture of both qualitative and quantitative methods. Retrospective narratives are essential components of the former and indeed provide the basis for quantitative estimates and the related issue of attribution.

9.5.3   Types of impact

Impact studies can be carried out to study the impact of a particular innovation/technology, on a research program, or on a research program plus complementary services (such as extension, marketing etc.). Impacts can also be measured at the individual household level, target population level, as well as national and regional levels (primary sector, or secondary sector, or overall economy). The direct product of an agricultural research project/program may be an improved technology (embodied or disembodied), specialized information, or research results (reports, papers and publications). There is general consensus that an agricultural TDT effort in addition to producing the direct product of research could potentially lead to five different types of impacts, namely production impact, economic impact, socio-economic impact, environmental impacts, and institutional impact. Institutional impact refers to the effects of TDT efforts on the capacity of the research and extension program to generate and disseminate new production technologies. These different impacts and the appropriate methods to measure them are discussed in the following section.

Based on the previous discussions, there are three broad categories of impact that form part of a comprehensive IA exercise. The first is the direct outcome of the research activities. The second, the intermediate impact is concerned with the organizational strategies and methods used by researchers,

and other actors in conducting more effective technology development dissemination and utilization. The third is the effect of the direct product(s) on the ultimate beneficiaries. This is the so called people level impact. The people level impact can be economic, socio-economic, socio-cultural, and/or environmental. This could be measured at both micro and macro level. The various types of impact are summarized in Figure 3.
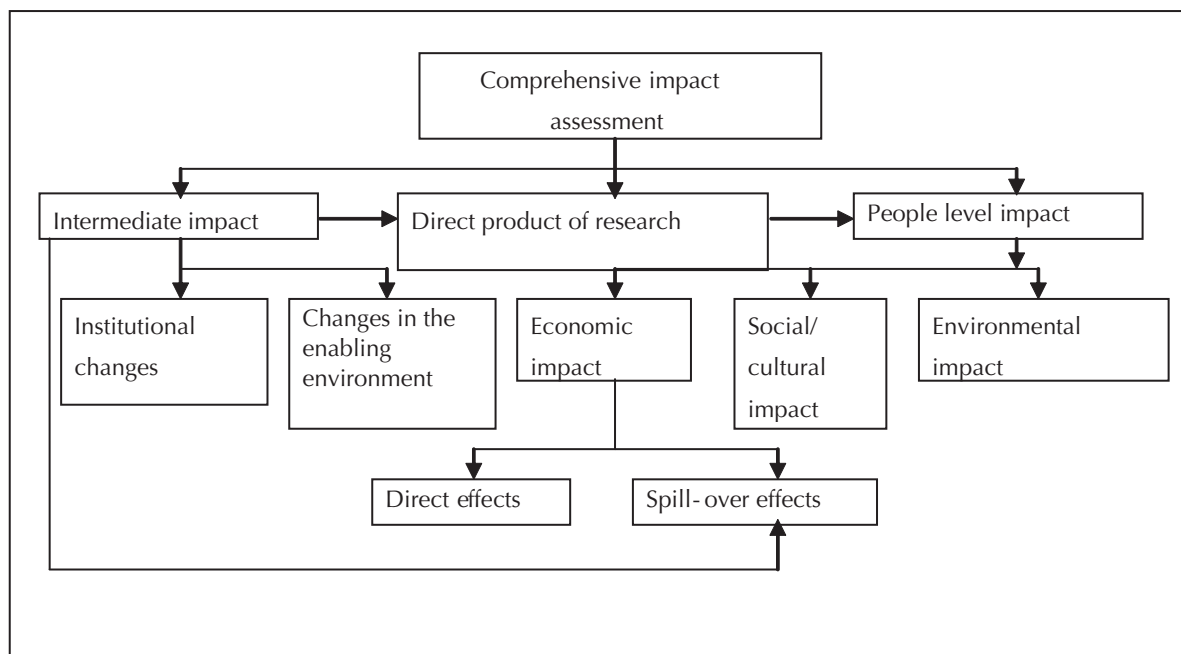
Source: Anandajayasekeram et al. (1996).
Figure 3. *Framework for comprehensive impact assessment.*

9.6   Overview of impact assessment methods

A comprehensive IA should simultaneously assess the various impact of the TDT. The various techniques and methods used to assess the different types of impact are summarized in Table 3 and discussed in the subsequent sections.

9.6.1   Direct product of research-effectiveness analysis

The most commonly used approach for assessing the direct product of research is known as effectiveness analysis. A useful starting point for effectiveness analysis is the logical framework of the project. The logical framework permits the assessment of the degree to which the research activities have made changes in the desired direction. The logical framework itself is a simple matrix that provides a structure for one to specify the components of a program/activity and the logical linkages between the set of means (inputs and activities) and the set of ends (outputs). This logical framework makes the IA process transparent by explicitly stating the underlying assumptions of the analysis.

Table 3. *Impact types, techniques, and methods used in a comprehensive assessment*

Impact type	Method	Technique
Intermediate impact	Survey , monitoring	Simple comparison/trend analysis
Institutional changes		Outcome mapping
Changes in the enabling environment		Impact chain
Direct product of research	Effectiveness analysis using logical framework	Simple comparison—Target vs. actual
Economic impact	Econometric approach	Production function
Micro, macro, spill-overs	surplus approach	Total factor productivity
		Index number methods and derivatives
Socio-cultural impact	Socioeconomic survey/adoption survey	Comparison over time
		Outcome mapping
		Impact chain
Environmental impact	Environmental impact Assessment	Various
		Qualitative
		Quantitative

Source: Anandajayasekeram et al. (1996).

The effectiveness analysis is a simple comparison of these targets to actual or observed performance of the project. Three sets of comparisons are identified in the literature: 'before' and 'after' comparison (also called historical comparison); 'with' and 'without' comparison; and 'target' vs. 'achievement' comparison. The most useful comparison is target vs. achievement. The targets need not be completely achieved for the project to be deemed effective. The movement in the direction of the desired target is evidence of project effectiveness.

9.6.2   Evaluating the impact of intermediate product(s)

The link between the intermediate product and the ultimate economic benefit is not clear and, therefore, tends to be ignored in most IA studies. The evaluation of the intermediate product is made difficult by the fact that the benefits of these products are not easy to quantify. Thus, most studies acknowledge the fact that having the institutional capacity to conduct agricultural TDT is of paramount importance. These studies, however, do not include the benefits in the assessment of the impact. The costs that are easy to quantify are usually included. Thus, the assessment of the intermediate product has been a tricky issue. The practice has been to trace the changes in institutional capacity over time using either simple trend analysis or comparisons over time. This requires baseline information on these indicators and careful monitoring. The results from these analyses can be incorporated into the quantitative analysis through a multicriteria analysis.

9.6.3   People level impact

As pointed out earlier, the people level impact can be economic, socio-cultural, and environmental.

The economic impact

The economic impact of TDT initiatives can be traced through its effect on production and income. The approach used is called the efficiency analysis. Efficiency analysis at the macro level assesses the people level impact by comparing the benefits that society gets from TDT and the costs incurred in conducting TDT programs. The benefits and costs are normally collapsed into a single number, the Rate of Return (RoR). There are two broad ways of calculating the rate of return to TDT: *ex-ante* and *ex-post*.

The *ex-ante* methods are useful as research planning tools as they aid in the selection of the research portfolio, priority setting, and resource allocation. The *ex-post* studies are useful for justifying past TDT investments, and demonstrating the payoff of such investments.

The *ex-ante* methods for estimating RoR include benefit–cost analysis, simulation models, and mathematical programming models. The last two methods are data and skill intensive and, therefore, rarely used.

Ex-post methods for RoR estimation can be divided into two broad groups. The econometric method uses the production function in which research and transfer activities are considered inputs and give the Marginal Rate of Return (MRR) to agricultural TDT. The MRR quantifies the returns to the last dollar expended in the research project. To determine the optimal allocation of funds, it is necessary to know the marginal benefit of the last research dollar invested. This is the only method that allows for the separation of the effects of research from those of extension and other support services. However, the data requirements have reduced the extensive use of this method.

At the micro level, i.e. individual farm level partial budgets can be used to assess the benefit of new technology to the farmer.

The second groups of methods are the *surplus approaches*. These methods calculate the benefits of TDT as the net change in producer and consumer surplus, employing a partial equilibrium analysis. The different techniques are based on the difference in the assumed nature and elasticities of the supply and demand functions. The benefit–cost approach has various combinations of the nature of the supply shift and the functional form of the supply and demand curves. The cost-saving approach is in between these two approaches, but based on the same theoretical foundation.

These methods calculate the Average Rate of Return (ARR). The average or internal rate of return takes the research expenditure as given and calculate the RoR for the project or program in its entirety. This provides information to assess the success of the project in terms of generating adequate returns. However, the ARR measure is not always helpful in determining if the allocation of research funding to the project was appropriate. Because of the historic nature of *ex-post* evaluation, the results of these studies have mainly been used as political instruments to secure future funding. They demonstrate how efficient past investments were, but not necessarily where research resources should be allocated in the present, or the future. For our purposes a simple technique such as a partial budget and cost benefit framework can be effectively used to estimate RoR of TDT efforts. The different techniques used to estimate the RoR are discussed individually in the subsequent chapters.

Socio-cultural impact

Socio-cultural impacts include the effects of research on the attitude, beliefs, resource distribution, status of women, income distribution, nutritional implications etc. of the community. These can be assessed through socio-economic surveys and careful monitoring. To be cost effective, appropriate socio-cultural questions can be included in adoption survey questionnaires.

Environmental impact

The adoption of modern agricultural technologies has often resulted in external benefits and costs largely through its effects on the environment. For example, the use of fertilizers or pesticides may lead to surface and ground water contamination by toxic chemical and algae, resulting in significant environmental costs. On the other hand, adoption of minimum tillage technology and herbicides by

farmers has probably had environmental benefits in the form of reduced soil erosion and nutrient loss. The full assessment of environmental quality issues requires complex analysis of physical, biological, social, and economic processes. This also leads into some measurement problems. Such a breadth of analysis is likely to be beyond the scope of most agricultural research assessment activities. Nevertheless, some assessment of environmental impact is necessary when evaluating agricultural research, especially where the environmental impact of the application of the research is likely to be significant. In the absence of data required for a thorough analysis, it may still be possible to identify qualitatively the nature of the social benefits and costs, together with the likely gainers and losers.

9.7   Multicriteria analysis

As discussed in the previous sections, due to the wide-ranging implications of agricultural research to the society, no single method is sufficient to adequately capture these impacts. Therefore, multicriteria analysis is often recommended for assessing the impact, which may also use a variety of methods. In this way, one could use more than one measure to assess the impact. Using the available information, one can construct an 'effect's table' or 'effect's matrix' which can be used for comparing projects. The columns of the effect's table represent the alternative projects/activities, and the rows represent the criteria by which the alternatives are evaluated.

9.8   Assessing the impact of partnerships and networks

In any intervention, partnership can be viewed as a means to an end or an end in itself. If partnership is the end, then the criteria used for assessing the partnership may be different. In the real world, partnerships and networks are a means to an end. The ultimate end in any project is defined in terms of the goals and purpose of the intervention. If one has to assess the impact of partnership, we need to consider a situation where the individual organizations pursuing the same goal vs. the organizations coming together to pursue the same goals. Keeping everything else same, the difference between the two situations (the 'with' and 'without' situation) will give some assessment of the effect of the partnership. Thus the partnership assessment raises some critical questions about the extent to which collaboration actually adds value in terms of both processes and outcome and how this judgment might be made. It is often difficult to have the counter factual situation, making the assessment of the impact of partnership more difficult and more challenging. Therefore, in many situations the impact of the intervention is assessed in terms of the stated goals and purpose and during the course the partnership process is also assessed.

Under normal circumstances the impacts of R&D partnerships can be studied at different levels: generation of new knowledge, technology and innovation; changes in attitude of the various actors; strengthening of capacities; and finally the impact on the target groups (people level impact) such as policymakers and local populations. It is also important to focus on wider context to determine and learn from intended and unintended, and positive and negative impacts of research partnership projects on various stakeholders and at various levels.

In any interventions, combination of a set of resources leads to the implementation of a set of activities producing certain outputs (the direct products of interventions). As a consequence of using the outputs, the initial effects (the immediate outcomes) can be observed (e.g. crop yield/livestock productivity increases, soil erosion decreases, contributes to green house gases) in the form of both benefits (e.g. higher crop yield is marketed and household income increases) and social costs that stimulates a

learning process. Attitude and perception of people change and further impacts (intermediate impacts) may be triggered (e.g. local people gain more confidence, performance of the institutes/organizations enhanced. Finally, all these changes relate to the overall goals in terms of poverty alleviation, food and nutrition security, environmental impact as well as empowerment of the local people, i.e. the developmental impacts (people level impact).

Thus the impact studies of partnership projects focus on four specific domains.

- The new knowledge and technology (finding solutions and key problems): the direct outputs.
- Individual and institutes capacity building; changes in the attitudes of change agents, changed processes: the intermediate impacts
- Benefits to end users at policy levels: decision-makers, politicians, administrators; development agencies, donors etc.
- Benefits to end users at societal level: farmers, women groups, Community-based Organizations (CBOs), local populations, private sector etc.

Like any other R&D impact studies, the issues of causality, attribution and incrementality are also relevant to partnership assessments. The impact chain and the associated attribution gap are presented in Figure 4.
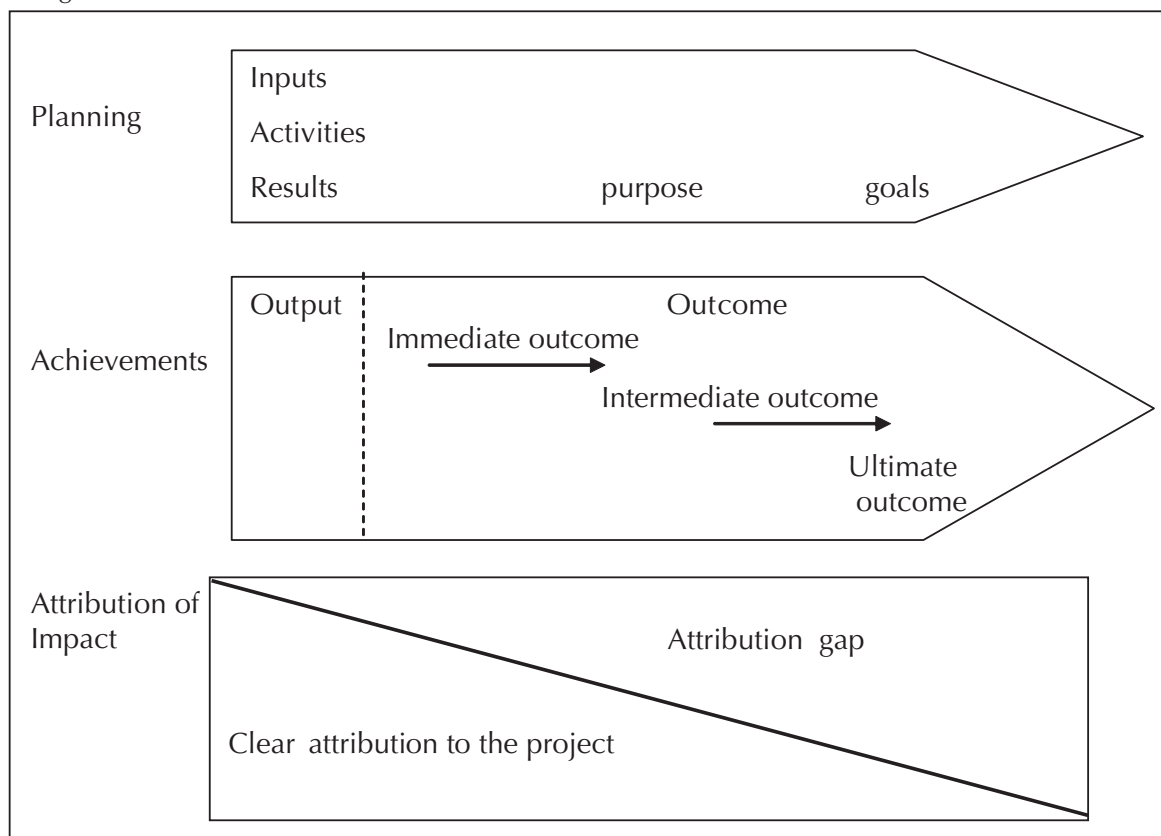

Figure 4. *Impact chain and attribution gap.*

9.8.1   Approaches to evaluate partnerships

Sullivan and Sketcher (2002) summarized the existing approaches to evaluate partnerships into a number of categories:

- Value for money evaluation: This approach emphasizes on questions of economic efficiency and to a lesser extent on effectiveness.

- Outcome focused evaluation: Here the emphasis is placed on the assessment of the outcome of the collaborative activity; and how these outcomes are achieved.
- Process outcome evaluation: Which examines the process of implanting an intervention through partnership in order to understand whether and how the objectives of the initiatives were met. This approach attempts to elaborate the circumstances in which particular intervention takes effect.
- Stakeholder or 'Interactive' evaluation: Which requires the consideration of the views of a whole range of stakeholders. The underlying assumption here is that the different stakeholders will have differential access and influence on the partnership as well as over the evaluation process.
- Evaluation of the collaborative mechanism: This approach focuses on the assessment of the means of collaboration, therefore on the partnership itself.

In any empirical impact study, one needs to consider all these aspects simultaneously. Atkinson (2005) developed a three-step process to guide partnership evaluation.

Step 1. Identifying key dimensions of evaluation. These are the key areas of partnerships that have been identified as having sufficient weight to warrant evaluation.

Step 2. Identification and description of sub-dimensions. Here each dimension identified in step 1 is broken down into sub-components.

Step 3. Assessment of sub-dimensions based on the available evidence.

Based on this, he proposed a conceptual framework to assess the partnership as shown in Figure 5. There are a number of similarities between this framework and the framework developed by Anandajayasekeram et al. (1996) which addresses the impact of any R&D investment.
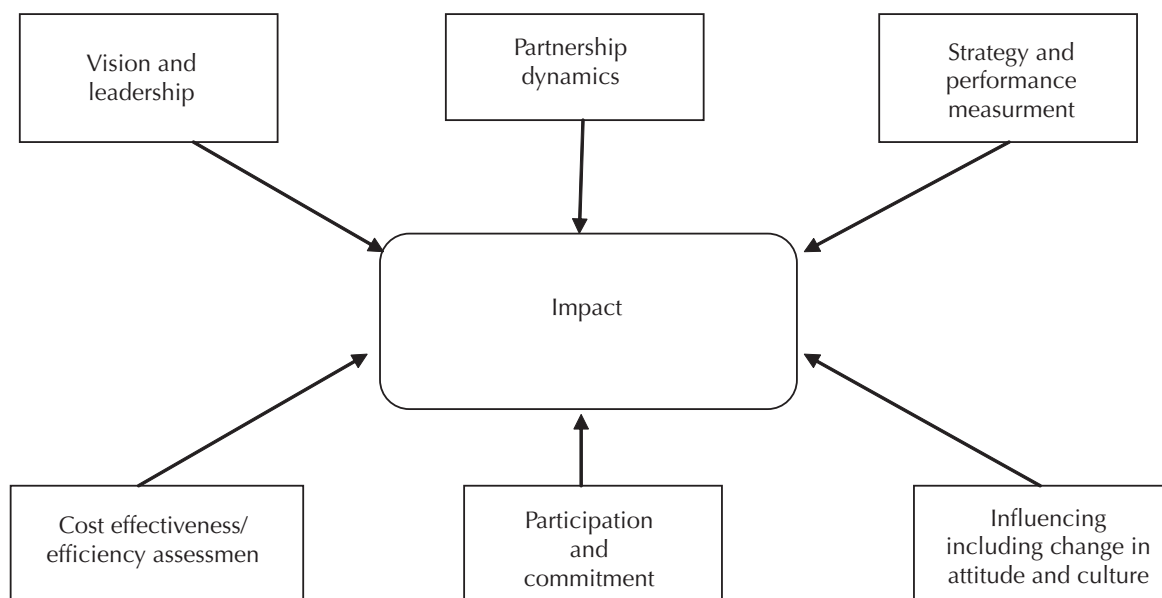
Source: Atkinson (2005).
Figure 5. *Evaluation framework for partnerships.*

In Atkins's framework, more emphasis is given to the partnership process. Some of the key questions related to the process that need to be addressed in the evaluation are:

- Are there shared goals, values and principles among the parties?
- Is there clear evidence of commitment in host organizations to working in partnership?
- Does the group member have the delegated authority to fully represent their parent organizations?
- Do the group members adequately present the partnership's agenda back in their parent organizations?
- Have the involvement of the partners fundamentally impacted on how organizations and agencies plan, deploy resources and define roles, responsibilities and relationships?
- Is there a genuine commitment to joint working within the individual organizations concerned?
- Are there effective methods in place for involving the ultimate beneficiaries in the entire process?

Any conceptual framework for partnership assessment should therefore address the progress of the intervention (conventional) the processes involved; the performance (in terms of output) as well as the outcome (immediate and intermediate) and the impact (the ultimate outcome or the developmental goals) at the societal level. A conceptual framework for assessing partnership projects and program is developed by combining the frameworks of Anandajayasekeram and Atkinson and is presented in Figure 6.
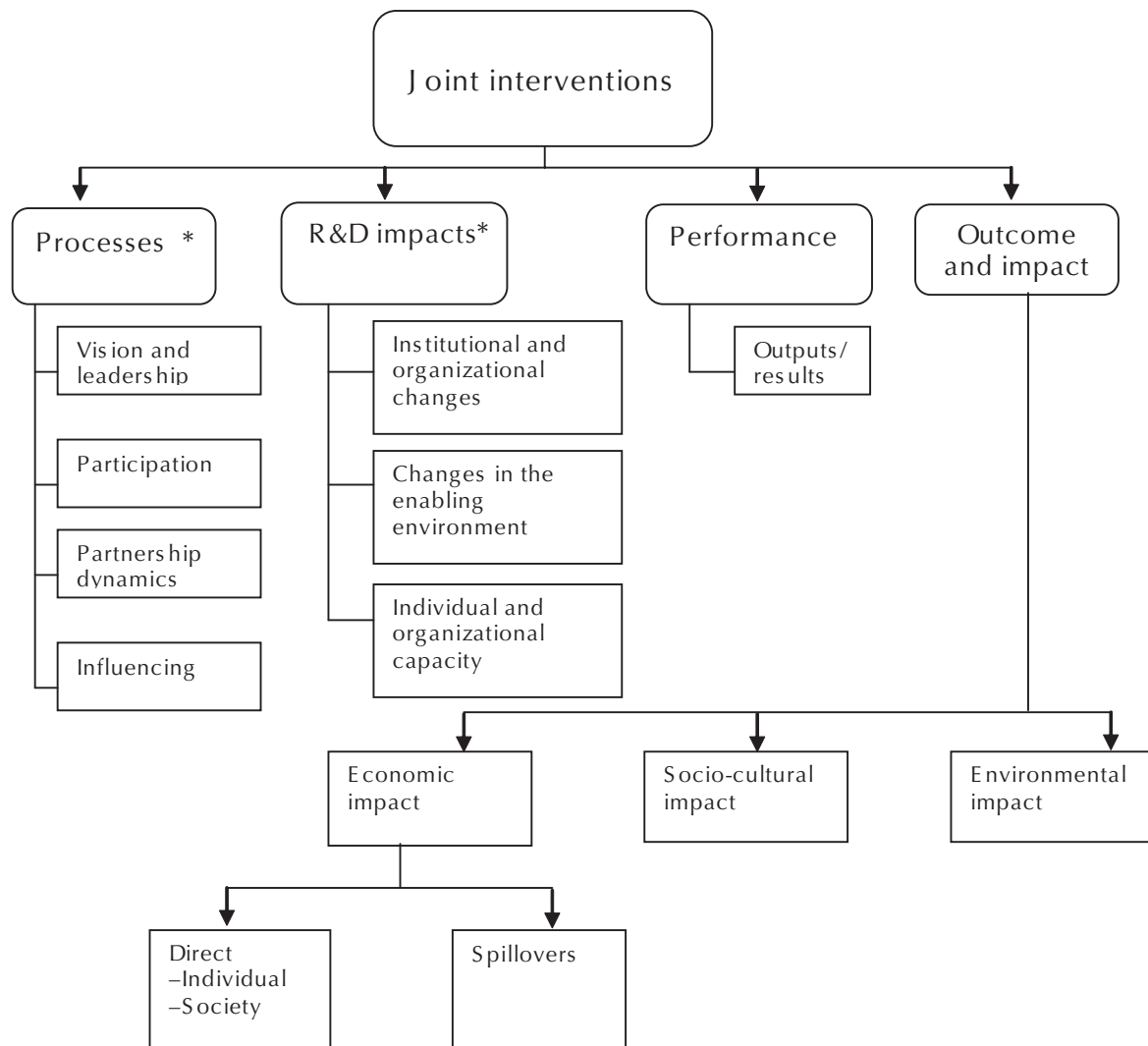
9.10   Considerations in designing M&E systems

M&E in the context of partnerships introduces some special considerations that should be taken into account in M&E system design.

First input-level monitoring has a particular importance in any partnership. Partnerships rely on resources leveraged from multiple partners, and in many cases, these will not be documented in a legally binding obligating agreement; it will be important to build in a system to track the level of resources committed and disbursed to the partnership by each resource partner. This information is needed to provide assurance to all partners that each individual partner is meeting its responsibilities and there is an adequate flow of resources for meeting partnership objectives.

Second, output-level monitoring is more challenging in a partnership due to the need to separately track activities being carried out by each implementing partner and to develop common measures for similar activities being carried out by different partners to allow for a 'summing up' of the accomplishments of the partnership as a whole.

Third, assessing the intermediate results and development impact of a partnership is uniquely challenging. For one thing, rarely will partnership objectives completely overlap with the objectives of any one organization's strategic plan. For another, different partners may define partnership success in different ways and hence be interested in tracing different partnerships 'results'. All of these are legitimate measures of partnership 'success' that need to be incorporated in order to determine whether a partnership is meeting the distinctive objectives of each partner. The challenge is to knit these differing measures of success into an analytical framework that integrates each one into the strategic logic of the partnership as a whole.

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                    ┌──────────────────────┐
                    │   Joint interventions │
                    └──────────────────────┘
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| Processes * | R&D impacts* | Performance | Outcome and impact |

Processes *
- Vision and leadership
- Participation
- Partnership dynamics
- Influencing

R&D impacts*
- Institutional and organizational changes
- Changes in the enabling environment
- Individual and organizational capacity

Performance
- Outputs/results

Outcome and impact

- Economic impact
  - Direct
    –Individual
    –Society
  - Spillovers
- Socio-cultural impact
- Environmental impact

* These two sets will also contribute to spill-over effects.

Source: Adopted and modified from Anandajayasekeram et al. (1996); Atkinson (2005).
Figure 6. *Conceptual framework for assessing collaborative R&D projects.*

As always in designing any M&E system, there is the need to strike a balance between the value of the information collected and the costs in time and money to collect it. The key consideration is what information is needed to:

- Effectively manage partnership resources, ensuring that partnership managers can get information they need to make mid-course corrections as appropriate;
- Properly account for use of taxpayer and shareholder funds; and
- Meet priority information needs of other stakeholder groups, such as host government or other donor officials engaged in related development programs, additional partners who may be sought in the future to sustain or expand the partnership, or others.

Determine what information is needed by whom and with what frequency and rigor will drive the design of any M&E system. Doing this in the context of a partnership requires intensive consultation with all partners. Once the scope of the desired system is defined, partnership managers then must agree on how M&E activities will be funded, who will manage them, and how widely the data and analyses will be shared.

The following framework could be used to systematically collect and analyse issues of partnerships and networks, to see if they are satisfactory in terms of their results and the way they manage their collaboration process.

- Understand the collaboration process in partnerships and networks and see how well it works;
- Assess if the partnership and networks generate the expected and relevant results and it does this in an effective way;
- Identify the strengths and weaknesses of partnerships and networks in areas related to trust, administration, management, leadership and the synergy it creates,
- Learn how it can make its collaborative process work better, when it still has time to take corrective action;
- Document the value of its collaborative process to partners, donors and the community;
- Make partnerships and networks more responsive to partners and the broader community; and
- Get agents more involved in the leadership and management of the partnership.

The evaluation framework presented in Table 4 could assist in this assessment.

Table 4. *Evaluation framework for partnerships assessment*

Key dimension	Sub-dimensions	Evidence based question
1. Impact: The purpose is to assess the extent to which the partnerships has added value and achieved a greater impact than would have been achieved without its existence. This deals with the overall effectiveness and performance of partnership. The responsibility of the team here is to look for both qualitative and quantitative evidence	1.1 Quality	• To what extent has partnership working brought about an improvement in the quality of the service which would not otherwise have been achieved?
	1.2 Innovation	• Has the partnership been innovative in the development of new services or approaches which would not otherwise have been introduced?
	1.3 Integrated services delivery	• From the perspective of service users, has partnership working resulted in improved and integrated service delivery on the ground?
	1.4 Changes to existing services	• Has the delivery of existing core services changed significantly to meet the needs of the users more effectively?
	1.5 Resources	• Has partnership working enabled pooling of resources or an increase in the scale of services to reach more beneficiaries and/or more consistently?
	1.6 Efficiency	• Is there greater efficiency in the way resources are being used?
	1.7 Contribution to developmental goals	• What has been the impact on the livelihood, environment and other developmental goals, that could be attributed to the partnership?
	1.8 Evaluation of R&D Outputs	• What costs are involved in creating and running the collaboration
		• What products, results, and benefits (company and social) are obtained form the innovations to be generated in the partnership?
		• How does the collaboration affect production, productivity and income of the agents in the agricultural sector?
		• What is the perception of participating agents on the worthiness of the activities conducted in the collaboration?
		• What minimal expectations on benefits do participating agents have with regard to the collaboration?
		• How do participating agents behave strategically to insure that they attain benefits from the collaboration?

2. Vision and strategy: The purpose is to see to what extent the partnership has been able to develop a shared and cohesive vision as an outcome of effective partnership. The team has to identify critical assessment criteria and generate qualitative and/or quantitative evidence	2.1 Future orientation	• Is the partnership future orientated with key individual/s in place who can exercise leadership and crease a vision though personal skills (rather than position or power) to catalyse, champion and nurture collaboration between individuals and organizations and secure the necessary resources?
	2.2 Making it happen	• Are there key individual/s in place to make it happen possessing the skills to establish, facilitate and co-ordinate collaboration?
	2.3 Creating opportunities to lead and partner	• How have leadership opportunities been created at all levels to empower and facilitate different individuals from a range of organizations to take up leadership positions?
3. Partnership dynamics: This deals with how effectively the partnership operates as a partnership. The purpose is to determine to what extent the partnership has developed appropriate structures processes, resources and culture conducive for collaboration	3.1 Evolution of partnerships	• What reasons led or will lead to the collaboration? What did partners have in mind when entering the arrangements? • How did the negotiations take place leading to the partnership contract? • Which catalysing agents (internal and external) have been supporting the creation of the collaboration? • Where did the initiative and the motivation for the collaboration originate from? • What do agents expect from the other participating agents in the collaboration? • What is the level of trust among the participating agents? Which mechanisms exist to create trust among the partners? • Are there positive unexpected outcomes from the partnership? • What are the companies and research organizations efforts to think on strategic market opportunities? • Have the objectives of the partnerships changed or been redefined over time? • Is there space for research teams in the partnership to involve in creative thinking on new product ideas?
	3.2 Functioning of partnerships	• How are decisions made in the collaboration? Who takes them? • Which governance models are used in the collaboration? • Which financing arrangements assure the collaboration? • Which unknown and conflicting actors; constellations did occur in the collaboration? • Which legal rules apply in repartition of resources and redistribution of benefits? • What obstacles loom in the partnership with regard to differences between the partners (language, culture, status, world view, bottom line)? • What measures are in place to control use of funds and achieving of objectives? • Which mechanisms of interaction and exchange of information exist in the collaboration? What information has been exchanged? How many agents have been contacted for how many times on what issues?

	3.3 Structure and processes	• Does the partnership have in place appropriate organizational structures and processes to deliver partnership activities?
	3.4 Trust	• Has trust been built amongst individual organizations and stakeholders to facilitate collaboration?
	3.5 Commitment to an ethos of collaborative working	• Is there a commitment to an ethos of collaborative working evidenced by shared values and common goals, the decentralization of decision-making and the development of new roles and relationships?
	3.6 Communication	• Are the purpose, achievements and need of the partnerships being effectively communicated and promoted internally and to key external target audience/stakeholders?
	3.7 Learning	• Is that evidence of the learning being built into collaborative processes to improve the ability to work together and the effectiveness of partnership activities?
	3.8 Capability	• Does the partnership have the capability to deliver on its agenda through having access to adequate resources and the development of appropriate skills/competencies to support collaboration working?
4. Strategy and performance measurement: The purpose here is to assess to what extent the processes for strategic and performance measurement have been embedded within the partnership and the degree to which they are effective	4.1 Developing a strategic vision	• Has the partnership developed a strategic vision setting out its long-term vision based on identified need and a clearly charted strategic path as to how this will be achieved?
	4.2 Setting objectives and performance targets	• Has the strategic vision been translated into challenging and specific strategic objectives and performance targets, i.e. results and outcome?
	4.3 Formulating a plan to achieve those objectives and performance targets	• Does the partnership have a clearly defined plan setting out how those strategic objectives will be achieved, matched to its resources, competencies and capabilities?
	4.4 Implementing and executing this plan	• Are processes in place to ensure that the strategy is flexible and adaptable?
	4.5 Evaluating performance and reformulating the strategic plan and/or its implementation	• Are mechanisms and resources in place to implement that plan effectively to ensure that strategic objectives are achieved on schedule?
		• Have processes been established to evaluate performance against the achievement of strategic targets to take necessary corrective action?
		• Is the strategy kept under review in light of the changing internal/external environments?
5. Influencing: The purpose here is to determine to what extent the creation of partnership has enhanced the joint understanding of the political, organizational and funding context in which the partnership operates and how effectively it influence at different levels to bring about change	5.1 Influencing funders and policymakers.	• Is there evidence of the partnership being able to influence policymakers and donors in terms of the way they work, policy and strategy development and funding and resource deployment?
	5.2 Influencing partner organizations	• Is there evidence of the partnership being able to influence partner organization mainstreaming the approach into their overall planning and resource allocation?
	5.3 Influencing other relevant partnerships/ initiatives	• Is there evidence of the partnership influencing and creating appropriate linkages with other relevant partnerships/initiatives?

6. Participation: the purpose here is to assess to what extent the partnership actively promotes the involvement of end users and communities as stakeholders in collaborative action	6.1 Membership	• To what degree are the end users and communities involved in the planning and implementation processes?
	6.2 Community development	• Is community development utilized or promoted as a method of working to achieve objectives?
	6.3 Consultation with end users	• What is the extent of consultation and user involvement in decision-making about the planning and policies and other service delivery aspect?
	6.4 Communication	• How effective is the communication strategy to raise awareness and community support?
	6.5 Generating evidence and knowledge	• How does the partnership tap into community and user involvement to generate evidence and knowledge? i.e. participatory assessment
	6.6 Reduction in social exclusion	• Is there evidence of the partnership empowering communities to reduce social exclusion, and enhance continuity and sustainability
7. Cost effectiveness: The purpose here is to enable the partnership to weigh the cost against achievements and thus be able to substantiate how it is generating value for money for the range of stakeholders	7.1 Costs and benefits	• Proactive monitoring of the costs (direct and opportunity costs) of working in partnerships to establish whether or not these costs are out weighed by the achievements of the partnership. This should be an integral part of the overall assessment and complementary to other dimensions discussed earlier

Source: Adopted and modified from Atkinson (2005).

The critical questions raised with respect to the various dimensions should be addressed in the assessment. It is crucial to use the appropriate tools and methods to generate both qualitative and quantitative evidence to make an informed judgment about the performance and outcome.

Any assessment should:

- Demonstrate to partners the value of their participation as well the achievement of the partnership to the others.
- Ensure that partnership focuses on priority objective and that these are aligned across partner organizations.
- Challenge poor performance of the partnership
- Improving decision-making by providing feedback on progress, identifying areas where action is required to improve performance and reviewing resource allocation.
- Provide the basis for learning and development.

The methodology and approach should facilitate the evaluation of a complex and multifaceted partnership. The framework used should allow judgments to be made about the overall effectiveness of collaboration, facilitate debate about its sustainability and future direction and identify clearly defined areas for improvement, development and learning. It is important to keep in mind that no single evaluation framework is applicable to all partnership. The evaluator should look at the partnership under consideration and modify the framework to suit the specific nature and context.

9.11 Conclusion

Monitoring, evaluation, and impact assessment are critical activities in planning and implementation of R&D projects and programs. These set of activities will enable the various actors to be accountable and be able to demonstrate the impacts of R&D investments. Multiple tools are used to achieve this purpose.

The important thing to keep in mind is that, to be effective, M&E and IA should be an integral part of project planning and implementation. Hence, the culture of M&E and IA should be institutionalized at all levels. Please note that partnership is a means to an end. Hence in assessing the partnership projects, adequate attention should be focused on processes as well as the outputs and outcomes of the intervention. The intermediate impacts associated with the partnership processes are equally important as the outputs and outcomes of the intervention.

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Session 9: Exercise: Studying key features of evaluation activities
(group work)

1. Form four groups of participants, each group elects a rapporteur.

Phase 1. Group work (30)

2. Discuss the project you were handling and respond to the questions below. Use the worksheet (handout 9.4) to record your responses.
3. Assume that you are in charge of setting up a monitoring evaluation system to assess the performance and impact of the project.
   a. Please develop the objective hierarchy (the logic path from input to impact—including partnership)
   b. Identify the relevant indicators/processes/products and methods you would employ to collect the data.
   • Note: anticipate and consider the indicators that each stakeholder would like to be included.
   c. Identify appropriate stakeholder(s) who will be responsible for these tasks.
   d. How do you want to use the lesson learned.

The groups organize their presentations, and the rapporteurs write the results on flipcharts and prepare to present their groups' results. (30 minutes)

Phase 2. Reporting and discussion (30 min)

4. Rapporteurs present the groups' results to the audience. Each rapporteur has 5 minutes to present the results. (20 minutes)
5. After the presentations, the trainer invites participants to participate in a plenary discussion. (5 minutes)
6. Trainer provides feedback on the content and closes the session. (5 minutes)

Session 9:   Exercise: Worksheet

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Session 9: Reading materials

Participatory impact monitoring (PIM)

Introduction

Participation has become a widely accepted strategy for planning, implementation and evaluation of R&D projects. The participatory approach values the input of the beneficiary and becomes associated with increasing the respect for and incorporation of indigenous knowledge, or beneficiary knowledge, in all aspects of a program or project. Participation occurs during the entire project cycle, namely: need assessment/problem identification, project/program design including feasibility analysis, project/program implementation; as well as monitoring and evaluation including impact assessment. The logical framework approach often used to identify objectively verifiable indicators for this purpose. It has been argued by development practitioners that this so-called traditional monitoring and evaluation cater for evaluating economic and technical impact and what is needed when dealing with communities is system of monitoring that may address the 'softer,' 'hidden' and 'informal' impact that the project may have on the target beneficiaries. These impacts are called 'socio-cultural impacts.' Traditional M&E systems are used to measure 'objectively verifiable indicators' whereas socio-cultural analysis wants to understand and develop qualitative indicators. Participatory impact monitoring (PIM) is an emerging method to assess the socio-economic impact of a project/program on the target beneficiaries—largely based on subjective judgment and perceptions of the stakeholders. The various aspects of PIM are discussed in this chapter.

Definition and objectives of PIM

The whole process of evaluation process since its inception has gone through several evolutionary stages. The current stage of development is called the fourth generation evaluation. The fourth generation evaluation deals with both subjective and objective means of assessment. Participatory impact monitoring (PIM) is one of the fourth generation techniques and it uses subjective interpretations as foundation for evaluation.

PIM is defined as a 'method that is used to evaluate the socio-cultural impact that a project has on the project environment.' Several autonomous actors are involved in PIM. These may be, according to context: farmer groups, self-help groups, development organization, NGOs, and the funding agency. These are what we usually call 'stakeholders' in a development project. PIM recognizes the subjective perceptions of all stakeholders! In other words, PIM is based on the joint perception of impacts by stakeholders.

Monitoring of budget, activities, and project objectives are catered for by conventional M&E systems. Therefore, PIM focuses on subjectively important changes. And since many actors are involved in a project, and because a project has got many impacts of different kinds, it is important to recognize both quantitative as well as qualitative aspects.

PIM invites members and stakeholders to observation, reflection and decision-making with respect to a project. The practical purposes of monitoring are: checking, reflection and learning. On the one hand, reflection takes time, but PIM argues that reflection, at the other end, saves time, because if you reflect you may avoid time-wasting activities. In this sense, 'reflection is investment.'

It is believed that the involvement of all stakeholders in the monitoring exercise will improve the realization of projects. The objectives of PIM are then to:

- Gear activities to members' needs;
- Involve members in observation, reflection and decision-making; and
- Strengthen the involved organization's structures

In order for PIM to be applicable, stakeholders must be willing to be flexible and to face a change in the project, or operate according to the 'trial and error' technique:

- To move from more rigid schemes of evaluations to continuous monitoring;
- Move a little bit from the factual to the social level;
- To be more attentive to subjectively important changes rather than objectively verifiable indicators; and
- Begin to perceive trends rather than to determine exact information, and emphasize informal— rather than formal structures.

Against this background, we PIM argue that:

- Objectively verifiable indicators function mechanically; and
- In dealing with community-based development programs one needs simple monitoring systems and indicators.

Key elements in PIM

PIM is usually conducted at all levels of stakeholders in the form of groups. This adds an additional requirement for PIM to be effective, such as regular group meetings, the interest of members that the group leaders are willing to communicate, and that group members are willing to invest a little time in joint management.

To sum up, we may say that the key elements in PIM are the following:

- Interaction between the project actors. Each group of actors covers its area of interest. A systematic mode of observation is not achieved by accumulating data, but only through co-operation between actors. The project data and autonomous monitoring systems of the individual actors are discussed regularly at Joint Reflection Workshops. If the aims and perceptions of the individual actors differ, PIM may serve as an early warning system.
- Informal structures play a significant role in PIM. The significance of the informal structures is underlined by the existence of the different actors participating in monitoring. The observation criteria, indicators, and reporting only have to be suitable for the respective actors, so that they can make decisions.
- The more intangible the goals, the less exact the information that can be obtained. PIM is especially suitable when we are dealing with development goals, thus catering for the subjective interpretations of all actors involved.
- PIM wants to encourage actors to form hypotheses about their expectations. This means that since the goals of PIM are intangible, we cannot expect to obtain exact information. Even if the information is not accurate, it is first assessed within a group, verified and disputed and, if necessary, supported by additional perceptions from other group members. Therefore, the group serves as a filter and corrective mechanism. So, rather than perceiving objectively verifiable facts, PIM aims at discerning trends. This means that:
  - Inaccurate observations are permissible
  - No formal indicators are expected

PIM does not make a strict differentiation between changes, effects, and impacts. Firstly, PIM rather tries to identify the subjectively important changes at the beginning. Only in a second step does PIM determine how these changes are related to the activities of the project actors and, hence, they become effects. Thirdly, the performance and range of changes are determined by regular monitoring. Due to this 'self-cleaning-mechanism,' effects and performance are filtered out mechanically.

The key elements of PIM are regular observation and reflection at different intervals and to a different depth at the individual level. PIM can be used at any stage in the project cycle, since it is not based on formal specifications or plans.

PIM contains elements of both formal logic and network logic. Expectations, as we shall see below, turn into indicators, which may be used for purposes of formal logic. The different actors involved also provide PIM with a natural network logic. Additional spill-over effect in the form of learning processes.

Special features of PIM

The special features of PIM are:

- Complementary to conventional, or formal, M&E methods;
- Goal oriented;
- Emphasizes socio-cultural impact;
- Based on informal processes and structures;
- Indicators may not always be exact, but will however illustrate essential trends quickly and plausibly;
- Subjective evaluation is an important selection instrument. PIM wants a solution that is subjectively the best for all actors;
- Uses limited perceptions to recognize patterns and interpret them;
- Guided more by experience and intuition;
- Promotes autonomous activities of the stakeholders;
- Encourages co-operation and participation; and
- Self-help promotion by stakeholders

Steps in PIM

PIM is performed in several steps, and is ideally conducted simultaneously by all actors involved in their respective locations and at their respective levels. The different groups regularly exchange their information, perceptions, and interpretations at Joint Reflection Workshops, discussing their expectations and fears regarding the project, thereby enhancing understanding between the groups. A systematic mode of observation is not achieved by accumulating data but only through co-operation between actors. The more congruent the aims and expectations of the individual actors are, and the more they are in agreement with the overall project goals, the more smoothly and efficiently PIM will function. The aim of the Joint Reflection Workshop is to discuss and communicate the observations of those involved regularly. At this occasion observations are compared, the socio-cultural impact is analysed, decisions are taken, and, if necessary, measures and decisions may be taken to improve on the monitoring. The first year it may be useful for the Joint Reflection Workshop to meet every three months. After the first year, an annual meeting may be enough. In order to set up an effective PIM, several basic questions need to be answered.

What should be monitored?

The first step of PIM consists in determining what it is to be monitored. It is useful to monitor informal and comprehensible objectives, such as expectations and fears, and the effects that were not planned. The group should systematically monitor the changes that are important to them. We can say that PIM aim at collecting fears and expectations, by answering the following questions:

- 'What changes do we expect from the project?'
- 'What changes do we fear from the project?'

By means of prioritizing, the group may then reach consensus and select 3–5 important aspects. This process should be dynamic. Therefore, the expectations and the fears should be corrected and refined continuously. The project team on their behalf may reflect over the issue: 'Based on previous experiences, what socio-cultural changes do you expect or fear from the project?'

How can it be monitored?

After having chosen some expectations and fears, the group should attempt at establishing some concrete examples of how it is possible to see if things are changing the way they want or not. Now you are looking for indicators! Here PIM does not ask for scientific solutions, but for practical ones, and relies on the collective knowledge of the group. In establishing the indicators continuous reflection, is more important than gathering of hard data! This may seem a little bit difficult, and therefore PIM suggests four ways to establish indicators, out of which the appropriate one is to be selected:

- Measuring or counting
- Scaling or rating
- Classifying
- Describing qualitatively.

Other stakeholders may wish to link with, if available, conventional M&E system at this step.

Who should monitor?

The responsible people for monitoring should be chosen at the meetings held by the group. By assuming the role of observers, members of the group learn to watch for relevant changes and to assume responsibility. It is important to stress, once again, that it is crucial that members are interested in follow-up and monitor of the indicators and that they do that responsibly. Often members holding senior positions are chosen to avoid the creation of a parallel structure of power.

How can results be documented?

There is a need to keep a record of the indicators in the monitoring process. This note can be summed up as follows: 'Always carry a notebook and a pen behind!' For example, if three people would visit a cattle market with the aim at establishing the market prices of different livestock, and do not bother about taking notes, it is quite possible that they will quarrel about the information received at the end of the day. Had they taken notes, there would have been peace in the team. Any way of recording is appropriate, such as tables, graphics, charts, and descriptions. However, the group may wish to keep some information inside the group, and not to be exposed at the Joint Reflection Workshops. It is important for the group to decide on this.

Another crucial step in the process is monitoring of reports. At the beginning of every group meeting, indicators are reviewed, and relevant changes are observed, following the presentations of the observers.

The revision of indicators can be done by asking a simple question, 'What have we observed?' Following the presentation, there may emerge a discussion in a group as to whether other relevant changes have taken place! Some useful questions at this step are:

- 'Have the indicators changed?' If yes, this may lead to corrections and refinements of the indicators used.
- 'What other important factors have changed?' This will indicate whether additional indicators ought to be observed.

The reports of the involved stakeholders are then presented at the joint reflection workshop. As a loose guide for discussion, it may be useful to discuss the following topics together:

- 'What has changed?'
- 'What/who has changed?'
- 'What has caused the change?'
- 'How has it changed?'
- 'How has this change affected you?'
- 'What other change(s) has/have occurred as a result?'

It may appear at the workshop that the monitoring system needs to be revised or changed. This may happen if the following applies:

- If time shows that indicators are not useful!
- If new fears and expectations arise!
- If funding agencies need improved information flow! If this applies, the group must decide what they think about it, and negotiate with the external organizations!

Analysis—Why these results?

It is important that the findings from the preceding step are reflected upon and discussed. Generally, the results of observation require analysis and discussion in the following situations.

- If things are always as expected, this is probably a success and it is worthwhile analysing occasionally why and how these results have been achieved!
- If the monitoring results show that there are problems that require decisions, the meeting should put the topic on its agenda immediately.

At this step, cause–effect relationships are not documented but can be prepared at any time.

What action should be taken?

After the analysis, the group defines its agenda and takes decisions. The decisions are based on factual reasons and the members are enabled to participate responsibly. The leadership of the organization becomes more transparent and democratic.

The last step, taking action, is not a final one, however. The action that we take will create new impacts on the project environment and each stakeholder will then be back at step one again and re-initiate the process of monitoring, establishing indicators, reflect upon those, and so on. The process of reflection will provide a useful point of learning from all actors involved: learning about ourselves, as well as learning from others.

Limitations of PIM

PIM is actually a very simple and easy monitoring system, once you become used to carry your notebook behind, and start looking for, and reflecting about, the indicators that you have selected. However, PIM has its limits. Some of them are that:

- PIM is only a concept and cannot be solution to all problems.
- Limited to a manageable number of dynamic elements.

Until we learn how to apply PIM and acquire the necessary experience in doing so, its value as a tool will be limited. PIM should always be used in conjunction with an objectively oriented M&E system.

It is worth noting that the comprehensive impact assessment framework proposed in this source book includes the socio-cultural impacts also.

Key reference

Eberhard G and Germann D. 1996. *The concept of participatory impact monitoring*. GTZ; GmbH; Eschborn.

Participatory evaluation

Introduction

The past two decades have seen an increased recognition of the importance of participation by beneficiaries and a wide range of other stakeholders in decision-making. Experience has shown that participation improves the quality, effectiveness and sustainability of development actions. By placing people at the centre of such actions, development efforts have a much greater potential to empower and lead to ownership of the result. For those involved specifically with evaluation, there has been a growing dissatisfaction with conventional modes of assessment that claim to be scientifically neutral and unbiased yet have had very little impact on how development activities are carried out. This has led to the various participatory approaches, tools and methods. The concepts of 'participation' and 'participatory' are discussed elsewhere in this source book.

Participatory evaluation involves the stakeholders and beneficiaries of a program or a project in the collective examination and assessment of the program or project. The evolution of participatory evaluation is summarized in Box 4. Participatory evaluation is people centred: project stakeholders and beneficiaries are the key actors of the evaluation process and not the mere objects of evaluation.

Box 4: Evolution of the evaluation process

The evaluation process since its inception has gone through different stages. Guba and Lincoln call participatory evaluation the Fourth Generation Evaluation.

First generation evaluation emerged in the 1900s and characterized as measurement, oriented, associated with the scientific management movement in the business and industry. The role of the evaluator was technical, providing tools and instruments for measurement—student performance assessment and time studies.

Sound generation evaluation concentrated more on descriptions and led to program evaluations. Focused beyond measurement, dealt more on the achievement of objectives and analysis of strengths and weaknesses. The role of the evaluator went beyond the technical to include that of describer.

The third generation evolution was characterized by efforts to include judgment as an integral part of evaluation. Thus the evaluators also became judges.

The fourth generation evaluation refers to the most recent evolution in evaluation practice and involves negotiations. It incorporates stakeholders more centrally into the evaluation process by taking into account their claims, concerns and issues. They embrace a more qualitative approach to evaluation. The evaluator becomes facilitator of the negotiation process with stakeholders who participate in designing implementing and interpreting the evolution. Stakeholders are not viewed as subject of experiment or object of study, but rather as participants in the evaluation process.

Participatory evaluation is reflective, action oriented and seeks to build capacity by

- Providing stakeholders and beneficiaries with the opportunity to reflect on a project progress and obstacles.
- Generating knowledge that result in the application of lessons learned and leads to corrective action and/or improvement.
- Providing beneficiaries and stakeholders with the tools to transform their environment.

Participatory evaluation is context-specific, rooted in the concerns, interests and problems of program end-users. The end-users immediate reality is what charts the route and determines the evaluator's purpose and direction. Flexibility is the key work in participatory evaluation. Choices must be made about the degree to which end-users can realistically participate in the process.

Functions of participatory evaluation

Participatory evaluation serves four key functions, some of which concern the stakeholders and beneficiaries while others relate to the funding agencies.

1. It helps to build the capacity of stakeholders to reflect, analyse and take action—such analysis should occur throughout the life of the project.
2. It can contribute to the development of lessons learned that can lead to corrective action or improvement by project recipients—when project stakeholders are involved in analysing problems, constraints and obstacles, they can often propose solutions.
3. It can provide feedback for lessons learned that can help program staff to improve program implementation. A participatory evaluation not only looks into the past but also guides into the future.
4. It helps to ensure accountability to stakeholders, managers and donors by furnishing information on the degree to which project objectives have been met and how resources have been used.

The focus on lessons learned is an essential dimension of participatory evaluation. Such evaluations should help to guide projects into the future by giving stakeholders the tools with which to take corrective action. In addition lessons learned should provide donors with the insight and tools to improve program delivery and management.

Participatory evaluation may take place during the course of a project (usually at its mid point) towards or at the end or a significant amount of time (e.g. 2 years) after a project has been completed. Undertaking an evaluation at mid-point offers several advantages. It presents an opportunity to take stock of a project's progress to date, its achievements and any obstacles encountered. Lessons learned can be applied and corrective action can be taken if necessary. Since mid-term evaluations are forward looking, they can provide stakeholders with the tools to take different source of action.

Key characteristics of a participatory evaluation

The following are the key features of a participatory evaluation

- It draws on local resources and capabilities;
- Recognize the innate wisdom and knowledge of end users ;
- Demonstrates that end-users are creative and knowledgeable about their environment;
- Ensures that stakeholders are part of the decision-making process; and
- Uses facilitators who act as catalysts and who assist stakeholders in asking key questions.

At the heart of participatory monitoring and evaluation (PM&E), however, are four broad principles:

- *Participation*—which means opening up the design of the process to include those most directly affected; and agreeing to analyse data together.
- *Inclusiveness*—the inclusiveness of participatory M&E requires negotiation to reach agreement about what will be monitored or evaluated; how and when data will be collected and analysed, what the data actually means, and how findings will be shared, and action taken.

- *Learning*—the process leads to 'learning' which becomes the basis for subsequent improvement and corrective action.
- *Flexibility*—since the number, role and skills of shareholders and external environment and other factors change over time, flexibility is essential.

Characteristics of participatory evaluation are:

- Collaboration
- Problem-solving orientation
- Generating knowledge
- Releasing creativity
- Using multiple methods
- Involving experts as facilitators and
- Using participatory evaluation.

Collaboration deals with the participation of all those affected by project decisions in the evaluation process. This includes beneficiaries as well as program and project staff. Special efforts are made to ensure meaningful participation of women, junior project staff as well as extension workers. It is important to ensure that all stakeholders are involved in the process.

Problem-solving orientation

The driving force behind participatory evaluation is not accountability to outsiders, but development at the local level. Participatory evaluation becomes a process whereby participants in a development project are empowered to learn and take effective action in solving problems.

Generating knowledge

Participatory evaluation aims to generate knowledge among local people at the community and project level. When users are actively involved in data collection processes, information becomes transformed into knowledge and leads to self-sustained action.

Releasing creativity

Participatory methods are creative and learning in this environment builds self-esteem and confidence essential for initial action.

Using multiple methods

Validity and reliability are achieved through the use of multiple methods, and by including different users and stakeholders in community building. If available tools are considered inappropriate, new tools are created.

Involving experts as facilitators

If evaluation expertise is not available within the community, then an external expert is included to facilitate shared decision-making throughout the entire process of participatory evaluation. The task of the facilitator is to share ideas, help people consider options, and let the process be taken over as far as possible by users, community people and project staff.

Basic assumptions of participatory approach

- To be effective, participatory approaches require significant time and flexibility in order to account for unexpected events;
- Participatory approaches still call outside expert advice. Outsiders have recognized their limitation in performing participatory evaluation;

- Programs or projects that provide indirect benefits to the community may be more difficult to do in a participatory sense than direct benefit projects;
- Participation and participatory approaches are particularly desirable strategy in the case of projects with a broad client base and/or direct delivery to individual beneficiaries and researchers;
- Participation and participatory strategies work best when evaluators have inside knowledge of program and geographic locales in which program/evaluation is being carried out; and
- Participatory evaluation approach still benefits from expert input from those knowledgeable about the program sector, and evaluation theory and practice. The evaluation professional must continue to give advice on evaluation approaches and past experience in participatory evaluation.

Participatory evaluation and conventional evaluation

The key differences between participatory evaluation and conventional evaluation are summarized in Table 5. The conventional evaluation is in most cases donor focused and donor driven. Donors are the key clients, provide the financial support and contribute significantly in defining the terms of references (ToR). Very often evaluation is carried out more to fulfil a management or accountability requirement than to respond to project needs. An outside expert/evaluator or team is hired to conduct the evaluation. The evaluators collect the data, review the project or program and prepare a report. In most cases, stakeholders or beneficiaries play a passive role, providing information but not participating in the evaluation itself. The process can be considered more linear, with little or no feedback to project.

Table 5. *Participatory M&E and conventional M&E*

	Conventional M&E	Participatory M&E
• Who plans and manages the process	Senior manager or outside expert	Local people, project staff, managers and outside stakeholders often helped by a facilitator
• Role of primary stakeholders and intended beneficiaries	Provide information only	Design and adopt the methodology, collect and analyse data, share findings and link them to action
• How success is measured	Externally defined, mainly quantitative indicators	Internally defined indicators including more qualitative judgement
• Approach	Pre-determined	Adaptive
• Defining terms of reference	Largely donors and managers	Stakeholders including beneficiaries
• Question makers	Largely managers and donors	Stakeholders
• Evaluator/evaluation team	Mostly outsiders	Mix of outsiders and beneficiaries
• Process	Linear with little or no feedback	Two-way flow of information
• Purpose	Management/accountability requirement	Build capacity of stakeholders + management/ accountability requirement
• Role of the evaluator	Plays the lead role	Act as facilitator
• Method	Reliance heavily on quantitative methods	Relies heavily on interactive qualitative methods but does not disregard quantitative tools

In a participatory evaluation, the role and purpose of evaluation change dramatically. Such an evaluation places a much (if not more) emphasis on the process, as on the final product of the report. The purpose of the evaluation is not only to fulfil a bureaucratic requirement but also to develop the capacity of stakeholders to assessment and take action. Stakeholders and beneficiaries do more than providing information. They also decide on ToR, conduct research, analyse findings and make recommendations. The evaluator in conventional evaluations becomes more of a facilitator in participatory evaluation— guiding the process at critical stages and consolidating the final report based on the findings of the stakeholders.

Participatory evaluation recognizes the wide range of knowledge, values and concerns of stakeholder and acknowledge that these should be the litmus test to assess and then guide the project performance. Participatory approaches to evaluation have the capacity to empower recipients. The active participation of stakeholders can result in new knowledge or a better understanding of their environment. It is this new knowledge and understanding that can enable them to make changes they themselves have discovered or advocated. As a result of active involvement of stakeholders in reflection, assessment and action, a sense of ownership is created, capacities are built, beneficiaries are empowered and lessons learned are applied both in the field and at the program level, thus increasing the effectiveness.

The emphasis in participatory M&E is placed on beneficiaries and stakeholders not as providers of information, but as active participants in the evaluation process. Supplementing more formal methods of inquiry, such as standard questionnaire or one-to-one interviews, with non-formal techniques can yield rich information than the use of only formal methods.

Collaborative evaluation approach

A collaborative approach is one form of participatory approach in which the evaluator works directly in partnership with a group of stakeholders (people who have a stake, i.e. vested interest, in how the evaluation comes out) to focus key evaluation questions, design the evaluation study, interpret the results, and apply findings. This is a process of shared decision-making. The evaluator is 'active–reactive–adaptive' in facilitating an evaluation process that addresses the concerns, interests, questions, and information needs of a group of stakeholders organized into some kind of evaluation task force. The evaluator helps the task force members to deal with the issues of utility, feasibility, propriety, and accuracy, but does not decide unilaterally how these standards of excellence will be met. In a normal situation, however, the evaluator is completely responsible for the process and responds to the audience's requirements for information.

The process of collaborative evaluation involves:

- Discussion with clients, program staff, and audiences, i.e. everyone in and around the program, to gain their expectations and purpose for the evaluation;
- Based on these discussions, the evaluator places limits on the scope of the evaluation program;
- Evaluator begins to discover the purpose of the project, both stated and real, and the concerns that various audiences may have with the project and/or the evaluation;
- Evaluator then begins to conceptualize the issues and problems that the evaluation should address;
- Design the evaluation process. Given the data needs, the evaluator selects whatever approaches are most useful for generating the data;
- Evaluator now proceeds to carry out the data collection procedures that have been identified;
- Once the data have been collected and processed, the evaluator shifts to an information-reporting mode. The evaluator also identifies the key issues for reporting; and
- At times, evaluators' are not very skilled at working with groups. They need patience, sensitivity, and good humor.

Participatory impact assessment

What is PIA?

Participatory Impact Assessment is an extension of the application of Participatory Rural Appraisal (PRA) approaches and tools to monitor and evaluate projects. Here, the participatory tools are adapted

and combined with the conventional, objectively oriented methods to measure the impacts. PIA was designed to measure the impacts of humanitarian assistance and development projects on people's lives. The proponents argue that PIA can be used to overcome some of the inherent weaknesses in the conventional approach to M&E such as: emphasis on measuring progress as opposed to impact, emphasis on external as opposed to community-based indicators of impact; and how to overcome the issue of weak or non-existent baselines. To an extent the approach also can handle the attribution issue.

The approach acknowledges that the local people, or project clients as experts by emphasizing the involvement of project participants and community members in assessing the project impact—and by recognizing that 'local people are capable of identifying and measuring their own indicators of change (Catley 1999). A well designed impact assessment can capture the real impacts of the project, be they positive or negative, intended or unintended on the lives of the project participants. In this regard, participatory impact assessment tries to find a balance between systematic methods and the richness of qualitative inquiry in assessing the impacts of any project. As Watson (2008) pointed out participatory impact assessment as a methodology tries to answer three questions:

- What changes have there been since the start of the project?
- Which of these changes are attributable to the project?
- What differences have these changes made to people's lives/participants lives?

A systematic and well designed participatory impact assessment can assist in:

- Measuring the impacts using participants' own indicators and their own methods
- Can overcome some of the inherent weaknesses of the conventional approach to M&E
- Create an opportunity to develop a learning partnership involving the donor, the implementing partners and the participating communities and
- When the results are rigorously applied can be used as a powerful advocacy tool to influence the formulation of policy and best practices.

Key steps in the PIA process

The methodology is based on the notion of combining participatory approaches and some basic epidemiological or good science principles. There are eight steps in the process: Define the questions to be answered; define the geographical and time limits of the project; identify and prioritize locally-defined impact indicators; decide which methods to use and test them; decide which sampling method and sample size to use; assess project attribution; triangulate, and feedback and verify the results with the community. The key steps and the tools used are summarized in Table 6.

Step 1—Identifying key questions

This is the most important and difficult part of the exercise. If you are not focused, you may attempt to answer too many questions, often producing poor quality results. Very often, one is tempted to capture as much information as possible about a project, but this has its implications on cost, data collection, analysis as well as presentation. It is better to limit the number of key questions to be answered and address them well.

If the community has participated in the planning stage and identified the impact indicators, then the assessment will focus on these indicators giving due consideration to the casual effect relationship and attribution issues. If the project is reacting and thought about impact assessment at the end (the

case in many instances), then it is important to jointly determine the impact indicators with the project participants. This should be done with all key stakeholders.
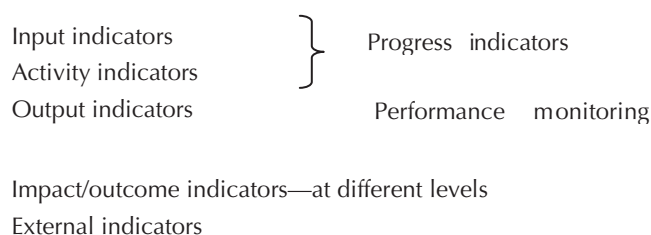
Table 6. *PIA: Steps and tools*

	Steps	Potential tools
1.	Identifying key questions	Group interviews technique
		Outcome mapping
		Impact chain
2.	Defining spatial and temporal project boundaries	Maps
		Timelines
3.	Identifying indicators of project impact	Group interview technique
		Key informant survey
4.	Deciding methods and field testing	Ranking and scoring: 'Before' and 'After' scoring, pair-wise ranking and matrix scoring, impact calendars, radar diagram and proportional filing
		Semi structured interviews
5.	Deciding a sampling methods and sample size	Various sampling techniques
6.	Assessing project attribution	Simple ranking and scoring
		Causal diagram with scoring of causes
7.	Triangulation	Direct observation
		Project based M&E system
8.	Feedback and validation	Effective communication methods

Step 2—Defining the boundaries of the project in space and time

This step is important to ensure that everyone understands the limits of the area in which impact is supposed to take place, and the time period being assessed. For long-term projects it is also good to identify the milestone/time dependent indicators. The timelines helps to clarify when the project started. When the project ended, when the project will be assessed, and what could be realistically expected during this frame work.

Step 3—Identifying indicators of project impact

Indicators are the variables that we are planning to measure, document and share with our stakeholders to assess the performance, efficiency, relevance and impacts of any intervention or projects. Indicators can be classified as:

Input indicators
Activity indicators   } Progress indicators
Output indicators   Performance   monitoring

Impact/outcome indicators—at different levels
External indicators

The progress indicators usually measure the physical aspects of project implementation. They are useful in showing that project activities are taking place according to the project work plan. The performance indicators measure the effectiveness of the project in terms of the output(s) generated. These indicators may not tell us much about the impact of the project activities on the participants or community.

Impact or outcome indicators measure changes that have been realized as a result of project activities on the livelihood of the people's lives. As stated by Catley et al. (2008) they measure the fundamental

assets, resources and feelings of the people affected by the project. Therefore impact indicators can include household measures of income and expenditure, food consumption, health, security, confidence and hope. It is important to keep in mind that measuring progress and performance is no less important than measuring impact. These data is more valuable in relating the impact to project activities.

Sometimes, proxy indicators are used to measure certain impacts such as livelihoods asset transfers. Although proxy indicators can be useful and easy to quantify, they may not go far enough to assess the actual changes in people's lives brought about by project activities and asset transfers. A useful way to identify impact indicator is to:

- Identify the livelihoods transfers (knowledge transfers) anticipated from the project
- Think about the utilization of these assets or knowledge, then
- Identify the benefits derived by the participants' use of the knowledge and the outputs derived from them such as food, security, income empowerment etc.
- Ask what difference the project will make to the livelihoods of the project participants.

In participatory impact monitoring, one of the key steps/features is the community-defined indicators. Communities have their own priorities, and their own way of identifying impact indicators for measuring changes. The traditional M&E system (very often derived from project log-frame) over emphasizes the indicators identified by the scientific community with very little input from the project participants. One way to collect community indicators is simply ask the project participants, what changes in their lives they expect to occur as a direct result of the project. If you are doing an *ex-post* impact study, where indicators are not identified earlier, then you can ask what changes have already occurred. If the project is focusing on delivering inputs and services, then ask the participants, how they benefit from the ownership or use of the resources in question. If the project is focusing on training or skill transfer, ask how the training or improved skills will benefit them. These identified benefits are the impact indicators. Expenditures on food, education, cloths, medicine, ceremonies, and investments in livestock, agricultural inputs, or income generating activities are all good livelihoods indicators of impact that can be easily measured. It is important to keep in mind:

When identifying impact indicators, try to be specific (not general). When collecting community indicators, it is important to capture the views of different groups of people within the community.

Simply measuring changes in livelihood impact indicators will not tell you much about impact unless you understand the reasons behind those changes. It is important to establish a casual effect relationship between the activities/outputs and the outcomes being measured. Careful attention also should be paid to attribution issues. An understanding of the livelihoods and context is therefore an important part of any impact assessment.

Step 4: Methods to measure changes/impacts

Once you have identified the key indicators, one has to decide on the methods that could be used to measure changes in these indicators. Some useful methods that can be used to measure impact or change numerically include: simple ranking and scoring: 'before' and 'after' scoring; pair wise ranking and matrix scoring, impact calendars, radar diagram and proportional filing. The practical application of all these tools involve the use of semi-structured interviews. Each of these techniques has its own advantages and disadvantages, and some methods are more appropriate for certain cultures and contexts. For example a method such as pair wise ranking can be used in situations where the literacy rate is low. A method such as scoring against nominal baseline can be useful in estimating

changes in certain indicators such as income, livestock numbers and crop yields. On the other hand, a single ranking can be a useful way of prioritizing impact indicators to get understanding of which project benefits are perceived to be of greater importance to the community members.

Step 5: Sampling

To ensure the reliability of the assessment and to avoid biases, often in impact assessment exercises, sampling procedures are used to identify individuals who will participate in the assessment. The sample size and the method used depends on the time and resources available for this assessment. There are three types of sampling methods which can be used for participatory impact assessment: convenient sampling (go to easily accessible villages/participants); purposive sampling (go to villages 'typical' of the (project area); and random sampling (every village has equal chance of being selected). Although random sampling is considered most scientific; and convenience sampling the least, each method has its strengths and weaknesses (see Table 7 for details). One practical approach often used is to deliberately select equal numbers of good, bad, and medium impact villages.

Table 7. *Sampling methods and appropriateness*

Methods	Advantages	Disadvantages	Appropriateness
Convenient sampling	Time and cost saving	Not representative	When you need quick results, where resources are limited
			Areas with poor infrastructure and insecure
Purposive sampling	Time and cost saving	Results not representative	Useful if no sampling frame is available
	Emphasis on positive results?	Result is applicable only for the sample studied	
		Can include comparison of impacts in areas judged to be 'weak', 'moderate' and 'strong' in terms of implementation	
Random sampling	More reliable results	Costly and time consuming	To influence policymakers, for publishing in academic journals
			Extrapolation of results

There is also no magic number for the sample size. In most impact assessments the important thing is to capture the overall trend. If properly constructed, this can be done with a smaller sample as long as the sampling is done systematically and it can be representative. There may be a need to stratify the sample in order to capture the views of different groups within a project area. This stratification depends on the questions to be answered and the hypothesis that one is trying to test.

In doing the assessment using PIA approaches, it is important to make sure that the same tool is applied consistently, using the same indicators, the same number of counters and framing the question exactly the same way.

Step 6: Assessing project attribution

Attribution is a major issue in assessing impacts of project interventions. In a dynamic environment, changes occur naturally. In any community where a project is implemented, there may be changes that are occurring naturally—endogenous changes. Therefore, the observed changes in the selected variables may be a combination of the endogenous changes as well as the effects on the project activities and outputs. Some of the observed changes may not have anything to do with the project, and would have happened regardless of whether or not the project ever existed. The objective of assessing attribution is to 'isolate and contextualize' the impact of the project from the non-project factors that could have contributed to the change. There are two main approaches for assessing project attribution.

- Within a project area, assess the relative importance of project and non-project factors
- Comparison between project and non-project populations with the project area.

In the first approach, we try to identify and understand all the project and non-project factors which contributed to changes in the impact indicators. Methods such as simple ranking and scoring, or causal diagrams with scoring of causes can be used to measure the relative impacts of both project and non-project factors.

The second approach is the most ideal one if that could be employed where a control group is used for comparison. Here, the 'intervention populations' are compared with control populations to determine statistical differences between the two groups. There are a number of practical and ethical issues involved in using this approach. Identifying two identical populations that share the same attributes can be a challenge, and there is a high probability that the control population receive similar intervention from other sources during the same time period. This approach may increase the time and other resources required for the assessment. The control group approach also implies that decisions are made to exclude a population from an intervention.

Because of the difficulties involved in establishing the control group, in many instances, the first approach is widely used. This can be done by prioritizing, ranking or scoring the different factors that contributed to any positive or negative changes that took place in the project area. The type of attribution method used will be a judgment call in trying to balance scientific rigor with the practical realities of carrying out assessments. Irrespective of the methods used, addressing the issue of attribution is definitely a big step forward in assessing the developmental impacts of intervention.

Step 7: Triangulation

This involves the use of other sources of information to cross-check the results from the participatory exercise. A key source of triangulation is secondary data, which may include previous studies and reports, and external surveys done by the government, other organizations or research institutes may also provide useful data for triangulation.

Projects' own data collected through monitoring may be another key source of secondary information. One could also use the different participatory methods to measure the same indicator and compare the results. If the results are similar, then they are more likely to be accurate. One could also observe trends and patterns from the results of different exercises, e.g. increase in production, increase in income as a result of increased production, reduction in the amount of household income spent on the purchase of cereals etc. Direct observations (before and after) can also illustrate changes as a result of intervention.

Step 8: Feedback and validation

This is the final step where the findings are presented to the community. This offers an opportunity for the community to verify that the findings are correct. Even at this stage, they may offer additional information to improve the findings and enhance the accuracy of the results. This may also be a good opportunity to seek input for future activities or next phase of the project.

Note: In any empirical study every effort should be made to include both objectively oriented approaches and participatory approaches. Striking a judicious balance is a challenge for practitioners.

Trainer's guide

Session 10: Challenges for research partnerships and best practices

Purpose	To enhance the capacity of the agricultural researchers to forge effective and efficient partnerships with other relevant stakeholders in the agricultural innovation system for achieving greater impacts	
Objectives	At the end of this session participants will be able to understand the: • summary issues that enhance and hinder research partnership	
Resources	• Flipcharts • White board • Blank transparencies • Flipchart and white board markers • Copies of handouts 10.1, 10.2, 10.3 and 10.4 for each participant • Computer and LCD projector • Overhead projector	
Time needed	One hour and 30 minutes	

Method of facilitation

Activity		Time
Presentation	Distribute handout 10.1 (Presentation slides) before you start your presentation Give a presentation on challenges for research partnerships and best practices Allow some time for questions to make sure that participants understand what is presented. Distribute handout 10.2 (presentation text) to supplement your presentation	30 minutes
Exercise	Distribute handouts 10.3 and 10.4 for exercise 10 Reflecting on challenges of partnership and improvement options Ask a volunteer to read the exercise Ask participants to answers the questions in pairs. Remind them the time allotted to the exercise	55 min
Transition	Make closing remarks and transit to the next session	5 minutes

Session 10: Challenges for research partnerships and best practices: Summary of overheads

10.1

Challenges for research partnerships
and good practices

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Session objective

- Summarize issues that enhance and hinder effectiveness of research partnerships

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10.3

Key challenges

- Changing mindset
  - Competition to collaboration
- Resources crunch
- Communication
  - Geographical dispersion, cultural differences
  - Internal and external
- Intellectual property
- 'Big Brother Syndrome'
- High staff turnover
- Personalities, institutional and cultural differences
- Coping with high expectations
- Transaction costs
- Challenges of PPP
- Low/inadequate emphasis on process outcomes

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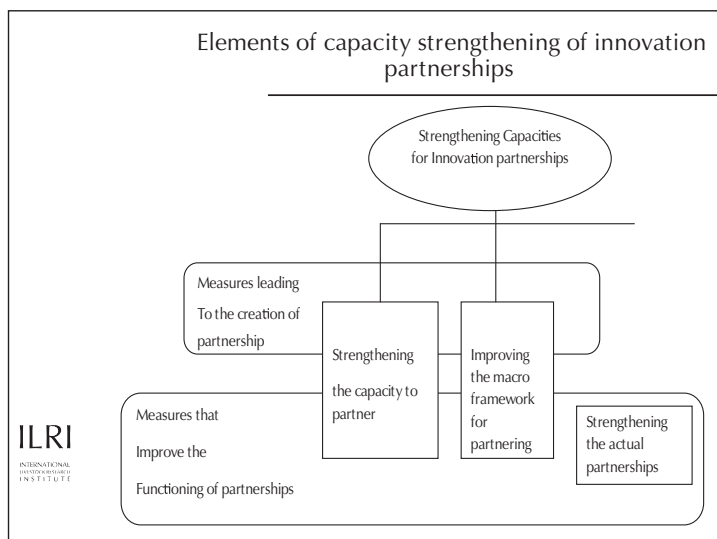INTERNATIONAL
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10.4

Key elements of a research partnership

- Foundation elements
  - Compelling vision
  - Strong participatory leadership
  - Shared problem definition and approach
  - Power equity
  - Interdependence and complementarity
  - Mutual accountability

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10.5

Elements of capacity strengthening of innovation partnerships

Strengthening Capacities
for Innovation partnerships

Measures leading
To the creation of
partnership

Strengthening
the capacity to
partner

Improving
the macro
framework
for
partnering

Strengthening
the actual
partnerships

Measures that
Improve the
Functioning of partnerships

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10.6

Sustaining elements

- Attention to process
- Communications linkages (nurturing interpersonal relationships)
- Explicit decision making process
- Trust, respect and commitment
- Credit and recognition

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10.7

Good practices

- Positive results or progress and documenting success
- Effective communication
- Resources, including maintaining technical expertise and sustained funding
- Effective/good working relationships and
- Mutual interest, common goals and sound management

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10.8

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8 I's that create successful we's

- Individual excellence—All partners are strong, have something of value to contribute, and possess positive motives to collaborate
- Importance—The relationship fits major strategic objectives of the partners, therefore they want to make it work
- Interdependence—The partners need each other. They have complementary assets and skills. Neither can accomplish alone what both can together
- Investment—The partners show tangible signs of commitment by devoting financial and other resources to the relationship

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10.9

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8 I's that create successful we's

- Information—The partners share information to make the partnership work
- Integration—The partners develop linkages and shared ways of operating so that they can work together
- Institutionalization—The relationship is given a formal status with clear responsibilities and decision processes. It extends beyond the particular people who formed it
- Integrity—The partners behave toward each other in honourable ways that justify and enhance mutual trust

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10.10

Lessons learned

- Partnership are not a panacea for all development challenges

- Can create valuable synergies, knowledge sharing, joint venturing, scale economies, resource pooling and risk sharing

- Critical weakness is its vulnerability—planning for sustainability

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10.11

Lessons learned (cont'd)

- Partnership often narrowly conceptualized

- Gathering organizational and institutional context right is more demanding

- Co-ordination matters

- Stronger governance is important

- Capacity building is challenging

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10.12

To conclude

- There is no blue print for partnership

- It is a process and there is a great diversity of arrangements which are related to historical and location specific context

- The factors that trigger the need for partnership may also vary

- Instead of developing models, we should aim to develop principles and good practices for designing and implementing partnerships

- Then look for 'best fit'

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10.13

Thank you!

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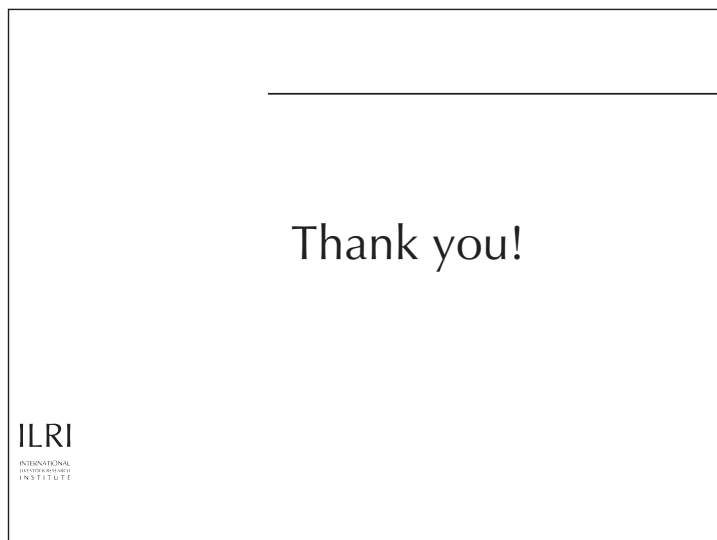
Session 10: Challenges for research partnerships and best practices: Summary of presentation

10.1 Introduction

In a changing world, partnership is no longer a choice but a must if organizations and individuals have to meet their goals and aspirations. There is now a growing recognition that R&D organizations must pay attention to how partnerships can be formed and managed to achieve collaborative advantage and to identify and nurture the critical factors that contribute to effective partnerships (CGIAR 2005).

10.2 Key challenges

Although partnerships and networks are expected to enhance the effectiveness, efficiency and impacts of R&D, there are also a number of challenges. Every attempt should be made during the planning and implementation to address these potential challenges in a meaningful way.

- Changing mindset
  In partnership management, often institutes must move from competitive modes of operation to those of a more collaborative nature. Many organizations find this mindset change difficult.
- Resources
  Managing networks and partnerships take a great deal of management time and resources. Given the diminishing resources in many organizations, individuals are expected to accomplish more tasks with limited and/or declining resources. Some could find any demands beyond those of their own organizations difficult to meet, thus compromising on the commitments made for the partnership.
- Communication
  Many partnerships (is the case with many CGIAR centres) include partners who are geographically dispersed and whose cultures differ. If they are geographically dispersed, it may be difficult to hold frequent face-to-face meeting. As a result, one has to use other means of communication (especially IT) but all partners may not have access to these tools. It is also important that staff working on partnerships communicate and advocate for that partnership within their own organization.

One of the key requirements for successful partnership and conflict management is effective communication. Communication should occur at all levels (both horizontal and vertical). It is important for partners to communicate in productive, efficient and timely ways as often as possible.

- Intellectual property
  One of the primary concerns of research organizations is the ownership of intellectual property. This is seen as a challenge because dealing with element of partnerships tend to require extra attention. The property right issues include: trade mark protection, residual interests, license arrangements, intellectual property right ownership, copy right and patent rights. Patent rights have been elicited as the most critical concern to resolve in partnerships. Most important in resolving these issues is the ability to negotiate a reasonable compromise among partners. Successful partnerships have the personal commitment to build trust among those involved with the partnership. Therefore, hurdles such as intellectual property rights can be worked out amicably.

- Big brother syndrome

  Another issue often noticed in the partnership formation and management is the big brother syndrome. In many instances, the partner who is making the financial contribution often influences the decisions made during the partnership process. The more one partner contributes to the partnership, relative to other partners, the more that partner may expect to benefit from its outcomes. When assessing how much one partner has contributed relative to the other(s), every form of inputs/resources (both cash and kind) should be taken into account. Thus, the challenge is how to avoid this 'big brother' syndrome in the partnership process.

- High rate of turnover of staff

  This has a considerable negative effect on the implementation of the project. This is especially true with the NARES partners. It was also argued that this may be an indicator of success of the approach and may give prospects for scaling out to other organizations. A related problem is the over commitment of staff who are often assigned several responsibilities and a wider coverage area.

- Issues of personalities, institutional and cultural differences

  Although in many cases the success to partnership has been sustained by individual relationships and high level of social capital (trust, networking, co-operation and exchange), there have also been several cases where differences of individual personalities, behaviours, attitudes, and internal conflicts within organizations have had negative effects on partnerships. In many development-oriented partnerships, the differences among partners, organizations and their institutional cultures were initially reinforced by perceptions of the divide and imbalance between research and development, between government services and NGOs, between international and national staff.

- Coping with high expectations

  With the shrinking resources for agricultural research, the need to engage with new stakeholders and building partnerships has become critical for obtaining funding both in terms of donor requirements and as productive way of achieving more efficient use of scarce resources.

Adequate funding was found to be the most recurring theme (up to 62%) contributing to partnership formation (Leach and Pelkey 2000).

In many instances, access to financial and material resources was the key motivation for partnering, and the instigating partner was seen to be dominant. Organizations that entered into partnership because of financial resource put too much dependence on other partners, and tended to create unrealistic expectations (Gormley 2001). Sometimes people get over excited and as a result overstate the possible outcomes and results.

- Transaction costs

  The issue of transaction cost was a recurrent theme in the challenge of sustaining multistakeholder partnerships. Working with multiple partners was perceived as expensive as partnerships require more time, meetings and considerable efforts to make partnership arrangements work satisfactorily. The costs include travel and communication costs; organizational overheads, as well as transaction and opportunity costs of meetings and workshops, particularly senior and middle managers that reduce available resources for operations and project implementation. It is generally considered that partnerships inherently result in high transaction costs, and are inherently time and resource consuming (Huxham 1996). However, there is no empirical

evidence on the real costs of different types and stages of partnerships compared to their benefits, which are often non-tangible and therefore difficult to measure.

Documenting the real cost and benefits of partnerships is still an important gap that needs rigorous research to assess whether tangible and non-tangible benefits of partnerships outweigh their costs. Increased transaction cost may not be a useful indicator to assess the efficiency of the partnerships. The key test is whether the extra benefits that come from working in a partnership mode are greater than the costs involved in doing so.

- Challenges of public–private partnerships

  Given the nature of the organizations, private sector can engage in research that will produce short-term results and products that appeal to paying consumers, while the public sector R&D organizations are mainly concerned with research that address the needs of poor small-scale farmers with poor market access. Most private sector companies will prefer contracting mode of partnership than true partnerships.

  For the private sector, multistakeholder partnership also involves enormous transaction and opportunity costs for attending meetings, field visits, and workshops. Learning how to build a successful relationship between small farmers and the private sector is still a key challenge. Partnerships with the private sector need to go beyond contracting or buyer–seller relationships to include co-financing, provision of extension services and field visits.

- Low/inadequate emphasis on process outcomes

  Castello and Zumla (2001) caution that current practices of partnerships in research for development may emphasize the outputs and products (technology impact, adoption and income) and ignore process outcomes such as ownership, sustainability and development of national and local research capacity. The key measure of success for many partnerships is the extent to which they bring about changes in partners' behaviours, policies, attitudes and practices. These are mainly process outcomes and can include getting research, development, extension and government departments to work together; strengthening farmers' organizations; creating local ownership, and building human and social capital.

To sum up, simply having common goal does not lead to formation of successful partnership. To be effective, partnerships need considerable investment in time and resources in the formation stage for building a shared vision and a common agenda to ensure organizational commitments. It is also important to build the necessary human and social capital to create alignment with the partnership principles.

Many of the challenges related to the formation of successful partnership require creative strategies for coping with over commitment/unrealistic expectation and turnover of trained personnel; dealing with different and sometimes conflicting personalities; institutional and organizational cultures; dealing with perceptions and unspoken expectations; and potentially high transaction and opportunity costs necessary to make multistakeholder partnerships work. Developing and sustaining effective partnerships with the private sector is still an important challenge in marginal, resource poor small scale farming conditions.

Gormley (2001) has identified the five common difficulties/obstacle encountered by the CGIAR systems in effective partnership design and management. These include: overcommitted partner staff, insufficient support for partnership; communication challenges; lack of attention to the process of building partnerships and trust; and lack of partnership and alliance competencies. The common obstacles and suggested coping strategies are summarized in Table 1.

Table 1. *Coping with obstacles to effective partnerships*

Obstacle	Steps to take
Overcommitted partner staff; uncompleted work or missed deadlines	• Make extra efforts to do realistic resource planning and budgeting • Have work-planning conversations with key staff to help them determine if they can really do the extra work. Avoid applying pressure to get them to say yes because otherwise they may make promises they cannot keep • Give plenty of time for the work to be done so staff can fit it into their work schedules. Avoid unrealistic deadlines • Keep in touch with people doing the work; stay connected with them • Do not over commit yourself • Build a sense of teamwork and mutual accountability by having periodic meetings and tele-conferences
Not enough support for partnership	• Involve a member of centre senior management in the formation of the partnership • Report progress faithfully • Create mini communications campaigns to keep your senior management aware of your partnership and what it contributes to the greater good of the centre • Be cautious about committing to partnerships in lukewarm • Directly ask for senior support. Tell them what you need and why • Join with other partnership champions, and work with senior leadership to help them make the centre policies and procedures 'partnership friendly'
Communication challenges	• Have project start-up meetings at which all partners are present and work together in the planning • Hold progress-review meetings at least annually • Work with key staff to agree on communication protocols. Keep the communication commitments reasonable. Monitor their use. Make adjustments if the protocols aren't working • Be a communications role model yourself. Find motivating ways to share information. Communicate successes. Look for small wins and tell that story • If communications weakens, do something (positive) about it. Don't just let it happen—it will only get worse • Try to find ways to make electronic communication available to all partner staff. • Budget for communications expense; it is an essential cost
Lack of attention to the process of building the partnership and trust	• Be purposeful about designing a partnership that provides hospitable environments for all partners • Openly discuss potential barriers to the partnership and establish specific behavioural norms for working together • Beware and concerned about the impact of how power is used • Decide together how decisions will get made. Be prepared to share decision-making and control • Be transparent. Put all issues on the table. • Avoid even the appearance of withholding information • Make fairness and equity a principle. Get all partners to contribute to making this principle a vital part of the way business is conducted • Never, ever try to negotiate the best deal for yourself. Do not engage in self-serving behaviours. Don't let others do it either • Ask for input from all partners. Listen. Use their suggestions. Don't dominate • Be flexible, willing to do things in different ways. Stay patient • Do what you agreed to do • Get all partners to share what they need and want. Listen. Try to accommodate • Share credit and recognition • Confront conflicts quickly and directly • Clarify roles and responsibilities so each partner understands and agrees on what is expected from them • Be humble • Spend time building social capital

Lack of partner-ship and alliance competen-cies	• Read from the partnership literature that describes competencies required
	• Attend workshops on partnering skills
	• Find a mentor or coach with more partnership experience
	• Stay open to learning; ask questions; listen. Say you are learning. Invite others to help. Ask for feedback
	• Create apprenticeships, so new staff can learn about partnering
	• Capture and communicate about what the partnership is learning about how to be effective— not just how to do good science, but also how to handle the relationships side of partnering

10.3   Key elements of a research partnership

Gormley (2001) grouped the key elements of a partnership under ten broader categories. The foundation elements that should be addressed during the partnership formation and the sustaining elements that should be addressed during the implementation that help to reduce tensions, smooth out interactions, build trust, enhance effectiveness and contribute to sustainability. The foundation elements include: compelling vision, strong participatory leadership, shared problem definition and approach, power equity, interdependence and complementarity, and mutual accountability. The sustaining elements include attention to process; communication linkages; explicit decision-making processes; trust, respect and commitment; and credit and recognition. The key issues to be addressed in each of the elements are summarized in Table 2

10.4   Capacity strengthening for managing partnerships

Capacity can be defined as the ability of individuals, organizations and societies to define and perform functions effectively, efficiently and sustainably. This definition has three key traits: it indicates that capacity is not passive but part of a continuing process, it ensures that human resources and the way in which they are utilized are central to capacity development, and it requires that the overall context within which organizations undertake their functions will also be a key consideration in strategies for capacity development (UNDP 1995). The contemporary view of capacity strengthening emphasizes an overall system, environment or context within which individuals, organizations and societies operate, interact, and absorb new knowledge and skills. The United Nations Development Program (UNDP) defines capacity strengthening as 'the process by which individuals, organizations, institutions and societies develop abilities (individually and collectively) to perform functions, solve problems and set and achieve objectives' (UNDP 1997). In addition, it is increasingly recognized that capacity strengthening is an endogenous process, that it is context specific and has to be driven by local needs (Schacter 2001). In the context of partnership building, capacity strengthening is closely linked to the notion of social capital. Social capital can be defined as networks, partnerships, norms and trust which facilitates co-operation for mutual benefits (Giffell and Vidal 1998). Seen in an innovation systems context, capacity strengthening to build partnerships can be targeted at three different levels — the partners, their relationships or the overall network or systems (Hartwich et al. 2007). Figure 1 illustrates a framework for strengthening capacity in innovation partnership.

Table 2. *Elements of a key partnership*

Key elements	Components	Key issues to be addressed
Foundation elements addressed during partnership formation	• Compelling vision	• Defines the problems or change opportunities to be addressed and strategies to be used
		• Defines strong sense of purpose, scope of work and clarifies boundaries
	• Strong participatory Leadership	• Demonstrated willingness, commitment and shared ownership
		• Leaders should
		• Involve others
		• Use the input or opinion of others, give them credit
		• Be willing to exchange ideas, entertain new ideas
		• Exhibit cultural and emotions sensitivity
	• Shared problem definition and approach	• Agree on the shared definition of the problem, analytical frameworks to be used, appropriate actions and strategies to be implemented
	• Power equity	• Respect the other partner and value their contribution
		• Important behavioural factors to be considered in power equity include
		• Full participation in decision-making
		• Frequent information sharing
		• Negotiated priorities
		• Clear assignment of roles and responsibilities
		• Fair and transparent distribution of funds and other resources.
		• win–win negotiation approach
		• Concern for all partners' interests, needs, and concerns during planning and decision-making
		• Explicit discussion on why they join and what do they expect to gain
	• Interdependence and complementarity	• Recognize interdependence
		• Skills, knowledge and resources each partner contributes
		• New value created, that partners could not do on their own
		• Unique contribution of each partner should be recognized
	• Mutual accountability	• Fulfilling each partners' responsibilities and commitments in a timely fashion
		• Shared ownership and personal stake in the outcome
		• Agreed upon norms and sanctions, with enough power and authority to exercise sanctions.
		• Other actions to enhance accountability
		• Establishing milestones, time frames
		• Setting quality standards
		• Identifying benefits
		• Monitoring for results
		• Celebrating success
		• Recognition and credit

Sustaining elements These are 'process' elements that help to reduce tensions, smooth out interactions build trust, enhance effectiveness that sustain the relationship	• Attention to process	• This includes
		• Communication among members
		• Decision-making
		• Agreement upon approaches
		• Cross cultural non-verbal communications
		• Conflict resolution
		• Power differentials
		• Feedback (both giving and receiving)
	• Communication linkages (nurturing interpersonal relationships)	• Creating a climate for:
		• Frequent and in-depth information sharing, (regular contacts)
		• Improved understanding of the scope of talent and skills of each partner
		• Exploring other opportunities for future collaboration
		• Discover new value creation
		• Partners keeping home organization informed
	• Explicit decision-making process	• Agreement on the way partners will make decisions
		• Active participation and consensus building
		• Pay attention to real or perceived power imbalances
		• Pay attention to decision-making practices and authorities of partners home organizations
	• Trust, respect and commitment	• Actions that could lead to the development of commitment and trust include
		• Doing what they promised
		• Understanding and protecting interest of all members
		• Active listening
		• Being honest about contribution
		• Sharing success, taking responsibility for mistakes
		• Shared set of values around expected output and processes
	• Credit and recognition	• Acknowledging and rewarding people for successful efforts
		• Early agreement about visibility authorship and IPR

Source: Adopted and modified form Gormley (2001).

Thus to be effective, capacity strengthening activities for efficient management of partnerships should simultaneously focus at four levels — individual level, the entity/organizations level, at the level of relationships, and the overall systems level including the context. Capacity strengthening initiatives should be based on five main principles namely:

- Broad-based participation and locally driven agenda
- Building on local capabilities
- Ongoing learning and adaptation,
- Long-term investments and
- Integration of activities at various levels to address complex problems

Strengthening the capacity of partners to design, implement and nurture partnership can have significant positive effects on the functioning and performance of partnership.

Capacity strengthening for partnership building goes beyond training to include horizontal learning among partners and is a continuous process. The necessary skills to partner and collaborate are not always developed or well understood. Designing and implementing successful partnership initiatives require a number of soft skills which are not normally taught in the tertiary institutes. The core capacities

in building partnerships typically relate to the ability of the individual partners to interact with their counterparts despite different organizational cultures, to negotiate commitments, understand the counterparts' interests and circumstances, communicate and share information, build trust, plan joint activities, effectively carry out common operations, share risks and eventually share benefits. One of the key considerations in capacity building is sustainability.
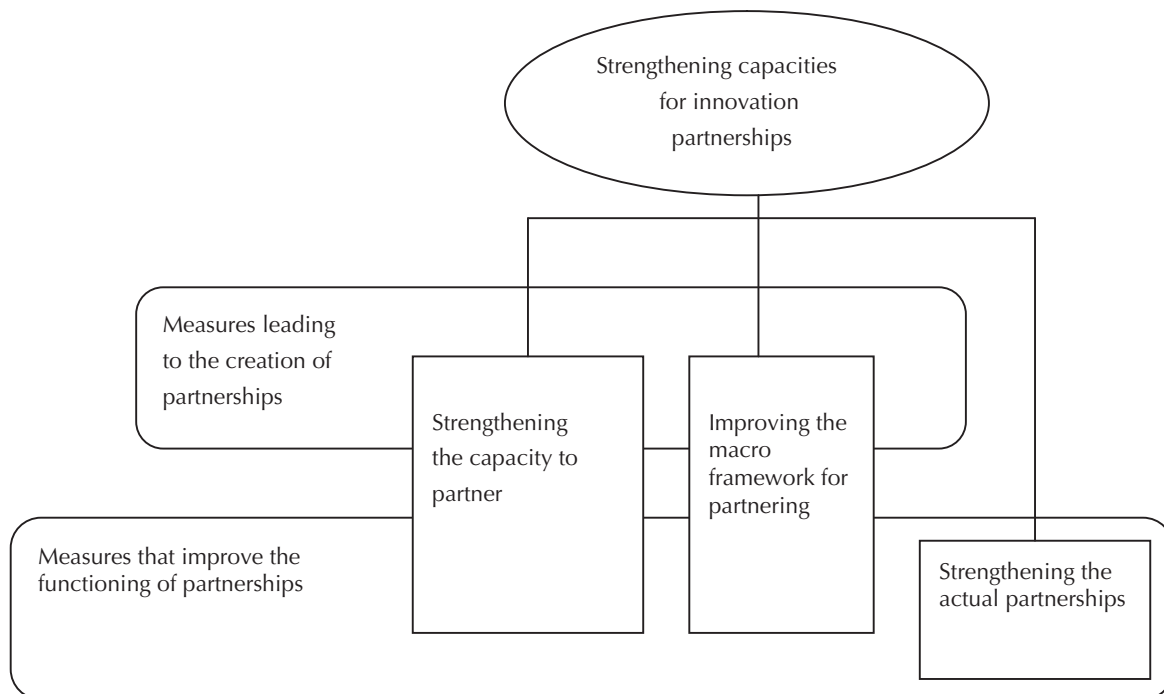
Source: Hartwich et al. (2007).
Figure 1 *Elements of capacity strengthening of innovation partnerships.*

Therefore, in addition to the disciplinary skills, the partners require skills in joint project development, business planning, negotiations, governance and administration, legal issues, leadership, resources mobilization and management, conflict resolution, facilitation, effective communication, monitoring, evaluation and impact assessment to name a few. Many of the partnerships fail due to lack of skills among partnering agents and efforts to strengthen these skills.

10.5   Good practices in sustaining effective partnership

A survey conducted by NCHRP (2001) identified the following as the critical elements in sustaining a research partnership:

• Positive results or progress and documenting success
• Effective communication
• Resources, including maintaining technical expertise and sustained funding.
• Effective/good working relationships and
• Mutual interest, mutual respect, common goals and sound management.

Broadly speaking 8 'Is' are needed to create a successful 'We'. These practices that are needed to make a partnership to work and sustainable are summarized below in Box 1.

Based on past experiences, the following are identified on good practices to establish, nurture and sustain research partnerships.

Box 1: 8 I's that create successful we's

- **I**ndividual excellence—all partners are strong, have something of value to contribute, and possess positive motives to collaborate.
- **I**mportance—The relationship fits major strategic objectives of the partners, therefore they want to make it work
- **I**nterdependence—The partners need each other. They have complementary assets and skills. Neither can accomplish alone what both can together.
- **I**nvestment—the partners show tangible signs of commitment by devoting financial and other resources to the relationship.
- **I**nformation—the partners share information to make the partnership work.
- **I**ntegration—The partners develop linkages and shared ways of operating so that they can work together.
- **I**nstitutionalization—The relationship is given a formal status with clear responsibilities and decision processes. It extends beyond the particular people who formed it.
- **I**ntegrity—The partners behave toward each other in honourable ways that justify and enhance mutual trust.

Source: Kenter (1994).

- Partners should establish mutual respect and compatible working relationship reasonably early in the project. During the early stage of the project, time and effort needs to be invested in building such relationship and greater inter institute exchange.
- Management of partnership projects is a very demanding task, time consuming and require multiple skills. A system of sharing of project management and reporting tasks among all partners is essential for more equitable and responsible partnership.
- Clear articulation of intended impacts of research partnerships
- In assessing benefit, it is important to pay attention to individuals, organizations as well as the society. As a result of the partnership process, the individual may get promotion, additional responsibilities, public recognition, consultancy services etc. At the organizational level, important benefits may include evidence of farm level impacts; increased visibility and recognition, expanding partnership opportunities, leverage of additional resource etc. At the societal level, benefits include the contribution to the developmental goals. An important aspect of organizational benefit has been credit sharing and recognition of partners; contributions in all public presentations, visits, publications or production of any materials, which result from partnership. It is important to weave the process of creating impact into the process of conducting research.
- Once the intended impacts are outlined, then the category of people who could be instrumental in bringing about the different impacts need to be involved in the implantation process.
- Ensure that the research findings and recommendation reach those who influence policy— researchers, NGOs, communities and those who lead advocacy. It is important to realize that those who influence policy have little time to read and absorb, hence research results need to be communicated to them in the form of short briefs and not as long reports.
- End user impact should be clearly identified and necessary resources should be provided as an integral part of the project for this to become possible.
- Keeping written records at the time of project formulation is very essential to avoid misunderstanding and conflicts. Much care is needed in documenting intellectual property and commercialization of knowledge/technology which are discussed and agreed upon. Agreements

will need to be reached on how the results of the partnership will be formally identified; commercially protected (and who will be responsible?); commercially exploited (and how will any benefits be shared?); and published and communicated (when and by whom?).

- Joint resource mobilization
  Although initially the resources will come from donor agencies the sustainability and continuity largely depends on the commitment of resource by the local partners. Co-financing and joint resource mobilization (including increased contribution), helping some partners to raise funds through proposal development has been a successful strategy in reducing financial burden and has increased partners; stake and commitment.
- A good research partnership culture positively influences the empowerment of all partners. It includes regular face-to-face meetings at each partner location and mutual respect, where all involved partners have equal voice and there is no dominating or paternalistic expert mentality; which eventually induces an inferiority complex in the weaker partner resulting in negative impact.
- Sharing of management tasks such as ensuring local co-ordination by local partners gives credibility and confidence to all parties thus positively enhancing the impacts of partnerships. Where the necessary managerial skills and experience are missing, appropriate training and support has to be provided as part of the project implementation.
- Personnel empathy enhances mutual trust and greatly contributes to the success of a research partnership, particularly with regards to end-user benefits thus enhancing impact of partnership.

There is no blue print for partnership. It is a process and there is a great diversity of arrangements which are related to historical and location specific context. The factors that trigger the need for partnership may also vary. Thus, instead of developing models, we should aim to develop principles and best practices for designing and implementing partnerships.

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Session 10: Exercise: Reflecting on challenges of partnership and improvement options

(Group exercise)

Group work (30 minutes)

1. Divide into four groups and have each group elect a rapporteur. (5 minutes)

2. Brainstorm and answer the following questions in your groups:
   - What are the key challenges you are facing in the implementation of the partnership project that you are currently involved?
   - Based on the lesson learned during the workshop, what do you want to suggest/recommend to address these challenges?

Reporting and discussion (30 minutes)

3. Rapporteurs present the group responses (20 minutes).
4. Facilitator asks feedback on this exercise and closes the session (10 minutes).

Session 10: Exercise 10. Worksheet

(Group responses)

1. What are the key challenges you are facing in the implementation of the partnership project that you are currently involved?

_____
_____
_____
_____
_____
_____

2. Based on the lesson learned during the workshop what do you want to suggest/recommend to address these challenges?

_____
_____
_____
_____
_____

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Annex 1: Sample MoU

Dated this _____[date]_____ day of _____[Month]_____ _____[Year]_____

Memorandum of Understanding

Between

International Livestock Research Institute ('ILRI')

and

XYZ
('XYZ')

DRAFT 061205

Memorandum of Understanding

This Memorandum of Understanding ('the MoU') is made this   day of   200_ by and between the International Livestock Research Institute, an international research institute of Post Office Box Number 30709–00100 Nairobi Kenya with its headquarters in Kabete, Old Naivasha Road, Nairobi, (hereinafter referred to as 'ILRI') of the one part and …………. a [•] of [•] (hereinafter referred to as 'XYZ') of the other part.

WHEREAS

a. ILRI is a non-profit international research institute working at the crossroads of livestock and poverty, bringing high-quality science and capacity building to bear on poverty reduction and sustainable development for poor livestock keepers and their communities in all tropical-developing regions.
b. ILRI's research and research-related activities are implemented in collaboration with other institutes from both developing and developed regions.
c. XYZ is engaged in [•].
d. The Parties are desirous of entering into this MoU to foster their objectives as set out in clause 3 below.
1. Definitions
    • In this MoU' where the context so permits, the following terms and phrases have the meanings set out herein:–
        • 'Business Day' means a day (except a Saturday or Sunday) when banks are normally open for ordinary business in Nairobi, Kenya;
        • 'Effective Date' means the date of this MoU;
        • 'LoA' means the Letters of Agreement to be entered into by the Parties relating to specific projects, pursuant to this MoU;
        • 'Parties' means ILRI and XYZ together and the term 'Party' means either of them as the context so permits and the terms 'Party' and 'Parties' mean their respective and joint successor(s), personal representative(s) and assignee(s) as the case may be; and
        • 'Term' means the term of this MoU as specified in clause 2 below.
2. Commencement
    This MoU shall commence on the Effective Date and remain in force for [   ] years (the 'Term'), subject to automatic renewal for similar periods unless earlier terminated in accordance with the provisions of clause 12 below.
3. Objectives
    The Parties' Main Objective under this MoU is to establish a long-term relationship for purposes of exploiting their complementary research skills to further their respective missions (the 'Main Objective').
    In particular, ILRI and XYZ will explore possibilities of collaborating in the following broad areas of research;

In furtherance of the Main Objective each Party shall provide such staff support, institutional services and materials as may be necessary for the implementation and achievement of the Main Objective.

4. The letters of agreement

The Parties shall on a case to case basis negotiate and agree on the terms of each LoA without thereby being under any obligation to enter into any LoA except by mutual agreement.

The Parties shall select, develop, plan and jointly implement the specific activities through the LoAs.

Each LoA shall specify:

    4.3.1.   name of the specific project to be undertaken;

    4.3.2.   specific objectives and procedures of the project;

    4.3.3.   contributions and responsibilities of each Party;

    4.3.4.   amount and source of funding, including schedule of payment and reporting;

    4.3.5.   intellectual assets and intellectual property ownership issues;

    4.3.6.   special terms and conditions of performance of the LoAs;

    4.3.7.   rights and obligations of each Party; and

    4.3.8.   any other provisions as may be relevant and/or applicable.

Each LoA shall be expressed in English and shall only be effective and binding on the Parties if signed by the duly authorized officers of the Parties.

5. Records

Each Party shall be responsible for maintaining its own records of the activities undertaken pursuant to this MoU.

6. No financial commitment

This MoU carries no financial commitment on either Party.

7. No exclusivity

The MoU does not obligate either Party to work exclusively with the other on any project whatsoever or constitute either Party an agent of the other. However, once an LoA has been executed by the Parties, neither of the Parties shall undertake the same project in collaboration with any other person unless agreed otherwise in the LoA.

8. Independence of parties

Nothing contained in this MoU shall constitute either Party, a partner or agent of the other for any purposes whatsoever.

Neither Party has the authority, either express or implied, to enter into any agreement, incur any obligations on behalf of, or commit the other Party in any manner whatsoever, except as is provided in this MoU or as may be agreed in writing from time to time.

9. Amendments

No variation or amendment to this MoU shall be effective unless in writing and signed on behalf of each Party by a director or other duly authorized person (as the case may be).

10. Legal effect

Whereas the Parties intend to be legally bound by the LoAs, this MoU is entered into in good faith and solely as a basis for entering into contractually binding relationships through the LoAs. Accordingly, this MoU is not intended by the Parties to be legally binding upon them and failure to enter into any LoA shall not constitute any breach capable of raising any legal liability on the part of either Party.

11. Notices

Any notice or other communication under or in connection with this MoU is to be in writing in the English language and signed by or on behalf of the Party giving it. The notice or communication may be served by being delivered personally, by facsimile transmission or sending it by registered post to the Party due to receive the notice or communication at the address set out in Clause 11.3 below or such other address as that Party may (for the purposes of this Clause) specify from time to time in writing to the other Party.

In the absence of evidence of earlier receipt any notice or communication so served is deemed to have been received:

    i. in the case of personal service, on delivery;

    ii. in the case of facsimile transmission, on completion of the transmission except where the time of transmission is not during the addressee's normal business hours it shall be 9.30 a.m. on the next business day and provided electronic confirmation of the transmission is obtained; and

    iii. in the case of registered post, five (5) days from the date of posting.

The addresses are: –

    a) In the case of the ILRI: –

Name:	International Livestock Research Institute
Physical address:	ILRI Campus
	Kabete, Old Naivasha Road, Nairobi, Kenya
Fax number:	+254 20 631499
Postal address:	P.O. Box 30709–00100, Nairobi
Marked for the attention of: Director-General	

    b) In the case of XYZ: –

Name:	[●]
Physical address:	[●]
Fax number:	[●]
Postal address:	P.O. Box [●]
Marked for the attention of:	[●]

Address for service of legal documents

The Parties agree that the address for service of legal documents shall be the same address set out in sub clauses 11.3 above.

Change of address

A Party may change its address for the purpose of this Clause, by notice in writing to the other Party, which change of address must include a physical address and must be acknowledged as received by the other Party in writing in order to be effective.

12. Termination

Either Party may terminate this MoU by giving at least one (1) month prior written notice to the other.

IN WITNESS WHEREOF this MoU has been duly executed by the Parties the day and year hereinbefore set out.

SIGNED by _____   )

the duly authorized representative of ILRI in the   )

presence of :–   )

Signature: _____   )

Name: _____   )

Address: _____   )

SIGNED by _____   )

the duly authorized representative of XYZ in the   )

presence of :–   )

Signature: _____   )

Name: _____   )

Address: _____   )

Annex 2   Toolkits for partnership and network design and management

1   Introduction

There is a dearth of simple tools and approaches that enable research and development organizations to benchmark the status of their partnerships, assess their effectiveness and performance and to reflect on their experiences and lessons in partnerships. In addition, in-depth studies of partnership processes and benefits are very limited, and the strength of the available literature is also questionable as it is mostly advocacy type (Farrington et al. 1993; Shah 1995; Carney 1998; Morse 1996).

For an organization to realize the full potential and the collaborative advantage of partnerships, it must be skilled not only in identifying the right partners, but also in managing the partnership very effectively. Strong interpersonal leadership, management skills, and facilitation skills are essential to increase the likelihood that collaborative partnership will produce the anticipated outputs and impacts. Some of the salient skills and tools that could be used to design, implement and evaluate partnerships and networks are presented in this chapter.

2   Tools for partnership design

2.1   Pre-partnership phase

2.1.1   Rich pictures

What is a rich picture?

'Rich pictures' were developed as a tool for exploring a complex situation in soft systems analysis by Peter Checkland and colleagues at the University of Lancaster. He called them 'rich' because the idea is too gain the 'richest possible picture of the problem situation' (Checkland 1981). A rich picture should not try to impose too much structure too early in the process of exploration. A rich picture has few rules. It can show:

- Important actors and their relationships (but it is not just an actor or Venn diagram).
- Elements of structure and process, (but it is not just a system model or flow chart).
- Relationships between problems, (but it is not just a problem-causal diagram).
- Influences on the situation, (but it is not just an influence diagram).

The point is that all these other sorts of diagrams try to clarify the situation and it precisely the lack of clarity that can be important at an early stage of exploring the situation. Anything that seems relevant can be included in a rich picture and it should include subjective information such as:

- Stakeholder perspectives, prejudices, concerns and conflicts (without trying to represent a 'truth').
- Questions and uncertainties that seem relevant to the problem situation

Rich pictures usually use symbols, icons, cartoons and drawings and as few words as possible. This is because symbols and drawings allow a more intuitive impression and expression.

When to use rich pictures

Rich pictures can be useful to:

- Keep an open mind, broaden your thinking, and think creatively.
- Help understand and summarize a complex situation.

- Unearth the critical issues—unearth the 'real' problem.
- Build a common understanding of the situation within the team.
- Help communicate your team's understanding of the situation to others.

Steps

Again, there are few rules to a rich picture.

- Discuss with your team colleagues the main purpose of the diagram, and who is going to draw it, and with what information. How will you make sure the picture is as 'rich' as possible?
- You can start by visualizing the central theme or issue (as identified by the client) in the middle of a large sheet of paper. Try to express this as a simple picture or cartoon.
- Add elements of structure (e.g. important stakeholders) that seem most relevant to the problem situation. Don't worry about the layout or shape of your diagram at this stage (you can always redraw it later). You are a stakeholder (or you represent one or more stakeholders): so include yourself or your team in the diagram—What is your role, view of the situation?
- Add any activities or processes that seem to be an important part of the situation.
- As you add the elements to your picture, try to express any interrelationships between these items of structure and process, or the absence of such a relationship where you might think there should be one.
- If you have conducted interviews with stakeholders, try to include the main issues as seen by the different groups (i.e. don't just stick to 'factual' information, but include the different perspectives). A common way of doing this is to use speech bubbles.
- Look for areas that are confusing, or are not clear—try to express these.

Example

This example of a rich picture is based on the problem of groundwater use in N. Brabant described in the previous section (stakeholder maps). It was drawn to express the different aspects of the problem: water use and stakeholder conflict. The diagram was then used to focus the study to specific aspects of groundwater use.
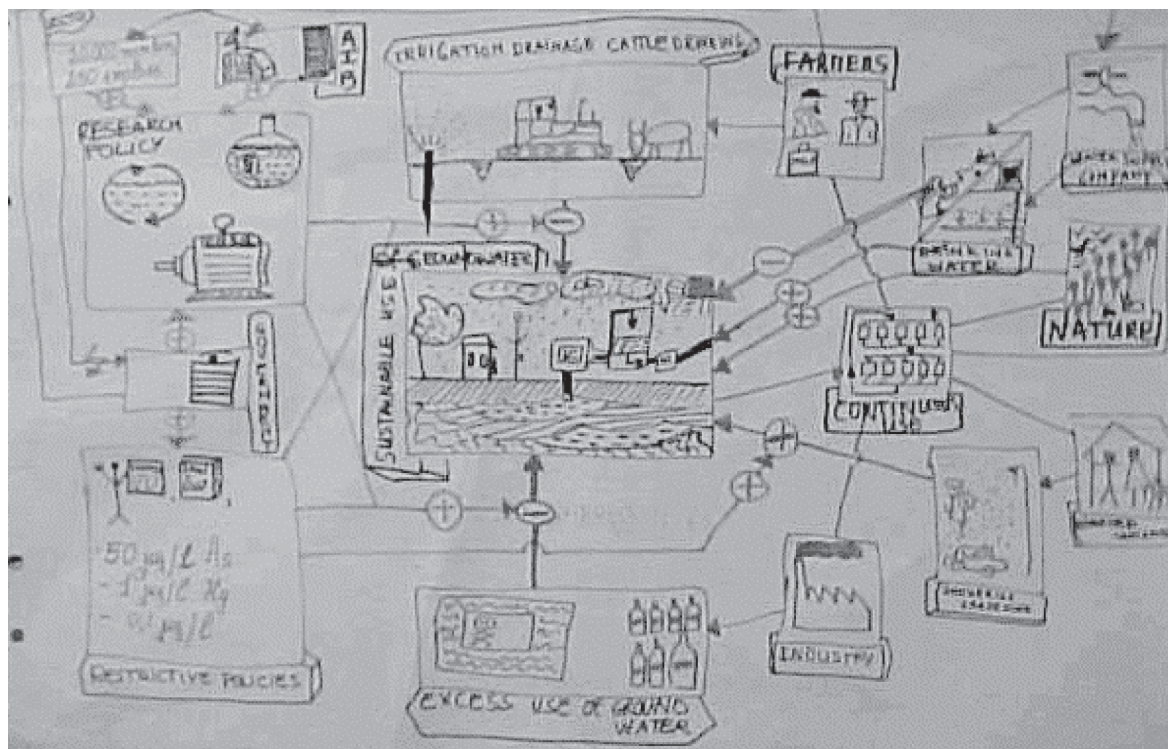
2.1.2 Actor analysis

Actors are all those people who have a stake (or share) in a particular issue or system. Stakeholders can be groups of people, organizations, institutions and sometimes even individuals. Other terms sometimes used in a similar way to stakeholders are 'actors' and 'interest groups'. The word 'actors' stresses that stakeholders are active and interact with each other. The use of the words 'interest groups' indicates that people can be grouped according to a common interest. In this document, we use the terms 'actors' and 'stakeholders' synonymously.

Actors can be at any level or position in society, from the international to the national, regional, household or intra-household level. Actors include all those who affect and are affected by policies, decisions or actions within a particular system.

Why is an actor perspective important?

Agricultural development often fails because the actors are not given enough consideration. Each actor has a different interest in the situation. Actor analysis is becoming more common in project settings. It attempts to deal with actors' multiple and often conflicting views, interests and objectives.

The term actor analysis was first used in management science for identifying and addressing the interest of different actors in business. Nowadays, actor analysis is frequently used for:

- policy formulation
- project formulation
- implementation and evaluation
- understanding and analysing complex situations in natural resource management.

Actor analysis is a way of understanding a system through its actors. It looks at their interest, objectives, power and relationships. Actor analysis will also show existing patterns of interaction between actors. It will show conflicts and can help find ways to resolve them. By understanding the system, it is possible to facilitate change.

In a project setting, actor analysis can help to improve performance:

- By helping to identify trade-offs between different actors objectives, and the conflicts between them. As a result, project efficiency and effectiveness can be improved.
- By helping to evaluate policy and project impacts. E.g. the distributional, social and political impacts of policies and projects. It can highlight the needs and interest of powerless people.

In considering actors, it is sometimes helpful to consider their importance and influence.

- Important actors are those whose needs are important to a project or study.
- Influential actors are those who have the power to control decisions in an activity or who can influence others in the decision-making process.

Importance and influence are not the same. For example, rural women farmers might have been identified as an important actor for equality purposes, but they may have traditionally little influence in decision-making processes.

Actor analysis responds to the question: which and whose interests matter in agricultural R&D intervention? It sets the domain of people, groups and organizations that should be taken into account when planning intervention by examining their interest and potential impact on them. The basic output is the identification and description of actors that an intervention is explicitly designed to help, as

well as those whose involvement is required to make the intervention work. The identification process disaggregates these actors in different characteristics, including:

- Structural: gender, age, geography (location or rural/urban), occupation
- Economic: employment sector, firms or business associations
- Political
- Social

Identifying actors is an iterative process. New actors are often identified by existing ones. To avoid missing important actors, it is important to review this regularly. Some actors will be important at the beginning of the process but not at the end. Others may not be important at the start but become more important later. The final selection of actors depends on the people responsible for the assessment. They have to develop criteria for identifying who should be considered actors.

Actor analysis uses groups like: communities, government or private sector. They are considered to be quite homogeneous. Obviously they are not. Communities are socially diverse—with individuals being differentiated by gender, caste, wealth, age, occupation etc. All these give social identity but divide people and cut across 'community' boundaries. The researchers and the actors themselves should determine which groups need to be subdivided, as and when the different interests become significant to the research questions or project.

While secondary literature is an important resource, actor analysis cannot be carried out without key informant interviews that identify specific actors relevant to the sustainability of the intervention. While some important information may be quantifiable, other information is inherently more subjective. Accordingly, the reliability of findings—especially on influence and importance—depends on direct interaction with diverse actors. Limiting interviews to a narrow group, such as government officials or big business, can generate a highly distorted picture of interests, intentions and influence.

For actor analysis, actor identification matrix, actor role matrix, actor perception matrix, information needs matrix, actor benefits matrix, actor importance and influence matrix and, septagrams can be used.

It should also be noted that the use of these tools by themselves does not make a process 'participatory'. The information can be gathered on a consultative basis, analysed and acted upon by a research team; or the matrices can be drawn up, analysed and acted upon by the actors themselves (albeit with an outside agency acting in a facilitative role). Whether a process is participatory depends not on the tool, but how it is used.

2.1.3 Actor linkage analysis

In undertaking any intervention, the first step is to identify the key actors who bring about or prevent change in an innovation system i.e. identifying the actors who are the actual drivers or hindrance to change. The breadth of analysis may vary depending on the context and focus. The emphasis is on identifying specific social groups or actors in a specific location at a given point in time. In actor analysis, it is the people who make decisions which define the groups. For example, 'research' does not happen; it is the people who do research, so the category would be 'researchers'. The common tools used to analyse actor linkages are: Actor linkages map, actor linkage matrix (ALM), actor determinant diagrams and, actor time line. These tools are briefly discussed in the following sections.

Actor linkage map

This is a useful starting point for discussing relationships and flows of information in an innovation system. The key actors are shown on a map with arrows between them indicating flows of information. In an actor linkage analysis, there is always an arm going in each direction. Note that single two-headed arrows are never used, as one of the main points of the mapping is to examine power relationships in the control of flows of information on different directions. The intensity of these flows can be illustrated by the width of the arrows. See Figure below for illustration. It is important to make sure that these maps need to represent actual flows of information. The map will be used as a guide to discussions of formal and informal mechanisms used to transmit and control information.
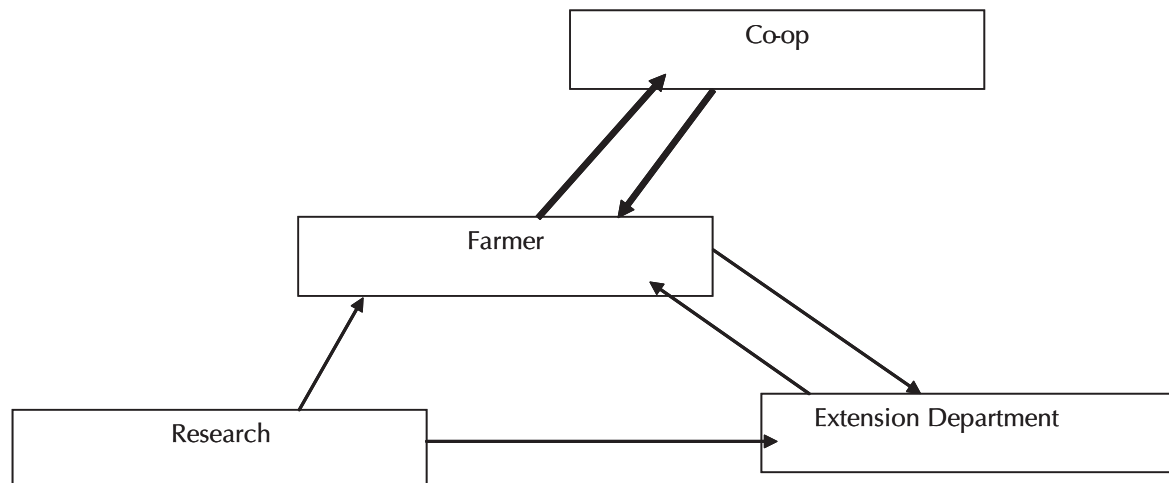

Figure 2.1 *Example of an actor linkage map.*

The actor linkage maps could be done individually with each of the actors. We could do what are called 'ego-based maps'. Here we look at individual actors and see who they link up with. All the ego-based maps can be synthesized to come up with the innovation system map.

For an ego-based map, we place the actor we are talking to in the centre and ask them to identify key actors they have linkages with and draw them up. We could ask them to distinguish whether the linkages in their perception are strong or weak (use and strong and dotted lines to represent them). We could even use different maps for past, current and anticipated situations, where relevant. This would help us understand the changes in/dynamics of the system.

Creating an ego-based linkage map

Maps can be drawn up by one actor or in a group.

- Put the name of the actor we are talking to in the centre of the page.
- Ask the actor who they link with for different aspects of their enterprise.
- Use arrows to show direction of flow of information or services.
- Use thick or thin arrows to indicate the importance of the link.

The actor linkage maps are particularly useful when focusing on one actor and his or her linkages with other groups. As the number of actors increases, however, the map can become too complicated. At this point, it may be useful to work with maps of part of the system or move to an actor linkage matrix.

Map showing key actors in a Bangladesh chilli innovation system
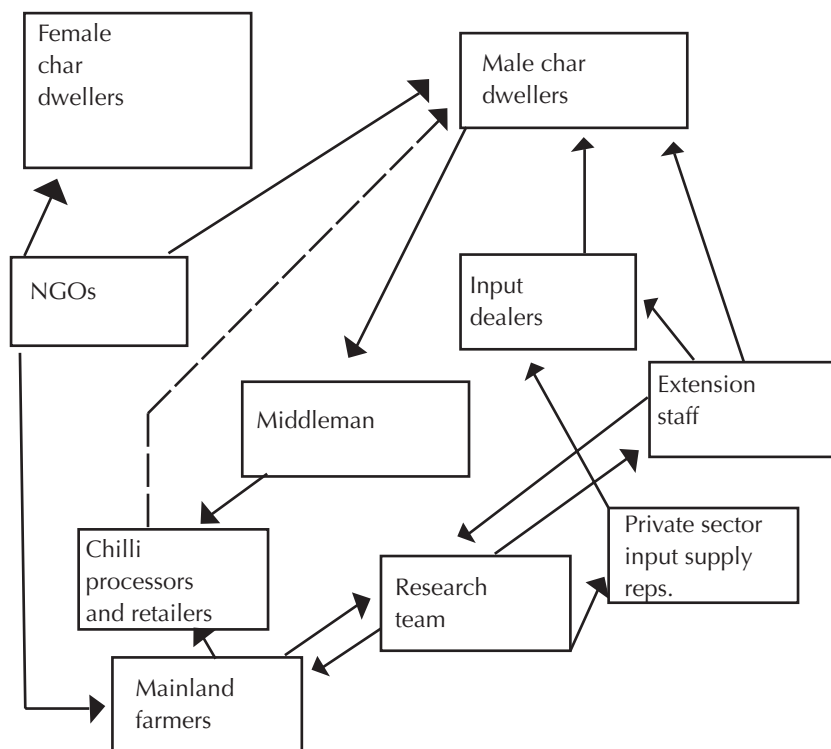
Source: Biggs and Matsaert (2004).
Figure 2.2. *Actor linkage map.*

Actor Linkage Matrix (ALM)

ALM identifies all the actors and shows the links between major actors in an innovation system. It complements the actor linkage map. In a Matrix, this is represented by listing actors along the vertical and horizontal axes. The cells in the matrix represent flows of information from the actors in the rows to actors in the columns. In the Matrix, all cells can be identified by their co-coordinators (numbers for rows and letters for columns are shown in the box below).

	Actors	A Researchers	B Farmers	C Manufacturers
1	Researchers		1	
2	Farmers			
3	Manufacturers			2

Source: Biggs and Matsaert (2004).

The matrix basically plots the same information as the map, but has additional advantages such as:

- It can deal with more complex situations and more actors (maps get very messy)
- It has a cell for every possible linkage, and so encourages one to explore all possibilities
- It is a useful role in helping to pinpoint particularly significant links, e.g. strong links, coalition groups, weak links etc. This makes it more useful than the map for planning, implementation, monitoring and evaluating change
- It enables users to quantify the strength of linkages using symbols in each cell, e.g. plusses and minuses, or telling such as s (strong), m (medium), w (weak), dn (don't know)

- It enables users to condense and store a lot of information about linkages in the spreadsheet ALM (each cell reference can be linked to a text). Therefore, it is a useful tool for documenting a given situation or the outcome of an event.

The actor linkage matrix is best used with a small group, with people familiar with the technique or after a discussion to summarize findings. We could do the actor linkage matrix with each of the actors, but we can also do it with the synthesis map.

Creating a linkage matrix:

- Use a spreadsheet program, e.g. Excel.
- Plot key actors on vertical and horizontal axis
- Now each cell in the matrix represents the flow of information from the actor on the vertical axis to the actor on the horizontal.
- Use symbols or shading to show information flowing from one actor to another. Use an agreed code and fill in for each actor linkage.

Each cell in the matrix can be linked to a piece of text describing the linkage and explaining the ranking given.

- As with the actor linkage maps, a separate matrix can be used to represent past, present and possible future situations.
- For planning and monitoring purposes, symbols can be used to indicate linkages which are targeted for interventions or which have been impacted by a particular activity.

Actor determinant diagram

This is similar to a problem tree. It is intended as a group discussion (or individual thinking) tool to analyse the nature of a particular linkage. The starting point is a cell of the actor linkage matrix or a linkage in the map. Normally, this would be the one that is particularly significant (and might need to be strengthened, weakened or learnt from). The diagram maps weakening and strengthening forces on the linkages and helps a group to identify possible areas of intervention.

This tool helps us to open up a discussion about the feasibility of different actions within the current social and political context. It is a useful tool for building an action plan from the analysis of a particular situation. Therefore, it is often carried out with the key actors who would be involved in any future 'implementation' of suggested actions.

Maps and matrices only show the relative strength of relationships and don't give an indication of issues of control, transparency, relative satisfaction with links etc.

The determinants diagram leads from analysis of a particular situation to the development of action plans. For this reason, it is most usefully used with key actors who would be involved in any future implementation of suggested actions.

Steps to build a determinants diagram

- We have to identify linkages on our matrix which look particularly important or significant. We have to choose only those which we think are most critical.
- The group must decide which links to focus on.
- We have to work with groups of actors to look more closely at this link (could be a mixed or single actor group, depending on how well we think the group dynamic will work).

- Write the linkage in the centre of a flipchart. Ask the group to start by discussing the strengths, examples of successful linking, good experiences etc. Mark these in the area above the link.
- Discuss any problems experienced with this link. Mark these in the area below the link. For each problem, try to get to the root cause, before going on to discuss the next.
- Now for each root cause look for potential solutions. Try to encourage the group to make these active solutions (not things other people should do for them).
- For each strength, look at how this could be built on to further improve this linkage.
- The final result will be a list of ideas for action. Obviously some 'areas for intervention' (what to do) will be more possible to implement than others. The exercise helps open up a discussion about the feasibility of different actions within the current context.

Actor linkage matrix used to monitor partnership building

		A Male char dwellers	B Female char dwellers	C Local leaders	F Local middlemen	H Dealers	I Local government staff	K Bank staff	L Local NGO staff	M National government staff	N Researchers	P National middlemen	Q Chilli processors and retailers	R Input suppliers	S Media	U Project team
1	Male char dwellers	d	d					a	a	a		a				11
2	Female char dwellers	d	d					a	a	a		a				11
3	Local leaders															C
6	Local middlemen															13
8	Dealers															14
9	Local government staff															3
11	Bank staff															3
12	Local NGO staff															2
13	National government staff															4
14	Researchers	a	a				a	a	a	a						1
16	National Middlemen															5
18	Chilli processors and retailers															10
19	Input suppliers															8
20	Media															6
21	Project team	11a	11a	c	13	14	3a	3a	2ab	4a	1ab	5	10	9	6	

Source: Biggs and Matsaert (2004).
Figure 2.3. *Actor Linkage Matrix.*

An actor time line is a listing of key events in the evolution of an innovation system. Getting a group of key actors to construct an actor time line of key past events for a particular innovation system can build a more comprehensive understanding to past change processes and a better understanding of the current situation. The key question to be answered is which actor made key decisions at what time in the past? Once again, the emphasis is on human action; it is important to specify who took what decisions, when and where. This will enable us to understand the actual causal effect relationship in a

particular innovation system. It also gives a feeling for the dynamics of an innovation system and where it is currently heading.
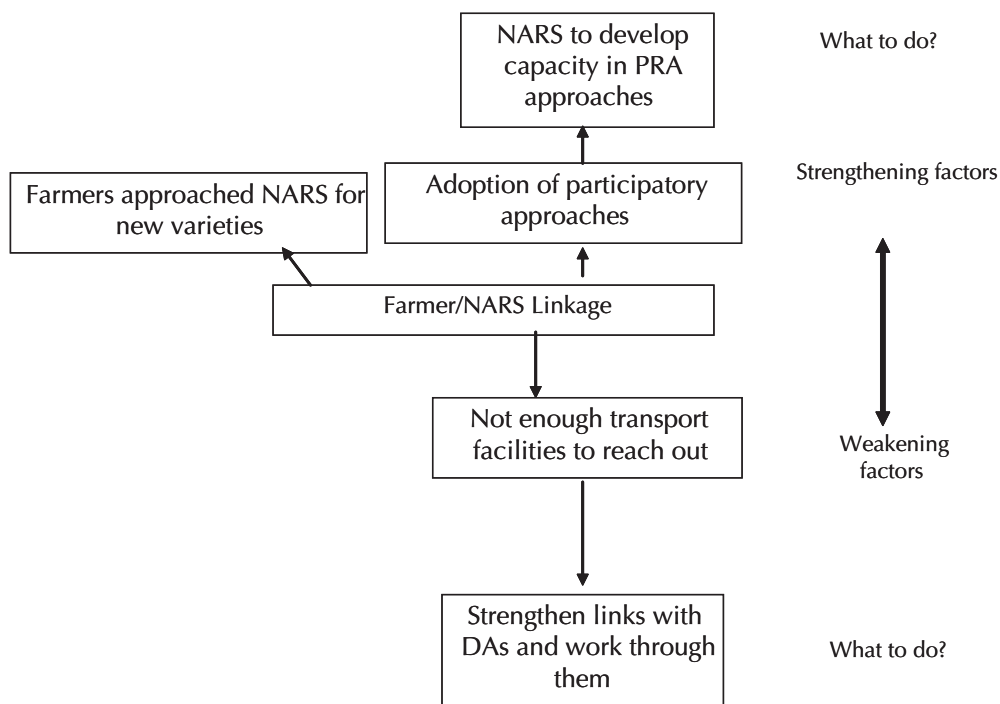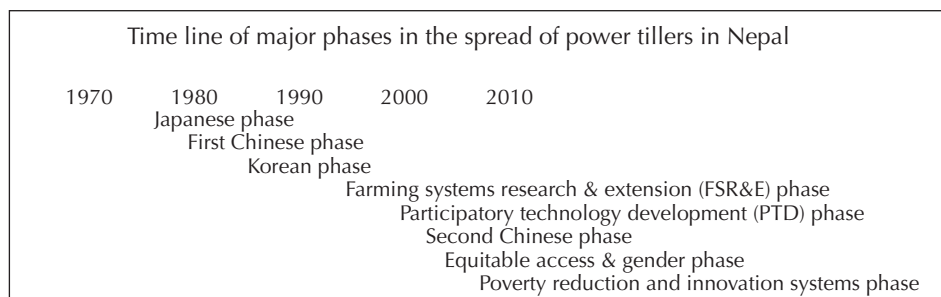

Figure 2.4. *Actor Determinants Diagram.*

Actor time lines

It is important to note that actor time lines are used here more as a learning and reflection tool, a way to establish new common ground in a coalition of partners, and as a tool to guide future action. The time line can either be given as a list of events, with dates alongside as a figure with a sequenced bar chart of actor events over time, sequencing and the path of causation of past events.

Time lines can be generated through a review of literature, individual interviews (particularly with people with a long association with the innovation system) and group discussions. Usually a combination of all these will get you the fullest information. Group discussions with knowledgeable people in the sector are useful to analyse and discuss the implications of the timeline, e.g. trends and new directions.

For the group discussion, use a flipchart or blackboard.

- Start with the earliest recorded memory in this innovation system
- Now mark key innovations since that time.
- On the time line these can be linked to key events in local or national history, e.g. independence, the year of the big flood etc.
- For each innovation marked on the line, note actors who created or helped the spread of this innovation. These are the key actors.
- Discuss implications: how has this innovation system changed? Where is it heading now? Who have been the key actors in the past and present?

```
┌─────────────────────────────────────────────────────────────────────────┐
│            Time line of major phases in the spread of power tillers in Nepal │
│                                                                           │
│   1970      1980      1990      2000      2010                            │
│               Japanese phase                                              │
│                   First Chinese phase                                     │
│                       Korean phase                                        │
│                       Farming systems research & extension (FSR&E) phase  │
│                           Participatory technology development (PTD) phase│
│                           Second Chinese phase                            │
│                           Equitable access & gender phase                 │
│                               Poverty reduction and innovation systems phase │
└─────────────────────────────────────────────────────────────────────────┘
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Source: Biggs and Matsaert (2004).
Figure 2.5. *Example of an actor time line.*

2.1.4 Network mapping

Innovation is a process leading to a productive use of knowledge for economic and/or social purposes. Innovation process is an interactive, non-linear social process; and social actors rarely innovate in isolation. The central proposition of the innovation systems approach is that the innovative capability depends on the quality and density of relationships among producers and the relationship between producers or producer groups and enterprise (market) and supportive services—public and private organizations. Thus, knowledge networks, resources linkages and partnership are crucial to understand and analyse innovation systems. Network analysis has been developed to understand these relationships in a specific social context (Clark 2006).

Rural households' and social groups' ability to access resources, goods and services depends on their membership and position in networks. Information is one of the crucial resources that flow through networks. Network analysis, among other things, helps to identify both information flows and bottlenecks, which can inform the design of a strategy to encourage horizontal sharing of information in the existing social systems.

More often than not, we find a number of actors—community-based organizations, NGOs, public and private organizations—engaged in development activities and interactions at the local or higher levels. Visualizing community level and organizational networks can help to understand actors, interactions between actors and identifying the most influential actors. Network analysis can be used as a diagnostic tool during planning development projects to identify similar initiatives to avoid duplicating efforts and facilitate linkages and interactions among actors; identify the drivers of change, possible conflict of interest, or power struggle. Network analysis is a good entry point for enhancing coordination of multistakeholder governance; and network maps are used for monitoring progress, with respect to improvements in relationships among relevant actors. The visual graphic are able to capture the attention and imagination of rural actors who are usually illiterate. The process of participatory net-mapping in itself facilitates group discussion, reflection and group visioning on ways to improve linkages and quality of interactions among relevant actors and ensuring inclusiveness.

Drawing a network map

Net-map is an interview-based mapping tool that helps people understand, visualize, discuss, and improve situations in which many different actors influence outcomes (Schiffer 2007). Net-map helps determine:

- what actors are involved in a given network
- how they are linked

- how influential they are and
- what their goals are.

A step-by-step guide to using the net-map method (adapted from Schiffer 2007, 7–18).

Preparation

Before you start using net-map and interviewing participants, make sure to clearly define the overarching issue you want to tackle. Do you want to know who can influence the success of a specific project that you are planning? Or do you want to generally map out the network environment of your organization? Are you interested in a specific conflict and how the network actors prevent or support conflict resolution? Are you examining a defined group of people (for example, all members of a working group) or do you simply want to find out who belongs to the network (for example, all those who can influence the course a reform will take)?

Pre-testing

Discuss the overarching issue you wish to examine, the defined links, and the goals with someone who is knowledgeable about the social environment you want to research. Using the guidelines presented below, draw your own Influence network map of how you see the situation to determine if your framework needs to be modified. You can continue the pre-testing process by interviewing and drawing maps with people similar to those you want to participate. You can also use these pre-testing activities to discuss your choice of words. Should you use the terms 'power', 'influence', 'authority', or a descriptive phrase like 'someone whose word has weight'?. If you call one link 'giving support,' do people think it means 'giving words' or 'giving money,' or is the term may be limited to the context of party politics? It is important to adapt the terminology to your experience.

Tips:

- Limit relationships in the map to four.
- Use small 5 cm by 5 cm post it notes for drawing the nodes.
- If you are dealing with only one project in the workshop, and you are working with a group of more than 8 participants, then split them into four groups and get each group to draw the map for just one relationship (e.g. one group draws the funding network, another does research etc.)
- Use poker chips/checkers pieces for the influence towers.

Question 1: Who is involved?

Place a mapping sheet in front of your interviewee and ask him or her to name all individuals, groups, and organizations that can influence the issue you are examining. The questions could include: Who can influence the restructuring of our organization? Which groups and individuals are involved in this inter-community conflict? Who has influenced this change of policy?

Encourage your interviewee to mention every actor that comes to mind, not only those who have formal decision-making capacity in the process. Write every actor on an actor card and distribute the cards on the map. Give your interviewee time to think this through properly and allow him or her to add actors throughout the interview. Before going to the next question, read out loud all actors, since this might make the interviewee think of other actors to add. In some cases, you might insist that the interviewees add themselves to the actor list. If you are working with illiterate interviewees, let them pick figures for each actor and place them next to the actor cards; this way, it will be easier for them to remember who is who. You might choose different colours of cards for different groups of actors (use pink cards for all governmental actors, for example, or green ones for all non-governmental actors). This also helps to visually structure of the map more clearly.

Question 2: How are they linked?

You have defined the links you want to look at through your preparation and pre-testing. Explain to your interviewee that you want to find out how all these people and organizations are linked to each other. You will connect the actor cards with arrows indicating that something (such as information, command, or money, for example) flows from one actor to the other. In cases where the actors exchange something, two arrows pointing to opposite direction are used. In cases where two actors exchange more than one thing, you can draw a link that has a number of arrow heads of different colours. Present the kinds of links by colour and explain what each colour represents. For example, red represents money, black represents command, green represents advice, and blue represents information.

It makes sense to start with the link that you expect to be the least common, finish this colour, and continue with the next. In this way, the picture will develop slowly and the process will be less messy. With complex maps, you might need to guide your interviewee through the process and make sure that he or she does not forget a link, though it is important you do not push the interviewee to link actors just to please you. Make sure your interviewee understands that you are not looking at how links should or will be, but at how they currently are.

Question 3: How influential are they?

To avoid misunderstanding, it is important that both the interviewer and the interviewee share the same understanding of the term 'influence'. In your pre-testing and discussion, you will have developed a commonly agreed-upon definition of 'influence'. *It is important that the interviewee understands that the question is about the ability of the actor to influence a specific issue, and not about formal hierarchies*. The question is: how much influence does this actor have in this specific field/activity/ organization—and not in a more general sense. For example, chief administrator of a region will be seen as more powerful in a general sense than administrator of a district or head of a district office of agriculture and rural development. However, when it comes to influencing the implementation of a specific intervention relating to agriculture, the latter tends to have much more impact than the administrators.

Emphasize that the sources of influence could be diverse, ranging from legitimate decision-making capacity, through giving advice or incentives, to bending or breaking the rules. Once this understanding of 'influence' is established, the interviewee will be asked to assess who has what amount of influence on the given issue. Choose one actor figure for every actor and put it on an influence tower. This tower might consist of a certain number of influence pieces according to how strongly this actor can influence the issue at stake. Explain the following rules to your interviewee: The more influence an actor has the higher the tower. The towers can be as high as the interviewee wants. Two actors can have towers of the same size. If an actor has no influence at all, the figure is put on the ground level without any influence tower.

After setting up the influence towers, verbalize what you see, starting with the highest tower. For example: You have given the chief administrator of the district the highest tower with a height of five tower pieces, followed by the head of district office of agriculture and rural development on towers of four, and DAs with two tower, and finally you say the resource-poor subsistence producers have no influence at all—no tower. Encourage the interviewee to adjust anything if he or she has second thoughts. This is especially necessary in complex influence networks. If you change one tower, make sure to adjust the others accordingly. Once the interviewee is content with the whole set-up, note the height of the influence towers next to the actors' names on the network map.

Starting with the most influential actor, you now begin to ask the interviewee about the sources and effects of influence. Your questions will vary according to your general goal and to the overarching issue you are exploring. As you become more familiar both with the tool and the situation you are analysing, you will see that it becomes easy to see at first glance what is special, strange, or noteworthy about a specific influence network map. Your questions may include: I see you have put this actor on the highest tower. Why? Where does his/her influence come from? You say that these two have the same level of influence. What happens if they disagree? Is their influence based on the same grounds? Does it have the same range? I have heard there is a conflict between these three actors. Could you explain to me what it is about? You have linked this actor to so many others, but you say he doesn't have much influence—why is that so?

Discussion

Now you have completed one Influence network map. Discuss the result with your interview partners. Depending on the goal of this specific mapping process, you might ask your interviewees to think strategically about the network and develop ideas to improve the situation in the future.

How can we draw network maps using software?

We use two programs to draw the network maps. First we put the information from the workshop-drawn network maps into a text file which are then imported into UCINET. UCINET puts the text file into matrix format which we then plot in NetDraw.

2.1.5 Partnership readiness questionnaire A

Please use the following seven-point scale. 1 = low degree of confidence. 7 = highest level of confidence. At the end, total up all your points. The scores reflect the degree of confidence in your readiness. Lower scores indicate a real concern, perhaps the partnership is not right for you right now; middle score says you have some concerns, but with special attention devoted to what concerns you most, you think you should proceed; and the higher scores—'go for it'—it's a winner.

(Circle one)	
1. Does my organization have the resources—financial, people, and technology—needed to contribute our portion of the partnership being considered?	1–2–3–4–5–6–7–NA
2. Can we honestly say these resources can be accessed when required? (Meaning they have not already been committed to several efforts and are seriously overloaded.)	1–2–3–4–5–6–7–NA
3. If we cannot contribute our entire share of financial resources, do we feel we have a good chance of obtaining additional donor funds?	1–2–3–4–5–6–7–NA
4. Are we willing and able to work in collaboration and mutuality with the other organizations that comprise this partnership?	1–2–3–4–5–6–7–NA
5. Are we willing and able to share control and participate in shared decision-making?	1–2–3–4–5–6–7–NA
6. Are we willing and able to be flexible about how things get done and not to be too insistent that it be done our way?	1–2–3–4–5–6–7–NA
7. Have we in the past and are we now able to work with our less re-sourced partners with mutual respect, avoiding any sense of domination and superiority? Would these organizations give us a high rating in this regard?	1–2–3–4–5–6–7–NA
8. Is there support for this project within our organization, and would this partnership become a valuable part of our organization's portfolio?	1–2–3–4–5–6–7–NA
9. Can we commit to devote the leadership and management time re-quired of us in this partnership effort?	1–2–3–4–5–6–7–NA
10. Have we had sufficient experience in working in partnerships so that we can say that our 'partnering' competencies are good enough to carry out our performance commitments?	1–2–3–4–5–6–7–NA

Total: _____

Partnership readiness questionnaire B

Rate each of the eight items listed using the following five-point scale as a guideline. Place the appropriate number from this scale in the space located to the left of each item. Obtain a total readiness score by adding together you eight ratings.

Five points scale:

5 = Strongly agree

4 = Moderately agree

3 = Indeterminate

2 = Moderately disagree

1 = Strongly disagree

XIII.   Efficiency and effectiveness
1. Effectiveness. Our product or service could be offered on a greater scale if we were able to combine efforts with one or more organizations.
2. Quality. Our product or service could be offered at a higher quality if we were able to combine efforts with one or more organizations.
3. Cost. Our product or service could be offered at a lower cost if we were able to combine efforts with one or more organizations.
4. Resources. Our organization needs resources that we do not currently posses that could be accessed through other organizations.
5. Sustainability. Our product or service could be provided on a more sustainable basis if we were able to combine efforts with one or more organizations.

XIV.   Personal fulfilment
1. Gratification. Other members of this organization and/or I would become much more involved in, have more control over, and/or be more satisfied with the work environment if our organization were to enter into some form of partnership with another organization.
2. Gratification. I believe that other members of this organization and/or I would find a partnership with one or more organizations a source of challenge, excitement, personal learning and/or professional development.

XV.   Organizational culture
1. Decision-making. Our organization has a culture of collaborative decision-making that would support a partnership with one or more organizations.

Source: DFID (2003).

2.1.6   Preliminary partnership analysis

At the concept note stage, the approach may just involve identifying the capacities needed to achieve the objective and the potential partners who might supply these capacities. Some comment on particular benefits, strengths and weaknesses of potential partners may also be appropriate. An example of such an analysis is given in the following table.

Table. *Preliminary partnership analysis: ICIPE tsetse repellent evaluation project*

Capacity needed	Potential partners (name of instituitions)	Expected benefit strengths/weaknesses	Alternative supplies
independent evaluation, especially epidemiology and socio-economic expertise	ILRI	Confirms scientific credibility for critical technology evaluation + research design and biometrics - weak epidiomolgy capacity currently -animal health field research no longer clear priority according to ILRI's defined outputs	ARIs in the north, e.g. CIRAD
Provides technology, back-stops application	ICIPE	Confirms success of technology; endorses development of technology to a commercial product + Relevant scientific, technical expertise - Some disappointing previous partnership experiences	n/a
Independent evaluation especially implementation in the field	KARI-TRC	reinforces role as national agency responsible for trypanosomiasis research; enhances capacity for technology evaluation + Appropriately trained field technicians, infrastructure in proposed study area + long track record, relevant subject expertise ?? Financial management capacity	ILRI hires own field team VSF

2.2   Partnership initiation phase

2.2.1   Preliminary visioning exercise

Visioning exercises have been used to design and help achieve a desirable 'future'. Visioning is a collective exercise and, whilst it has predominantly been used for community and urban planning, the principles can be applied to many other situations.

For partnership management of research activities, it could be especially useful when different partners are likely to be doing a wide range of activities which could appear isolated.

Even if the grant application does not necessarily require it, it may be useful to use a log frame format to structure this visioning exercise. By asking participants to describe where they expect to be and what they see in 'x' years time, related to the activities they will be doing, the similarities and differences between the visions can be elicited. Where there is divergence, this can be discussed so that everyone agrees on the overarching goal and purpose of the proposed research activity.

Agreeing first on the goal and purpose provides criteria for deciding whether proposed objectives and activities are relevant to the project. This approach can help keep everyone honest if partners try to load in activities that do not contribute directly to the project purpose.

2.2.2   In-depth and participatory partnership analysis

A more in-depth partnership analysis is appropriate at the proposal development stage. This should be done together with all the partners; the process of conducting the analysis together can help to ensure

that everyone is 'reading from the same page'. The aim should be to clarify roles and expectations from each partner, using a similar framework of capacities needed to achieve the objectives.

One possible approach would be as follows:

1. Agree on the main types of capacity needed.
2. Each partner then identifies their contribution, perhaps ranking it as 'major' or 'minor'.
3. Each partner lists their expected benefits by participating in the project. This should be expressed in terms of the output or output target the activity will contribute to.
4. Each partner characterizes for itself and each of the other partners their perceived strengths and weaknesses vis-à-vis implementing the research activity.

Outputs might take the form of the following tables:

Table. *Capacity*

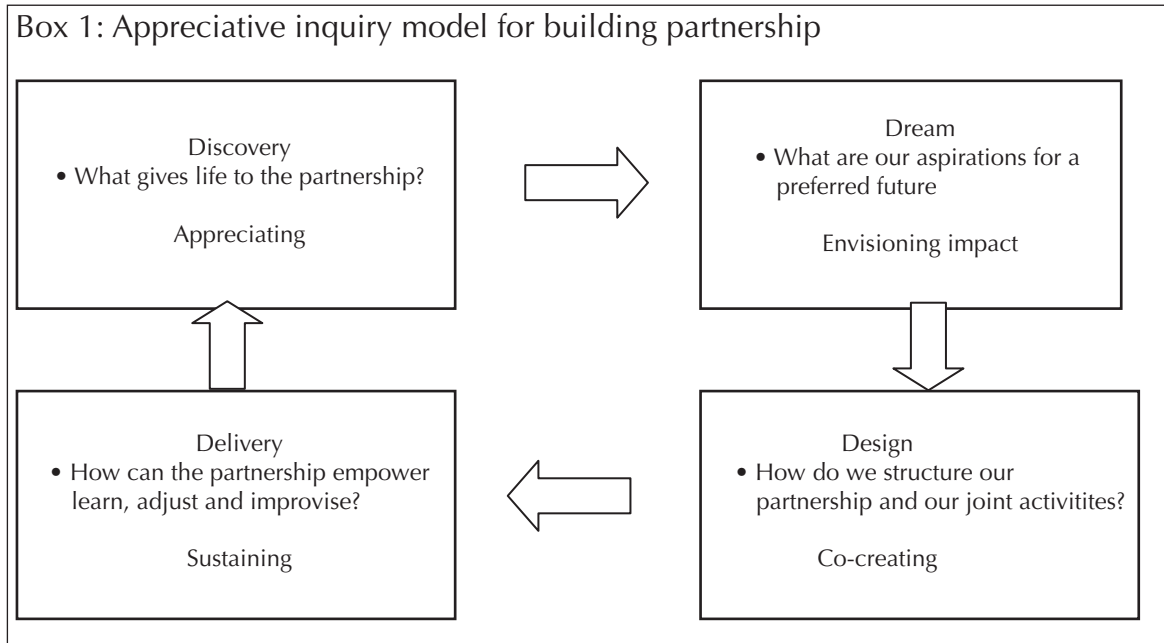| Capacity needed	Partners who can contribute	Proposed role and ability to contribute

Table. *Motivation and strengths/weaknesses*

Partners (name of institution)	Expected benefit (motivation)	Strengths Weaknesses

In some cases, donor applications have a specific section requesting information on partner capacities and roles; the results of this exercise can serve as the basis for that section. Other approaches and frameworks could be used to achieve the same objective, or in addition to this simple partnership analysis. One such is a 'resource mapping' approach, which may be especially appropriate for large proposals involving a range of different actors bringing different resources.

2.2.3 Appreciative inquiry

The power of AI lies in its ability to tap into the values, assets and strengths of organizations and using these as building blocks for discovering organizational 'best practices' and creating a shared vision, strategy and action plans across organizations.

Box 1: Appreciative inquiry model for building partnership

Discovery • What gives life to the partnership? Appreciating	⟹	Dream • What are our aspirations for a preferred future Envisioning impact
⟰		⟱
Delivery • How can the partnership empower learn, adjust and improvise? Sustaining	⟸	Design • How do we structure our partnership and our joint activitites? Co-creating

2.3   Partnership formation phase

2.3.1 Outcome mapping

Outcome mapping is a methodology for planning, monitoring and evaluating development initiatives that aim to bring about social change. The process of outcome mapping helps a project team or program to be specific about the actors, its targets, the changes it expects to see and the strategies it employs. Results are measured in terms of changes in behaviour; actions or relationships that can be influenced by the team or program. It enhances the team and program understanding of change process, improves the efficiency of achieving results and promotes realistic and accountable reporting.

The key terminologies/concepts used in outcome mapping are: Boundary partners, intentional design, outcome challenges and progress makers.

Boundary partners

Individuals, groups or organizations with which the program interacts directly and which the program hopes to influence

Intentional design

The planning stage, where a program reaches consensus on the macro-level changes it wants to influence and the strategies to be used.

Outcome challenge

Description of the ideal changes the program intends to influence in the behaviour, relationships, activities and/or actions of a boundary partner.

Program markers

A set of graduated indicators of changed behaviour of a boundary partner that focus on the depth or quality of change.

This is a tool that assists program teams to learn from and to report realistically on their achievements by tracking the connections between what they do and what happens.

Outcome mapping focuses on change process and outcomes. It defines the limits of the programs' influence, promotes strategies that are appropriate to the context and recognizes the potential contributions of other actors. Development results (or outcomes) are measured as changes in behaviour and relationships of actors with which the program interacts directly. Performance is assessed as the programs' contribution to influencing those changes with outcome mapping; it is possible to develop and use indictors that facilitate comparison and leaning while retaining the relevant contextual details of the story at each site or in each case. Outcome mapping is especially useful in projects where success depends on behavioural change. Outcome mapping provides tools that help a development program to think holistically and strategically about how it intends to achieve results. Outcome mapping is usually initiated though a participatory process at a design workshop led by internal or external facilitator who is familiar with the methodology.

It is useful to include boundary partners in the initial workshop for their input on the relevance, activities and direction of the program.

The entire approach is a three-stage 12 steps process as shown in Figure 2. The three stages are intentional design, outcome and performance monitoring and evaluation planning. These stages are discussed below:

Intentional design

The four basic questions to be asked at the intentional design stage are:

Why? — Vision statement

How? — Mission, strategy maps, organizational practices

Who? — Boundary partners

What? — Outcome challenges, progress markers

Helps the team to clarify and reach consensus on the macro-level changes they would like to support and to plan appropriate strategies. The long-term goals provide reference points to guide strategy formulation and action plans (rather than acting as performance indicators). Progress markers which are used to track performance are developed for each boundary partners.

Outcome and performance monitoring

This provides a framework for monitoring actions and boundary partners' progress towards outcome/goals. The three data collection tools that can be used in this process are:

  a. an outcome journal monitors boundary partners actions and relationship
  b. a strategy journal monitors strategies and activities
  c. a performance journal monitors the organizational practice that keeps the program relevant and viable.

These tools provide workplace and processes and help the team reflect on the data they have collected and how it can be used to improve performance. Select only the information that they can afford to collect.

Evaluation planning

Helps the team set priorities so they can target evaluation resources and activities where they will be most useful. This stage outlines the main elements of the evaluations to be conducted.

'Outcome mapping' and 'result-based management' are compatible and outcome mapping can contribute important elements to results-based management; such as supporting stakeholder learning in relation to the management of the program, fostering social communication as a basis for interactive participation, and strengthening local organizations and institutions.
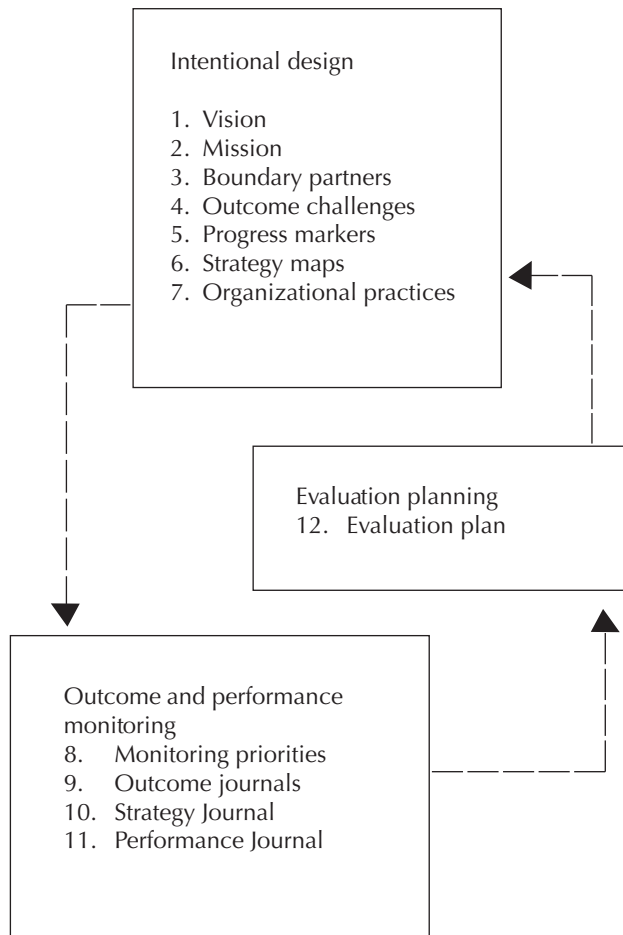
Figure 2. *The three stages and twelve steps of outcome mapping.*

2.3.2 Logical framework analysis

The logical framework approach (LFA) is analytical, presentational and project management tool that has evolved since the 1970s as a methodology for improving the systematic design, planning and management of development projects. More specifically, it can help project designers and managers to:

- Analyse the existing situation during project preparation
- Establish a logical hierarchy of means by which objectives will be reached
- Identify some of the potential risks
- Establish how outputs and outcomes might best be monitored and evaluated
- Present a summary of the project in a standard format.

LFA involves situation analysis (including stakeholder, problem and opportunity analysis), establishing an objective hierarchy and selecting a preferred implementation strategy. The product of LFA is a 'logical framework matrix', summarizing what a project intends to do and how, what the key assumptions are, and how outputs and outcomes will be monitored and evaluated.

Overtime, LFA has evolved from simply a framework for structuring project objectives to more sophisticated, process-orientated approaches for involving stakeholders in project design and management and establishing a 'result'-based monitoring and evaluation system.

The horizontal logic of the logical framework matrix includes objectively verifiable indicators (OVI); means of verification (MOV) and key assumptions. The vertical logic includes inputs (resources) and activities; outputs, purpose and goal. In essence the logical framework matrix summarizes the details of the interventions in one page as follows:

- What is the goal of the project?
- What is the purpose of the project?
- How does the project contribute to the objectives? (Intermediate results)
- What will the project do? (Activities)
- Which important external factors will determine the success or failure of the project? (Assumption)
- What measures do we use to assess success? (Objectively verifiable indicator)
- Where can we find the date/information needed to evaluate the project? (Means of verification)
- What resources/inputs activities are involved in the project?

The strengths of LFA include:

- During initial stages, LFA can be used to test project ideas and concepts for relevance and usefulness;
- When designing a project, a logical framework matrix can help to make comprehensive plans that are feasible within acceptable levels of risks;
- Logical framework matrices can form the basis of 'contracts' with explicit statements of what will be delivered;
- During implementation, the logical framework matrix serves as the main reference for drawing up detailed work plans, terms of reference, budgets etc.;
- A logical framework matrix includes indicators against which the project progress and achievements can be assessed.
- Enable project implementers to design and manage an M&E system. It also facilitates the subsequent *ex-post* evaluation and impact assessment.

Weaknesses include:

- Focusing too much on problems rather than opportunities and vision;
- When used too rigidly, leading people into a 'blueprint' approach to project design;
- Limited attention to problems of uncertainty, where a learning or adaptive approach to project design and management is required; and
- A tendency for poorly-thought-through sets of activities and objectives to be entered into a table, giving the appearance of a logical framework matrix when in fact the key elements of the analytical process have been skipped.

Provided that it is not used too rigidly and due attention is given to stakeholder participation, however, LFA remains a valuable and widely accepted tool for project planning and management.

Logical framework approach: procedure

Key steps in the logical framework approach are:

1. Establish the general scope and focus of the project;
2. Agree on the specific planning framework, terminology and design process;
3. Undertake a detailed situation analysis;
4. Develop the project strategy (objective hierarchy, implementation arrangements and resources);
5. Identify and analyse the assumptions and risks for the chosen strategies and modify the project design if assumptions are incorrect or risks are too high;
6. Develop a monitoring and evaluation framework.

The logical framework approach involves problem analysis, stakeholder analysis, objectives tree, objectives hierarchy and selecting a preferred implementation strategy. The product of this analytical approach is a logical framework matrix, which summarizes what the project intends to do and how, what the key assumptions are, and how outputs and outcomes will be monitored and evaluated.

2.3.3 Strengths, weaknesses, opportunities, threats (SWOT) analysis

Introduction

The SWOT is an acronym for strengths, weaknesses, opportunities, and threats.

A SWOT analysis is a tool used to understand the strengths, weaknesses, opportunities, and threats involved in a project or an organization or initiative. It involves identifying project, organization or initiative and list the favourable or unfavourable condition facing it. The tool is often used as part of a planning process, but can be useful in understanding an organization or situation and decision-making process for all sorts of situations.

The model

A SWOT analysis process generates information that is helpful in matching an organization or group's goals, programs, and capacities to the social environment in which it operates. The 'SWOT' itself is only a data capture exercise—the analysis follows later.

- Strengths: positive tangible and intangible attributes, internal to an organization and within the organization's control.
- Weaknesses: internal factors within an organization's control that hinder the organization's ability to attain the desired goal. These could be areas that organization needs to improve?

- Opportunities: external attractive factors that represent the reason for an organization to exist and develop. What opportunities exist in the environment, which will propel the organization? Identify them by their 'time frames'.
- Threats: external factors beyond the organization's control which could place the organization mission or operation at risk. The organization may benefit by having contingency plans to address them if they should occur. Classify them by their severity and probability of occurrence.

The strengths and weaknesses are inherent value-creating skills or assets, or the lack of, relative to competitive forces. Opportunities and threats are external factors which do not exist in the organization, but emerge as a result of the competitive dynamics caused by future gaps in the market.

	Internal factors		
Positive factors	Strengths	Weaknesses	Negative or potential to be negative
	Opportunities	Threats	
	External factors		

The process

Doing a SWOT analysis can be very straight forward, but its strengths lie in its flexibility and experienced application.

- Decide how the information is to be collected and by whom (often a team approach is much more powerful than one person's view)
- Identify appropriate sources of information
- Gather the information—it is useful to use a template as the basis for exploring the factors and recording the information
- Plot the findings
- Identify the most important issues
- Identify strategic options
- Write a report
- Disseminate the findings
- Decide which activities are a priority in the context of the organizations goals and values. Look at the factors identified—where they appear in more than one area, use the table below as an action agenda.

	Strengths	Weaknesses
Opportunities	Make the most of these	Watch competition closely
Threats	Restore strengths	Strategic turn around required

Adapted from CIPD (2008). SWOT analysis. http://www.cipd.co.uk/absite/tandc.htm#con.

3 Tools for partnership implementation

3.1 Partnership self assessment inventory

This is a tool to get feedback on the partnership's strengths and weaknesses. The results should be shared during a discussion in which members discuss the information and explore ways to improve

weaknesses. Both in new as well as established partnerships, members can identify elements of weaknesses, and focus attention on these areas for future improvement.

Partnerships are complex relationships that require deliberate formation and maintenance. Research shows there are predictable characteristics or elements found in successful partnerships. By focusing on these elements in the beginning, new partnerships can 'get started' faster and with less difficulty. Existing partnerships can assess whether they have overlooked any of these elements which might be contributing to current difficulties. Either way, new or established partnerships can take a moment, reflect on which of these elements are strengths, and identify through this self assessment inventory where to focus attention for future improvement.

It is suggested that this self-assessment inventory be used as a means for all members to provide feedback on the partnership's strengths and weaknesses. The results of the inventory should be shared during a facilitated discussion where members can discuss the information and explore ways of improving targeted areas. Please note that this inventory is intended to help partnerships prioritize their limited time and resources by acknowledging where they are doing well and by targeting selected areas for improvement.

Remember this is not an evaluation of the partnership's capacity. This is feedback that will help focus the partnership's attention and energy to increase effectiveness in areas that are not current strengths.

Use the following 7-point rating scale to indicate your partnership's current level of skill and effectiveness.

1 = We need to focus on this immediately

2 = We will need to focus on this in the next couple of months

3 = We need to get better at this, but it is not our priority

4 = We are doing this inconsistently

5 = We are doing this with regularity

6 = We are doing this well, to an advanced level

7 = We do this in an exemplary way and can be used as a 'best practice' or model to others

N/A = Not seen in action or not observed.

Partnership self-assessment inventory

(Circle one)	Compelling vision
1—2—3—4—5—6—7—N/A	1. The partnership has a clear and compelling vision that is exciting, worthy of the combined efforts, and will have impact.
1—2—3—4—5—6—7—N/A	2. It is clear how these organizations can create the value added impact desired from the partnership and the role of each member.
1—2—3—4—5—6—7—N/A	3. Members can articulate partnership goals and how each parent organization contributes to achieving that goal.
1—2—3—4—5—6—7—N/A	4. The vision is used as a reference point in prioritization of activities and resources and keeping the partnership on track.

	Strong and shared leadership
1—2—3—4—5—6—7—N/A	1. Members share leadership where appropriate, not overly relying on any one person for all of the leadership functions.
1—2—3—4—5—6—7—N/A	2. Leadership is facilitative rather than directive, involving members in decisions, problem solving, and planning.
1—2—3—4—5—6—7—N/A	3. Members are willing and supportive followers, contributing to planning. Problem solving and assisting the leader in other ways.
1—2—3—4—5—6—7—N/A	4. Members use both successes and mistakes as learning opportunities to increase skills in analysis and future decision-making.

	Shared problem definition
1—2—3—4—5—6—7—N/A	1. All partners participate in the definition of the problem being addressed.
1—2—3—4—5—6—7—N/A	2. Members can articulate others' concerns and/or interests in the problem being addressed.
1—2—3—4—5—6—7—N/A	3. Members have and use a common approach or framework for addressing the problem.
1—2—3—4—5—6—7—N/A	4. Partnership meetings are held with the frequency required to ensure full communication, adequate problem solving, and efficient progress towards project goals.

	Interdependency and complementarity
1—2—3—4—5—6—7—N/A	1. Partnership uses and respects the diverse skills, knowledge and backgrounds of its members.
1—2—3—4—5—6—7—N/A	2. Partnership can create new value—something that individual members could not achieve on their own.
1—2—3—4—5—6—7—N/A	3. Members believe that each member's contribution is essential for the total outcome of the partnership goal.
1—2—3—4—5—6—7—N/A	4. Members and/or their parent organizations have the skills necessary to achieve the partnership goal.

	Mutual accountability
1—2—3—4—5—6—7—N/A	1. Members share a sense of responsibility for partnership results, not just the results for which they are individually responsible.
1—2—3—4—5—6—7—N/A	2. Members have agreed upon norms and processes for holding each other accountable.
1—2—3—4—5—6—7—N/A	3. Partners pitch in and help others who are experiencing problems or needing assistance to meet deadlines or outputs.
1—2—3—4—5—6—7—N/A	4. Members give timely and specific feedback to each other when appropriate.

	Attention to process
1—2—3—4—5—6—7—N/A	1. Members respond to feedback and criticism without getting defensive.
1—2—3—4—5—6—7—N/A	2. Members express ideas openly and honestly without irritating others.
1—2—3—4—5—6—7—N/A	3. Members monitor that all voices are heard before decisions are made.
1—2—3—4—5—6—7—N/A	4. Partnership has agreements for how it will work together and these are used and periodically checked for consistency of use.

	Communication
1—2—3—4—5—6—7—N/A	1. Members keep other partners appropriately informed about work, contacts, problems, accomplishments, and progress.
1—2—3—4—5—6—7—N/A	2. In partnership discussions, members emphasize the open, inclusive and respectful sharing of thoughts and ideas.
1—2—3—4—5—6—7—N/A	3. Members deal openly and constructively with problems and conflict not allowing these to hinder the partnership's performance.
1—2—3—4—5—6—7—N/A	4. Members keep their parent organization informed about partnership activities, challenges and progress.

	Decision-making/power equity
1—2—3—4—5—6—7—N/A	1. The decision-making process is clear and transparent to all members.
1—2—3—4—5—6—7—N/A	2. Members can provide input and have equal opportunity to influence decisions and the direction of the partnership's strategy.
1—2—3—4—5—6—7—N/A	3. Resource allocation within the partnership is transparent and in line with principles agreed upon by the partnership.
1—2—3—4—5—6—7—N/A	4. Decisions are recorded and shared with all those involved or affected by the decisions.

	Trust
1—2—3—4—5—6—7—N/A	1. Members share and act according to agreed upon values regarding the expected output of the partnership and the processes for carrying out the work.
1—2—3—4—5—6—7—N/A	2. Members deliver on promises and commitments made.
1—2—3—4—5—6—7—N/A	3. Members are direct about organizational interests and expectations, keeping covert or hidden agendas to a minimum.
1—2—3—4—5—6—7—N/A	4. Members are willing to compromise or make organizational sacrifices of self-interest so that the needs of other partners are met.

	Credit
1—2—3—4—5—6—7—N/A	1. Partnership has explicit agreements on how to handle visibility, authorship and intellectual property of individual members and the partnership.
1—2—3—4—5—6—7—N/A	2. Members recognize contributions to the partnership by individuals and their organizations.
1—2—3—4—5—6—7—N/A	3. Members share responsibility to ensure parent organizations demonstrate commitment to broader partnership goals.
1—2—3—4—5—6—7—N/A	4. Members are watchful for opportunities to acknowledge others for their contributions.

Scoring your questionnaire responses

After completing your ratings, transfer the points for each question to the appropriate box below.

Elements	Q1	Q2	Q3	Q4	Total
Compelling vision					
Strong and shared leadership					
Shared problem definition and approach					
Interdependency and complementarity					
Mutual accountability					
Attention to process					
Communication					
Decision-making and power equity					
Trust and commitment					
Credit and recognition					

Interpreting your questionnaire responses

Based on your ratings, which two elements are the strongest for your partnership?

1.

2.

Which two elements need improvement?

1.

2.

What specific changes/actions would improve these areas?

Share your assessment with others in your partnership for a collective look at the strengths and needed improvements

4 Tools for partnership monitoring and evaluation

4.1 After action review (AAR)

This is a participatory tool that facilitates collective learning by talking, thinking, sharing and capturing the lessons learned with partnerships (CIDA 2002).

This tool is used within a small group; it creates a climate of confidence as it focuses on constructive feedback, explicitly recognizes positive contributions and things that are working well and that people are proud to share with others. AAR uses the following six questions:

1. What was supposed to happen? Why?
2. What actually happened? Why?
3. What is the difference? Why?
4. What went well? Why?
5. What could have gone better? Why?
6. What lessons can we learn?

These questions provide the opportunity to evaluate what works, how and why, but also to induce a process of collective learning and sharing empirical examples and experiences with partnerships, and to examine the critical factors that may have contributed to success or difficulties in partnerships.

4.2 Action–reflection

Action reflection is a model that helps a program project or partnership to continuously improve based on the observation of the action of the planned program. The main idea behind the use of action–reflection is to learn from the experiences. Since the changing contexts affect some of the operations, it is expected that the partnership moves with a contingency plan to adjust to a changing situation. As a learning process, partners should take into account both internal and external contexts. The planned partnerships sometimes get affected by internal factors such as unwillingness of partners to carry out

the planned activities, dropping out from the partnership due to change in occupation and project phase out. They could also be affected by external factors. The partnership has to be made flexible and proactive to make adjustment according to situation. It is important to critically note what is working and what is not. This information serves as an input for the next step planning. This continuous process of planning–putting into action–receiving reflection/feedback—revising plan—putting again to practice (action)—helps partnerships to move around the problems-solving orbit.

4.3   Impact chain

The typical impact chain starts from the set of inputs and activities of a project/program to the most highly aggregated development results, such as poverty reduction, food security, environmental protection etc. The chain also specifies all the main intermediate steps: the activities of a project, the output, the use that others make of this output, the direct as well as possible indirect effects, and the implications of the use of these outputs on the ultimate beneficiaries—the society. The output, outcome, and impact that are generally sequentially produced over a period of time become more difficult to articulate, measure, and attribute as one moves from outputs to impact.

Collaborative activities are the joint actions undertaken by the collaborators, for example a training workshop. Here you are expected to identify all collaborative activities in the country by listing activities, key collaborators, as well as the contributions of each group. Clearly state the objectives of the collaborative activities.

The term output refers to the results of the program activities, i.e. goods and services produced by the set of collaborative activities. In the case of training activities, the outcomes may be trained individuals with acquired skills (are able to apply the skills taught), a set of training materials, and/or trained trainers.

Immediate outcome refers to the first level effect of the outputs: the observed or documented behavioural changes in those directly affected by program. In the case of training program, how did the training affect the behaviour of the trainee? Did (s)he make any changes in the way of doing business as a result of the training? Did (s)he apply the skills acquired? In the case of research the first immediate outcome may be a change in the recommendations provided by the extension staff or even the behavioural change to use the direct product, i.e. adoption.

Intermediate outcomes are the benefits and changes resulting from the application of the output. In order to bring about an outcome, the program has to change people's behaviour. By trying to identify and then document the changes in attitudes, knowledge, perceptions, and decisions taken by program target groups, which logically link to the outcomes being observed, we can often acquire a good understanding of the actual impact that the program has. Often, immediate and intermediate outcomes can be measured and documented directly. This requires clearly identifying the various clients of the program and the way in which their behaviour is expected to change. If an expected outcome has been observed after the program activity has started up, then this suggests that the program is having an effect. If we can observe these short-term changes, then the logical case for the program's attributions can be enhanced.

Outcomes are measures of the use that is made of the output by clients and partners. They reflect the value they place on them as intermediate product, which in turn are input in their management decision-making.
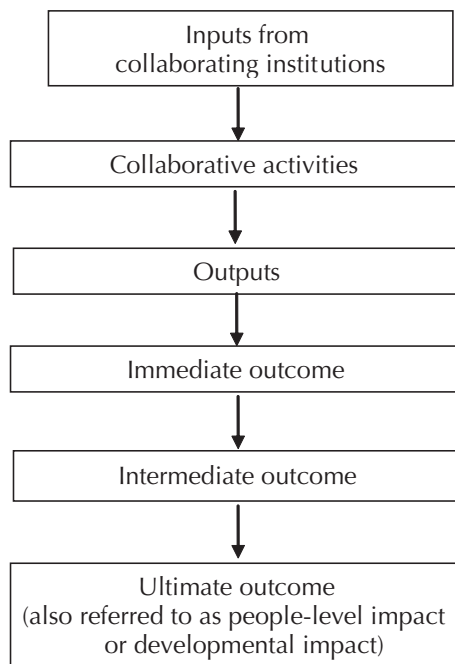
Figure 1. *Impact chain.*

The term ultimate outcome (impact) refers to measurable effects of the outputs and outcomes on the wellbeing of the ultimate beneficiaries of the R&D efforts, namely the poor, the food and nutrition insecure, and the environment. Most socio-economic impacts and developmental impacts fall under this category. Very often the ultimate outcomes are closely linked to the sectoral/regional/national developmental goals.

4.4 User surveys

The most common method for assessing the economic and social benefits of R&D involves the use of surveys of the primary intended users of the research results. There are two basic types of such surveys:

- Client surveys: Surveys in which the respondents are involved with the research organizations in research collaboration or some other form of active interaction; and
- Beneficiary surveys: Surveys in which beneficiaries are selected to be a representative sample of the broader group of primary intended users of the research results.

These surveys are sometimes structured in such a way that the direct clients are a certain percentage of the total sample of primary intended users.

At times, it is necessary to use experts rather than users to review some of the research activities. This may be the case in situations where the primary intended users are not sufficiently familiar with research to be able to answer questions.

Advantages of user surveys

User surveys provide a more systematic review by using standardized interviews and questionnaires and gathering the views of a wider number of people, thereby overcoming the restrictions involved in using a modified peer review procedure with a limited number of participants. Quantitative indices can be formed if the questions are amenable to scoring, thereby providing concurrent method of making comparisons among R&D projects.

Disadvantages of user surveys

The major disadvantage to user surveys is the problem of 'grateful testimony,' i.e. the possibility that the clients and users may be more positive about the relevance and usefulness of the R&D than is warranted. In addition, often there is difficulty in interpreting the results.

Handling 'grateful testimony'

There are several ways to handle the problem of 'grateful testimony' when implementing user surveys. Several of these are:

• Pose a large number of questions of different types, all dealing with different aspects of client relevance and usefulness. These questions could be related to the interest of the client in the research area, indicators of the value of the R&D to the organization and the indicators of the importance of the R&D to the client organization;
• Gathering more specific information on associated benefits is to ask the (potential) clients or users to describe, in very specific terms, the details of the use (or potential use) of the R&D and its related social and economic benefits;
• Conduct follow-up interviews with a subset of the (potential) clients/users surveyed to test the veracity of their answers by probing for additional details which generally reveals how honest they have been; and
• Validity also can be assessed in *ex-post* and ongoing reviews by comparing them with other primary and secondary data relating to the relevance and usefulness of the R&D activity.

Issues addressed in user surveys

Issues that need to be addressed in user surveys are:

• Which type of user survey to implement
• How to identify the users
• How to structure the survey sample
• When to use experts instead of users
• How to ensure the validity of the results and
• How to interpret the results.

Other user survey issues

In developing questionnaires and interview guides, one has to be careful to standardize questions in a manner that facilitates analysis, but does not place undue constraints on the amount of information that can be obtained, thereby resulting in the collection of trivial information. The individuals involved in developing the interview guides or questionnaires must have a clear understanding of the nature of the R&D activity being assessed.

Suitability of user surveys

User surveys are most useful for past R&D and ongoing R&D. The method is useful for assessing the impacts associated with R&D activities near the applied and development end of the R&D spectrum. In most cases, user surveys are often combined with some other method.

4.5   Benefit–cost methods

The theoretical underpinning of these approaches is found in the economist's concepts of supply, demand, consumer surplus, alternative costs, and willingness to pay. This form of analysis seeks to assess private and public investments in R&D in terms of both the economic and social benefits generated for society by the investment as well as the economic and social costs incurred by society to execute the project. Benefit–cost analysis provides a strong theoretical framework for analysing the economic and social impacts of R&D activities. It is always carried out on a project-by-project basis, and it attempts to assess the project in terms of both the economic and social benefits generated for society, as well as the economic and social costs incurred by the society to execute the project. The net benefits of the projects are then calculated as follows:

Net benefit = Gross benefit (economic, social) — Costs (economic, social)

There are several variants of cost benefit measures:

- Net present value
- Benefit–cost ratio
- Pay-back period and
- Rate of return calculations.

All these essentially involve the same techniques.

Costs

There are three types of costs associated with R&D projects that should be included in the analysis:

- Cost of generating the research results
- Cost of introducing and supplying the results to the end users and
- Cost incurred by the end users to implement the results
- Transaction costs.

Each of these categories of cost needs to be identified and included into the analysis. Any additional cost to the society also needs to be included. In terms of the costs of the R&D activity, they are calculated as 'opportunity' costs, which represents the value of the goods and services that society forgoes when resources are transferred from one occupation to another. It is assumed that under this methodology, that society's land, labour and capital resources are approximately fully employed. Hence, they can only be utilized on a new R&D project if they are withdrawn from their alternative areas of employment.

Benefits of R&D

The benefits which result from the new or improved product, processes or systems which result from the research are valued at the price society is willing to pay for them. These benefits include:

- Those for which prices are paid
- Benefits associated with increased educational and training opportunities
- Reduced environmental damage and
- Improvement in health and safety.

It is worth noting that in many cases it may not be possible to associate an explicit value with such benefits. Many of the research benefits are intangible and existing valuation techniques do not readily apply.

In *ex ante* analysis, in addition to costs and benefits, the probabilities associated with the realization of these costs and benefits must be determined. The time sequence of the relevant costs and benefits must also be determined. The (expected) value streams of annual costs and benefits must be discounted to their present value in order to estimate the net benefit of the project.

The calculations must be based on incremental benefits and costs, i.e. the difference between the 'with' and 'without' scenario (those costs and benefits, which would not have occurred in the absence of the R&D project). It is often very difficult to meet this requirement because many social and economic benefits result from a combination of complementary R&D investments, incurred over substantial period of time and it is often not possible to isolate the influence of a specific R&D project.

Benefit–cost analysis is technically demanding and time consuming. However, the main value of benefit–cost analysis in R&D impact assessment is that it offers a systematic framework for identifying the costs, benefits and wider implications of R&D.

Suitability of the benefit–cost method

Benefit–cost methods are much more appropriate for past research than for ongoing or future research. The benefit cost method is very useful for assessing applied research dealing with a product/process development. In the past, studies have focused on 'big winners.'

Benefit–cost methods can be used for *ex ante* analysis of R&D within those sectors where the connection between R&D and sectoral impacts are clearer and more direct, such as agriculture. In order to use it in ongoing or future research, one must have:

- A good idea of the likely outcomes or R&D
- Their probability of occurrence
- When they will occur
- Who and when they will be applied and
- The market for products or processes developed.

4.6 Cost-effectiveness analysis

Cost-effectiveness analysis is a particular type of benefit–cost analysis in which the objective is to compare costs of two different means of generating the same information or end product. Basically, it is a simple approach that compares the technical efficiency and cost of alternative methods to accomplish a given task, exogenously defined as required. This approach is most useful when one is evaluating two systems which yield comparative similar outputs. The basic steps in cost-effectiveness analysis are:

- Define the objectives that must be attained
- Identify the alternative methods of achieving the objectives or obtaining the output
- Determine the costs of these various alternatives and
- Compare the cost and rank them.

Advantages of cost-effectiveness analysis

The primary advantage of the cost-effectiveness method is that one does not need any benefit information.

Shortcomings of cost-effectiveness analysis

The major shortcomings of the cost-effectiveness approach are:

- There is nothing to prove that any of the alternatives compared can yield benefits over and above costs. This is why cost-effectiveness analysis is only justifiable in situations where one system is certain to be undertaken in the absence of the other; and
- The products/outcomes of the alternatives must be virtually identical in terms of output if the magnitude of the cost saving is to be representative of the net social benefit. If one of the alternatives costs less, but produces a lower quality product and/or has a different impact, then the computation of benefits becomes much more complicated. Lower cost will create a positive social benefit, but the lower quality will yield a disbenefit, that is, the willingness to pay will decline.

4.7 Partnership assessment tools (PAT)

(Tools for assessing the performance and impacts of partnerships)

This tool was jointly developed by four UN entities—the UN Development Program, the UN Office for Partnerships, the UN Institute for Training and Research and the UN Global Compact to assess the sustainability and impacts of partnerships. It is a simple automated assessment tool that leads users through a series of close ended questions.

This tool (PAT) can measure the level of various elements of sustainability of partnership for development and it can contribute to:

- Informed decision-making
- Establishing partners to better capitalize on opportunities to add value to partnership projects
- Systematically articulating and communicating the value of partnership projects
- Focusing on the long-term economic, environmental and social impacts of partnerships
- Aligning and clarifying objectives and responsibilities
- Creating and designing successful partnership projects with positive development impact (UN 2007)
- Risk of facing unforeseen problems is significantly reduced.

Purpose: The tool provides a process by which partners can assess the expected value of a prospective partnership and identify ways to improve future partnership activities. The tool can be applied to a wide range of partnerships.

When to use?

Use PAT after project planning is complete but before the project is launched.

Note: The most important part of a partnership is understanding the added value of the partners. Risk associated with the partnership is a challenge that deserves more detailed coverage in the tool.

For more details see globalcompact@un.org.

5 Other relevant participatory methods/tools

5.1 Interviews

Interviews are among the most commonly used technique in agricultural R4D to obtain required information. The interviews can take the form of individual interviews, key informant interviews, community interviews, focus group interviews etc. This section presents different types of interview techniques a researcher can use.

Individual interviews

Structured individual interviews are often used in formal household surveys to collect data from randomly selected rural households. Although informal surveys can provide a lot of information in a relatively short period, there may be a further need for more specific information and quantitative data. Under these circumstances, a follow-up formal survey may be appropriate.

A survey uses a sequence of focused, predetermined questions in a fixed order, often with predetermined, limited options for responses. Surveys can add value when they are used to identify development problems or objectives, narrow the focus or clarify the objectives of a project or policy, plan strategies for implementation, and monitor or evaluate participation. It is important to keep in mind that this formal/verification survey is different from the traditional farm management survey. The distinguishing characteristics of a formal survey are:

- Uses standardised or structured questionnaire
- Collects uniform set of data
- Engages, as much as possible, a random sample of farmers to collect information
- Enumerators are often used to administer the survey and
- Carries out problem-focused verification.

Since the formal survey collects standard information from a sample of farmers, it enables statistical analysis of information collected to draw inference and conclusion about the population. Formal surveys are recommended in one of the following cases:

- When quantitative data are required to complement qualitative data obtained form RRAs/PRAs;
- When detailed information on individuals or households is sought rather than general information on target group;
- To compare before/after situations and the changes in farmers' conditions over time (baseline and adoption studies);
- To conduct in-depth studies of specific subjects and to test hypotheses that have emanated from informal surveys.

The interview schedule/questionnaire are structured and standardized in such away that the data to be collected meets the objectives of a researcher and the way the researcher would like to analyse the data. Such an approach to data collection and analysis is common, particularly in quantitative research (positivist paradigm), and the dataset is more amenable to statistical manipulation.

Semi-structured interview

These are also called *conversational interviews,* interviews that are partially structured by a flexible interview guide with a limited number of preset questions. This kind of open-ended guide ensures that

the interview remains focused on the development issue at hand while allowing enough conversation so that participants can introduce and discuss topics that are relevant to them. These tools are a deliberate departure from survey-type interviews with lengthy, standardized questionnaires.

Using a guide or a checklist, a multidisciplinary team poses open-ended questions and probes topics as they arise. The output is usually in the form of qualitative information, but can also be quantitative. The steps to follow in a semi-structured interview are summarised in Box 5.1. There can be sequencing and a chain of semi-structured interviews, which can be repeated as and when required. Semi-structured interviews can be conducted with different groups in a village or community.

Box 5.1   Semi-structured interview—steps to follow

Before survey
- Select the multidisciplinary survey team
- Analyse secondary data
- Prepare checklist for the interview (this should be a team exercise)
- Prepare the logistics for the survey
- Inform farmers in advance
- Establish note taking procedure before entering the village and
- Decide whether group discussion and/or individual in-depth interviews are more appropriate.

During a group meeting or individual interview
- Introduce yourself and the purpose
- Be aware of the local culture and language
- Respect farmers as equal partners
- Do not use checklist as a questionnaire—use it as a means to stimulate discussion
- Build questions to be asked around a list of sub-topics
- Use guidelines for probing: who? Why? What? When? Where and How?
- Take notes during the interview but not excessively.

After the interview
- Finish the discussion politely
- Make sure to thank the respondents, mention the follow-up
- At the end of the day have a brainstorming session, complete notes and prepare for the following day's work
- Establish report writing procedures as well as responsibilities among team members.

Community interview/group interview

At times, in community development oriented activities, one useful tool that can be used is a community interview. The objectives of this type of interview are:

- To gather descriptive data on community and village
- To assess community needs/problems and priorities and
- To assess the attitude/commitment of the community with respect to planned intervention.

Advantages of community interviews are:

- It permits interaction with large group of people within a short period of time, i.e. it is efficient in terms of cost and time;
- In a non-threatening environment, participants tend to complement/correct/verify each others' input, thus improving the quality of the information collected.

However, there are a number of limitations to this approach. They include:

- Local leaders and powerful community members may dominate the deliberations
- Group may not be homogenous and
- Facilitator should have considerable practical knowledge about the problem/issue that needs to be explored.

Focus group interview/discussion

Focus group interview is another form of group interview that addresses specific topics/issues confronting a group. Typically 6–8 people under the minimum guidance of a facilitator discuss a particular topic in detail. When the ideas and opinions of people at the grass-root level are needed about a specific problem or intervention, then a focus group interview is the most appropriate technique to use. This type of discussion may reveal the perspective, attitude, understanding and reactions of beneficiaries/local group.

The group interview is cost effective, can be carried out quickly, and can stimulate diverse thinking. The moderator of this exercise should not be biased, must possess good theoretical and practical knowledge of the problem/issue being discussed. (S)he should be fluent in the local language and should have previous experience in conducting focus group sessions.

The potential dangers are that the formal/informal leaders and influential individuals may dominate the discussions. If the issue under discussion is controversial and sensitive, then the group situation may inhibit rather than stimulate individuals' response. Focus groups are not intended to reach consensus, make decisions or agree on specific action.

5.2   Ranking and scoring

Ranking and scoring methods require informants to assess the relative importance of different items. Ranking usually involves placing items in order of importance (1st, 2nd, 3rd etc.) whereas scoring methods assign a value or a score to a specific item. This is usually done by using counters such as seeds or stones, nuts or beans to attribute a specific score to each item or indicator.

Proportional piling and scoring techniques can be used to assess the relationship between two or more given variables. For proportional piling, informants are asked to distribute one hundred counters amongst the different variables or indicators, with the largest number of counters being assigned to the most important indicator, and the smallest number of counters being assigned to the least important indicator.

Before and after scoring

'Before and after' tools are an adoption of scoring methods which enable a situation before a project to be compared with a situation during or after a project. Definitions of 'before,' 'after' or 'during' can be obtained from timelines which provide a useful reference for establishing agreement between the investigator and assessment participants on these different points in time. With 'before' and 'after' scoring, rather than simply scoring items against indicators, each score is further subdivided to give a score 'before' the project and a score 'now' or 'after' the project.

Specific methods in ranking include simple ranking, pair-wise ranking, matrix scoring and wealth and wellbeing ranking, among others.

Simple ranking

As the term implies, simple ranking involves asking participants to categorize or grade items in order of importance.

In this example, pastoralists were asked what benefits they derived from different livestock. They were then asked to rank them in terms of the overall benefits they provided. The exercise was done with both women and men's groups to ensure that any gendered differences were captured. In this example, the only variation was that women ranked sheep higher than goats as they fetched a higher market price. The men valued goats slightly higher than sheep as they are more resilient to drought.

Pair-wise ranking and matrix scoring

Matrix scoring is primarily used to compare several items against a set of different indicators. It involves three main stages—a pair-wise comparison followed by the scoring of items, and finally 'interviewing the matrix'.

It is a tool used to elicit the relative importance attached to a list of problems, solutions and technological options by farmers. Farmers' preferences and decision-making criteria can be learnt during the pair-wise ranking exercise with the help of probing questions. Preference ranking can be used to learn about differences in priority between social categories (men/women, young/old, rich/poor etc.). Table 5.1 gives example of matrix of criteria by which livestock keepers evaluate different species of forage crops.

Table 5.1 *Ranking of community livestock assets*

Women		Men	
Cattle	1st	Cattle	1st
Sheep	2nd	Goats	2nd
Goats	3rd	Sheep	3rd
Camels	4th	Camels	4th
Donkeys	5th	Donkeys	5th
Horses	6th	Horses	6th

Example of a ranking and matrix scoring of food source preferences

The following example describes how a pair-wise ranking and matrix scoring exercise was used to assess food source preferences in an integrated livelihoods project in Niger. The project had several components. These included re-stocking of small ruminants and the establishment of cereal banks, and vegetable gardens.

During a focus group discussion, participants identified their existing food sources as follows:

1. Own farm production (millet)
2. Vegetable production
3. Purchased food (excluding cereal bank)
4. Livestock production (milk and meat)
5. Cereal bank (millet) purchases.

They were asked to individually compare or rank each food source against each of the other food sources in terms of overall preference. The participants were asked to give reasons for their preferences. The name of the food source that ranked highest was then entered into the appropriate cell in the pair-wise matrix

Pair-wise ranking showing food source preferences

Food source	Millet	Vegetables	Purchases	Cereal Bank	Livestock
Millet (own production)		Millet	Millet	Millet	Millet
Vegetables (own production)			Vegetables	Vegetables	Vegetables
Purchases				Cereal bank	Purchases
Cereal bank					Cereal Bank
Livestock					

An overall preference score is then calculated by counting the number of times each food source was ranked highest and thus recorded in the matrix:

Score	
Rainfed cereal production	4
Vegetable production	3
Cereal banks	2
Purchases	1
Livestock	0

From these discussions, it transpired that the overall preference for millet from own production was largely attributed to the volume or quantity of food that is produced from this source. The assessment team also asked participants what sources provided the most nutritious or healthy foods as opposed to just the largest quantities. Based on the discussion during and after the exercise, the assessors and participants agreed on four broad categories of food preference indicators:

1. Availability (quantity/volume)   2. Accessibility (easy to come by/grow/cheap)

3. Income earning or savings potential   4. Nutritional/health value

Participants were then asked to score the five food sources against each of the four food preference indicators identified. This was done using visual aids to represent each food source. A millet stem was used to represent rain-fed millet production, a broad green leaf was used to represent vegetable production, a handful of coins was used to represent food purchases *(excluding cereal bank purchases)*, a bottle top was used to represent livestock production *(milk and meat),* and a small bag of groundnuts was used to represent cereal bank purchases. After carefully explaining what each visual aid symbolized, the assessors asked the participants to score each of the food sources against the first food preference indicator using fifty counters. The exercise was then repeated for each of the other three food preference indicators. The physical distribution of counters was done by one volunteer, but this was based on group consensus.

Matrix scoring of different sources against indicators of preference

	Millet	Vegetables	Purchases	Cereal bank	Livestock
Availability (quantity/volume)	15	12	5	13	5
Access (easy to come by)	22	8	3	13	4
Income earning and savings potential	12	13	0	8	17
Nutritional value	6	17	6	6	15
Total	55	50	14	40	41

Although livestock ranked lowest on the food source preferences during the pair-wise ranking exercise, against specific indicators such as income potential and nutritional value, it ranks much higher than some of the other food sources. Against the four indicator categories shown here, livestock comes out with the third highest overall score, illustrating how matrix scoring can be a valuable tool to measure against different indicators, and capture important information that otherwise may be overlooked.

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Annex 3 Complementary interests and the personal touch: An institutional history of sorghum–poultry coalition, Andhra Pradesh, India

Project title:

Exploring marketing opportunities through research, industry and user coalition: Sorghum poultry feed

[DFID-CPHP R8267 (ZB0337)]

3.1 Introduction

India is the second largest producer of sorghum in the world after USA with around 11 million hectares under its cultivation. Sorghum is grown in rainy season (June–October) and in post rainy season (September–January). The rainy season crop accounts for 37% of the total crop area and contributes 65% of the total production. The demand for rainy season sorghum grain for food use has declined over the years primarily due to increased production of rice and wheat and public policies that make them more accessible to the poor and low-income consumers. Thus, farmers are unable to sell surplus sorghum grain at remunerative prices. Further, the deterioration in the apparent and actual grain quality of rainy season sorghum due to grain mold leads to large fluctuations in price.

Small farmers with less than one-hectare land in the semi-arid regions grow sorghum. The lion's share of sorghum cultivation is under subsistence farming. Sorghum production underpins their livelihood strategy to meet the twin objectives of food and feed for livestock. However, after meeting their household demands, these farmers are unable to dispose off the marketable surplus due to lack of marketing networks to take advantage of the potential demand for sorghum in non-food uses. Rainy season sorghum is gaining momentum for use in poultry feed as a potential alternative to maize, whose production is not able to meet the present growing demand. In this context, enhancing the use of rainy-season sorghum in poultry feed rations and creation of sustainable marketing linkages between sorghum growers and poultry industry through innovative institutional systems assumes importance for ensuring sustainable supply to industry and assured incomes to poor sorghum growing farmers.

The demand for rainy-season sorghum grain as food has declined over the last decade, mainly due to the deterioration in the apparent and actual grain quality as a result of rain-induced molding, increasing production of fine cereals (primarily wheat and rice) and public policies that make the latter more accessible to the economically deprived.

3.2 Problem statement

Poultry in India developed significantly during last three decades. The annual growth rate of layer is 10% while that of broilers is 15%. This has placed enormous pressure on feed resources. Andhra Pradesh is the largest poultry producing state accounting for one-third of the egg and 18% of broiler production in India. Present requirement of total compounded poultry feed in the country is about 12 million tonnes per year. Maize (Zea mays L.) is the main cereal feed ingredient, which constitutes 30–35% of poultry ration.

The non-availability of cost-effective feed ingredients is a major factor inhibiting the growth of poultry industry. Maize gained importance in poultry field, but its low availability and high cost are dwindling the profits of poultry farming. Production of maize in India is estimated to be about 10 million tonnes per year. Poultry consumes 30% of it. To feed the anticipated poultry population by 2020, the requirement of maize will be 31 million tonnes from the present level of 3.5 million tonnes. In view of the shortage of maize and huge requirement of feed for poultry in the near future, it is necessary to develop alternative cereal feed ingredients such as sorghum.

Maize is the principal energy source in poultry feed. Sorghum is next important energy source and is often included in poultry diets as an alternate to maize. Variable performance of broilers on feeding sorghum is attributed mainly to the grain quality with respect to grain moulds, tannins and certain

fungal toxins. Some of the recent improved sorghum cultivars are known to be moderately resistant to grain moulds and free from tannins.

The limited inclusion of sorghum in poultry feed and its relative low status as a raw material is partly due to misconceptions surrounding the crop such as the level of tannins, mycotoxins in blackened sorghum grain, energy levels, problems in processing and lack of carotenoids for egg yolk pigmentation.

With this background, a project was conceived in a novel approach, i.e. coalition, making all the stakeholders as partners right from the stage of objectives formation.

3.3   Coalition approach—more than partnership

Coalition is the process in which distinct/independent entities/institutions/partners work together for the common goal with synergistic effect.

For a successful coalition, the partners need to have

- Common goal
- Clarity of roles and responsibilities
- Ability to articulate their problems and prospects
- Empathetic ability to fit themselves in broader objective
- Enthusiasm to work in groups and sharing the synergies

Background of sorghum poultry coalition

Sorghum poultry coalition grew out of a long-standing partnership between International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) and the private sector. ICRISAT played a nurturing role, often through informal networks, in the emerging private seed industry and relied on them in turn to ensure that the new material they developed reached farmers. The relationship progressed still further in 2000. ICRISAT signed an agreement with eight private sector seed companies to develop sorghum hybrids whereby each company makes a grant to ICRISAT and the scientists then make their results available to all the companies in the consortium. Thus the scene was set for a broader institutional coalition to promote marketing opportunities for sorghum farmers. ICRISAT sorghum breeders and economists were aware that this crop had great potential. There is also a large, and increasing, potential market demand for rainy season sorghum in animal feed, especially for poultry. Two previous DFID-funded projects (R7506 and R6687) identified this potential, and the two key constraints that appeared to be holding back the promotion of rainy season sorghum in poultry feed.

ICRISAT sorghum breeders and economists were aware that this crop had great potential. Production and consumption of sorghum has declined in the last thirty years but it remains important to poorer producers in mixed farming systems. It still represents half of the cereal consumption of 60 million people in the areas of AP, Maharasthra and Karnataka; it often underpins poorer farmers' livelihood strategies during low rainfall seasons; and sorghum stover makes up around 50% of animal diets. There is also a large, and increasing, potential market demand for rainy season sorghum in animal feed, especially for poultry. Two previous DFID-funded projects (R7506 and R6687) identified this potential, and the two key constraints that appeared to be holding back the promotion of rainy season sorghum in poultry feed:

1. Poultry producers assumed that tannin and mold affected the quality of rainy season sorghum which would in turn reduce the health of the birds[1]
2. The institutional[2] links between the different stakeholder organizations (science institutes, poultry feed manufacturers, poultry producers and sorghum growers) were weak.

Although these projects had established contact with the private sector, they were not working together as partners systematically, or from the outset of the initiatives, so the impact of these projects was limited.

Formation of the coalition: Shared and complementary objectives

In 2002, ICRISAT scientists with the help of a Special Project Scientist at ICRISAT seconded from Natural Resources Institute (UK), wrote a concept note about developing institutional linkages between different stakeholders in sorghum production and marketing. Scientists at ICRISAT were well aware of the institutional constraints that had held back previous projects. The careful selection of member organizations relied on both long experience and personal contacts. They did no invite the individuals that they knew into the new coalition, but rather these contacts allowed them to find out easily and quickly who would have appropriate expertise for the coalition within those organizations.

A list of eleven organizations were drawn that might take part in the sorghum coalition and then narrowed it down to four, in addition to ICRISAT, i.e. Acharya NG Ranga Agricultural University (ANGRAU), Federation of Farmers Associations (FFA), Andhra Pradesh Poultry Federation (APPF), Janaki Feeds. Personal knowledge of the individuals in the organization did not influence the choice of partners. But doors may have been more easily opened, and trust established more quickly, by use of these personal networks.

Each coalition member had his or her own reasons for joining. The ANGRAU poultry experts, and the ICRISAT seed breeders, were interested in forming links with farmers and feed manufacturers to improve the uptake of their research outputs and findings. Like most agricultural research institutes, in the past, both had relied heavily on academic publication to disseminate their work to other institutes and on other agencies to transfer findings to the end-users. They were anxious to work more closely with key stakeholder organizations from the outset of this new initiative to make sure that responsibility for all stages of the work—planning, innovation, dissemination—were jointly shared by all. This strategy, they felt, would maximize the impact on poverty reduction.

Sorghum farmers, represented by the FFA, saw the potential to increase the security of their livelihoods. In recent years, farmers had suffered repeated droughts and low prices for their produce. The coalition offered them opportunities to grow higher yielding sorghum, which is less risky crop than maize because it relies on less rain. If there is an average amount of rain, or a slight drought, sorghum will usually survive whereas maize may easily fail. (Paddy was not a choice for those poorer dryland farmers with no irrigation). Improved rainy season sorghum could provide both fodder for animals—which was of particular interest to women dairy farmers—as well as food for their own consumption. It could potentially be sold for industrial use as well. Since the latter relied upon convincing poultry feed manufacturers and poultry farmers that sorghum was as health for the birds just like maize, there was an element of risk. But enough farmers judged that this risk was lower than the prospect of growing crops that could be utterly ruined if the rains failed.

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1. Ulrich Kleih et al. (2000).

2. Hall defined 'institutional' broadly to include the rules, norms and power structures within which individuals and organizations operate (2004, 1).

Initially the poultry feed manufacturers—Janaki Feeds—were skeptical about 100% replacement of maize with sorghum. They had already been replacing small amounts of maize with sorghum in poultry feed, partly because the latter was cheaper but also because maize was becoming scarce. They had not conducted scientific tests, and had doubts about the nutritional value of replacing large quantities of maize, so they kept the amounts relatively small. They attended the early meetings because an established contact with ICRISAT. They had a high opinion of the value of science, and of ICRISAT scientists in particular, because they had collaboratively developed a useful and cost-saving 'ELISA Kit' together for assessing mycotoxins in poultry feed. But it was only when they scrutinized the evidence that sorghum was as healthy as maize that they saw the business potential and participated fully in the project.

APPF saw the potential benefits to its members: if the farmers produced their own feed, then they would benefit from cheaper, more easily available sorghum. Or if they bought it from Janaki Feeds, or other feed manufacturers that followed suit, then they would spend less on purchasing feed than they would if they relied on maize for grain.

Project objectives

The main objective of this project is the creation of marketing opportunities by developing sustainable economic linkages in sorghum-poultry feed chain through innovative coalition systems.

The four outputs set for the project are:

3. Poultry feed formulations with sorghum cultivars available
4. Formation of a sustainable farmer scientist industry coalition
5. Technology access to the target groups accelerated and
6. Understanding coalition system as a process.

Setting the tone for shared vision

Scientists from ICRISAT took the initiative and convened a meeting with potential project partners October 2002. They discussed objectives and approach, agreeing to a shared overall goal—to improve the livelihood security of poorer farmers—as well as sub-goals that would meet the interests of each member organization. They developed a, 'feeling of win-win situation for all the partners—breeders seeking the dissemination of their products to farmers, poultry scientists in developing new poultry feed rations, farmers looking for high productivity and high market value, feed manufacturers seeking for grain in bulk quantities'. Then they met on four occasions to discuss roles and responsibilities, administration, communications and decision-making, and the budget, culminating in the development of a two-year plan.

The question of who should lead the coalition provoked considerable debate. Since the key beneficiaries were sorghum growing farmers, the FFA felt that they could lead the coalition. ICRISAT did not press its own case to be the convenors of the project but other members favoured it, saying that, ICRISAT being an international organization, would be more appropriate because they were neutral—that is, not pushing for any particular interest, but rather the success of the whole project—transparent, and accountable.

The discussion was also able to identify the roles and responsibilities. A steering committee was established to oversee the poultry feed trials. Since the whole enterprise depended upon buying of the outcomes by the poultry feed manufacturers. Janki Feeds was chosen to be the convenor of the committee.

The coalition members discussed the advantages of trying to get the private seed industry involved, but when approached they found their response was lukewarm initially. By the second year, however, three seed companies agreed to sell new cultivars at a 50% subsidized price as a way of promoting them and stimulating demand among farmers.

The clarity and appropriateness of roles—agreed jointly at the beginning of the project—was recognized as an important ingredient of success. The monitoring plan, for example, stipulated the precise responsibilities of each partner organization in relation to each other.

Defined roles of coalition partners

International Crops Research Institute for Semi Arid Tropics (ICRISAT):

- Cultivars selection from existing sorghum cultivars suitable for poultry feed
- Multiplication of seed and distribution to participant farmers through FFA
- Networking of partners under one umbrella
- Project implementation and monitoring.

Acharya N G Ranga Agricultural University (ANGRAU):

- Conducting poultry feed trials with sorghum as principal cereal ingredient
- Providing technical guidance on consumption and quality of sorghum in poultry feeds
- Improved cultivars production for the target areas.

Federation of Farmers Associations (FFA): Represent the interest of the farmers

- Identify suitable sorghum growing areas, farmers
- Disseminate the information to farmers about the improved sorghum varieties, market opportunities
- Foster effective linkages with end users.

Andhra Pradesh Poultry Federation (APFF): Represent the interest of poultry producers

- Take the lead to interact with poultry producers
- Conduct/facilitate on-farm poultry feed trials on a large scale in selected locations.

Janaki Feeds: Represent the interest of feed manufacturers

- Prepare feed formulations using different proportions of sorghum poultry feed rations
- Up-scale project findings after completion of project.

Further, the coalition process is represented diagrammatically in the following figure.
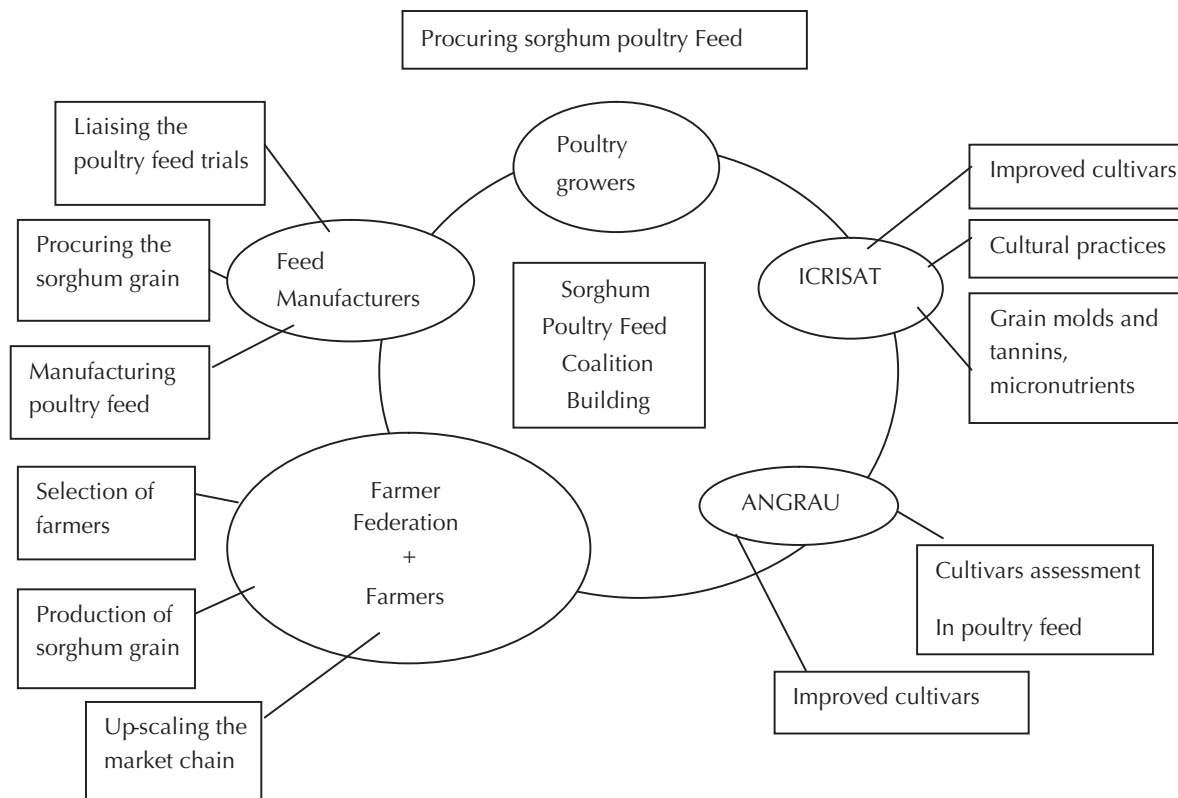
Sorghum poultry feed coalition building.

3.4   Brief timeline of activities

This will give chronology of important activities and how the coalition moved to achieve designated outputs in a specified timeframe. Detailed date-wise major activities were listed and annexed.

Time	Activity	Remarks
October-No-vember 2002	Finalized project plan	During this period the partners met for three times
January 2003	Preliminary poultry feed trials	Sorghum cultivars (CSH 16, CSV 15, S35 and PSV 16) screened from the 2002 Kharif harvest and dispatched to ANGRAU for Preliminary Poultry Feed Trails (PPFT) and to Pathologist for grain mold scaling
February 2003	Activities finalized	Roles and responsibilities of each partner was clearly charted
March 2003	Milestones finalized	Partners discussed thoroughly and finalized milestones to be achieved during the project time
May 2003	Steering committee formed and villages selected	A steering committee under the chairmanship of poultry feed manufacturer was formed to look after poultry feed trial and in another meeting the study villages were finalized and improved sorghum seeds were distributed for the farmers
October 2003	A one-day review and planning workshop at ICRISAT	In this workshop feed manufacturer asked for part-for-part replace-ment of sorghum in place of maize rather than iso-energy adjust-ment. This was well taken and ANGRAU carried experiments as for the industry requirement
November 2003	Dr Andrew Barnett from DFID, UK visited ICRISAT to evaluate the project progress	He visited FFA and met all the coalition partners. He gathered the needed information from all the coalition partners individu-ally. Later in the afternoon, he visited the Poultry Experimentation Station of Acharya NG Ranga Agricultural University (ANGRAU) and observed the sorghum poultry feed trials and acknowledged the sensitivity arrangements made to the project by the coalition partners. He appreciated all the sorghum poultry feed coalition partners of their dedicated effort in successful implementation of the project

June-November 2003	Meetings in project villages	During crop period frequent visits to villages were made to advice farmers on improved package of practices. Field days, field visits and farmer-training programs were organized
December 2004	Surplus grain from farmers procured	Procured sorghum grain was supplied to feed manufacturers for large scale poultry trials and samples supplied for chemical analysis
January 2004	Stakeholders workshop	Main focus group is poultry producers. Prof. VLK Prasad of ANGRAU delivered a keynote address on 'poultry feed trials using improved sorghum grain'. The aim of the meeting is to disseminate the broiler PFT results to a larger group of end users (poultry producers) conducted at ANGRAU by using the 2002 kharif harvested improved sorghum grain
January 2004	Reports received	Report on levels of Tannins and Phenolic compounds, threshed grain mold severity, and Micotoxins (Aflotoxins and Fumanosin) estimated for the procured sorghum grain from the farmers; fields (2003 kharif harvest) was completed
March 2004	Writeshop at ICRISAT	All the coalition partners participated in CPHP organized two-day Writeshop on 'Developing Institutional Outputs'
March 2004	Ms Mary Underwood, Training and Development Consultant of DFID visited ICRISAT	She reviewed the project progress, especially the steps taken for coalition building and the poverty eradication possibilities through the project. She visited the PFT's at ANGRAU on 26-03-04. Later in the afternoon, she met all the coalition arrangements among the partners to derive the stated outputs of utilization of sorghum in poultry feed manufacturing
March 2004	Private sector seed companies participation	Hybrid sorghum seed was procured from the private seed companies for distributing to the project farmers. The cultivars are JK Jyothi for JK seeds and MLSH 296 and Paras Pradhan form emergent genetics
May 2004	Review meeting of coalition partners was held at ICRISAT	Partners discussed various issues regarding Developing Poultry Feed Formulations with sorghum grain procured from farmers; Progress of large-scale poultry feed trials; Forming/strengthening the farmers groups in target villages; Selection of villages and farmers for 2004 kharif sowings and distribution of seed
June 2004	Coalition partners visit to poultry trials	All the partners visited poultry feed trials at ANGRAU and reviewed the progress
August 2004	Review meeting of coalition partners was held at ICRISAT	Partners discussed various issues regarding progress of large-scale poultry feed trials; poultry feed efficiency of sorghum; status of seed distribution in project villages; decided the venue and dates for conducting field visits to the project farmers (last week of September) and training program to poultry producers (November 2004 at ANGRAU)
June–November 2004	Meetings in project villages	During crop period frequent visits to villages were made to advice the farmers on improved package of practices. Field days, field visits and farmer-training programs were organized
November 2004	The stakeholder meeting was held at ANGRAU on 9th November 2004	Main focus group is poultry producers. Dr A Rajasekhara Reddy of ANGRAU delivered a keynote address on 'sorghum based poultry feed rations—a potential alternative to maize'. The results were well received
December 2004	Writeshop	Organized a two-day writeshop at ICRISAT by CPHP, CRISP and ILAC on writing institutional histories of CPHP projects

Innovation

For all members this was their first experience of such a broad-based coalition involving different types of organization (public, NGO, private), and different skills and expertise (science, farming, commerce). All claimed that not only had they learned from working as a coalition but that collectively they had worked at a faster pace and achieved their objectives more quickly, than they could have done if working separately. The 'coalition allowed to capitalize on the synergies from sharing of skills in different disciplines with each member playing his/her role in the project'.

The method of testing the sorghum was refined by the coalition to meet the interests of all. Four improved cultivars of sorghum were selected by ICRISAT and grain produced by seventy-four farmers during the kharif (rainy season) harvest of 2002 was analysed for threshed grain mold severity and chemical traits. The poultry feed efficiency of this grain was assessed by ANGRAU. The tests on both layers and broilers showed that sorghum could entirely replace maize in poultry rations with no ill effects when consumed by the birds. Contrary to popular opinion, they demonstrated that when sorghum replaces maize the level of tannins and toxins remain low.

Although DFID had initially resisted the arguments for the necessity of these tests, different varieties produce different results, so they were eventually persuaded that these poultry feed trails were necessary. Also, the poultry feed manufacturers felt that they needed to see the results for themselves on the specific cultivators that ICRISAT were hoping to promote. Significantly, these scientific tests were repeated, on the recommendation of the Steering Committee, with a slightly different method. In the first ANGRAU test after the replacement of sorghum at different levels—at 50, 75 or 100%—the scientists adjusted the energy content, as was their custom, so that it was equal in each case. This would ensure that the experiment was not affected by other variables, that is, in this case energy content. But the poultry farmers and feed manufacturers who do not all have computers and so are not able to adjust energy levels as precisely, wanted to know the effects without changing the energy content. So in the second test, ANGRAU agreed to repeat the experiment with a simpler method (part-by-part replacement of sorghum in place of maize). A feed manufacturer's mill was used to prepare the poultry feed rations for the second 'pat-by-part replacement trial'. In both cases, the quality of feed was the same as maize, and confidence in the results was achieved on all sides.

Although the results were favourable to sorghum, the light colour of the skin of the broilers was deemed a worry. It might deter consumers form purchasing them. Although there remains some disagreement about whether consumers mind, ANGRAU thought of adding stylosanthes leaf meal to return at least 50% of the yellow to the skin colour. This idea came out of an earlier ICRISAT/ANGRAU project and was one of several possibilities (such as synthetic colouring or marigold) but was chosen because partners had supplies of the Stylosanthes leaf meal. The experiments conducted on layer birds also have produced similar results and were recently conveyed to poultry farmers and feed manufacturers. Another innovation to the methodology emerged from the poultry farmers concern that the tests should be valid for different breeds (commercial layer birds). At their suggestion the tests were repeated on another breed, and the preliminary results have so far demonstrated that sorghum appears to be healthy for all. Even though ANGRAU had not thought this necessary (because previous research informed them that all breeds would react the same way), this ensured that poultry farmers had complete confidence in the results.

Although hypothetical, it is probable that if the scientists had been working in isolation, the poultry farmers and feed manufacturers would have been less satisfied with the methods. The testing would not have reflected their own practices and concerns and they would not have been in a position to make requests for adjustments after the results had been published. Innovation within the project does appear to have been propelled by linkages between people. Learning from past experience, combining different perspective to give rise to new, synthesized ideas, and what Barnett has called 'creative imitation'[3] were all the product of the exchange of knowledge and experience between individuals and groups.

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3. Barnett (2004, 1).

Culture and communication

The roles and responsibilities allocated to each member organization by the coalition as a whole were both clear and appropriate to the task and the interests of each stakeholder organization. As a result, the need for complex communication was kept to a minimum. It was required for updates, decision-making about the present and future, reviewing progress, and disseminating detailed results, but it was not as necessary for exerting pressure as it can be in advocacy coalitions. Whereas the latter often rely on communicating with a wider group, for example, to pressurize particular stakeholders to change their practices, communication within this coalition, which was mainly piloting rather than disseminating ideas, remained largely internal.

The mode of channel of communication used by the sorghum coalition varied according to context. Although regular communication was achieved by e-mail and telephone, especially for quick updates, straightforward decisions or arranging meetings, face-to-face discussion was critical at certain points. It was only academics as a group who all relied heavily on e-mail; in all the other groups only certain individuals used electronic communication very regularly while others preferred the telephone. Some had erratic or no access to the Internet, another did not know how to use a computer, and a third was perpetually worried about viruses. But the need for face-to-face discussion was not merely the result of the shortcomings of information and communication technologies (ICTs); it was essential for the process of consensual decision-making. Cognitive understanding of different points of view was vastly easier when people sat around a table rather than communicated through impersonal technology. One informant stressed the importance of courtesy to their good relationships. This is much more easily achieved through direct contact partly because non-verbal communication plays such an important part in conveying messages.

The culture of the coalition—created in part by the consensus-building approach of the ICRISAT convenors, but also nurtured by all coalition members—put a high value on courtesy. Polite forms of address, showing concern, patience and flexibility for each other, seeking peaceful resolutions to problems rather than throwing down aggressive challenges, and following the customary ritual during more formal meetings, all contributed to this culture. The 'personal touch' in communication was also important to sustain relations.

No stakeholder organizations or individuals tried to dominate or pressure each other. When farmers found that the quality of the sorghum had improved as a result of using the coalition's cultivators they increased their own consumption. This, as well as low yields due to late rains, has led to insufficient supplies for the poultry feed manufacturers. Rather than provoking hostility within the coalition, the other stakeholder organizations have been trying to bring more farmers into the coalition and gently persuading existing growers to balance their short-term need for food with their longer-term interest in establishing marketing links that will lead to greater security in years when lower quality sorghum is produced. It is the lower quality sorghum that requires the new marketing opportunities offered by poultry feed manufacturers. The fact that the coalition members have a clear-shared interest in increasing the production and sales of rainy season sorghum undoubtedly makes communication between members harmonious. They are not dealing with severe conflicts of interest within the coalition or pressure from outside interest groups.

In conjunction with shared interests, and a non-domineering approach by all members, the individuals who belong to the coalition all work and reside in the same city (with one exception: a scientist

who is based two hours drive away). It is agreed that geographical proximity makes a difference. It allowed frequent meetings, at short notice if necessary, with the minimum expenditure of time or other resources. The shared language and identity of all coalition members have reduced the potential for misunderstanding. All were from the state of Andhra Pradesh, shared the same framework of references (cultural, ecological, social, economic and political), and were Telugu speakers.

Informal communication or contact has been found to be a critical factor in the success of many networks. Workshops during which results of the poultry feed trials were disseminated (19th January 2004 at ICRISAT and 9th November 2004 at ANGRAU), may have been as important in providing opportunities for making and consolidating links as they were for conveying information. The ability of two members of the coalition from ICRISAT to exchange information and discuss the best ways forward for the project were greatly enhanced by two forms of informal contact: sharing a lift to and from work each day and smoking outside their office. Such informal discussion—without the strictures of an agenda or any emphasis on formal performance—allowed for creative and spontaneous thinking and consolidating relationships based on trust.

The coalition developed its methods of research to respond to the different types of evidence required to convince different groups of people. The scientist and poultry feed manufacturers required scientifically validated results, while the farmers needed to see for themselves. Farmers observed, 'seeing is believing'. They ranked reliable sources of information as follows: (1) seeing with their own eyes, (2) other farmers' reports, (3) scientists' reports, (4) trusted industrialists or media outlets. The coalition conducted experiments that could generate evidence to satisfy scientists, but then also enabled some farmers to see for themselves, others to learn directly from the innovative farmers, and still more to be alerted to the market potential of sorghum through media reports, workshops and brochures in Telugu.

The coalition has been highly successful in forging links between different sectors (public research institutes, farmers, and companies). The financial profitability of growing new varieties has been surveyed with positive results. During farmer meetings in the village, for example when seeds were distributed, women have not only been present but expressed their views and asked questions, especially concerning the use of sorghum as fodder. As the people usually responsible for dairy production, women have a stake in the fodder that sorghum provides. They also contribute their labour to the sorghum-production system either as members of the farming household or as labourers. Furthermore, along with other household members, they may also benefit from greater availability of sorghum for home consumption.

3.5   Research, practice and coalition building

Various 'policy networks' have been identified in research on knowledge utilization and policy-making ranging from 'policy communities', with access to privileged information and decision-making, to 'advocacy coalitions' that share beliefs and aim to change policy. The sorghum 'coalition' is a network' in the sense that the participants have voluntarily entered into the collective; they also remain part of autonomous organizations, and they come together for mutual or joint activities.[4] As a group of organizations with different values and interests, the sorghum poultry coalition could also be labelled an 'issue network';[5] alternatively, as distinct but related organizations, including private companies, who have come together to improve their performance or position, it might be categorized as a

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4. Church et al (2002, 14).

5. Crewe and Young (2002, 16).

'strategic alliance.'[6] Although such labels are only of limited use, they can be helpful in exploring how different types of network or coalition will require different strategies for successful innovation, learning, communication and impact on poverty reduction.

At the same time, some lessons about improving the links between organizations are generic. Crewe and Young's analysis into the relationship between research and policymaking/practice concluded that certain principles were common to all networks, partnerships or coalitions. Initiatives are more likely to lead to impact on poverty reduction if:

- *Context:* Stakeholders have clear idea of the purpose of the partnership and plan a strategy that responds to the political and institutional set up, end-users' needs and pressures, and the 'windows of opportunity'
- *Evidence*: The key messages are credible and convincing. The acquisition of knowledge, the way it is substantiated, and its presentation and dissemination, will all affect whether it leaves a lasting impression and changes people ideas or behaviour
- *Links:* Appropriate links, alliances and chains of legitimacy are created between beneficiaries, researchers, NGOs, policymakers and other stakeholders.[7]

These are all characteristics of the sorghum poultry coalition but it is clear that the process is still more complex and involved other critical ingredients. The sorghum coalition is a 'national system of innovation' in action (as described by Lundwall and Hall et al.)[8] and is characterized by some shared and some complementary interests, flexibility, and mutual learning. The literature on national systems of innovation indicates that understanding successful partnerships requires an investigation of (a) the triggers that lead to innovation, (b) the process of collective learning, innovation, and 'creative imitation', (c) organizational culture, and (d) the quality of management of the collective.

The private sector literature on strategic alliances and networks reveals that 60% fail or under-perform in part because relationships between partners were not built carefully in advance.[9] The care with which the sorghum coalition was formed substantiates this point very clearly. Still other disciplines have relevant experience. Knowledge management has demonstrated that it is not necessarily useful for networks to attempt to formally codify knowledge, partly because it changes too quickly but also because much of it is tacit and taken for granted rather than explicit, but rather a shift is needed from 'classifying data to facilitating learning between people' within communities of practice.[10] In the case of the sorghum coalition, rather than separating knowledge generation and dissemination, these processes were jointly directed by the whole coalition from the outset of the project. This encouraged shared innovation, ownership over, and confidence in the results.

Furthermore, disciplines that have had less influence on development literature to date, such as media studies, cultural studies and psychology, shed light on the success or failure of communication strategies and interpersonal relationships within partnerships. Shared cultural reference points, and the ability to read social situations with effective social skills and empathy (or what has been called 'emotional intelligence'),[11] can both enhance effective communication between individuals, as this coalition demonstrates.

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6. Creech and Willard (2001, 84).

7. Crewe and Young (2002).

8. Lundwall (1992) and Hall et al. (2004).

9. Creech and Willard (2001, 58).

10. Creech and Willard (2001, 40).

11. Patnaik (2004).

This case confirms that all these aspects play a part in what is a highly complicated process of interlocking social, political and economic relationships between institutions, groups and individuals. The importance of understanding relationships between stakeholders, rather than the transfer of knowledge or technical innovation as if it can be isolated from its social context is clear throughout. A few aspects of these relationships will be highlighted and an attempt also be made to draw out what is distinctive about this particular coalition and what it share in common with others.

3.6   Shared and complementary interests

The need for clear objectives is now repeated by all those with experience in partnerships and networks. Members of the network are more likely to prosper if they have thought through their objectives and strategy with care. But not all members necessarily share the same objectives because interests often conflict as much as they converge. That the sorghum coalition members had a driving shared interest and solution in common distinguishes it from many networks that are concerned about a particular topic (such as, transport) but cannot agree on how to tackle it and can find it difficult to move beyond information sharing as a group. The sorghum coalition's shared interest at the level of overall goal, and complementary interests expressed through outputs at the lower level, allowed it to work as a team. The decision-making is based on consensus building rather than advocacy or campaigning.

The shared over-arching interest, and complementary sub-interests, allowed the coalition to develop a feeling of 'win-win' situation. This entailed the creation of incentives that drew each member into the coalition but also kept them investing in it. These incentives were primarily economic but not entirely. All could potentially increase their financial profit, or their economic security, if the coalition succeeded. But a more elusive gain in social status possibly also encouraged participation.

3.7   Management and learning

Another aspect of planning that the coalition rightly took extremely seriously was selection of partners. Echoed throughout all the literature on partnership and networking, the good choice of partners is certainly one of the key criteria in the success of any collective enterprise. It has been pointed out that it is better to have a small number of dedicated organizations in a network than dozens of marginally committed ones.[12] The coalition followed this model as well as having a complete membership involved from start. The inclusion of no additional members may have also eased the process: the small group of organizations built up a cohesive way of working from the earliest planning stage. Because the coalition chose the right partners to meet their objectives, any changes/additions were not necessary. Once the pilot project has proved the potential of sorghum, it is arguable, however, that broader representation will ensure that participation is scaled up.

Three other aspects of management contributed to the success of this coalition and appear to be relevant to all types of networks:

1. All coalition members were involved in the negotiations about how resources would be divided between the members. The openness and transparency about the budget was important for establishing trust;
2. The monitoring framework and plan made the roles and responsibilities for each member appropriate and clear. Rather than having all stakeholders involved in all activities, and thereby

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12. Creech and Willard (2001, 59).

wasting their time and goodwill, the responsibilities were logically divided so that each was only involved when their expertise was needed and/or their own interests were being met;

3. Members accommodated each other's practices, needs and perceptions where necessary. For example, ANGRAU agreed to conduct the tests twice to take into account the preferences of the private sector members.

3.8   Communication and trust

It is in the area of communication that the biggest differences between networks can be found. But there are two obvious principles that hold true for all enterprises: (1) Different types of evidence, communication channels and presentation will be necessary for different audiences. The sorghum coalition understood this from the outset: their diverse forms of communication—e-mail, phone, meetings, publicity brochures, use of the media, publications—fitted the purpose and the audience; (2) the second principle concerns trust:

'Across the literature, either in the development field or the organizational development literature, all agree that trust is of paramount importance when examining the network form.'[13]

The sorghum coalition members respect and trust each other, not necessarily in all senses and circumstances, but in ways that their enterprise requires. Newell and Swan have distinguished between three types of trust:

1. 'Companion trust: this is the trust that exists in the context of goodwill and friendship;
2. Competence trust: this is where we trust in others' competence to carry out the task agreed;
3. Commitment trust: this is a trust made fast by contractual or inter-institutional agreements, ones that can be enforced.'[14]

In this case, the sorghum coalition achieved all three, but most particularly competence trust. Regular dialogue was critical, and nurturing relationships with courtesy was a feature, but as important was the emphasis on results. As each member fulfilled own responsibilities and produced new sorghum varieties, sorghum yields, experimental results, and poultry feed, the confidence of all grew. Their determination to continue the coalition beyond the end of the grant is based in part on the belief that it will meet their interests. But that is partly possible because their relationships are founded on trust.

3.9   Social capital and scaling up

Any innovation will start with an optimism of reaching the potential level. Same connotation holds good in sorghum coalition building too. Carl Taylor rightly pointed that *there are no universal solutions but only universal processe*s for development. To sustain and enhance the benefits of this innovative coalition approach *social capital* forms the basis, which in turn helps in scaling up.

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13. Church et al. (2002, 24).

14. As quoted by Church et al. (2002, 28).

Summary of lessons learned by the sorghum poultry coalition	
Generic—all partnerships	Specific—to strategic alliances
Clear objectives	Financial accountability
Flexibility and creativity	Transparent and consensual management
Credible and 'legitimate' representatives of stakeholders	Collective planning, innovation and learning
Matching evidence and communication to the audience	Competence trust important when undertaking joint activities
Monitoring of impact, not just outputs, on indirect as well as direct stakeholders	Appropriate division of tasks, stakeholders involved only when it meets their interests
Informal networking and contacts important	Regular face-to-face meetings
Inclusivity required to ensure equitable impact	Courtesy and the 'personal touch'

Box 1: Social capital and partnerships

SOCIAL CAPTIAL means 'trust' and 'cooperation networks'. As a form of capital it is possible to invest on it to save and to stock it—but it is possible to lose it too. The principal strategies for 'investing' in social capital are:

- Create a common space among different institutions (social organizations, NGOs, public sector, entrepreneurs) to identify common goals as stakeholders
- Make transparent the interests of the different institutions in negotiating common goals
- Identify the added value of cooperation through the different types of support coming from each of the stakeholders. The added value is like the interest rate of social capital.

The main outputs of social capital are:

- Reduced transaction costs among institutions
- Increase in the cooperation values in a community or region
- Increased competitiveness of the stakeholders in the market

Social capital influence in scaling up efforts

1. Technical aspects

- Creates environment for farmers to reach agreements in their organizations to support an inter learning process e.g. in sharing successful technologies.
- Allows for agreements to be reached among farmers' organizations, NGOs, public and private sectors

2. Political aspects

- Makes way for defining and implementing common policies in a local or regional context
- Facilitates designing and implementing common programs and mobilizing institutional resources human, financial, physical)
- Demonstrates to the national government the importance of cooperation in a region to raise more funds for the decentralization process.

3. Economic aspects

- Social capital makes possible new loans from banks to farmers' organizations (social guarantees among farmers can serve as replacement/alternative to collateral requirements in the absence/lack of property rights to land).
- Makes it possible to design and implement new strategies to reduce the risk of markets
- Social capital among social, public and private institutions can increase the competitiveness of a region in the country (competitive advantages instead of comparative advantage)

Source: Sanchez (1999).

Social capital

Social capital means 'trust' and 'cooperation networks'. As a form of capital, it is possible to invest on it to save and to stock it—but it is possible to lose it, too. Inter institutional collaboration and cooperation is not only important, it is crucial and a prerequisite for maximizing impact.

Juan Sanchez, in his paper presented at an international workshop in October 1999 held at the World Bank, Washington, sponsored by CGIAR NGO Committee and the Global Forum for Agricultural Research, emphasized the value of social capital in improving the quality of partnerships and increased networking. One can observe the anticipated outputs of social capital formed in Sorghum Poultry Coalition Project by increase in cooperation value, i.e. research institutes recognized the importance of stakeholders in realizing more uptake of research products by the intended users and industry as well realized the importance of science in business and NGOs enhanced their capacities and capabilities in networking for better bargaining and enhanced competitive advantage.

The social capital formed in sorghum coalition influence scaling up efforts in *technical* and *economic* as well as *political* aspects.

Technical
- Coalition preliminary efforts in establishing sustainable linkages between farmers associations (FFA, APPF), research institutions (ICRISAT, ANGRAU) and private sector (Janaki Feeds) are successful. The experience and confidence attained by the partners hopefully result in enhanced and wider networks for mutual benefit.

Economic
- Attempts to establish sustainable economic inter linkages between sorghum farmers and poultry feed manufacturers will reduce the risk of high price fluctuations in the market both for the farmers and feed manufacturers.
- The market link between the producer and processor will eliminate the middlemen in market consequently a higher price for the farmers and lower price for the feed manufacturer, which results in poultry feed cost little cheaper, enhancing the competitive advantage of poultry industry.

Political
- Generic lessons from this project demonstrate to the government the required inputs to provide a congenial policy environment for partnerships/alliances/networks/coalitions.
- This enables policymakers to come out with specific policies for poultry industry to improve its competitive advantage over other regions/nations, at the same time benefiting the poor sorghum growers.

Scaling up

In sorghum poultry coalition all the scaling up types, as refereed by Uvin and Miller (2000), are relevant for one or other organization. All types of scaling can be observed in each organization but based on the type of organization one or other type of scaling up can prominently be anticipated.

ICRISAT and ANGRAU, and primary research organizations scale up more in terms of functional and organizational, i.e. the activity is increased to realize the anticipated benefits at end user level and improving the management capacity of staff.

FFA and APPF can observe quantitative and functional scaling up by increasing membership size of the organization and enhancing its activity base. They can also lobby for political scaling up.

Janaki Feeds: The private company can move beyond service delivery towards empowerment by establishing direct market link with farmers, which eliminates the middlemen in market chain who are taking maximum share of price spread. This ultimately leads to maximizing of profits for the company and enhanced returns of the farmers. It looks more of political scaling up.

Box 2: Types of scaling up

- Quantitative: a program or an organization expands its size by increasing its membership base or constituency through increase in geographic area or budgets.
- Functional: a community-based program or a grassroots organization expands the number and the type of its activities e.g. from agriculture production to health, nutrition, credit, training, literacy etc.
- Political: the organization moves beyond service delivery towards empowerment and change in structural causes of under development. This usually involves active political involvement and the development of relations with the state.
- Organizational: community-based program or grassroots organizations increase their organizational strength to improve the effectiveness, efficiency and sustainability of their activities. This is through diversifying fund source, increasing level of self financing/income generating, assuring the enactment of public legislation earmarking entitlements within the annual budgets for the program, creating external links with other organizations, or improving internal management capacity of staff.

Source: Uvin and Miller (2000).

As pointed by Paul Rice,[15] the initial economic inter linkages established in this coalition approach will be strengthened by

- Organizing farmers themselves to achieve economies of scale to produce economically and profitably
- Furthering linkages with other possible industry utilizations.

Acknowledgements

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Appendix 1   List of coalition members representing their organization

Dr Belum VS Reddy, Principal Scientist, ICRISAT

Mr P Parthsarathy Rao, Senior Economist, ICRISAT

Dr K Gurava Reddy, Visiting Scientist, ICRISAT

Dr A Rajashekhara Reddy, Head LRI, Poultry Experimental Station, ANGRAU

Dr V Ravinder Reddy, Associate Professor, ANGRAU

Dr D Ramachandraiah, Principal Scientist (Millets), ANGRAU

Mr A Bhavani Prasad, Vice President, Federation of Farmers' Associations

Mr Varaprasad Reddy, Scientist, Federation of Farmers' Associations

Mr CLN Rao, Managing Director, Janaki Feeds

Mr Ch Janardhana Rao, General Secretary, Andhra Pradesh Poultry Federation

Sorghum and Poultry Farmers.

Appendix 2 Key meetings of coalition

10-10-2002	Discussion with Coalition partners to finalize project plan
16-10-2002	Discussion with Coalition partners to finalize project plan
06-11-2002	Discussion with Coalition partners to finalize project plan
17-02-2003	Detailed activities finalized with the partners
28-02-2003	DFID-CPHP approval communicated to all partners and agreements sought with partners
17-03-2003	Milestones discussed and finalized with partners
02-05-2003	Monitoring and Evaluation training workshop of DFID-CPHP
23-05-2003	Formation of Steering Committee in meeting with coalition partners
23-05-2003	Review meeting of coalition partners. Study villages selected by collation
29-07-2003	Two coalition partners (ICRISAT and Janaki Feeds) visited the poultry experimentation station an ANGRAU to learn about sorghum as poultry feed
19-09-2003	Two-coalition partners (ICRISAT and Federation of Farmers Associations) conducted a meeting in Gangapur village of Jadcherla mandal followed by a field visit
07-10-2003	A one-day review and planning workshop of the project was held at ICRISAT, attended by the representatives of all coalition partners along with 7 sorghum farmers form four of the selected villages
14-10-2003	ICRISAT conducted a farmers meeting in Kandwada (one of the selected villages) of Chevella mandal and visited the sorghum fields of selected farmers
24-11-2003	Dr Andrew Barnett (on behalf of DFID, UK) visited ICRISAT, and other coalition members, to evaluate project progress
10-12-2003	Review meeting of coalition partners held at ICRISAT. The partners discussed various issues including: procuring the sorghum grain from the farmers, purchasing project equipment, grain requirement for large-scale poultry feed trials, stover sample collections, reports to be submitted to donors and budgetary matters
19-01-2004	A stakeholders meeting was held at ICRISAT on 19th January 2004 with all coalition partners of the project. The main focus group was poultry producers. The aim of the meeting was to disseminate the results of the broiler poultry feed trial conducted at ANGRAU to a larger group of poultry producers
11 and 12-03-04	CPHP of DFID organized a writeshop on 'Developing Institutional Outputs' at ICRISAT
25 and 26-03-04	Ms Mary Underwood, Training and Development Consultant of DFID, visited ICRISAT and reviewed the project progress, especially the steps taken for coalition building and the poverty eradication possibilities of the project
14-05-2004	Review meeting of coalition partners was held at ICRISAT. The partners discussed various issues including: developing poultry feed formulations with sorghum grain procured from farmers; progress of large-scale poultry feed trials; poultry feed efficiency of sorghum; a brochure prepared for training the poultry producers; questionnaires prepared for monitoring; forming/strengthening the farmers groups in target villages; selection of villages and farmers for 2004 kharif sowings; distribution of seed; equipment procured under the project; reports sent to donors and budget receipts and disbursement
09-06-2004	ICRISAT partners visited the large-scale layer poultry feed trials being conducted at the Poultry Experimentation Station of ANGRAU
23-08-2004	Review meeting of coalition partners was held at ICRISAT. The partners discussed various issues including: poultry feed formulations with sorghum grain; progress of large-scale poultry feed trials; poultry feed efficiency of sorghum; the brochure; progress of farmers groups; status of seed distribution in project villages; the venue and dates for conduction field visits to the project farmers (last week of Sep) and training program to poultry producers (9th November 2004 at ANGRAU); and reports sent to donors and budget receipts and disbursement
09-11-04	Training program on 'sorghum based poultry feed ratios—a potential alternative to maize' was held at ANGRAU to disseminate results on the layer poultry feed trial conducted by ANGRAU. It was attended by coalition members, poultry farmers, scientists from ANGRAU and the media
6 and 7-12-04	CPHP (south Asia) of DFID organized a writeshop on 'Writing institutional histories' at ICRISAT