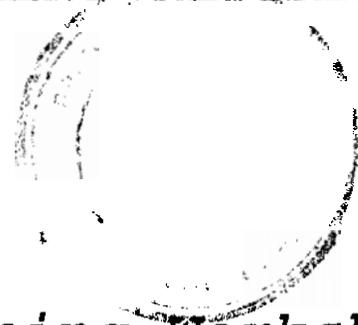


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RAPID APPRAISAL OF  
AGRICULTURAL KNOWLEDGE SYSTEMS  
(RAAKS)  
AND ITS USE IN  
IRRIGATION MANAGEMENT RESEARCH



*Report on the Training Workshop*

by

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**28** January 1996

# TABLE OF CONTENT

## ACKNOWLEDGEMENTS

### PART 1 INTRODUCTION

- 1.1 Background 1
- 1.2 Report on the RAAKS training workshop 1

### PART 2 CONCLUSIONS

- 2.1 Reflection on the training course: facilitators' perspective 3
  - 2.1.1 Creating a good atmosphere: collaboration between facilitators 3
  - 2.1.2 The first **two** RAAKS cycles: learning to swim 3
  - 2.1.3 The final RAAKS cycle: formulating action plans for **RAAKS** research 5
  - 2.1.4 Concluding 6
- 2.2 Reflection based on the facilitators' terms of reference 6

### PART 3 PROGRAM

### PART 4 RESULTS

#### Day 1: Sunday, December 10

- Activity 1.1: Introduction Pierre Strosser (IIMI-Pakistan) 16
- Activity 1.2: Objectives of the workshop and presentation of the program 17
- Activity 1.3: Getting acquainted 18
- Activity 1.4: Learning objectives 19
- Activity 1.5: Participatory working 20
- Activity 1.6: RAAKS: principles and framework 22
- Activity 1.7: PRA and RAAKS 33
- Activity 1.8: Wrap up (Evaluation of the day) 35

#### Day 2: Monday, December 11

- Activity 2.1: Review of day 1 37
- Activity 2.2: The Benin case: introduction and video 37
- Activity 2.3: Exercise phase **A**: the Benin case 39
- Activity 2.4: Presentation phase **B**: windows and tools 42
- Activity 2.5: Exercise phase **B**: the Benin case 45
- Activity 2.6: Evaluation of the day 50

Day 3: Tuesday, December 12	
Activity 3.1: Inventory of questions about RAAKS	52
Activity 3.2: Presentation of the windows and tools used in phase R: the Benin case	52
Activity 3.3: Questions on the <b>use</b> of windows and tools of phase R	62
Activity 3.4: Windows phase R: the case of irrigation in Farooqahad	63
Activity 3.5: Presentation of windows and tools in phase C: the Benin case	64
Activity 3.6: Review of RAAKS workshop	65
Activity 3.7: Presentation of the field work	66
Activity 3.8: Preparations for the field work	67
Activity 3.9: Evaluation of the day	68

## FIELD WORK

Day 4: Wednesday, December 13	
4.1 Results	69
4.2 Observations and discussions	69
4.3 Evaluation of the day	69
Day 5: Thursday, December 14	
5.1 Results	70
5.2 Observations and discussions	70
5.3 Evaluation of the day	71
Day 6: Saturday, December 16	
6.1 Results	72
6.2 Observations and discussions	72
6.3 Evaluation of the day	73
Day 7: Sunday, December 17	
7.1 Results	74
7.2 Observations and discussions	74
7.3 Evaluation of the day	75

## EVALUATION DAY

Day 8: Monday December 18	
Activity 8.1: Evaluation of the field work and participatory working	76
Activity 8.2: Evaluation of working with RAAKS	78
Activity 8.3: Evaluation by participants on working with RAAKS within their own organization	78

## ACTION PLANS FOR RESEARCH PROPOSAL WRITING

Day 9: Tuesday, December 19

Day 10: Wednesday, December 20

Activity 1: Outline for the 2 days of research proposal writing	79
Activity 2: Three components: presentations	81
Activity 3: Formulating action plans for research proposal writing	82
Activity 4: Results	85
Activity 5: Evaluation of day 9	96
Activity 6: Final evaluation of the workshop	97

### PART 5 FACILITATION PROCESS

5.1 Creating a learning atmosphere	98
5.2 Facilitating learning by groups	100
5.3 Dealing with problems in analysis	104

### PART 6 EXERCISES, CHECKLISTS, ENERGIZERS

6.1 Exercises	
Exercise 1 : Getting acquainted	106
Exercise 2 : Expectations of the participants	107
Exercise 3 : Formulating learning objectives	107
Exercise 4 : Participatory working	108
Exercise 5 : RAAKS and PRA	109
Exercise 6 : Evaluation of the day	110
Exercise 7 : RAAKS methodology - phase A	111
Exercise 8 : RAAKS methodology - phase B	112
Exercise 9 : Inventory of questions about RAAKS	114
Exercise 10: RAAKS methodology - windows phase B	114
Exercise 11: Field work preparations	115
Exercise 12: Mapping exercise	116
Exercise 13: Evaluation of the field work	117
Exercise 14: Evaluation working with RAAKS - the RAAKS quiz	118
Exercise 15: SWOT analysis on using RAAKS within own work	120
Exercise 16: Formation of groups for research proposal formulation	121
Exercise 17: Research proposal formulation - phase A	121
Exercise 18: Research proposal formulation - phase C: action plans	122

6.2	Checklists	
	Checklist 1: Group work	123
	Checklist 2: Observation exercise	123
	Checklist 3: Group contract (field work)	123
	Checklist 4: Interview groups	124
	Checklist 5: Observation points for interviews	124
	Checklist 6: Field report	125
	Checklist 7: Actor workshop	126
	Checklist 8: Format for the research proposal	127
	Checklist 9: Instrument for action plan	128
6.3	Energizers	
	The number game	129
	Simon says	129
	Animal farm	130
	Dancing lesson	130
	Fruit salad	131

## ANNEXES

1	RAAKS in the picture
2	Field report Recky group
3	Field report Food for future group
4	Nominees for awards
5	Discoveries on the farmers' track. Prints and picture on agricultural innovation
6	Curriculum vitae Monique Salomon and Stephan Seegers
7	Information on the Department of Communication and Innovation Studies
8	Introduction Pierre Strosser (IIMI-Pakistan)
9	Presentation of the field work
10	Three components: Presentations
11	Action Plan IIMI Research Component Decision Support Systems

# **PART 1. INTRODUCTION**

## PART 1, INTRODUCTION

### 1.1 Background

From November 1994 till July 1995 Anouk Hoerichts, graduate from the Department of Communication and Innovation Studies from Wageningen Agricultural University (WAU) has done research for the International Irrigation Management Institute (IIMI) in Lahore, Pakistan. Her research focused on how farmers perceive the quality of the irrigation services. Participatory Rural Appraisal (PRA) was used to identify farmers' performance indicators. Pierre Strosser, initiator of the research, supervised on IIMI's part. Monique Salomon supervised on behalf of the Department of Communication and Innovation Studies of the Wageningen Agricultural University (WAU).

In April 1995 Monique Salomon, Anouk Hoerichts and Pierre Strosser facilitated a three day workshop for IIMI staff in Pakistan. The results of the PRA research were presented and an introduction was held to Rapid Appraisal of Agricultural Knowledge Systems (RAAKS) including a short fieldwork. Main objective of this workshop was to sensitize IIMI researchers to participatory approaches for improving irrigation performance, and identify opportunities of using these approaches in IIMI's current and future research activities.

As a result, opportunities for using RAAKS were identified for three distinct research components of IIMI's current research programme, i.e. Decision Support Systems, Water User Associations, and Watercourse Management. A terms of reference was made by IIMI staff for further collaboration with the Department of Communication and Innovation Studies. It was decided to launch a research programme to apply RAAKS in IIMI's research programme. The Department of Irrigation from WAU, IIMI's counterpart in this research programme, would be involved as well.

The research will take place from November 1995 to May 1996, including extensive periods of fieldwork. An interdisciplinary team of researchers with knowledge of RAAKS has been formed, consisting of a cultural anthropologist (Nathalie Roovers), a specialist in tropical animal husbandry (Jos van Oostrum) and a biologist (Derk Kuiper). Each researcher will work in one of IIMI's three research components. They will be part of a RAAKS research group involving IIMI staff already working on these components. The teams will be responsible for the application of RAAKS in their research activities.

The research is preceded by a RAAKS training workshop of ten days for staff of both IIMI and other organizations working in the three research areas. The training workshop is a refresher course for the researchers. The training workshop will be facilitated by Monique Salomon, staff member of the Department of Communication and Innovation Studies and Stephan Seegers, private RAAKS consultant. Both facilitators are associates of the RAAKS consultants network PERSPECTIVES.

### 1.2 Report on the RAAKS Training Workshop

This report is a reflection on the results on the RAAKS training workshop held at IIMI Pakistan headquarters in Lahore from December 10 to 20, 1995. The authors have written this text with the intention to make a document that people can use in their work. A document people will consult once

in a while, something which is practical but also provides the necessary hindsight to get to grips with situations. A document that will contribute to the continuous joint learning of facilitators, trainers, researchers, extensionists who are learning about the **RAAKS** methodology and/or on innovation in general.

This text is more than 'just' a consultancy report. Not only does it provide results from the training workshop (see Part 3) and an assessment to what extent the terms of reference have been met (see Part **2.2**). It can also be used as a training manual using the exercises, checklists and energizers presented in the annexes. It provides learning points and insights in the process of working with and training in **RAAKS** (see Part **2.1**). For those readers who will facilitate **RAAKS** (supported) activities such as training, (action-) research and interventions, this document contains specific information on facilitating the process of such activities (see Part **4**).

There can only be joint learning on **RAAKS** and the social organisation of innovation if we listen to each other, if we are open to comments and suggestions. Most participants in the training workshop have experienced two facilitators who are eager to learn. We would like to invite all readers to enable us to continue and provide us with feedback.

## **PART 2. CONCLUSIONS**

## PART 2. CONCLUSIONS

This part of the report presents the reflection on the training workshop and its results. This reflection was presented by the facilitators on the last day of the training course. Their evaluation provides their view on the process of trying to achieve the objectives of the training workshop and what has been achieved. Most learning points for participants and the organizing institution (IIMI), however, were derived from looking at what has not been achieved and why not?

A second reflection is based on the evaluation of the achievements of the training workshop, using the facilitators' Terms of Reference (annex 1).

### 2.1 Reflection on the training course: Facilitators' perspective

In the training workshop the facilitators tried to guide the participants through three cycles of RAAKS-exercises in order to not only teach the methodology and its analytical complexities but also to let the participants experience the (often difficult) social aspects of working together and hopefully learning jointly using RAAKS. Looking back, the facilitators reflect on how they have tried to organize the teaching of the methodology and let the participants experience working with RAAKS by looking at their input, the activities and the results.

At the end of the third RAAKS cycle the facilitators had hoped that there would be an output that would effectuate collaboration of a number of organizations in RAAKS-exercises. However, this was not fully achieved. The reflection on the events and processes during this last RAAKS cycle provide many learning points for facilitators, participants and the organizing Institute IIMI.

#### 2.1.1 Creating a good atmosphere: Collaboration between facilitators

In order to create a good atmosphere in which participants would be able to learn, the facilitators have tried to bring across to the group of participants much about their own collaboration. In their collaboration the facilitators had created an atmosphere among themselves of a lot of laughter, creativity, taking up challenges. Tasks were divided in such a flexible way that leading the activities could easily change from one person to the other. Use was made of the other persons' qualities. There was a non-competitive atmosphere in which both facilitators could learn. Personal confessions were also part of this collaboration: first a sense of failure if the other had performed very well, but instead of getting stuck in that feeling, both facilitators realized that they had to watch each other to learn from the other.

#### 2.1.2 The first two RAAKS cycles: learning to swim

##### *A first RAAKS-cycle: swimming on land*

Day 1:

The workshop started off actively. This was appreciated although there were a lot of complaints about time pressure. A clear image of participatory working was created collectively. Theoretical background on RAAKS was given.

## Day 2:

Participants were improving on group work. They kept time and played an active role in groups. Although participants kept on complaining about the limited time, they kept on achieving the outputs asked for, thus contradicting their complaint.

From the beginning exercises were given through which participants would discover what RAAKS is all about. We pushed them into the deep irrigation canals of RAAKS so they would learn how to swim. After their first attempts, they felt that the facilitators had pushed them into the water to kill them. The facilitators had to change to a different style of learning and working. These were much more aimed at achievements and competitiveness.

## Day 3:

On request of the participants the windows were laid out and clarified step by step. This was well appreciated and a second exercise showed better understanding of the windows. By working according to the 'learning by doing' approach, the facilitators had not only created a demand for such lecturing but also a willingness to learn and understand among most of the participants. One RAAKS cycle had been completed.

After a good morning session, the groups didn't start off very well in their preparations for the fieldwork. Even though there had been formulated a wonderful definition of 'participatory working' on the first day, bringing this in practice is difficult. Again, participants were afraid that the assignment they received could not be finished in time. And again they proved otherwise.

### *A second RAAKS-cycle: swimming in knee-deep water*

## Day 4, 5, 6, 7:

The fieldwork was well organized. There were, of course, some practical problems such as late departure, traffic and late arrivals at interviews. Nevertheless, participants enjoyed the fieldwork, especially the actor workshop.

The groups had a number of difficulties:

- use information collected before
- exchange information
- listen to each other
- do a good interview
- define the problem situation
- choose windows
- operationalize windows
- combine information obtained
- draw conclusions

In the beginning there was little intervention by the facilitators, later on they got involved much more trying to address the abovementioned difficulties and supporting the groups in achieving results.

## Day 8:

The evaluation was good. Participants were open and able to show their failures in working as a group in the field. Looking in a mirror is surely not an easy thing.

The quiz appeared to be the appropriate method in the Pakistan context to stimulate reflection.

### 2.1.3 The final RAAKS-cycle: Formulating action plans for RAAKS research

Day 9, 10:

This part of the workshop had two objectives:

- 1) to form and train three teams in the use of RAAKS for irrigation management research
- 2) to formulate a concrete work plan for the implementation of RAAKS activities as part of IIMI's research program in the Fordwah/Eastern Sadiqia Irrigation System

The facilitators' role was to help participants start **up** the process of developing a research proposal. **A** beginning was made with the formation of three research groups and agreement reached on how to contact other potential partners.

The action plan, however, was far from finished at the end of the workshop. **Why? Who was** responsible for not achieving the envisioned end results?

#### - The facilitators

They had implicit expectations about the two days. Day 9 meant the start of a new phase in the workshop. The facilitators omitted to set new rules for working together. They expected the participants to take up responsibility for the process **as** they would execute the RAAKS research. From the **beginning there** was confusion about who should be leading what and why?

#### - IIMI

They initiated this workshop and provided participants with learning opportunities, free of costs. They took the lead in initiating RAAKS research which should benefit all parties involved in irrigated agriculture. They presented their ideas about where and how the RAAKS research can be done. However, they did not continue this role during group work. IIMI-staff was going in **out** of the room, leaving the group confused and disturbing the process of team building and formulation of the action plans.

This raises the question about the carrying capacity within IIMI to proceed this RAAKS research. Some senior staff members, who are responsible for one of the research components, were absent during the workshop. They should have been **part** of the process from the beginning.

Participating staff members clearly had other responsibilities besides this workshop. They should have been given time and space to play the leading role they were expected to play during these two days.

#### - Participants

They did not take **up** responsibility for the process but depended heavily on others to take the lead: the facilitators, IIMI staff and the RAAKS researchers. RAAKS research is done by a group in which everyone **is** responsible for process and outputs.

How to proceed from here? Which opportunities are there?

- There are three well prepared and **capable** RAAKS researchers. Do not lean on them! They are equal member of the group, with equal responsibilities. **They** will share their expertise during the process but together you will be responsible for successes and failures.

- Enthusiastic and capable participants from other organizations. They have to cope with constraints within their organizations. Support them where necessary in tackling these constraints. Keep them involved and committed.

Which threats are there?

- The prisoners dilemma: "If he doesn't do anything, I'm not doing anything either". Don't depend on others, don't wait for others to do the job. Take up responsibility and use your own potential for the benefit of all!!

#### 2.1.4 Concluding

IIMI should get appreciation and recognition for the initiative it has shown in bringing together representatives of different agencies and institutions. Moreover, they not only brought them together but they, also through the RAAKS training workshop, actively made a first attempt to collaborate and work in a participatory manner with farmers and institutions.

For the facilitators it has been a great experience to witness, the part of a growing process within IIMI in a new way of thinking and working. In this short period they have gained valuable insights in the problems that such a growing process evokes. Only due to this involvement they were able to provide a tailor-made RAAKS training workshop.

## **2.2 Reflection based on the facilitators' Terms of Reference**

### **A. Expectations of the training**

To a large extent the training course came up to expectations set by IIMI (and given as sub-objectives of the training in the contracts for the RAAKS consultants).

#### **1. To familiarize IIMI staff with RAAKS methodology and tools.**

Ten IIMI staff members, both national and international, participated in the training, comprising three counterparts of the RAAKS researchers from the three field stations.

It is assumed that the counterparts are well familiarized with the RAAKS methodology, although it is difficult to say whether or not this was due to the training: these people were selected as counterpart because it was believed that they would be suitable for this task. The theoretical framework should be made operational.

The three supervisors (Ineke Kalwijn, Marcel Kuper and Cris de Klein) know the theoretical concepts and the thinking behind RAAKS, partly through the training and partly through their background knowledge. They can make a good contribution to the RAAKS study in terms of discussion and decision making. Since this study is an iterative process, putting the sequence of the different activities in a time frame will to some extent remain open. RAAKS is hoped not to be an extra workload, but easily to be integrated in the work. Meetings should be effective. In some cases expectations still may be too high, since difficulties in applying the RAAKS methodology within IIMI's regular activities may not be fully acknowledged. It was said that it was regretted that the supervisors did not participate fully in the training.

In addition to that, the 3 RAAKS researchers who will work with IIMI for a period of 6 months, had a refresher course. Although they were already acquainted with the RAAKS methodology, I think it was very useful for them to follow this course again. Having that background knowledge and the other participants knowing this, the role they had to play certainly was not easy. As the course went on, they more and more managed to find a good balance between being participant and being 'facilitator' (which was sometimes expected of them by the other participants). This was a good exercise for them, since they will have to deal with finding this balance throughout their stay here.

Although not mentioned in this sub-objective of the training, also ten people from outside IIMI attended the course. These people were selected with great precision, the main criteria being their future involvement in IIMI's three RAAKS studies and/or the supposed advantage it would bring to them in their regular professional activities. Participants were from PID, OFWM, Dept of Ext. PATA and IWASRI.

All the participants have been familiarized with the RAAKS methodology and tools and received the training certificate. They gained both theoretical and practical knowledge. With regard to the theoretical framework, for some of the participants it was somewhat difficult to grasp. The atmosphere in the training however was such, that misunderstandings and questions could be spoken out. The consultants treated the theoretical framework again, this time combined with a practical assignment to use the RAAKS methodology in studying possibilities for participatory irrigation management. In general it is felt that the first steps have been made to discuss difficult concepts. The practical application of RAAKS seemed to be easier, since all participants have their own experiences in the field, that could be used as practical examples for understanding RAAKS.

A RAAKS manual (version S.2) and hand-outs with exercises and guidelines for group work, interviewing, etc. were distributed to each participant and a file with background articles will be sent to them.

To what extent the knowledge gained during the training can be operationalized by the participants in their profession, still has to be seen (most of them will be part of the new RAAKS action teams).

A lot of informal discussions within as well as outside IIMI were triggered by the training. This makes that within IIMI awareness has been created: people know of the existence of the RAAKS methodology and some know that it is a participatory approach that can be used for developing collaborations with actors in the irrigated agriculture system. Some of the higher officials and colleagues of the non-IIMI participants may also know about the existence of a RAAKS methodology now.

## 2. To undertake a first network analysis in IIMI's research areas in the Fordwah Eastern Sadiqia Irrigation System

Before the start of the training it was decided by the course coordinators and trainers that field work would not be carried out in IIMI's present research areas. Two reasons for this were: i) accessibility of the areas (at more than 300 km distance from Lahore) and ii) it could confuse people from that area who were also participating in the training course, as well as the interviewees. To draw a line between exercise and reality could have caused confusion. Moreover, a lot of participants would face themselves and their organizations as actors in the system, and at that time we did not know what effect that would bring about. To us it seemed that 'evaluating'

their colleagues in other areas would be a more acceptable way of analyzing the status quo of the system.

Since it is assumed by IIMI people, who know both areas, that the area that was selected for field work (Mananwala distributary in Sheikhpura district) more or less resembles IIMI's present research sites in FES area, the network analysis that is made during the training can easily be translated to IIMI's research sites.

Looking back we should have considered the possibility of staying in the research area at night, since travelling to and from the area took much time.

The field work gave a good impression of (how to do) a network analysis. Emphasis on the Integration and Task Analysis windows during phase B of the field study, gave us useful information about the actor network when looking at the issue of "mobilization of the existing human resources in Mananwala Distributary in order to bring about a more equitable and reliable supply of agricultural inputs" (Terms of Reference for the field study). All participants now have sufficient tools and instruments to make an analysis.

It is felt however, that not enough use was made of the knowledge of the participants (who are actually also the actors) and that therefore it remained an identification instead of an analysis of the network. The training certainly helped in identifying the actors, at least in making this more explicit.

### 3. To identify actors that may play a role in the RAAKS research

This can be considered in two ways: actors who will be part of the RAAKS team, and actors in the system. This section focuses on the former one.

It should be clear that the three RAAKS researchers are not the ones who are going to conduct the RAAKS study within the three components. They will do this in close collaboration with people working in this area, both from within and outside IIMI. They will support the formation of the research team and facilitate the RAAKS study. The last two days of the training were used for working on an action plan for how to carry out these RAAKS studies. It started with presentations of the problem statements in each field by the RAAKS researchers or their supervisor or counterpart from IIMI. After the presentations the group split up in three groups, each working on one of the subjects. Logically, people from IIMI working in that specific component and participants, working in that specific research area, sat together to elaborate on their terms of reference. Other participants who were not directly involved, chose the subject of their interest. By some of the participants it was understood that these groups will - more or less in the same composition - be the core groups who are going to carry out the RAAKS research, although clear appointments for a follow-up have not been made. Through the training the participants could look at how to cooperate in an informal way. The SWOT technique showed that it was difficult to make explicit strong and weak points of the RAAKS methodology as seen by the participants. Some of the participants did not feel called upon to give a serious input during the formulation of the action plans. They had a passive attitude, expecting IIMI to take the lead since they regarded it as IIMI project.

In general it can be said that awareness is created among the participants about which actors should play a role, but concrete actors could not (yet) be indicated.

4. To form and train three teams in the use of RAAKS for irrigation management research

None of the three groups reached this objective. The first steps have been made, but teams have not been formed or trained. The extent to which people were interested to commit themselves to be in a RAAKS team, varied a lot per participant. Some participants were apparently very sympathetic towards the problem statement, because they sincerely experience this as a problem as well. These actors are expected to form the 'core groups' of the RAAKS research teams. A first actor network analysis led to identification of actors outside the training, who should be closely involved in the RAAKS study as well. Proper identification and selection is thought to be one of the first steps to be undertaken by the RAAKS research team.

In those components in which the research team is still small, it is supposed that all new members will have to be trained. This is given high priority, although it is not clear yet how this will be done. The overall thinking is that formation and training of RAAKS research teams still needs to be done.

5. To formulate a concrete work plan for the implementation of RAAKS activities as part of IIMI's research program in the FES Irrigation System

Other commitments and unfortunate circumstances made that some of the IIMI staff, designated as supervisor of the RAAKS study, was not in a position to fully attend all meetings. Especially during the last two days of the training, wherein full attention was given to the formulation of action plans, other participants (from within and outside IIMI) were not always given the encouragement that was required for an active input. Some groups clearly needed more feedback from IIMI staff or a better notion of the situation in the field, to be able to come to concrete proposals.

However, the terms of reference for the different components have been analysed and in some cases redefined. An actor network analysis has been done and strong and weak points of actors with regard to their possible input in the RAAKS study have been identified. Moreover, the training learned how difficult it is and will be in future to cooperate with people who are not really 'RAAKS-minded'. The training gave the participants a good outlook on constraints that have to be dealt with in practice.

B. Future collaboration

Monique and Stephan will write a report on the training course. Names of all participants will be mentioned on the first page, as being the (co) producers of the report. The format that will be provided will be as such, that it is functional for the participants, RAAKS researchers and IIMI staff:

1. Introduction
  2. Evaluation - Accomplishment of ToR
  3. Activities / Exercises - Results - Discussion
  4. The Process
  5. Conclusions
- Annexes

The report will be submitted to IIMI by January 15, 1996.

A copy will be sent to all participants of the training, as well as the interviewees during the field work (with regard to the farmers we could send 2 copies to the village?). We could distribute copies to all Lahore based IIMI staff as well.

Pierre Strosser launched the idea to produce a video of the application of the RAAKS methodology on IIMI's research activities in the three components. This idea was received with great enthusiasm by Monique Salomon and by IIMI staff. Since this video is warmly welcomed by both the Department of Communication and Innovation Studies and IIMI, I propose that we further discuss on who delivers which input. Monique will discuss this matter with Paul Engel. Decisions should be taken on short notice, so that we can record the process of integration of RAAKS and IIMI's research activities right from the beginning (with the understanding that the first step, the training course, has to be put in scene again).

The contracts of the three RAAKS researchers end up half of May, 1996. Discussions during and after the training reinforced the idea to have at least one of the two consultants come to Pakistan again to organize a workshop at the end of the RAAKS study. IIMI staff, the RAAKS researchers and the consultants all showed their interest in having this follow-up. Especially for IIMI it is considered useful to thoroughly evaluate the results reached during the RAAKS study with help of (an) outsider(s) who have been involved in the process ever since the beginning, but who still can take a more distant view. Moreover, an evaluation workshop would give ample opportunity for IIMI staff involved for reflection and (getting guidance) for how to proceed. Agreements for how to organize this future consultancy have to be discussed with Prof Skogerboe, involved IIMI staff (inc. the RAAKS researchers) and the consultants.

The two consultants have found themselves prepared to supervise the process of the integration of the RAAKS methodology within IIMI's research activities from a distance. This is highly appreciated by IIMI staff and the three RAAKS researchers. Commitment towards an exchange of experiences and giving feedback (fax, e-mail) is considered to be the best starting point for structured guidance. However, it is hoped for that the RAAKS research teams, operating in the field, will use their own expertise and capacities to solve problems. In the form of workshops, organized at IIMI, they can get feedback and learn from the other teams. In this way other IIMI staff is also kept informed about their activities and given the opportunity to give feedback.

## **PART 3. PROGRAM**

## **PART 3. PROGRAM**

### **A. TRAINING WORKSHOP RAAKS**

**DAY 1: Sunday, December 10**

**08.30 - 09.00 Registration of Participants**

**09.00-09.45 Opening Ceremony**

**09.45 - 10.15 Introduction Pierre Strosser (IIMI-Pakistan) (1.1)**

**Break**

**10.45 - 11.15 Objectives of the Workshop and Presentation of the Programme (1.2)**

**11.15- 11.45 Getting Acquainted (I .3)**

**11.45 - 12.30 Learning Objectives (I .4)**

**Lunch**

**13.30- 13.45 Energizer**

**13.45 - 14.30 Participatory Working (I .5)**

**Break**

**15.00 - 15.45 RAAKS: Principles and Framework (I .6)**

**15.45 - 16.45 PRA and RAAKS (1.7)**

**16.45 - 17.00 Evaluation of the Day (I .8)**

**DAY 2: Monday, December 11**

**09.00 - 09.15 Review of day I (2.1)**

**09.15 - 10.15 The Benin Case: Introduction and Video (2.2)**

**Break**

10.45 - 11.00 Presentation Phase A: Windows **and** Tools

11.00 - 12.00 Exercises Phase A: the Benin Case (2.3)

12.00 - 12.30 Plenary discussion

Lunch

13.30 - 13.45 Energizer

13.45 - 14.15 Presentation Phase B: Windows **and** Tools (2.4)

14.45 - 16.00 Exercise Phase B: the Benin Case (includes break) (2.5)

16.00 - 16.45 Plenary discussion

16.45 - 17.00 Evaluation of the Day (2.6)

**DAY 3: Tuesday, December 12**

09.00 - 09.30 Inventory of questions about RAAKS (3.1)

09.30 - 10.30 Presentation Windows and Tools Phase B: the Benin Case (3.2)

10.30 - 10.45 Answering question about the **use** of Windows and Tools of Phase B (3.3)

Break

11.00 - 12.00 Window Phase B: The case **of** irrigation in Farooqahad (3.4)

12.00 - 12.30 Presentation windows and tools of Phase C: The Benin Case (3.5)

Lunch

13.30 - 13.45 Review of the RAAKS Workshop (3.6)

13.45 - 14.30 Outline for fieldwork (3.7)

14.30 - 16.15 Preparations for field work (Including Break) (3.8)

16.15 - 16.45 Plenary presentations and discussion

16.45 - 17.00 Evaluation of the Day (3.9)

## **B. FIELDWORK**

### **DAY 4: Wednesday, December 13**

**08.15 - 10.00** Leaving for the field

**10.00 - 11.30** Interviews

**11.30 - 13.00** Interviews

Lunch

**14.00 - 14.15** Interview Groups discussion

**14.15 - 15.30** Discussions in Field Groups (Including Break)

**15.30 - 16.00** Plenary and Wrap up

### **DAY 5: Thursday, December 14**

**08.15 - 10.00** Leaving for the field

**10.00 - 11.30** Interviews

**11.30 - 13.00** Interviews

Lunch

**14.00 - 14.15** Interview Groups discussion

**14.15 - 15.30** Discussions in Field Groups (Including Break)

**15.30 - 16.00** Plenary and Wrap up

### **DAY 6: Saturday, December 16**

**08.15 - 10.00** Leaving for the field

**10.00 - 11.00** Introduction to PRA techniques

**11.00 - 13.00** Interview and/or PRA technique

Lunch

- 14.00 - 14.15** Interview Groups discussion
- 14.15 - 15.30** Discussions in Field Groups (Including Break)
- 15.30 - 16.00** Plenary and Wrap **up**

**DAY 7: Sunday, December 17**

- 08.30 - 10.00** Leaving for the field
- 10.00 - 13.00** Preparations of the presentations

Lunch

- 14.00 - 16.00** Actor Workshop

**C. REFLECTION**

**DAY 8: Monday, December 18**

- 09.00 - 10.30** Evaluation fieldwork and participatory working (8.1)

Break

- 11.00 - 12.30** Evaluation working with RAAKS-methodology **(8.2)**

Lunch

- 13.30 - 14.45** Evaluation of the **use** of RAAKS by Participants (8.3)
- 14.45 - 15.00** Wrap Up

## D. RESEARCH PROPOSAL FORMULATION

DAY 9: **Tuesday, December 19**

**09.00 - 09.10** Introduction

**09.10 - 09.30** Outline **2** days of research proposal writing (1)

**09.30 - 10.30** Three components: Presentations RAAKS researchers (**2**)

Break

**11.00 - 11.30** Formation Groups for Research Proposal Formulation (per area) (**3.1**)

**11.30- 13.00** Phase **A**: Identify actor networks and proposition for inter-organisational RAAKS research group (**3.2**)

Lunch

**14.00 - 14.30** Plenary presentation and possibilities for switching groups

**14.30 - 16.30** Phase B: **SWOT** - analysis per research area (**3.3**)

**16.30 - 17.00** Plenary presentations

DAY 10: **Wednesday, December 20**

**09.00 - 10.30** Phase C: Format for research proposal

**11.00 - 13.00** Phase C: Action Plan (**3.4**)

Lunch

**14.00 - 15.00** Plenary Presentations of the Action Plans

**15.00 - 15.30** Action Plan to finish the Research Proposals

**15.30 - 16.00** Evaluation of the Training (**6**)

**16.00- 17.00** Closing Ceremony and Social Event

**ACTIVITY 1.1: INTRODUCTION PIERRE STROSSER (IIMI-PAKISTAN)**

Sheets of this presentation can be found in Annex 8.

## ACTIVITY 1.2: OBJECTIVES OF THE WORKSHOP AND PRESENTATION OF THE PROGRAM

### 1.2.1 Objectives

Objectives of the training workshop are formulated in the Terms of Reference as follows:

- to familiarize IIMI staff with the RAAKS methodology;
- to familiarize RAAKS researchers with IIMI staff;
- to do a first network analysis in one of IIMI's former research areas;
- to identify other/new actors who can play an active role in the RAAKS research. to form three RAAKS teams;
- to formulate action plans to finalize the proposals for the RAAKS research.

Part A	Introduction to RAAKS principles and framework (Days 1,2,3)
Part B	Field work and actor workshop (Days 4,5,6,7)
Part C	Reflection on training (Day 8)
Part D	Formulation of action plans for research proposals in IIMI's research components Finalizing field reports (Day 9,10)

## ACTIVITY 1.3: GETTING ACQUAINTED

*For this activity exercise I was used.*

### 1.3.1 Results und Discussion

In the beginning participants felt uncomfortable and shy about stepping into the circle and saying their name. But everyone participated. In the second round, where they had to put an adjective before their name, the atmosphere changed. Most people really revealed something personal. Participants were surprised to find out that they had been working with someone for years without knowing this specific thing about that person. People started to enjoy the exercise, they laughed and the atmosphere became relaxed.

In the third round, participants were asked to talk shortly in pairs about their work. After 10 minutes each participant introduced the person he or she had been talking with. This round took more time than was planned. But the facilitator did not intervene as she felt it was important that participants would get a clear picture about their colleagues.

It became clear that participants find it difficult to really listen. This has been confirmed during the rest of the course as well. They also have difficulties in reproducing what has been said without interpreting too much and they find it difficult to distinguish which information is most important and to summarize it. Only few participants were able to summarize their conversation and give a quite accurate picture of the other person. Most participants tried to reproduce exactly what had been discussed in pairs and to fill in (forgotten) gaps by interpreting on the spot. Several times the person that was presented felt the urge to correct the information, but was stopped by the facilitator.

## ACTIVITY 1.4: LEARNING OBJECTIVES

*For this activity exercises 2 and 3 were used.*

### 1.4.1 Results

#### 1.4.1.1 Expectations:

The expectations of the participants could be categorized under the following headings:

- RAAKS Methodology
  - not only the methodology but specifically how it can be used for objectives of the participants (dissemination of research results, new ideology for training course, organization of farmers, application in irrigation system operation and management)
- Collaboration in Irrigation Management
  - necessity, opportunities and constraints for collaboration and communication between relevant actors, agencies.
- Exchange of Experiences
- Practicality of RAAKS
  - insight in the way RAAKS can be used in the Pakistan context. can RAAKS organize farmers, will there be three research plans. 3 research teams, can it be disseminated to farmers and other interested institutions
- Personal expectations
  - to learn, to become part of the social system in irrigated agriculture, observe farmers' attitudes, can water user associations work effectively? Can I use RAAKS in future research and jobs?

#### 1.4.1.2 Learning Objectives

For each of the categories identified from the expectations. participants indicated their learning objectives:

- Methodology
  - ▶ to learn whether RAAKS is a research tool which could offer support in asking the right questions, collecting information, familiarize people with the production system, identify actors. selecting farmers, supporting present action research
  - ▶ to learn how to use the methodology and specifically the juggling with windows.
  - ▶ to learn whether RAAKS would be fit for the Pakistani context, its application in irrigation and drainage.
  - ▶ to learn about the similarities and/or differences through comparison with other methodologies such as PRA and other 'traditional' appraisal methods
- Exchange of experience
  - ▶ to learn about the experiences with RAAKS and its implementation in development studies. action research
  - ▶ to learn about the use of RAAKS in different environments. in irrigation management. institution building, irrigation agronomy

- ▶ to learn about perceptions of problems by different actors, opinions of other organizations on possibilities and constraints of Participatory Irrigation Management (PIM)
- ▶ to learn about the methods of the other organizations present
- ▶ to learn about the experiences of different projects
- Collaboration in Irrigation management
  - ▶ to learn to identify key actors to work with
  - ▶ to learn how to bring actors (farmers, line agencies and IIMI) together through **RAAKS**, form collaborative coalitions that are workable and feasible, what are the benefits for different actors and what could be their motives to collaborate; what languages do the different parties speak, how can they communicate?
- Personal
  - ▶ to learn
  - ▶ to learn to use **RAAKS** in own research or PIM
  - ▶ to learn how to train other people/staff
  - ▶ to learn about farmers behavior and expectations and about Water User Organizations

#### 1.4.2 Observations and Discussion:

The formulation of expectations and specifically the learning objectives was difficult for the participants. The distinction between expectations and learning objectives was not clear and the facilitators' explanations in this did not clarify it.

Participation of the trainees in categorization of expectations needed active facilitation. During the categorization the group stood in front of the wall where all colored cards had been put. Only a few persons were actively involved in categorizing the cards. Since these were mainly expatriates, the facilitator requested the people standing in the back row whether they agreed with the categorization and thus trying to get more participation from Pakistani participants.

Main objectives for participating in the training differed between IIMI staff and representatives of other organizations. The results from both exercises showed much more personal interest in learning (about) the **RAAKS** methodology than looking for an instrument to strengthen or improve 'collaboration in irrigation management'.

#### ACTIVITY 1.5: PARTICIPATORY WORKING

*For this activity exercise 4 was used.*

##### 1.5.1 Results

From the cards on 'What does participatory working mean to you?' the group identified a number of issues that together formed an image of participatory working:

"Participatory working is working together and collectively deciding on roles and rules for working. Everyone has her/his own responsibility. Everyone can take the initiative though it may be necessary that someone will coordinate. For participatory working there must be something common, like an issue, a problem, a purpose, or an interest. Involvement is achieved through communication and sharing resources".

This image was used for looking into opportunities and constraints that the participants feel they will encounter if they want to work in a participatory manner. Opportunities mentioned were the favorable environment and more/better integration and collaboration. Constraints mentioned were lack of integration of participatory working in work, conflict of interest (or objectives), lack of coordination, no conducive environment (fixed roles), lack (or imbalance) of responsibilities. In the discussion on the apparent discrepancy of conducive or non-conducive environment, it was mentioned that the environment for participatory working was different for the different institutions: in some it was supportive, in others it was not.

The inventory of the participatory methods and techniques and the experience yielded the following:

- . Participatory Irrigation Management (PIM)
- . Rapid Appraisal of Agricultural Knowledge Systems (RAAKS)
- . Participatory Rural Appraisal (PRA)
- . Meetings (supervision) / seminars
- . GRAAP
- . Rapid Rural Appraisal (RRA)
- . Cooperative Movement launched by government
- . formation of Water User Associations / Salt Land Users Associations / improve user association
- . extension service
- . Scheme Development Process
- . Scheme Management Plan
- . Participatory Technology Development
- . demonstration / exhibition

Few participants had practical experience with these techniques and methods

### 1.5.2 Observations and Discussion

During the categorization of cards the facilitator still had to stimulate active participation by motivating participants to step forward and directing questions to individual participants. People were stimulated to read all cards because they had to put their cards on the wall close to other cards that matched theirs.

The facilitators could have stimulated learning about participatory working much more by using the definition of 'participatory working' developed by the group. They could have written the definition on a sheet and put it in a prominent place to be seen and read by the participants. Thus they could have stimulated participants to consult the cards and reflect on the concept of participatory working. Now the cards were just left for 'decoration' of the room.

## ACTIVITY 1.6: RAAKS: PRINCIPLES AND FRAMEWORK

### 1.6.1 Introduction

RAAKS stands for Rapid Appraisal of Agricultural Knowledge Systems (RAAKS). RAAKS is proposed here to support IIMI in analyzing social performance in irrigation and designing new strategies. RAAKS is developed at the Department of Communication and Innovation Studies of Wageningen Agricultural University under auspices of Dr.Ir. Paul Engel (Engel, 1994). Born as a practical method of participatory diagnosis for small farmers in Colombia it has been refined in its actual appearance (Engel, Salomon & Fernandez, 1994; see also Box 1).

RAAKS offers a flexible framework for defining complex problem situations and design desired and thus sustainable actions. There is no one perfect way of doing RAAKS. Working with RAAKS requires flexibility and creativity. There is no recipe for performing a RAAKS study, nor is there an ideal RAAKS exercise. Each person or team will have to adapt it to the problem situation at hand. Three elements have to be rearranged while designing a RAAKS application.

$$I + A + P = M$$

I = Intentions and principles

A = Analytical design

P = Procedural design

M = RAAKS methodology

### 1.6.2 Principles

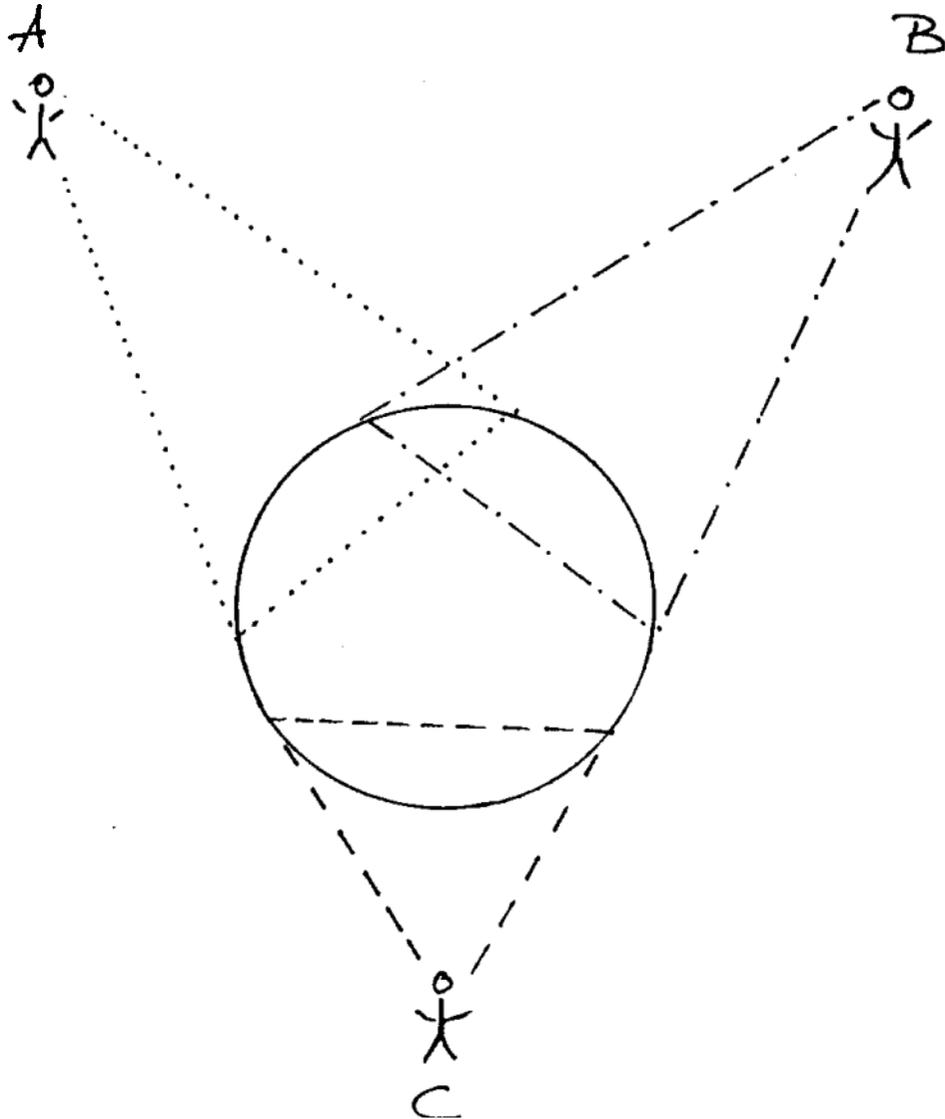
#### 1.6.2.1 Principles of RAAKS

The RAAKS methodology is based on the following principles:

- o **Systems thinking:**  
RAAKS is based on systems thinking. This implies that we don't look at single but relationships but at the correlation between relationships and the result of that correlation.
- o **(joint) learning and reflection**  
Rather than optimizing within constraints set, RAAKS is trying to stimulate (joint) learning and reflection.
- o **Multiple perspectives**  
Different people will make different observations and evaluations of a situation which leads to different actions. Many different perspectives provide an explanatory framework for a situation. However, none of these frameworks/perspectives is the overall explanatory one (see figure 6.1).
- o **Participatory**  
Many innovation efforts have been frustrated because those who could use or benefit from the innovation did not. They were not involved in the learning process, understanding the situation, and the decision making on interventions/actions that need to be undertaken.
- o **Action oriented**

Many methods get stuck on analysis of a situation instead of moving towards action. RAAKS keeps focussing on actions as final outcome.

FIGURE 6.1: MULTIPLE PERSPECTIVES



## The Knowledge System Perspective

In order to understand where these principles come from and what they stand for, we need to look into the development of the Knowledge System Perspective.

### ***Linear Thinking***

For many years the linear model has - and still is - dominating thinking about innovation. This has **not** been limited to the field of irrigation or agriculture in general but also prevails in other areas such as in management of organizations for example. The linear model, also called the Transfer of Technology model (TOT), is top-down (figure 6.2). Research is perceived as the only source of knowledge. Extension basically has to do nothing but to transfer this knowledge to farmers. Farmers only **need** to use the knowledge to obtain good results.

This way of (linear) thinking has shown not to work for a number of reasons:

- It neglects the creative role of the so-called 'receivers'
- It has a preconceived notion that new ideas are good and must be adopted
- The model generates generalizations which are not adoptable in complex problem situations with high uncertainty and multiple causes
- There is **no** difference made between i) the research and ii) the **use** that is made of research by development organizations and extension services.
- It does not take power into consideration e.g. farmers have no countervailing power to demand services

There, of course, have been adaptations of the TOT model (see figure 6.3):

- Diversification, defining different target groups specially aiming at "innovative" farmers that will adopt and then "diffusion will take place while you sleep". This did not work either. An example is the Training & Visit system of extension which has been implemented by the World Bank in many Third World countries.
- A more two-way/feedback model: asking farmers what they want, what they will do and adjust research agenda. Examples are on-farm research, farming systems research and development. However, the initiative and decision making often still lies with the research(ers)

### ***Knowledge Systems Thinking***

The Knowledge System Perspective is based on different assumptions than the linear model. The most important assumption is:

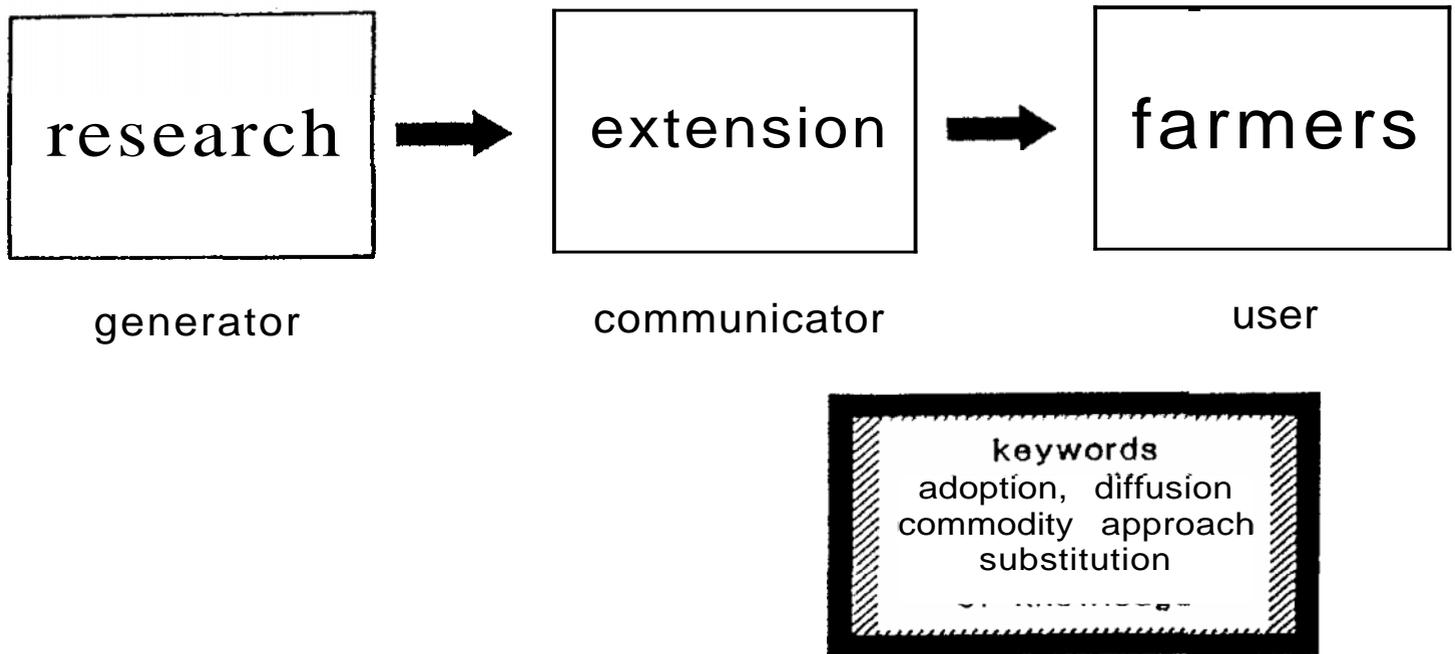
- knowledge is not developed in isolation but through interaction. The interaction in fact **is** the carrier of knowledge.

The implications of this assumption are:

- there is not one source of knowledge
- there is a need to think in terms of a system instead of single out relationships,
- knowledge includes a tremendous amount of mutual influencing and decision making;

Figure 6.4 presents the knowledge system model

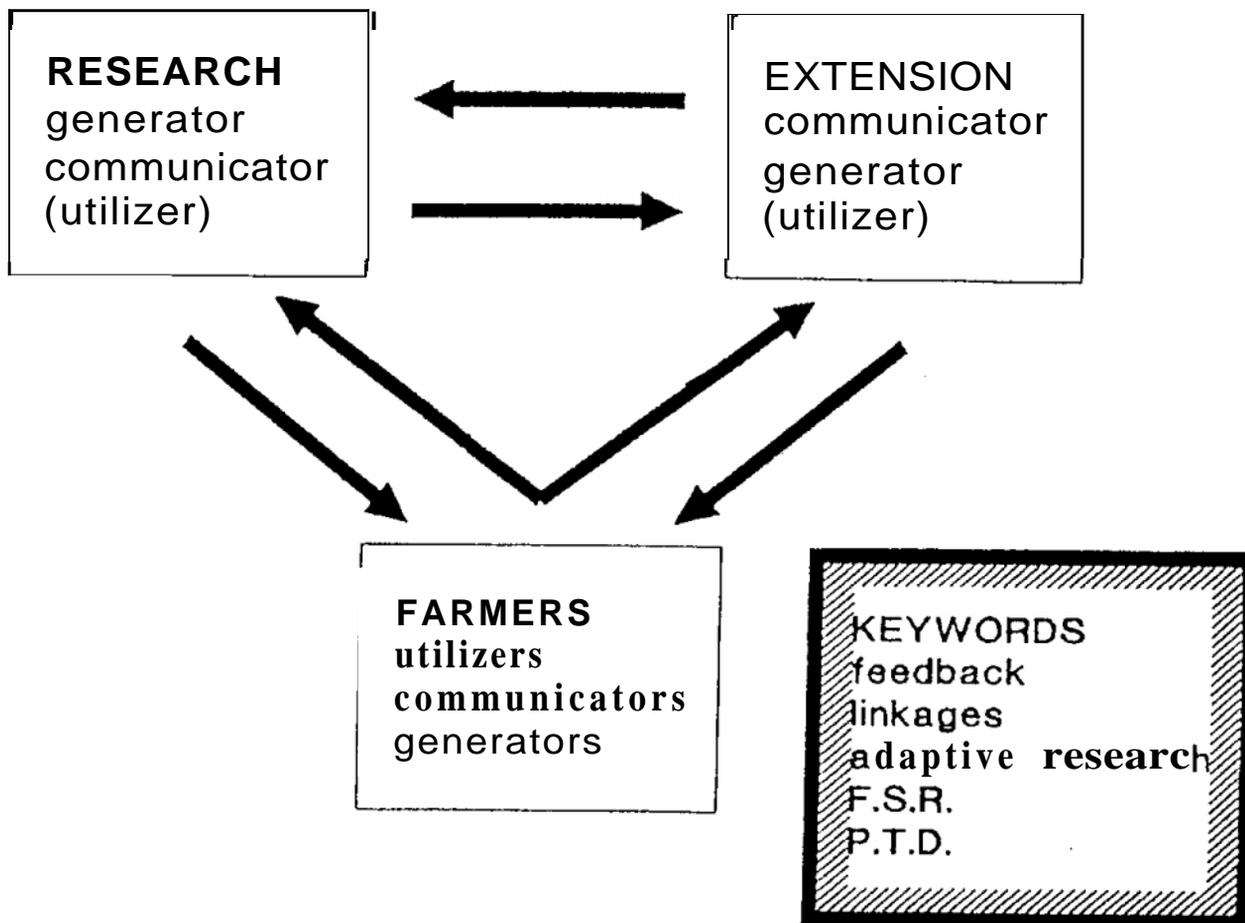
FIGURE 6.2: THE LINEAR MODEL OR TRANSFER OF TECHNOLOGY (TOT) MODEL



The Transfer of Technology model

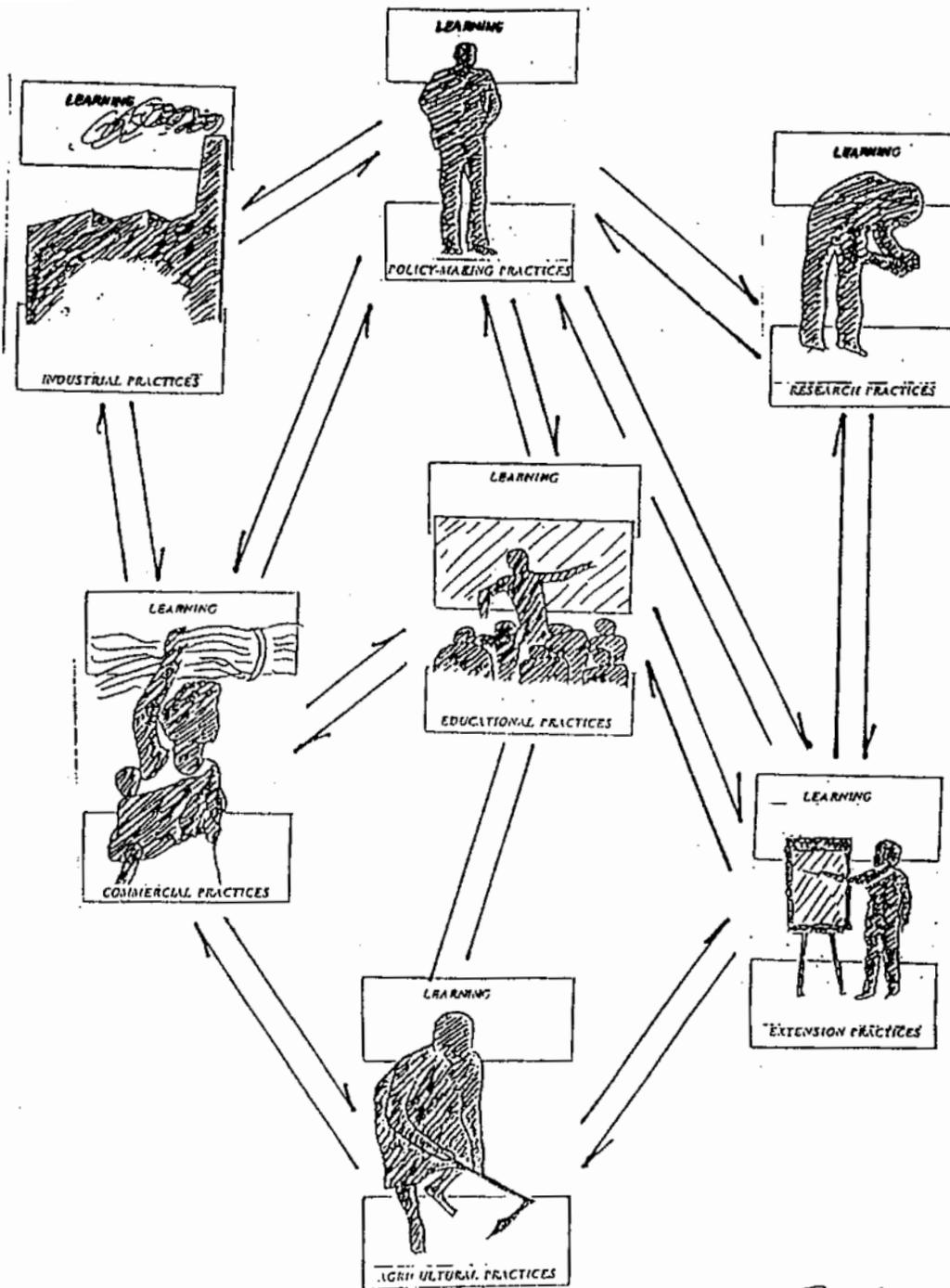
adapted from P.G.H. Engel

**FIGURE 6.3: ADAPTATIONS OF THE LINEAR MODEL**



Extension as Intermedlate between farmers and research

FIGURE 6.4: THE KNOWLEDGE SYSTEM MODEL



The Knowledge and Information system model © Engh, 1994

### **Hard Systems vs Soft Systems**

Hard systems can be described by physical factors. The objective of a hard system is mostly fixed so you can concentrate on the "how" question in achieving the objectives. An example is an irrigation system.

Soft systems are mostly human activity systems. These systems do not have built-in objectives, people have objectives. When people start to operate as a system, this must be on the basis of agreement, tuning of objectives and acceptance of common **goals**. An example of a **soft** system is for example the management of irrigation systems.

#### 1.6.2.3      Soft System Methodology

To operationalize the Knowledge system perspective, the Soft Systems Methodology by Checkland (1991) was adopted. This methodology has the following elements:

- A continuous learning process
- Different individuals/groups (autonomous) make different evaluations of situations which lead to different actions. Multiple perspectives are involved in analyzing situations and formulating options.
- Problems should be dealt with as a whole and not split up in sub-problems
- The use of designed systems, working models based on individual's/group perceptions.

Figure 6.5 presents the Soft System Learning Cycle that is used as a basis for the analytical design of the RAAKS methodology.

FIGURE 6.5: RAAKS' SOFT SYSTEM METHODOLOGY (cf Checkland and Scholes, 1991)

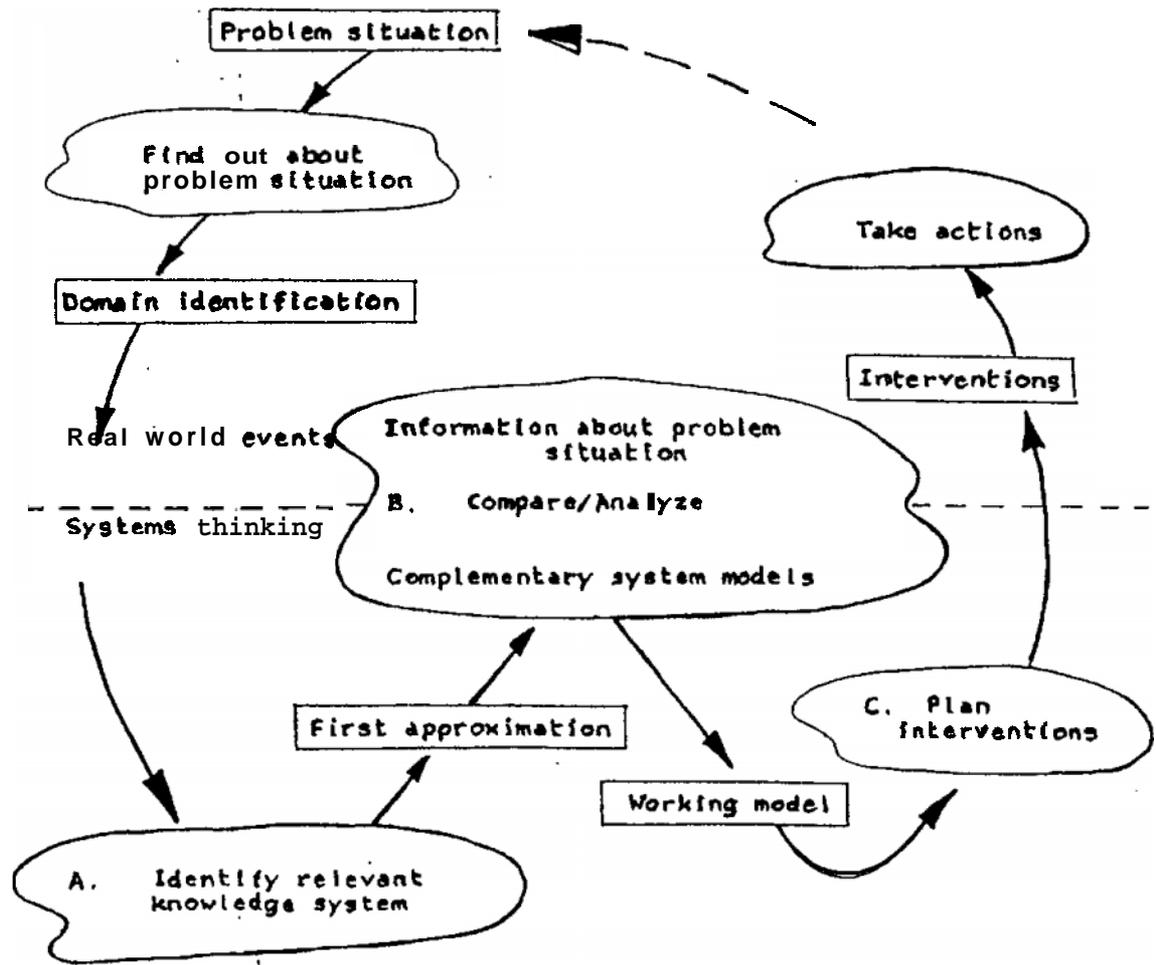


Figure : RAAKS' Soft Systems Methodology ( cf. Checkland. 198., and Checkland & Scholes, 1991)

### 1.6.3 Intentions of a RAAKS exercise

RAAKS can be applied for different purposes (e.g. evaluation, market research, participatory planning) in different situations (e.g. sector, problem, country, theme) each requiring different ways of designing the RAAKS process.

### 1.6.4 Analytical Design

The analytical design of RAAKS relates to phases and windows (see figure 6.6). Three phases can be distinguished: A) Problem definition and system identification; B) Analysis of constraints and opportunities; C) Action planning. Within each phase a number of analytical perspectives or 'windows' are offered. These windows are at the core of RAAKS. They provide an approach to analyzing the problem situation at hand, suggesting focal issues and/or possible questions, which may be used, adapted and extended according to the situation under scrutiny. All windows of phase A and C have to be addressed. However, in phase B a selection of windows has to be made according to the problem situation at hand, the team's preferences, and time and manpower available. Some of the windows partly overlap. Phases and windows don't suggest a strict chronological order. In practice, one may find it necessary to combine phases, interchange windows, to review previous analysis and design new windows.

### 1.6.5 Procedural Design

The procedural design refers to the process of organizing the RAAKS exercise. Ideally RAAKS is carried out by an interdisciplinary team, consisting of persons with experience in applying RAAKS and persons with experience in, and knowledge of the problem situation under scrutiny. Collection of data takes place through studying documents (literature, articles, annual reports, databases etc.), semi-structured interviews and sometimes questionnaires. At the end of each phase discussion papers are prepared which are discussed in actor workshops. Relevant parties are actively involved in analysis of intermediate outcomes and design of actions. Thus, RAAKS seeks to facilitate a joint learning process among actors involved in a problem situation.

Depending on the intentions of the RAAKS exercise, participation is organized accordingly. In practice case studies have been done ranging from a desk study to a full participatory learning cycle (see box 6.1).

FIGURE 6.6: RAAKS framework

Facilitating innovation: RAAKS

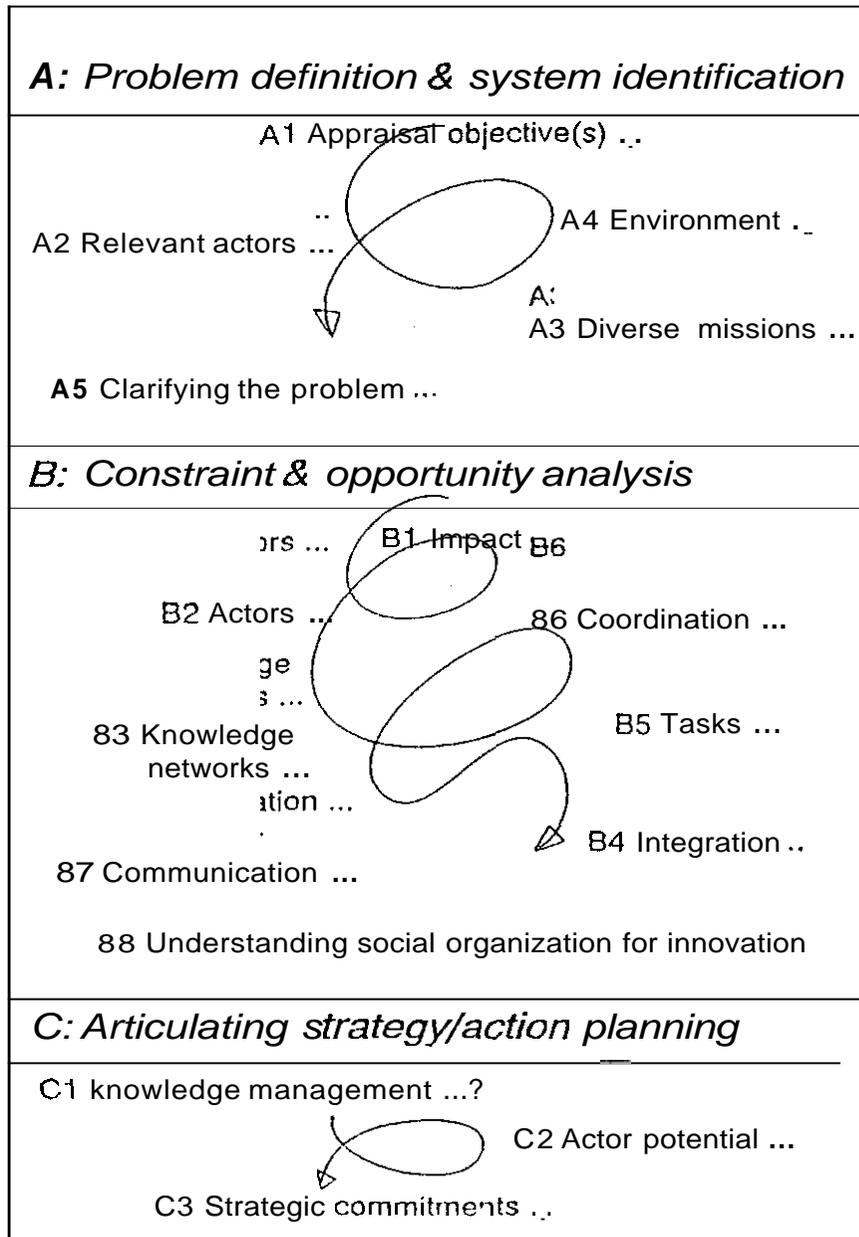


Figure : RAAKS: juggling with perspectives

**Box 6.1: Different RAAKS designs**

Intention	Analysis	Procedure
<p>Phasing out of an irrigation project in Ile 4 Morphile, Senegal (Annemarie Groot, WAU)</p>	<p><b>Phases:</b>                      . A &amp; B                      . B &amp; C                      . Monitoring &amp; evaluation C</p> <p><b>Windows:</b>                      Tasks, Communication, Knowledge network</p>	<p><b>Team:</b>                      30 farmers and project staff</p> <p><b>Methods:</b>                      Interviews                      Actor workshops</p>
<p>Social feasibility of bio-ethanol as transport fuel in the Nonh of the Netherlands (Willem van Weperon et al, WAU)</p>	<p><b>Phases:</b>                      . A &amp; B                      . B &amp; C</p> <p><b>Windows:</b>                      Communication, Knowledge network, Integration, Coordination</p>	<p><b>Team:</b>                      3 researchers (2 WAU, 1 local)                      Steering committee</p> <p><b>Methods:</b>                      Interviews                      Questionnaire                      Actor workshops</p>
<p>Restructuring extension in Eastern Europe (Dutch Extension Service DLV)</p>	<p><b>Phases:</b>                      . A &amp; B &amp; C</p> <p><b>Windows:</b>                      Task, Integration, Knowledge network</p>	<p><b>Team:</b>                      DLV-consultants</p> <p><b>Methods:</b>                      Interviews                      Key-actor Meeting</p>
<p>Knowledge Management of Organization working in India (D &amp; D Consultants SNV)</p>	<p><b>Phases:</b>                      . A &amp; B                      . B &amp; C                      . monitoring &amp; evaluation C</p> <p><b>Windows:</b>                      Communication, Integration, Knowledge network, Impact</p>	<p><b>Team:</b>                      3 head quarters staff/ 2 RAAKS consultants</p> <p><b>Methods:</b>                      Interviews                      Questionnaire                      Workshop</p>

## ACTIVITY 1.7: PRA and RAAKS

For this activity exercise 5 was used.

### 1.7.1 Results

Neither group finished the exercise completely. Group A completed the identification and prioritization of problems and actors but was not able to draw conclusions. Group B completed the identification and prioritization of the problems and was looking at the main actors that (could/should) occupy themselves with these problems.

#### 1.7.1.1 Group A

##### SHEET 1: PROBLEMS IDENTIFIED:

- Low / stagnant productivity (7)
- canal water shortage & shortage at tail (10)
- labor problems at transplant (1)
- seepage leading to w/l (1)
- stealing (2)
- social problems (4)
- lack of communication between farmers and research (2)

Note: Numbers behind problem statement are scores by group members

##### SHEET 2

Actors Problems	PID	farmer	landlords	Extension	Water management
Inequity / Shortage	X 12	(X) 7	X 5		X 6
Productivity	(X) 3	X 12		X 10	X 5
Social conflict	X 6	X 11	X 6		X 10

1.7.1.2      Group B

SHEET I

Problems	Actors	#
Shortage of Water	Irrigation Department (ID)	
Social Relations	Influential Farmers	
Irrigation Department	Politicians	
Inequity	Politicians	

## ACTIVITY 1.8: WRAP UP (Evaluation of the day)

*For this activity exercise 6 was used.*

### 1.8.1 Results

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#### EVALUATION DAY 1

##### WEAK POINTS:

- **too** short time for exercises
- bad time management
- **RAAKS** presentation **too** long and too much jargon
- introduction of **RAAKS** and **PRA** too late in the program
- getting acquainted too long
- **no note taking**
- **ranking exercise difficult**

##### STRONG POINTS:

- **good program**
- **good arrangements**
- **enjoy method of teaching**
- good knowledge of **RAAKS**
- good speakers on **RAAKS**
- real participation
- good atmosphere

##### SUGGESTIONS:

- stimulate the discussion by statements
  - more time for reflection
  - more breaks
  - program should be from 9:00 - 16:00
  - better time management **for** exercises
  - more practical **work**. little theory
  - distribute literature beforehand
  - explain lecture / exercise before starting
  - decide together on tasks in **small** groups
  - energizers every day
-

### 1.8.2 Observations and discussion

In spite of the positive comments on the training style, the participants are clearly not **used** to the style of working of the trainers. The participants clearly don't like the fact that they:

- are not lectured but given only necessary instructions
- have to take responsibility within the small groups
- have to work within a time limit
- have to come to conclusions in a short time period

Participants are also not **used** to take a fair amount of time to get acquainted. It is unclear whether they consider it unnecessary or whether they feel that getting acquainted is something that can be done informally. This comment may be related to the comment on **RAAKS** and PRA being too late in the program,

,

**DAY 2: Monday, December 11**

## ACTIVITY 2.1: REVIEW OF DAY 1

### 2.1.1 Results

The results of the evaluation of day 1 were used to make a start for day 2. It was **stressed** again to the participants that working with RAAKS can mean working under time pressure, working together in a group with people that have different opinions and still decisions and conclusions need to **be** made. **The** way of working in **groups** and the limited amount of time for exercises will be sustained.

## ACTIVITY 2.2: THE BENIN CASE INTRODUCTION AND VIDEO

*For this activity the video "The system and the soil" by Peter Linde and the checklist 2 were used.*

### 2.2.1 Presentation

The video is presenting the situation of **the Adja Plateau** in Benin, West Africa. The video shows male **and** female farmers **and** their daily **problems**. **Three** organizations are working in **the** area with **farmers**. All three organizations **use** very different extension **approaches**. One is less **successful** than the other. Representatives of those organizations talk about their work and their **ideals**, successes and failures. **Some** also give comments on the other organizations. A representative of the University of Benin also gives his comment **on** the activities on the **Adja Plateau**.

Who are these three organizations:

- **CARDER** Regional Centre for **Rural** Development  
A government **body** providing extension and inputs. They **also** market products for farmers. Extension officers of CARDER provide technical knowledge from research stations to farmers.
- **RAMR** Applied Research in the Real Environment  
This **institute** adapts research done at research stations to the context of local farmers. They **use** the Farming Systems Research and Extension approach. They also develop new technologies under real life conditions. An example **is** shown in the video: an experiment with '**mucuna**' an indigenous plant.
- **PEMR** **Community** Development in the Real Environment  
A non-governmental organization (**NGO**) who **uses** the functional approach. Animators identify priority **problems of local** communities. **Community members** are **organized** into 'functional groups' who try to **find** solutions to a specific **problem**. Animators organize **excursions** to see how **other** people managed. they help to find **funding** for activities and they **involve** government **and** other agencies. **PEMR** also provides limited funding to groups who **don't** have access to credit (**e.g.** women) only to start **up** activities.

Persons interviewed:

- Representative of CARDER in Mono

- Rural Development officer at District level (~~called~~ RDR)
- Extension agent (called AVA)
- Male farmer
- First wifefemale farmer
- Second wifefemale farmer
- Landowner
- Representative of the Faculty of Agronomy from the University of Benin

Key-questions:

- 1) Is CARDER capable of reaching farmers when it comes to agricultural innovation?
- 2) How effective are the three organizations in bringing about positive changes for farmers?

Participants were divided into three groups of consultants. These consultant groups were invited to do a RAAKS study of the problems on the Adja plateau in Benin. The information for the study would be presented on video. Participants were instructed to watch the video carefully as the video would be the main source of information for the RAAKS study. In the afternoon participants would have the opportunity to interview two resource persons from the Adja plateau (impersonated **by** the two facilitators).

After the introduction to the video a list of key-questions was distributed. This list enabled participants to structure data collection from the video. Before the video was started the consultant groups had some time to divide the questions among themselves. After the video was shown the consultant groups received the terms of reference for the RAAKS study.

"CARDER would like the group to formulate recommendations to change farmers' attitudes in order for farmers to adopt CARDER advised practices on food crops."

The consultant groups were formed beforehand **by** the facilitators. Each group consisted of a RAAKS researcher from WAU, IIMI staff who followed the introductory RAAKS workshop in April and persons from other agencies.

Group division:

- A Mirza, Nathalie, Mushtaq, Saeed, Beg. Gulrez Akhar, Naqvi. Ineke
- B Waqar, Derk, Rafique, Cris, Rana, Jan. Munawar, Gulraiz Khan
- C Ali, Jos, Mehmood, Neeltje, Niamat, Abbasi, Arshad, Pierre

## ACTIVITY 2.3: EXERCISE PHASE A: THE BENIN CASE

For this activity exercise 7 are used.

### 2.3.1. Results

#### 2.3.1.1 Results of group A

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##### SHEET 1: ACTORS, EXTERNAL FACTORS AND PROBLEMS.

###### Actors:

farmers (male and female) (1),  
PEMR (2),  
RAMR / CARDER (3)

###### External Factors:

Govt. policy focusses on export crops (cotton) (1).  
falling prices oil - shift towards wine production necessary (2),  
Pré-démocratie heritage (3)

###### Problems:

poor reception of farmers (7),  
water shortage (1),  
lack of coordination between agencies (4),  
lack of interest in farmers' needs (6),  
agric. advice inconsistent with farmers' needs (1).  
degradation of the soil (2),  
availability of the land, population pressure (3),  
poor financial resources, non-availability of credit (2)

(between brackets the ranking and/or scoring by the group)

---

The group came up with the **following** redefinition of the problem:

"How **can** farmers' attitude be changed towards CARDER advice?"

### 2.3.1.2 Results of group B

#### No drawing of the problem situation

#### Sheet 1: Actors, Objectives and Problems

ACTORS	OBJECTIVES	PROBLEMS
Oil Planter	<ul style="list-style-type: none"> <li>● to have maximum land under oil palm trees</li> <li>● Cash by selling oil &amp; wine</li> </ul>	<ul style="list-style-type: none"> <li>● marketing</li> <li>● no credit</li> </ul>
Cotton planter	to have more cash income	
Food crop planter (women)	self sufficiency in staple food and through marketing of beans (clothing, medicine)	<ul style="list-style-type: none"> <li>● had variety</li> <li>● no credit</li> <li>● gender</li> <li>● preservation maize</li> </ul>
Landlords	<ul style="list-style-type: none"> <li>● try to influence the cropping pattern</li> <li>● power</li> </ul>	
CARDER, Extension agents	● to facilitate the farmer to increase yield of crops (cotton & maize)	farmers don't adopt technologies
RAMR	to develop new technology fit for the farmer's fields	● create awareness (theory is not practice)
PEMR	community /institutional development	process takes time (awareness)
University	education	more theory less practice
Credit agencies	<ul style="list-style-type: none"> <li>● to provide credit for inputs, especially for cotton</li> <li>● making money</li> </ul>	repayment

#### SHEET 2: EXTERNAL FACTORS

##### Constraining EFs:

Population pressure,  
Lack of education,  
Market

##### Driving EFs:

Democratization,  
Emancipation (men and/vs women)

##### Other EFs:

Rituals  
Tradition

Group **B** came to the following redefinition of the problem:

"How can communication between organisations and farmers and among farmers be improved?"

### 2.3.1.3 Results of group **C**

Problems:	Ext. Ag.	Carder	farmers	PEMR	RAMR	Govt.	DEO
CARDER does not consider farmers' wishes while making decisions	-	13	-	5		-	-
Communication Gap	-	6	2	7	1		-
Government has no strong roots in people	-	4		1		13	-
no benefit from scientific development for farmers	4			4	2	2	6

(coloring of actors that should take the lead in solving problems)

Group **C** came up with the following redefinition of the problem:

"How can the attitudes of the farmers and the organizations be changed?"

### 2.3.2 Observations and Discussion

Not all groups presented a drawing of the problem situation. Most groups had not ended the problem prioritization and analysis.

The groups had difficulties in elaborating upon the information collected from the exercises. They also found it difficult to analyze the matrix in such a way that they could draw conclusions from it. They seemed to be afraid to draw conclusions.

It became clear that most participants still think according to the linear model. They perceive the problem as reluctance of farmers and don't question CARDER's approach. Moreover, they did not question the validity of the terms of reference given to them.

It was nice to see that the groups came up with their own schemes.

The differences in analysis led to different problem statements by the groups.

The groups felt the need to fill in the gaps they think exist within the system e.g. group **B** brought up credit agencies as an actor. This actor was not mentioned in the video nor in the information provided. The group then came up with information which was possibly based on their own

knowledge of the situation in Pakistan. This shows the point that people do not like the unknown or feel uncomfortable with a situation in which they do not have all necessary information and still have to make an analysis and take decisions: they start making theories about it and using these as, what they consider, a true image of the real situation.

With respect to the group processes:

Group C was in a separate room, all participants standing around the table and being actively involved in the process.

Group B was also in a separate room, two expatriates standing at the board and the other participants were seated.

Group A remained in the conference room and all participants remained seated.

## ACTIVITY 2.4: PRESENTATION PHASE B: WINDOWS AND TOOLS

### 2.4.1 Presentation

The various windows and their tools were not presented extensively since their description can be found in the manual. Instead, important 'points of attention' were presented and thus indirectly a number of the windows. The following points of attention were mentioned:

#### 2.4.1.1 Choice of windows and motivation

Be clear why you choose the windows! Don't spend much time on which window can do what, but decide quickly. Spend more time on why you choose those windows and what kind of insights you expect from them. Box 4.1 presents a number of examples. The choice of the windows is linked to the problem statement.

---

#### BOX 4.1: EXAMPLES FOR CHOOSING WINDOWS

##### Problem statement:

"Farmers want to change their practice towards ecological sound farming"

##### Reasons for choosing these Windows

**B3 - Knowledge Network Analysis:** to identify what (new) knowledge is needed and who can offer it.

**B4 Integration Analysis:** to find what new relationships are needed

**B6 Coordination analysis:** to find out who pulls the strings now and to find out who should be pulling them.

### 2.4.1.2      Operationalize windows and accompanying tools

Some windows may seem rather straightforward such as for example window B5 the Task Analysis and window **84** Integration Analysis. However, the groups should be aware that they are making an interpretation of the tasks they think are relevant in that situation. The interpretation should be made clear! Document it!

The windows and tools do not give a recipe for how to see & the problem. You have to redesign them so they can give you the information you are looking for. Discuss how **you** can operationalize the two windows and their tools, decide how you are going to redesign them and then start with the work.

## BOX 4.2: OPERATIONALIZATION OF WINDOWS

### B3 - Knowledge Networks Analysis

A matrix can be made with on the X-line the actors, and on the Y-line the different types of knowledge related to farming and ecology. The matrix showed that part of the actors have a lot of knowledge on regular farming and farm management, while others have a lot of knowledge on ecology and government regulations on environment. There is hardly any overlap between these two types of knowledge. Some actors have specialized knowledge on organic farming.

### B4 - Integration Analysis

Contacts between actors are put in a matrix. All actors are put on the X-line and the Y-line. Contacts mentioned by the actors are indicated on the X-line with a number from 1 to 5 (1 sometimes, 5 very frequent). The numbers on the X-line show who has many contacts with whom. The Y-line shows who is mentioned most often by the actors and who is mentioned very little. The integration analysis showed two separate networks of actors with different objectives: 1) The agricultural network with regular farmers, farmers organizations and service providers who come to the farm including the governmental extension services. 2) The environmental network of nature and environmental organizations, the Ministry of Environment and organic farmers. Contact with the agricultural network takes place only between the Ministry of Agriculture and the Ministry of Environment.

### B6 - Coordination Analysis

The agricultural network is pulled by the international market and the government policy on agriculture. The environmental network is pulled by the government policy on environment. Both policies have contradicting objectives on some points.

### 2.4.1.3 Combine the results from windows and tools

Coming to conclusions on the Social Organisation of Innovation will depend on combining the various windows used for analysis. Window B8 Understanding the Social Organisation of Innovation is obligatory as it is the synthesis of the various windows used. Make a drawing to clarify the problem situation.

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**BOX 4.3****EXAMPLE OF COMBINING RESULTS OF DIFFERENT WINDOWS**

The integration analysis showed two separate networks of actors with different objectives. The knowledge network analysis showed that within these networks knowledge exchanged was different in content. The coordination analysis showed that in both networks different actors were pulling strings, making the rules which direction to go. The conclusion based on combining the outcomes of the three windows was that there are two subsystems: one promoting cheap agricultural products on the European markets, the other one is promoting protection of nature and environment. Some overlap is provided by a small group of actors who promote ecological sound products for small local markets. This particular group may play a prominent role to bridge the gap between the two networks.

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**ACTIVITY 2.5: EXERCISE PHASE B: THE BENIN CASE**

*For this activity exercise 8 was used.*

**2.5.1 Results****2.5.1.1 Results of group A**

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**SHEET 1: WINDOWS CHOSEN**

Problem definition:

How can farmers' attitude be changed towards CARDER advice?

1) Actor analysis:

- who are the most important actors?
- what are their characteristics?
- who are successful actors? Why?
- what do they **do**?

2) Communication analysis

- do they speak the same language?
- is effective communication possible?
- is dialogue possible?

3) Integration analysis

- who has contact with whom? Why? What is the intensity of the contacts?
  - Clusters?
-

---

SHEET 2: ACTOR ANALYSIS (?)

**RAMR (left top corner of sheet)**

- description and activities: On-Farm Research with Progressive Farm (farmers know)
- resources: staff, research, adoption and introduction of new technology

**PEMR (right top corner of sheet)**

- description and activities: mobilize people, mobilize resources, communication facilities
- resources: home industries, credits, community mobilization skills, limited resources, support/facilitation, community/family/women's problems health

**FARMER (center of sheet)**

- description and activities: farming (men and women), communication (men), household and garden (women), traditional bound, gender roles, land tenure issues
- resources: knowledge farming system, knowledge environment, knowledge land

**EXTENSION/CARDER**

- description and activities: introduction of new technology, new farm practices, input supply advice, credit supply advice, Training & Visit (all or selective), familiar relations with farmers only agric.
  - resources: knowledge new technology, set up (organisation), skills (communication)
- 

SHEET 4: DESCRIPTION OF THE SYSTEM

- no linkages between RAMR - CARDER, RAMR - PEMR, PEMR - CARDER

only one-way, directional linkages to farmers from RAMR. PEMR and CARDER but no real reciprocal linkages

---

2.5.1.2 Results of group B

Group B formulated their problem definition as follows:

"How can communication between organisations and farmers and among farmers be improved?"

Sheet 2: Drawing showing existing set up

Drawing showed only links between farmers and the three organisations

Sheet 3: Drawing showing Proposed / Recommended Set up

Drawing showing linkages between all actors.

---

## SHEET 1: COMMUNICATION WINDOW

### Differences:

- **Social:** status, education
- cultural: urban, rural
- cognitive: formal **education**, actual farming practices

### Opportunities for communication

- **prime movers interest** (CARDER)
- **objectives** community oriented (PEMR)
- democratic way of working (RAMR)
- **collaboration** with farmers **by** providing improved **seed / tech** etc (RAMR)
- learning attitude of farmer

### Constraints for communication

- organisations not ready to listen to farmers
- farmers do **not** believe **unless** they see it happening
- limited **resources** (RAMR)
- cannot reach whole community (RAMR)
- farmers want money **not** work (Ext)

### Communication problems

- different perspectives, visions and ideology

(drawing showing three different lines: government-carder-deo-ext.agent-farmers (only **one-way**), farmers-PEMR, farmers-RAMR (two-way flows))

---

### 2.5.1.3      Results of group C

#### Problem definition:

How **can** the attitudes **of** the farmers and the organizations be changed?

Sheet I presents their results.

Sheet 1: Task analysis

	Government	PEMR	RAMR	FARMERS	CARDER	DEO(CARDER)
policy	X					
applied Research	X					
real envirn. research			X	X		
credit	?					X
extension			X		X	
training (guidance)			X			
comm. devt. (facilitation)		X				
trade	X			X		X
farming				X		
promoting ideas		X	X		X	
practice evaluation		X	X	X		
awareness creation		X				
problem identification		X	X	X		
adapting technology			X	X		
devt.technology			X			
inputs		(X)	X			

SHEET 2: CONCLUSIONS

1. At present CARDER top-down approach
2. Actors want to improve communication
3. No proper feedback
4. Overlapping Tasks
5. Different Approaches for similar tasks

## 2.5.2 Observation and Discussion

During the groupwork two of the groups depended heavily on the **RAAKS** researchers in their group. They expected the **RAAKS** researchers in their group to tell them what to do. The facilitators had anticipated this to happen and had instructed the **RAAKS** researchers not to take that responsibility and leave it to the group. In one of the groups a lot of pressure was put on the **RAAKS** researcher. One of the facilitators intervened which led to a confrontation with the other group members. Finally, they decided that the **RAAKS** researcher would start up the process and the group took over later on. Still, the group did not function well.

All groups had a lot of difficulty in choosing and operationalizing windows, analysing the information and drawing conclusions. During the presentations this was brought up by one of the members of group **A**. He started the presentation of his group by commenting that it had not been a good exercise for them. The participants felt not comfortable with the exercise because:

- they did not know what they were doing
- it was a rough exercise in which they did not know what to do
- the participants were not aware of the activities, the trainers should have suggested literature so people would have come prepared.
- small briefings on the windows by a senior were necessary
- it was a painful process

In the brief discussion that followed it became clear that a number of participants felt that the teaching method needed to be changed because it was so much different from theirs. They opined that in Pakistan the trainer instructed the participants first and showed them how things were done before they themselves would implement it.

The facilitators explained that they wanted to facilitate a process of 'learning by doing'. They felt they had to push participants into the water so they learn how to swim. One participant remarked that before going into the water they needed instructions how to swim. "If you push us into the water we think you want to kill us".

Part of the problem may also be related to the uncertainty one has to deal with while using **RAAKS**: conflicting opinions, multiple perspectives of the problem situation. It is very hard for participants to maintain those multiple perspectives: they tend to choose to look from one angle only. In the Benin Case they tended to choose either farmers' point of view or **CARDER's**.

However, the bottom line was that participants felt uncomfortable with the teaching method and needed more guidance from the facilitators. Thus, it was decided that the next day the facilitators would give a presentation of how they would use the windows and tools and use the Benin Case as an example.

General remark:

In presenting the group result some persons tend to tell only their own story instead of the story of the group. Disputes, disagreements or contradictory statements and opinions were thus left out.

## ACTIVITY 2.6.: EVALUATION OF THE DAY

*For this activity exercise 6 was used*

### 2.6.1 Results

#### EVALUATION OF DAY 2

##### Strong Points

- + good management by trainers
- + open discussion on felt problem
  
- + group work: dynamic and collaborative (attitude)
- + little talking, lot of practical exercises
- + nice to play volleyball / shooting bal
- + heading towards the right direction without knowing the direction
- + interesting exercises

##### Weak Points

- hectic day / confused atmosphere overlook/overruled creativity
- depth of the water was not known before jumping
- explanations on the exercises were not clear
  
- time was too limited for exercises
- little time for reflection
- no time for informal talk
  
- feeling of competitiveness among the participants

##### Suggestions

- . clarity before exercise
- . windows / tools / explain exercises using examples
- . go step by step for sake of clarity
- . consider difference in background of the participants
- . exercises to be evaluated by the trainers
  
- . more room for (in between) reflections
- . at least one exercise without time limit
- . make a time line, big on the wall: visualize phases and activities as steps

## 2.6.2 Observations and Discussion

The morning session was good, but in the afternoon things went wrong!

It was clear from the discussion during and after the presentations of the B-phase that the participants expected, requested and needed more instructions for the windows and tools and the exercises that the trainers provided.

The remark that the hectic and confused atmosphere overtook/overruled creativity was considered very valid. In addition to trying to clarify the exercises as much as possible, the trainers should also pay more attention to the group work; the well organised and open minded group did not become very chaotic/hectic, whereas the less democratically organised group (the one in which tasks were assigned by one person) did.

The complaint about the time constraint again was invalidated by the participants' own performance: they produced usable output/products within the time set for the exercise.

The active working in groups and the attitude of the trainers in accommodating the wishes of the participants resulted in a good atmosphere. The flexibility of the trainers to change the programme according to the wishes of the participants was well appreciated.

## **DAY 3: Tuesday, December 12**

## **ACTIVITY 3.1: INVENTORY OF QUESTIONS ABOUT RAAKS**

*For this activity exercise 9 was used.*

### **3.1.1 Results**

Participants had agreed upon reading chapters 3, 4 and 5 of the RAAKS manual. They were asked to write down all questions they had about RAAKS from the preceding days and from reading the manual. The first session of the day was spent inventorizing all questions. Participants were instructed to inventorize all questions by writing down each question on a small card and put them on the wall. Cards were then categorized by the participants. They came up with the following categories:

- getting started
- making a drawing
- choosing windows
- operationalize windows
- combine results from different windows
- synthesis
- defining a problem situation

#### **1. Observations and Discussion**

Some of these categories were discussed. The question how to get started was considered very important as this related to IIMI's current situation. They are faced with the problem how to involve organisations in participatory irrigation management. They seem to be reluctant to participate. How can they be convinced that it is important? The facilitators argued that in RAAKS it is essential to find out the different views of organisations. They often have very good reasons why they don't want to participate. For IIMI participatory irrigation management is the solution to problems in irrigation. Other organisations may have a different perception on what is needed in irrigation, what is wrong and how this should be solved. These differences in views should be made explicit and put for debate. This will be the starting point for finding some common ground to work from.

The remaining cards were used later on by one of the facilitators during his presentation of windows.

## **ACTIVITY 3.2: PRESENTATION OF THE WINDOWS AND TOOLS USED IN PHASE B: THE BENIN CASE**

### **3.2.1 Phase A: The Benin Case**

#### Window A1 (Re)defining the objective of the appraisal itself

Original TOR for the groups was:

"CARDER would like the group to formulate recommendations to change farmers attitudes in order for farmers to adopt CARDER advised practices on food crops"

**Window A2 & A3**

**Identifying relevant social actors (A2) / Tracing diversity in mission statements (A3)**

Actor	Priority	Orientation	Problems	Perception of farmers
Male farmers	continue the farming system: <b>Keep the oil palms, make more money out of them</b>	<b>Oil palm</b>	Soil fertility, scarcity of land, no credit for food crops	. usually family or community members
Female farmers	have land to farm and make income	<b>Food Crops</b>	scarcity of land, no credit for food crops	. usually family or community members
Community			<b>water</b>	
CARDER	<b>1) cotton 2) food crops</b>	. technical crop oriented . monocropping . package approach approaches both individual and groups of farmers	. meeting targets set by HQ/government	. farmers need to be motivated + educated to understand and use the packages
RAMR	<b>FSR&amp;D</b>	. systems oriented (technical but taking social, economic and environmental factors into account) . individual farmers	. soil fertility	. farmers know their farming system very well.
PEMR	Community Devt, being intermediary between communities and official agencies	. community ■ collective oriented	. no cooperation from official agencies . raise issues of democracy	. communities need to be trained in financial mgmt and to be taught how to organise themselves so that they can solve their own problems and demand gwd services
University			. raise issues of democracy	
Government		. national orientation . national orientation . Cotonou oriented	. transition from socialist governing to democracy . population pressure in Cotonou	

**Window A4 Environmental diagnosis**

External factors that are influencing the knowledge system on the Adja Plateau are:

- Transition from socialist system to democratic system
- Population growth / pressure of migration
- Land shortage
- Complex farming system based on oil palm
- Dependency on credit to achieve CARDER targets
- Limited (availability) of technology

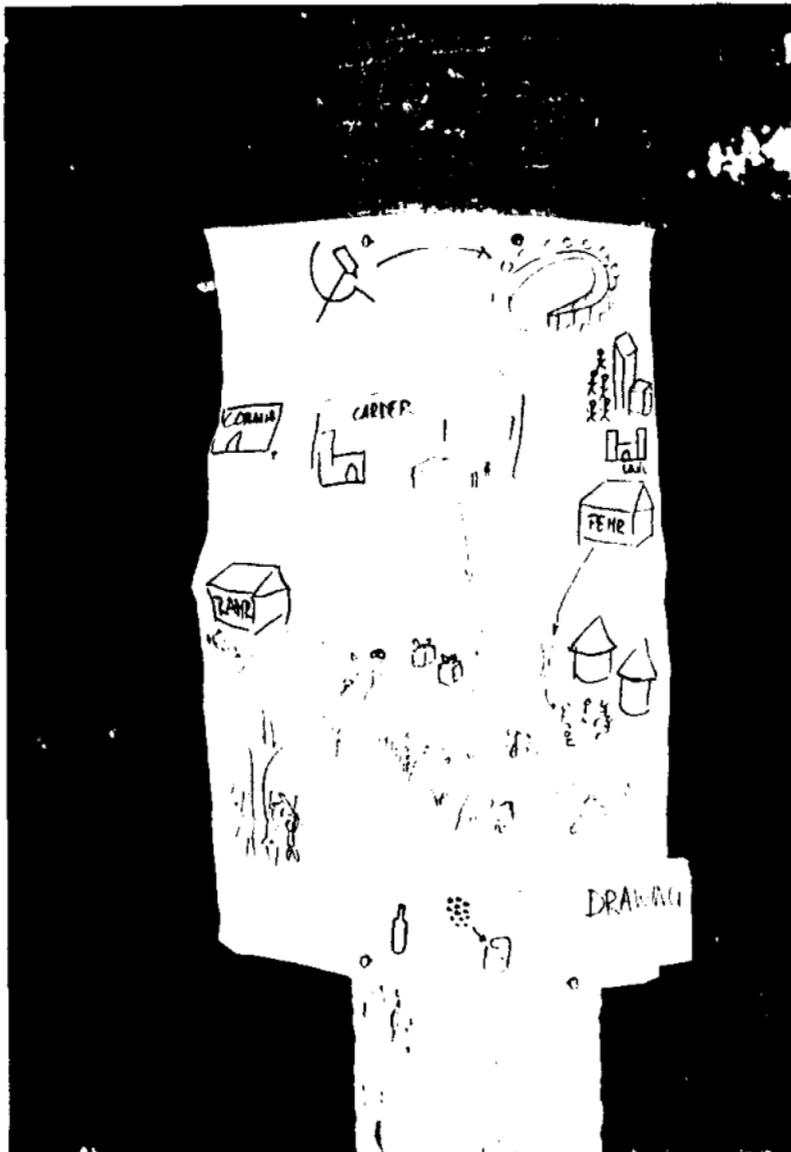
Window AS Clarifvina the problem situation

There is a tension between the national / government level and the local communities / farmer (male and female) level. The government is under pressure of the increasing population in the capital due to migration: there is a need to produce more food in order to keep the population "under control" (electorial power). The male farmers are under pressure because due to decreasing soil fertility the land produces less and thus they try to gain more income through the palm products. The female farmers are looking for arable land which is more and more scarce. The farming system that farmers have at this moment is under pressure and there is a need to maintain its sustainability.

Therefore, 1 would change the TOR into:

" The group will try to formulate recommendations on: How can organisations and farmers work towards a farming system that is (ecological and economical) sustainable hut also produces sufficient food for the Adja Area in **the Mono** province (thus halting migration).

Figure 2.I: Drawing showing the analysis of the problem situation



### 3.2.2 Phase B: The Benin Case

If I had to choose only a few windows, I would have chosen:

- Window B1 Impact Analysis: identifying the knowledge (products) that is (are) needed in order to maintain, develop, strengthen a sustainable farming system
- Window B4 Integration Analysis: do actors link and how can they be linked together?
- Window B6 Coordination Analysis: how does it run at this moment and how can it work?

#### Window B1 Impact Analysis

Types of Knowledge	Farmer	CARDER	RAMR	PEMR	Univ.
<b>. TECHNICAL</b>					
- soil fertility	X		X		
- farming system	X		X		
- crops	X	X	X		
<b>. SOCIAL</b>					
- land tenure / ownership	X				
- land use	X		X		
- use of products	X		X		
- decision making	X			X	
- ceremonies	X			X	
<b>. COMMUNICATION</b>					
- feedback	X	v	X	X	
- farmers language	X	X		X	
- exchange of information					
- joint learning	X		X	X	
<b>. ORGANISATION</b>					
- organise people				X	
- collaboration				X	
<b>. FINANCIAL</b>					
- credit		cotton		fin. mgmt	

Conclusions:

Most knowledge types and skills are available in the system but there is no organisation for demand & supply of the products of the knowledge and skills.

For more conclusions we need to combine with the results of the integration analysis.

## Window B2 Actor analysis

For the actor analysis I **used** the Tool: Actor Analysis Checklist (page 74 of the manual).

Actors	Primair Activities	Position in KIS	Impact System Performance
Female Farmers	<ul style="list-style-type: none"> <li>. food crop production</li> <li>. many women</li> <li>. high knowledge of their farm. system</li> <li>. ?</li> </ul>	<ul style="list-style-type: none"> <li>. ?</li> <li>. not aware that she is part of a system</li> <li>. land to farm</li> <li>. little knowledge on other actors</li> </ul>	<ul style="list-style-type: none"> <li>. relevant knowledge base</li> <li>. little power</li> <li>. limited range / high effect</li> </ul>
Male Farmers	<ul style="list-style-type: none"> <li>. cash crop production</li> <li>. many men</li> <li>. high knowledge of their farm. system</li> <li>. ?</li> </ul>	<ul style="list-style-type: none"> <li>. ?</li> <li>. not aware that he is part of a system</li> <li>. continuation of the present farming system</li> <li>. little knowledge of other actors</li> </ul>	<ul style="list-style-type: none"> <li>. relevant knowledge base</li> <li>. little power</li> <li>. limited range / high effect</li> </ul>
CARDER	<ul style="list-style-type: none"> <li>. Extension / Development many staff</li> <li>. limited knowledge on the farming system</li> <li>. bureaucracy</li> </ul>	<ul style="list-style-type: none"> <li>. Extension/ Development</li> <li>. not part of a system</li> <li>. produce sufficient food</li> <li>. possibly knows other actors</li> </ul>	<ul style="list-style-type: none"> <li>. knowledge base somewhat relevant</li> <li>. has power</li> <li>. wide range / limited effect</li> <li>. possible effective leader</li> </ul>
RAMR	<ul style="list-style-type: none"> <li>. FSR&amp;D</li> <li>. small staff</li> <li>. high knowledge base</li> <li>. task oriented</li> </ul>	<ul style="list-style-type: none"> <li>. FSR&amp;D</li> <li>. system thinking</li> <li>. sustainable farming system</li> <li>. knows the other actors</li> </ul>	<ul style="list-style-type: none"> <li>. relevant knowledge base</li> <li>. little power</li> <li>. limited range / high effect</li> </ul>
PEMR	<ul style="list-style-type: none"> <li>. Community development + credit</li> <li>. small staff</li> <li>. limited knowledge base on farming systems</li> <li>. task oriented</li> </ul>	<ul style="list-style-type: none"> <li>. Community development + credit</li> <li>. "systems" thinking</li> <li>. people are able to help themselves</li> <li>. knows the other actors</li> </ul>	<ul style="list-style-type: none"> <li>. relevant knowledge base</li> <li>. little power</li> <li>. limited range / high effect</li> </ul>

### Conclusions:

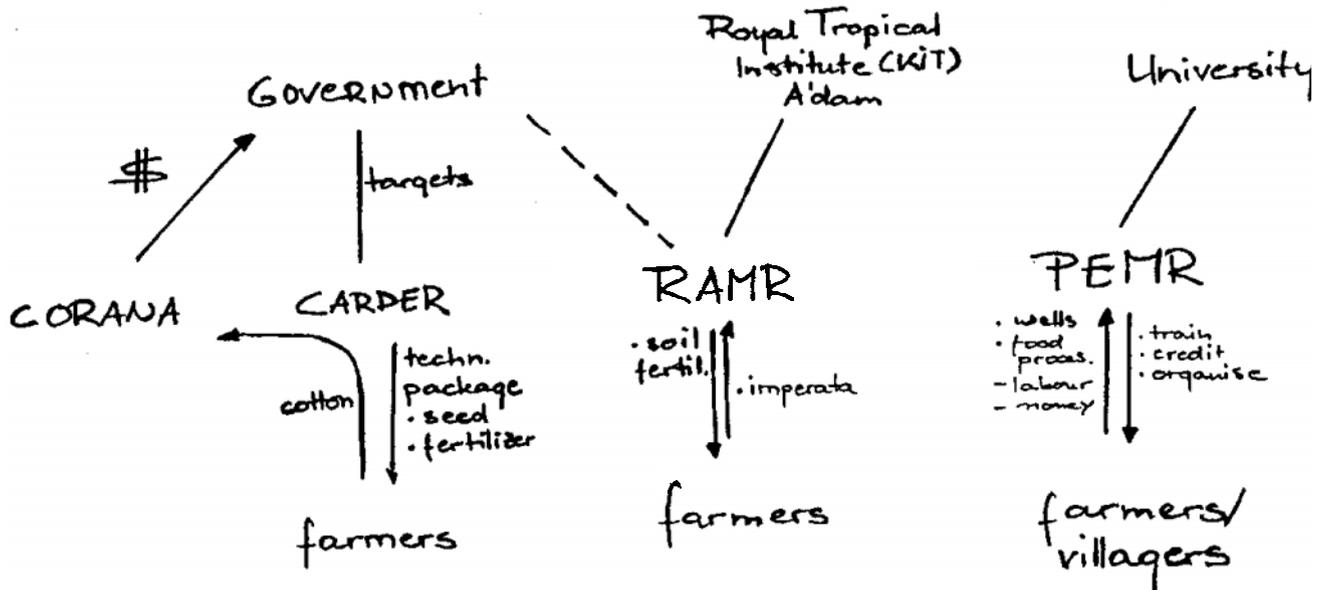
CARDER can play the role of key actor for change, or at least the initiative, hut will need other actors to increase its' efficiency.

## Window B3 Knowledne Network Analysis

From the Impact analysis (Window BI) it already became clear that numerous knowledge types and skills are present in the system. The data can he **used** to identify knowledge networks. From the video it becomes clear that there are three communication networks:

1. government - CARDER (& CORANA) - farmers: this network is mainly occupying itself with cotton production and marketing
2. ministry of Agriculture and Royal Tropical Institute. Amsterdam - RAMR - farmers: this network is mainly concerned with farming system research. possibly male biased
3. university - PEMR - farmers: this network has in coinparison to the other networks a non-technical 'content', being involved in organising people and teaching them self-reliance.

FIGURE 2.2: KNOWLEDGE NETWORKS IN THE BENIN CASE



**Conclusions:**

there are three knowledge networks in the system that are separated from each other. There seems to be no intermediaries or links.

	female farmer	male farmer	ext. worker	RDR-CARDER	RAMR	PEMR	Policy makers
female farmer	. help each other out in producing palm oil, gari etc.	. produce of her leased land . provide labour for farming husbands land				. time to come to community meetings . money for credit and well	
male farmer	. provide land for farming	. ceremonies . drinking	. time to listen . cotton package	only when ext.worker brings him along	. problems in the field . trying out research results	. time to come to community meeting . money	
extension worker (CARDER)		. crop practice packages . advice . demonstration	. meetings??	. if farmers take advice . if ext. work meets target			
RDR-CARDER		. only if ext. worker takes him to farmers	. targets . advice	. meetings??			. whether targets are met
RAMR	??	. talk about fields and problems . joint research			X		. try to influence policy
PEMR	. credit to learn financ. mgmt . help to organise . exchange experience	. credit to learn financ. mgmt . help to organise . exchange experience				X	
Policy Makers				. targets for agric. product.	. via thematic research - priorities		X

Conclusions:

there are three subsystems which are not interlinked. **CARDER** and farmers have strong linkages hut only on cotton, **RAMR** has strong linkages with farmers but not with any other organisation, **PEMR** also has strong linkages with both male and female farmers hut not with other organisations. Female farmers are barely addressed by agencies whereas they are of great importance to the food production.

Window B5 Task Analysis

	Policy Makers	CARDER	RAMR	PEMR	Male farmer	Female farmer	CORANA
policy	X						
research			X				
extension		X					
development				X			
credit		1		2			
production					X	X	
markets		1					1

- 1: Only for cotton
- 2: Not for crops

Conclusions:

The task of credit provision for food crops is not present in the system. **Also** the food crop market is not as well developed as in the case of cotton.

Window B6 Coordination Analysis

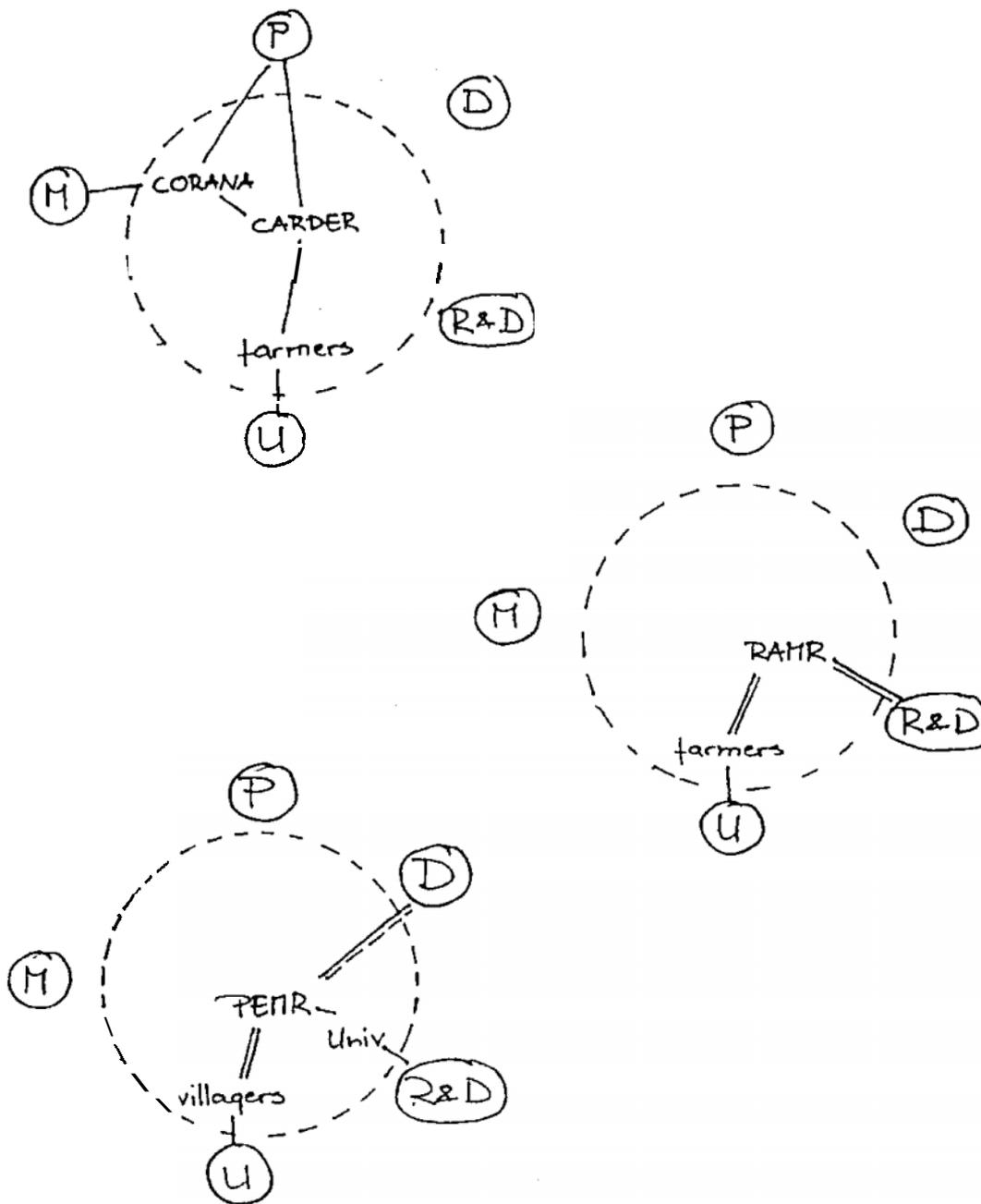
I always start by putting the external forces with respect to this knowledge system on a large sheet of paper. I then search for their representatives within the knowledge system that I am studying. Then I see whether there are links/linkages between these representatives and whether these are strong or weak. I only draw the strong linkages. I then look whether I recognize a coordination configuration (comparing with the types described in the RAAKS manual). I also start thinking about the linkages between the actors within the system and I used the classification of the manual: Do I find a direct supervision or a standardization of norms within this system??? Slowly the different configurations become clear to me.

Conclusions:

Three different configurations can be distinguished:

1. for cotton: Carder / Corana - farmers; a policy/market driven configuration with the following coordination mechanisms: i) standard output / technical packages, ii) direct supervision & standard of working processes / technical packages.
2. for food crops / soil fertility: RAMR - farmers: an R&D driven configuration with the standardization of skills as coordinating mechanism
3. for wells and food processing equipment: PEMR - communities / women's groups: A donor / farmer driven system with the following coordination mechanisms: i) mutual adjustment. ii) standardisation of norms and interests. iii) standard technical packages, work processes (teaching financial management).

FIGURE 2.3 CONFIGURATIONS WITHIN THE BENIN CASE



## Window B7 Communication

In this window I only operationalized two terms that may be an opportunity or a constraint in the communication between the different agencies:

---

### **Farming System**

- **farmer:** the way of living and farming
- **CARDER:** crops through monocropping
- **RAMR:** soil fertility, crops, land ownership, products used for social purposes
- **PEMR:** ..

### **Participation**

- **CARDER:** no idea yet but change is needed
  - **RAMR:** together with farmer: talk about problems, suggest solutions, joint decision making on trials, joint evaluation
  - **PEMR:** teach people to organise themselves and teach them financial management so that they can realize projects themselves
- 

## Window B8 Understand the social organisation of innovation

In this window I will combine the results from the different previous windows

When combining the Impact Analysis and Integration Analysis it becomes clear that the results of the Knowledge Network Analysis can be supported. The knowledge types and skills are there but **due** to the lack of integration of the actors, there is no impact.

Combining the Task Analysis and the Integration Analysis it becomes clear that apart from the missing tasks, there is really **no** linking between the tasks. This **results** in knowledge, technology, innovations not being developed due to separate task implementation.

The Actor Analysis has shown us that all actors have a different orientation and are not aware that they are part of a system. The integration analysis supports this **fast** conclusion in showing that there are three subsystems working independently from each other.

The TOR I accepted was:

" The group will try to formulate recommendations on: **How** can organisations and farmers work towards a farming system that is (ecologically and economically) **sustainable** but also produces sufficient food for the Adja Area in the Mono province (thus halting migration).

My conclusion from the **above** analysis are:

For food crop production there is not an integrated system linking actors and thus different tasks that need to be performed in order to obtain a **sustainable** system **of** food production, are also not linked. Therefore, CARDER has become isolated **and** **unaware** that its standard packages may work for a cash crop such **as** cotton but not for food crops.

The actors need to change the coordinating mechanisms and thus the configuration of the system. There linkages need to be established between the various actors:

- knowledge types that are present become accessible;
- tasks can be linked resulting in relevant innovations.

### ACTIVITY 3.3: QUESTIONS ON THE USE OF WINDOWS AND TOOLS OF PHASE B

For this activity the *results of* activity I were used.

#### 3.3.1 Results

- getting started

There are different situations which lead to the start of a RAAKS-exercise:

- i) you are given **an** assignment, a terms of reference **of an** organisation;
- ii) an organisation decides that things have to change and *is looking* for a different manner to **bring** this change about
- iii) your **or** your organisation do action research

- drawing

Drawing seems difficult since we are all used to writing. However, if we want to communicate with those stakeholders that are illiterate then we are forced to visualize things. Furthermore, a drawing can contain more information. Most important aspect is really the fact that a drawing is the ideal instrument for showing different perspectives of the people that have made them. **As** to the fear of drawing: it is learning by doing.

- choosing windows

Choosing windows **is** not something which is done very intuitive **by** those who have experience with RAAKS. Other may want to use the matrix presented on **page 30** in the manual.

- operationalize windows

Here **also** you will find that there is no standard for operationalisation of windows. The tools and instruments you find in the manual are one way of operationalising. The results of the exercises so far have shown us that each group has a different way of operationalising concepts, problems, actors ect.

- combining

Combining windows is something that **on** seems logical and simple since the windows overlap. **On** the other hand this takes practice to really grasp the critical issues.

- synthesis

The synthesis seems difficult but as you practice more with RAAKS, you will find that the more windows you are able to use for analysis the more the different parts of the synthesis puzzle can be put together. Synthesis also takes making decisions on what you think is most important. You need to be clear, however, why you feel something is important. This has much to do with your intentions of applying RAAKS **to** a situation.

- defining

The results of defining participatory working (exercise 4) provided a good example how you can come to definitions with a heterogenous group.

### ACTIVITY 3.4: WINDOWS PHASE B: THE CASE OF IRRIGATION IN FAROOQABAD

For this activity exercise 10 was used.

#### 3.4.1 Results

Groups were given the following Terms of Reference:

"Can the irrigation system work in a participatory manner?"

Groups were then asked to do choose a window:

\_\_\_\_\_

\_\_\_\_\_

Actors	Activity	Characteristics	Maintenance	Revenu Collection
PID	Reg & Distr., O&M upto District level	Bureaucratic set up	- canals - distr. minors	- assessment
Farmers	- utilization - crop reduction cleaning of w/e	Subsistence, unorganised	w/cs	payees
Agri (OFWM)	w/cs Imp	- target oriented - close to farmers	w/cs	
Parlimentarians	policy maker	- vested interest	swimming pool	use fir their own purposes
research organs	R&D	- technical oriented - no restitution of results		
Administration				revenu collection

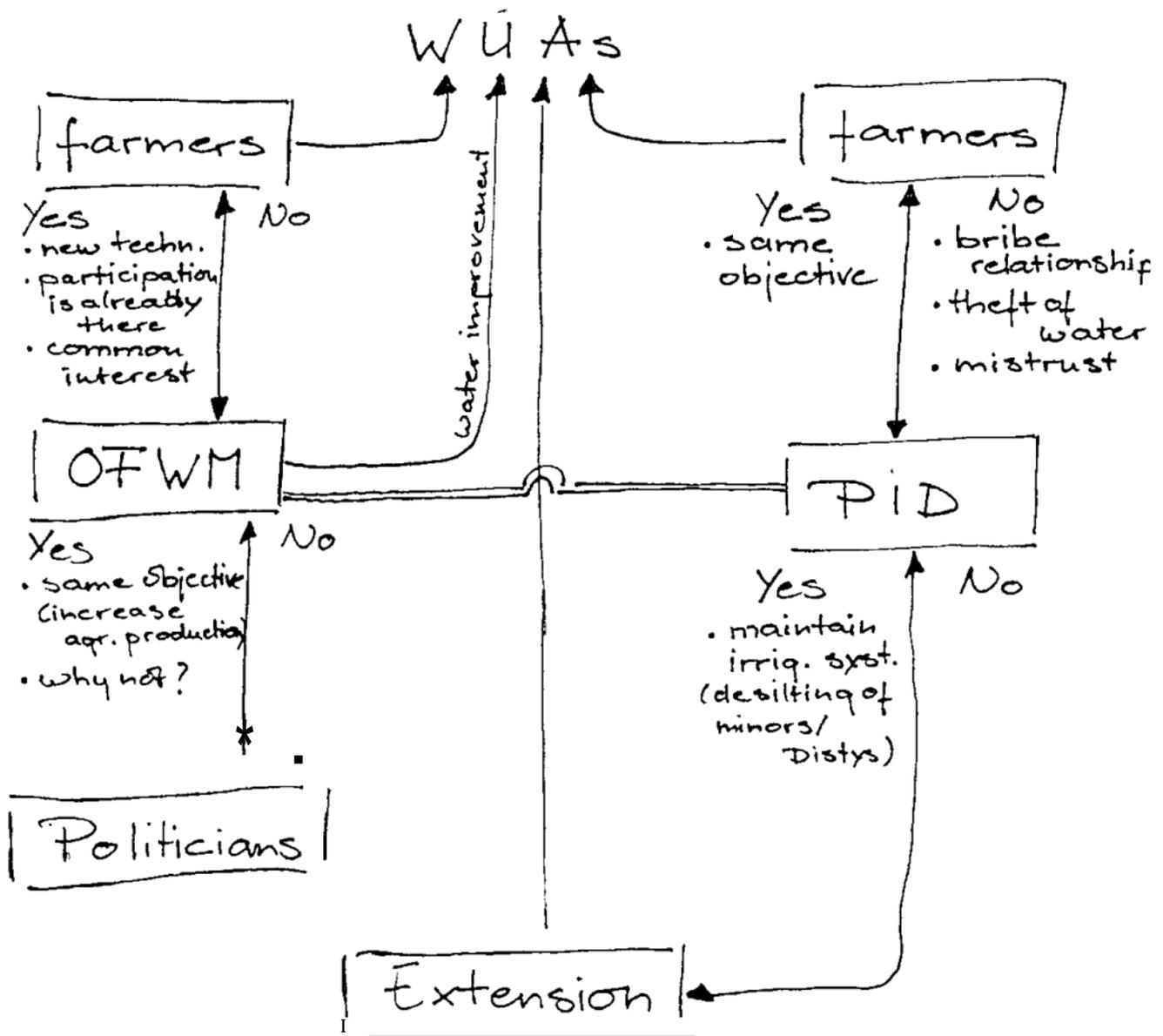
#### 3.4.1.3 Results of group C

The results of group C could not be retrieved

#### 3.4.2 Observations and Discussion

This second attempt of the participants to come to grips with the analytical content of the windows and their operationalization, was more succesful. The results of the exercise showed a better understanding of the window used and how to operationalize it.

3.4.1.1 Results of group A



## ACTIVITY 3.5: PRESENTATION OF WINDOWS AND TOOLS IN PHASE C: THE BENIN CASE

### 3.5.1 Introduction

Due to time pressure, the facilitators held a plenary session in which they involved the participants in the use of the windows of Phase C. The Benin Case and the results of the analysis and synthesis presented during the morning were used.

### 3.5.2 Results

	Task Yes / No	Knowledge Management - necessary communication activities	Poten- tial
Farmers	Yes	- be open, listen - awareness: technology and organisations - motivated	X
CARDER	Yes	- change attitude - link up with others - learn from others - incentives to change - except feedback farmers	X
RAMR	Yes	- coordinate with PFMR / CARDER - accept feedback	X
PEMR	Yes	- include farming - accept feedback	X
Policy Makers	Yes	- policy supportive to the system	v
University	Yes	- change attitude of researchers and extensionists	

### 3.5.3 Observations and Discussions

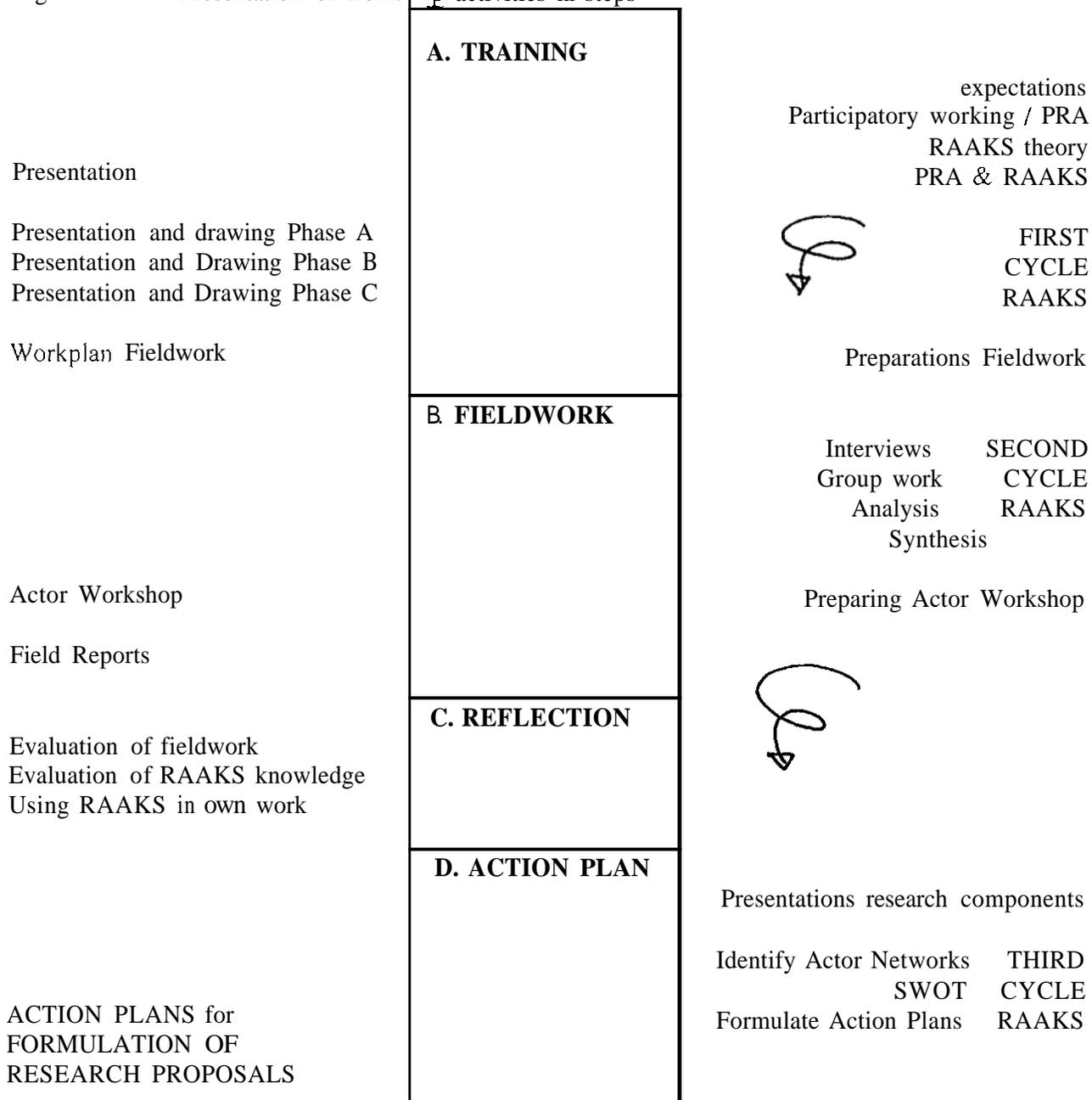
The group was not very active in providing input. Possibly this was due to the difficulty in explaining the concept of knowledge management tasks. This complicated the brain storming with the whole group on that particular topic. Nevertheless the results that came out of this plenary session were clear.

## ACTIVITY 3.6: REVIEW OF RAAKS WORKSHOP

### 3.6.1 Results

The facilitators gave a presentation of key activities and the relation between the various activities and the different elements in the whole training course using the time-chart and the flip-chart already produced by the groups.

Figure 6.1: Presentation of workshop activities in steps



## **ACTIVITY 3.7: PRESENTATION OF THE FIELDWORK**

### **3.7.1 Presentation of the field work**

See Annex 9.

## ACTIVITY 3.8: PREPARATIONS FOR THE FIELD WORK

*For this activity exercise II and checklists 3, 4, 5 and 6 were used.*

### 3.8.1 Results

Groups presented their group motto and contracts. These can be found in the group reports in the fieldwork.

### 3.8.2 Observations and Discussion

There seemed to be some hesitation or resistance to start working on the preparations for the field work. This all started by participants saying up to three times that they did not understand what we were explaining to them about the group divisions, the groups tasks and the results we would like to see at the end of the afternoon. By probing what they did not understand exactly it turned out that the participants thought that the (field)work could not be done in the time allocated to it. Again the time constraint evoked resistance among some of the participants to start working on the assignment. Later on, working in the groups and under time pressure, little evidence could be found of worrying about the time.

It was still difficult to get the preparations finished, especially for the group Recky. The two groups functioned completely different: Whereas FFF was working closely together, the group Recky had a hard time keeping itself together and every member involved in the preparation. Possibly the environment / working space had something to do with this. The group Recky was working in the conference room, one person standing at the board and the rest was sitting down in chairs facing the board and leaning back. The group Food For Future was working outside on the grass lawn, in the sun, all sitting at a round table thus facing each other.

The time constraint remained an excuse for not finishing the assignment.

## ACTIVITY 3.9: EVALUATION OF THE DAY

For this activity exercise 6 was used.

### 3.9.1 Results

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#### EVALUATION OF DAY 3

##### Strong Points

- + day was **useful**, productive, **interesting**, excellent, good for learning
- + windows are clear
- + **working** in teams: pleasant / synergy and laughs
- + to reach results and present them
- + (watching people) play volleyball

##### Weak Points

- keep being exhausting
- **time constraint for** exercises (specifically mentioned, interviews)
- **some** people keep **coming** and going: confusing
- too long presenting windows B-phase
- discussion behind participants
- need markers **in the** field. so people please return **them** (thank you)
- to **the** field at **8:15 am**
- **Ab ...**

##### Suggestions

- evaluation of learning points (3 **main** things you learned today)
  - more group** dynamical work
  - role and **team** relationship should be **improved**
  - everybody should speak **up**, but **not** at the same time
  - time** shared too short
  - continue** process
  - more time to play volleyball
-

## **FIELD WORK**

**DAY 4: Wednesday, December 13**

**DAY 5: Thursday, December 14**

**DAY 6: Saturday, December 16**

**DAY 7: Sunday, December 17**

## DAY 4 WEDNESDAY, DECEMBER 13

### 4.1 Results

Due to the lack of time for information exchange and the analysis, the groups were allowed to give the analysis more time. There were no presentations given.

### 4.2 Observations and Discussion

There was a late start which immediately resulted in getting stuck in traffic and arriving late for the first interviews.

The groups very much enjoyed the interviews in the villages. The interview techniques of some of the interview groups needed improvement (to say the least).

The chosen location was 'perfect' for the groups to work: out in the open, all necessary facilities at hand.

The groups took a lot of time to exchange the information from the interviews and then had a lot of trouble putting that information together. There was no time for presentation of phase A.

The groups showed the same way of group working as during the preparations: group Food For Future sat close together in the dry basin of the fountain exchanging information. The Recky group as before, formed a less coherent group: some active members at the board and a number of passive members which only provided input when they felt like it or were "motivated" by other group members or the chairman.

### 4.3 Evaluation of the Day

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#### EVALUATION OF DAY 4

##### Strong Points

- 1 good team work and participation
- 2 interviews: interesting and inspiring

##### Weak Points

- first field day not completely clear
- little time for: presentation, analysis, solving problems related to group work
- too late start / too long in traffic

##### Suggestions

- BE ON TIME
  - time lost in traffic / travelling - stay in the field (also time in the evening)
  - interview farmer group at different places
  - keep monitoring the groups
  - time for another question round?
  - energizer after lunch
  - drop interviews on the 14th and have the work done
-

## DAY 5: THURSDAY, DECEMBER 14

### 5.1 Results

In order to give participants feedback on their way of interviewing, the facilitators made a role play. Points of attention were:

- no proper introduction;
- too complex introduction/explanation of purpose and subject of the interview;
- asking questions and writing at the same time (no real attention towards the interviewee) (interviewee becomes insecure, and/or starts to dictate the answers - more attention for the paper than the interviewee or the subject discussed);
- following list of questions, leaving no room for the interviewee to tell his own story;
- interrupting the interviewee
- feeding answers to the interviewee
- not asking open questions but "closed"/suggestive questions to which the interviewees can only say YES or NO

### 5.2 Observations and Discussions

In the Recky group a number of persons were withdrawing / did not take up responsibility. Some of the other group members became annoyed, mainly the expatriate members! The chairman was trying to keep the group active and on track, but the other tasks were performed very weakly. Members did not listen to each other, and only the most dominant persons are heard. Their opinions are represented in the results. This can be illustrated by the discussion on the acceptance of the terms of reference (TOR): the least active group members agreed with the TOR provided by the facilitators and argued with any member who would raise doubts (e.g. whether it was true that the necessary human resources were available). The facilitator made a suggestion which was received in great silence: the group did not necessarily had to come to a consensus on issues but if contradicting arguments existed, the group should acknowledge these differences in opinion and present them explicitly. Thinking back there may never have been a real discussion on issues but merely an exchange of opinions and the opinion most pushed became the group's result. This undoubtedly did not justice to the discussions which were open and frank within the group.

The Food For Future group had a quite efficient way to solve these differences in view. If they had been discussing for a while and could not agree upon one view, they voted by raising hands and then continued. From the beginning they were constantly working with the whole group. This slowed down the process of analyzing and drawing conclusions.

## 5.3 Evaluation of the Day

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### EVALUATION OF DAY 5

#### Strong Points

- + **RAAKS**: gradually getting the picture of the methodology, clear how to use windows and tools
- + better understanding of the problem
- + interviews: good response, good choice of actors
- + groups operate more as a team, team grows, more efficient group work, participants well prepared
- + interview role-play: good!
- + learning to listen
- + encouraged the farmers
- + people start getting realistic
- + more involvement trainers is good
- + working in the garden is nice

#### Weak Points

- interviews. i) small scale: invading the village. ii) actors chosen not impressive, iii) lack of background knowledge. iv) lack of preparation using windows
- process: i) no time for group discussions, ii) too much interruption, iii) no more participatory but rather dictatorial. iv) group dynamics low
- arrangements: transport, site selection, DSA
- Mr Naqvi has headache because of Mr Rana's talking

#### Suggestions

- take tea during interviews
  - arrange more trainings
  - we should use moderation skills
  - prepare interview schedule before taking interviews
  - field work should be organised including stay overnight & laptops
  - brief introduction on activities each morning
  - get involved more, don't be observers
  - reschedule work
  - brief introduction on socio-economic problems in the area
  - work / start deport on time
  - interview Banks, influentials & government administration
  - next time select site closer to Lahore
  - 1 interview per day is enough
  - monitor process of operationalizing windows and tools
-

## DAY 6: SATURDAY, DECEMBER 16

### 6.1 Results

In the afternoon the groups presented their results from phase A and B. All these results can be found in the group reports.

#### 6.1.1 Results of Food For Future group

Task/Actor analysis (too complex)  
Integration analysis

Priority problems:

- . institutional constraints
- . corruption
- . resource constraints
- . social inequity

#### 6.1.2 Results of Reckv group

Drawing ~~of~~ main problems  
Problem tree  
Task analysis  
Conclusions

Very participatory presentation!

### 6.2 Observation and discussion

The groups appreciated the mapping exercise **as** this enabled active involvement **of** farmers and lively discussions. For this occasion one interview group was composed with women only. They did the mapping exercise with women in the village. Manon, a friend of Nathalie, who joined the fieldwork for two days facilitated the session and translated (she speaks Hindi fluently). She performed these tasks excellently which was very stimulating for the group.

The groups had a lot of difficulty in organising the information collected. The groups had difficulties in analysing the information from the windows and combining the results. The facilitators stepped in to help them get through the process. This was appreciated by the groups. Groups tended **to** forget the analysis they had already made. Sheets remained folded and put aside while a new sheet and analysis were made. This was especially the case in phase B where the groups had **to** start combining results from different windows.

It would **have been** better **if** the facilitators would **have** pushed **them** to **make** drawings of phase A during **the** first day and having **the** groups adjust those drawings during the following days of the fieldwork.

### 6.3 Evaluation of the Day

---

#### EVALUATION OF DAY 6

##### Strong Points

- + PRA-exercise: mapping
- + good experience
- + great experience with **women** (food for thought)
- + constructive input trainers
- + time management: better, enough time for discussion
- + know what **RAAKS** is

##### Weak Points

- group work: not good, **miscommunication** and lack of attention  
PRA: i) use of results in **RAAKS**, ii) not helpful, iii) could not give anything back to the farmers  
actors' i) missing **influentials**, ii) poor men who cannot **conversate** with **women** who give a different perspective on the whole problem  
integration of findings **more &** more difficult (too many sheets)
- not sure about application in **Pakistan system**  
data obtained from different **distributaries** - not comparable  
**no meeting to discuss about** how we **organize the actor workshop** (practical questions, what do we **offer** them, what do we expect, **our attitude**)

##### Suggestinns

preparation (for interview??) should be good  
**things should be done on time** ■time keeping !  
**field:** a) **more** time for travelling. b) more **PRA techniques**  
**Farooqabad not** a good site (suggest: **Multan Road**)  
time and again tell what is the output of each phase  
build in information **exchange moment between** interview5  
more vegetables for lunch  
**musical** evening (last day)  
**mineral** water

### **7.1. Results**

The actor workshop was organised and held. It was a great success! The majority of the 30 visitors were farmers. There was an input supplier (also farmer), representatives of the Agricultural Extension Service and a representative of the Irrigation Department.

The Recky group gave a verbal presentation of their results. They had visualized their results in drawings and in Urdu language. The Food For Future group performed a role play and presented some flip charts written in Urdu.

### **7.2 Observations and Discussion**

The facilitators had to guide the groups through the last part of their analysis and preparations for the actor workshop. The difficulties with analysing information as a group, combining the information from the different windows and especially drawing conclusions, put the groups under a time constraint. The FFF group had great difficulties in coming to final conclusions since it was working so closely together and was focused on reaching consensus. This was mainly due to the fact that they didn't have a well defined problem situation. So they didn't know what they were looking for. Close facilitation was necessary. The group was split up into two groups to finalize their analysis and prepare the presentation. The presentation group started enthusiastically with preparing a role play. The facilitator pulled the other group through the analysis together with the chairman and the RAAKS researcher. Much time was spent on redefining the problem situation. Once this was decided upon the final analysis could be made very quickly. The facilitator tried to check if everyone understood the decisions made during analysis. But some group members didn't seem to grasp what direction the group was going. The question is how much they have learned from this exercise. The Recky group had to be provided with clear directions and assignments in order for the group to come with results and conclusions.

During the preparations the facilitating team of the actor workshop got in conflict with the groups about the order of presentations. A dispute arose and the facilitators were asked to intervene. The problem was solved after a short discussion with the chairmen of the two groups. It was argued that the groups should focus on the objective of the actor workshop instead of fighting over a minor issue. It was decided that Food For Future would present first as their roleplay would create attention and involvement of the actors. However, the air was not cleared completely with this decision.

The actor workshop was successful in sharing the results from the field work with the audience. The presentations were highly appreciated and evoked lively discussions.

The facilitation team had divided tasks. Two persons took notes, one person monitored the process, and one person facilitated the session and translated. Seats were arranged in rows during the presentations. Afterwards the audience was asked to put their seats in a circle so everyone could face each other during the discussions.

Questions raised after each presentation were written on cards and put on the wall. These were used for discussion after the presentations. The facilitator took the first question raised - shortage of water - as a starter for the discussions. This issue was discussed for half an hour. Then he took the second issue raised. Instead he could have consulted the audience which issues they wanted to discuss in which order.

An imam of one of the villages who had **not** been interviewed dominated the discussion. After a while other people started speaking up. While the discussion became very chaotic, it became clear that the multiple tasks of the facilitator were too much for one person. It was difficult to keep an eye **on** who wanted to speak up, guide the discussions and translate at the same time. Translation had to be done in Punjabi, Urdu and English. Other persons started translating as well, while others were still speaking. This caused a lot of confusion about whom to listen to.

It was difficult for some field group members to sit and listen to participants voice their views. One person even started lecturing what was wrong in irrigation, thus taking the risk of blocking feedback from the audience.

After the workshop one participant remarked that only two representatives from line agencies were present. These two persons obviously had been invited explicitly **by** IIMI because they received an award for organizing the field work. "How valid was their presence knowing they were given an incentive by IIMI?"

### 7.3 Evaluation of the Day

---

#### EVALUATION OF DAY 7

##### Strong Points

- + strong farmer involvement
- + provided suggestions
- + productive seminar
- + strong interaction with farmers
- + delicious tea in the afternoon
- + good end of field training programme
- + good presentations by 2 groups

##### Weak Points

- no** concrete solutions are given to farmers
- more people from IIMI should have been in the actor workshop
- no** / few officials present

##### Suggestions

- improve travelling
  - exercises **in** listening & discussing **in** beginning of training
  - a copy **of** report should be given to farmers **of** every village
-

## **DAY 8: Monday, December 18**

## ACTIVITY 8.1: EVALUATION OF THE FIELDWORK AND PARTICIPATORY WORKING

*For this activity exercise 13 was used.*

### 8.1.1 Results

#### 8.1.1.1 Results of group Recky

The group gave three different role plays: role plays on interviews (with official and with farmer) and a role play on the group working.

The role play on group work showed a number of things that were happening during the field work: people not actively participating. active persons at the flip-chart. no real group work, a facilitator who (behind sunglasses) observed the process. occasionally intervening and confusing the group somewhat more, but in the end much to their own surprise there was a group result, notwithstanding the troublesome group processes.

#### *Sheet 1:*

Positive:

Output: friendly atmosphere, good preparation, good reception, clear tasks, smooth flow of information

- interview
- actor workshop
- preparing actor workshop
  
- analysis and discussion 0
- communication 0
- decision making 0

Negative

Process: dependence on facilitators, personal biases, weak control on tasks

- communication
- analysis and discussions
- decision making
  
- interviews 0
- actor workshop 0
- preparing actor workshop 0

#### *Sheet 2*

- there was no consensus on decisions
- outspoken members imposed their decision
- some people preferred to follow & be passive instead of speak up themselves

### 8.1.1.2      Results of group FFF

Role play on group process showed that the group had to agree on everything, what needed to be done and how "orders" were given.

no sheets available

### 8.1.1.3      Results of the facilitation team

The facilitation team filled out an evaluation sheet themselves.

---

## EVALUATION OF THE FACILITATION TEAM

### Strong points

- + preparation of program was good
- + time management was good
- + seating arrangements were good
- + enough time for questions
- + enough time for discussion
- + performance of groups was good
- + involvement of actors was good

### Weak points

- translation was poor
- agenda was not explained well
- most of the agencies (government) did **not** participate
- poor communication with the groups
- plenary discussion was disorganised
- work load was not equally divided

### Suggestions

- have a good translator
  - try **to** involve silent participants
  - participants must be introduced in the beginning
  - half circle for discussion
  - proper way **to** intervene - define rules for discussion
  - participants should take up responsibilities
  - one issue at a time
  - prioritize issues before discussing
  - co-facilitators
  - intra co-ordination among facilitators
-

### 8.1.2 Observation and Discussion

Groups were willing and able to put themselves in front of a mirror and voice critique on their functioning in a role play. There was no time for doing the reverse: Having the groups present a role play in which they show how things could have been done ('do the right thing' version instead of only 'what went wrong' version).

### ACTIVITY 8.2: EVALUATION OF WORKING WITH RAAKS

*For this activity exercise 14 was used*

#### 8.2.1 Results

Unfortunately the bar-chart with the names and scores of the participating groups had mysteriously been removed from the facilitators possession so that these results will only live on in stories told about the **RAAKS** quiz.....

#### 8.2.2 Observation and discussion

The groups appreciated the quiz very much. The answers clearly showed that participants had grasped what **RAAKS** was about and what they had been doing during the field work. The competitive element stimulated learning and reflection among the Pakistani participants. Most of the Dutch participants were annoyed or even blocked by the competition.

All groups gave the wrong answer on joint learning and participation. They confused joint learning with individuals learning in a group situation. Participation was perceived as the ideal. The facilitators argued that participation can be organized in different ways for different goals (instrumental participation versus empowerment). If group members participate in an activity it does not mean that they have learned as a group. Active participation is a prerequisite for joint learning. The fact that the question was understood wrongly points out that the facilitators have not explained these concepts clearly enough.

### ACTIVITY 8.3: EVALUATION BY PARTICIPANTS ON WORKING WITH RAAKS WITHIN THEIR OWN ORGANIZATION

*For this activity exercise 15 was used*

#### 8.3.1 Results

This exercise/activity was given to participants as homework and preparation for the two days of actionplan writing.

No evaluation of the day was done on this evaluation day.

**ACTION PLANS FOR  
RESEARCH PROPOSAL WRITING**

**DAY 9: Tuesday, December 19**

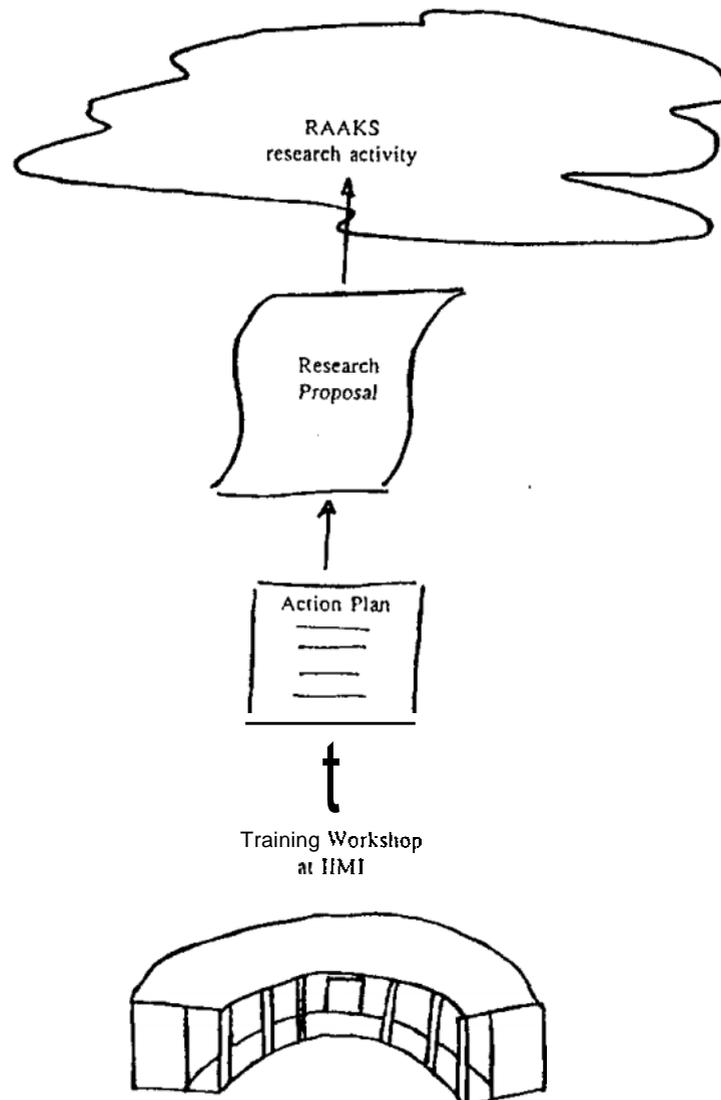
**DAY 10: Wednesday, December 20**

## ACTIVITY 1: OUTLINE FOR THE 2 DAYS OF RESEARCH PROPOSAL WRITING

### 1.1 Putting the last two days in perspective

Presentation of figure 1.1. In order to disseminate their research results IIMI would like to collaborate with other organisations and institutions within irrigation. IIMI is looking into the possibility to use RAAKS as a methodology for collaborative research action within its three research components. For the implementation of a RAAKS-activity, a research proposal needs to be formulated. To come to the formulation of such a research proposal, some of the collaborating persons, organisations need to have knowledge of the RAAKS methodology. These last two days will not be enough time to formulate a research proposal. Moreover, relevant actors may be missed out. There is a need, however, to come to a plan of action which will lead to the formulation of the research proposal. For all these above mentioned reasons (especially wanting to collaborate, formulating a research proposal) IIMI has organised this training workshop.

FIGURE 1.1: PERSPECTIVE OF THE LAST TWO DAYS OF THE TRAINING WORKSHOP

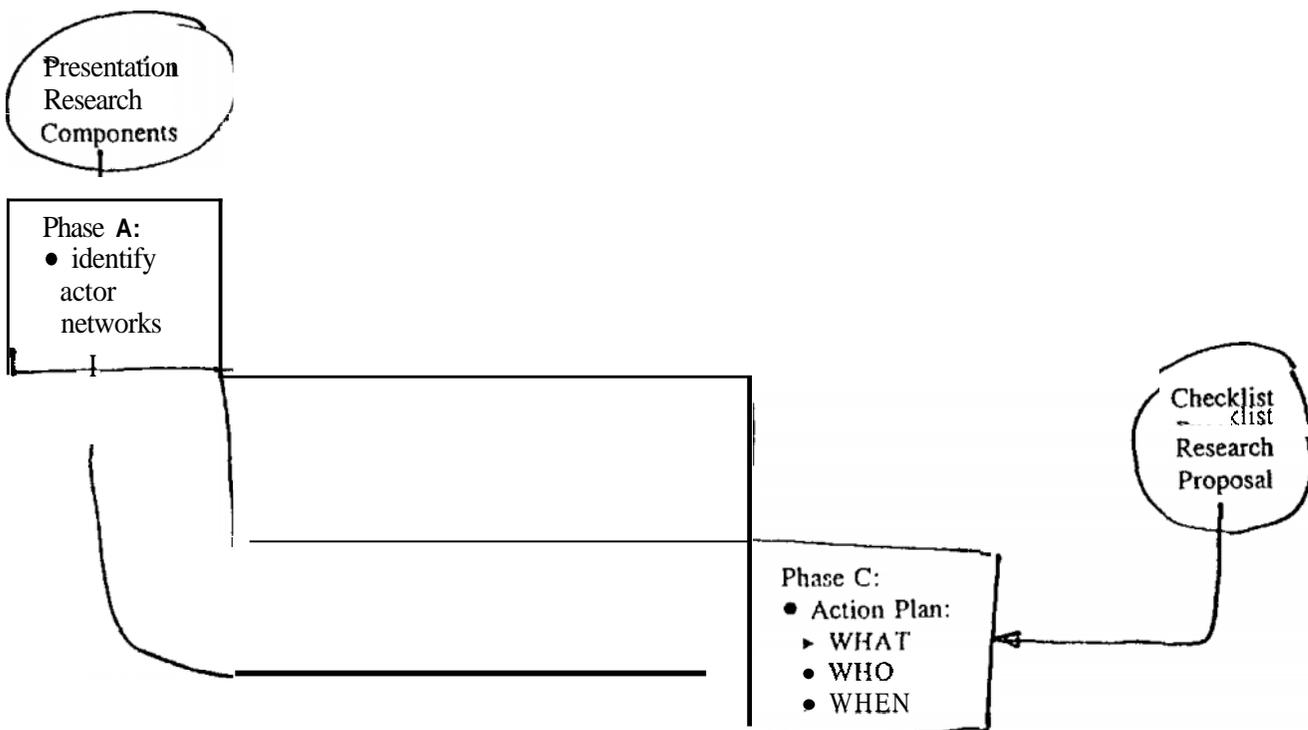


## 1.2 Outlining the last two days

Presentation of figure I .2. To come to the final output of the last two days: **an** action plan for the formulation of a research proposal, there will be a third cycle of RAAKS. Before starting this cycle there will be presentations of the three research components for the orientation of the non-IIMI participants. After groups have been formed on each of the research components, each group will start to work on the RAAKS cycle using the presentation of the research component **as a** broad Terms of Reference.

- During the Phase A, the groups will try to identify the actor networks for the research component and discuss what are relevant actors to be involved in a RAAKS-exercise.
- Phase B will consist of a SWOT-analysis thus identifying opportunities and constraints for working with RAAKS.
- In Phase C, the results from the SWOT analysis and the checklist for a RAAKS research proposal provide the inputs in identifying actions that need to be done to finalize the formulation of the research proposal. The results from Phase **A** can be used to decide WHO should be involved and responsible for these actions. Last but not least a time schedule has to be decided on: WHEN are the identified WHOs going to take the identified ACTIONS.

FIGURE .2: OUTLINING THE LAST TWO DAYS.



## **ACTIVITY 2:            THREE COMPONENTS: PRESENTATIONS**

Contributions of the IIMI *staff* and RAAKS researchers on the three research components:

- o     Institutional development by Cris
- o     Irrigation practices by Pierre
- o     Decision support systems by Mushtaq

*See Annex 10*

## ACTIVITY 3: FORMULATING ACTION PLANS FOR RESEARCH PROPOSAL WRITING

For the formulation of action plans for the writing of research proposals, a number of activities were planned and carried out. The results of these activities have been documented for each IIMI research component.

### 3.1 Formation of groups

*For this step exercise 16 was used.*

#### 3.1.1 Observation and Discussion

There were no participants from other organisations who were interested (enough) in the IIMI component decision support systems. to sign up as a group member.

### 3.2 Identifying actor networks and proposition for inter-organisational RAAKS research groups (Phase A)

*For this step exercise 17 was used*

#### 3.2 1 Observation and Discussion

There was no difficulty in identifying the networks but no concrete research groups were suggested. The groups felt that this was too soon and should be part of the research proposal writing.

Somewhat more troublesome was the collaboration/cooperation within the groups. Although the participants had some experience in group working, there was still the problem of not listening to one-another. overruling by those which would voice out his opinion loudest.

### 3.3 Phase B: SWOT - analysis per component

*For this step exercise 15 was used*

#### 3.3.1 Observation and Discussion

Most participants had a difficult time in making the SWOT analysis. It was hard for them to be clear about their own weaknesses and strengths with applying RAAKS in their own function/jobs. It was difficult for most of the participants to estimate what would be opportunities and threats within and between organisations to apply RAAKS in the work and services provided. A summary of the results of the three SWOT exercises is presented in table 3.1

## **ACTIVITY 2:            THREE COMPONENTS: PRESENTATIONS**

Contributions of the IIMI staff **and RAAKS** researchers on the three research components:

- Institutional development by Cris
- Irrigation practices by Pierre
- Decision support systems by Mushtaq

See Annex 10

## ACTIVITY 3: FORMULATING ACTION PLANS FOR RESEARCH PROPOSAL WRITING

For the formulation of action plans for the writing of research proposals, a number of activities were planned and carried out. The results of these activities have been documented for each **IIMI** research component.

### 3.1 Formation of groups

*For this step exercise 16 was used*

#### 3.1.1 Observation and Discussion

There were no participants from other organisations who were interested (enough) in the IIMI component decision support systems, to sign up as a group member.

### 3.2 Identifying actor networks and proposition for inter-organisational **RAAKS** research groups (Phase A)

*For this step exercise 17 was used*

#### 3.2.1 Observation and Discussion

There was no difficulty in identifying the networks but no concrete research groups were suggested. The groups felt that this was too soon and should be part of the research proposal writing.

Somewhat more troublesome was the collaboration/cooperation within the groups. Although the participants had some experience in group working, there was still the problem of not listening to one-another, overruling by those which would voice out his opinion loudest.

### 3.3 Phase B: SWOT - analysis per component

*For this step exercise 15 was used*

#### 3.3.1 Observation and Discussion

Most participants had a difficult time in making the SWOT analysis. It was hard for them to be clear about their own weaknesses and strengths with applying **RAAKS** in their own function/jobs. It was difficult for most of the participants to estimate what would be opportunities and threats within and between organisations to apply **RAAKS** in the work and services provided. A summary of the results of the three SWOT exercises is presented in table 3.1

Table 3.1 : Strengths and Weaknesses at different levels that **will** enable **or** present an obstacle to the formulation and implementation of **RAAKS** research activities in **IIMI** research areas.

<p>Strengths at Personal level</p> <ul style="list-style-type: none"> <li>dedication</li> <li>convinced of the methodology</li> <li>. [trained I knowledge of method.</li> <li>. RAAKS expertise</li> <li>one outsider</li> <li>. open mind and eyes</li> <li>RAAKS helpful in own work</li> </ul>	<p>Weaknesses at Personal Level:</p> <ul style="list-style-type: none"> <li>time constraint</li> <li>job description</li> <li>blue prints on the job</li> <li>(targets to achieve</li> <li>little experience</li> <li>no knowledge on irrigation</li> <li>it is (still) a learning process</li> <li>not yet insight what can be achieved</li> <li>language (farmers)</li> </ul>
<p>Strengths at Organisational Level:</p> <ul style="list-style-type: none"> <li>. enthusiastic persons</li> <li>conducive / open environment</li> <li>. IIMI: freedom, resources, contacts (internet network) and PUSH</li> </ul>	<p>Weaknesses at Organisational Level:</p> <ul style="list-style-type: none"> <li>organisation somewhat reluctant towards the methodology</li> <li>no/limited resources</li> <li><b>blue</b> prints in jobs</li> <li>targets to be met</li> <li>no expertise in <b>RAAKS</b> (other colleagues)</li> <li>no support for <b>SDO</b> (for RAAKS)</li> <li>few people of IIMI involved - not everybody</li> <li>mobilizing available IIMI manpower</li> <li>finance</li> <li>no involvement in the area</li> <li>high turn-over of personnel</li> </ul>
<p>Strengths at Inter-Organisational Level:</p> <ul style="list-style-type: none"> <li>. all agencies can collaborate</li> <li>collaborative attitude</li> <li>some collaboration already exists</li> <li>. knowledge</li> <li>. willingness</li> <li>. some agencies have [the same philosophy</li> </ul>	<p>Weaknesses at Inter-Organisational Level:</p> <ul style="list-style-type: none"> <li>. inter-departmental rivalry</li> <li>each organisation has its own plans and objectives</li> <li>constraints in manpower and resources</li> <li>. no resources and/or contacts (SDO)</li> <li>. priorities</li> <li>. no commitment</li> <li>. no communication</li> <li>. absence of actors</li> <li>. influential farmers</li> <li>. difficult to mobilize</li> </ul>

### 3.4 Formulation of action plans for finalizing the Research Proposals (Phase C)

*For this step exercise 18 was used.*

#### 3.4.1 Observation and Discussion

In the morning **the** activities were stopped for a while due to unfortunate circumstances in IIMI. The announcement had reached IIMI Head Quarters **that** one **of** their staff member was killed in **an** accident. The workshop program was **adjusted**. The rest of **the** morning was spent by **non-IIMI** participants finalizing the field reports. In the afternoon **the** facilitators evaluated the **last** two days. And a small closing ceremony was held.

## ACTIVITY 4: RESULTS

### 4.1 Action Plan IIMI Research Component Institutional Development

#### RESEARCH PROPOSAL INSTITUTIONAL DEVELOPMENT COMPONENT

##### RAAKS TRAINING DECEMBER 19 & 20, 1995

### 1. PRESENTATION INSTITUTIONAL DEVELOPMENT COMPONENT AND TERMS OF REFERENCE

Cris presents the background, objectives and activities of the institutional development component, and the TOR for the RAAKS research to be conducted in the Haroonabad area.

### 2. GROUP FORMATION FOR RESEARCH PROPOSAL

Participants:

Name	Organization/Area
Azmat Beg	IWASRI Lahore
Sajjad Naqvi	OFWM (WMS) Donga Bonga
Mehmood	IIMI Haroonabad
Nathalie	IIMI Haroonabad
Mirza	IIMI Haroonabad/OFWM
Cris	IIMI Haroonabad
Raza-Ur-Rehman Abbasi	SDO lining Haroonabad or Bahawalnagar (?)
Gulrez Khan	OFWM (AO) Hasilpur
Besharat Ali	Ext. (EADA) Haroonabad
Gulrez Akbar	OFWM (coord. training) Lahore

### 3. DISCUSSING TERMS OF REFERENCE

What is PIM and what is FICC?

PIM	Worldbank concept PIM Working Group: implementing body of PIM Established by Director General OPWM Mushtaq Gill Broad scope (3 disties in Fordwah Eastern Sadiqia South)
FICC	IIMI's initiative (november '95) Functional group Only 4-R disty Not definitely formed yet, following people (and their superiors) have been approached Besharat, EADA Haroonabad 2 Watermanagement Specialists (Mr Amjad, Mr Razzaq, Haroonabad have been suggested) 1 WMS Donga Bonga SDO Haroonabad (Mr Abeed Masood)

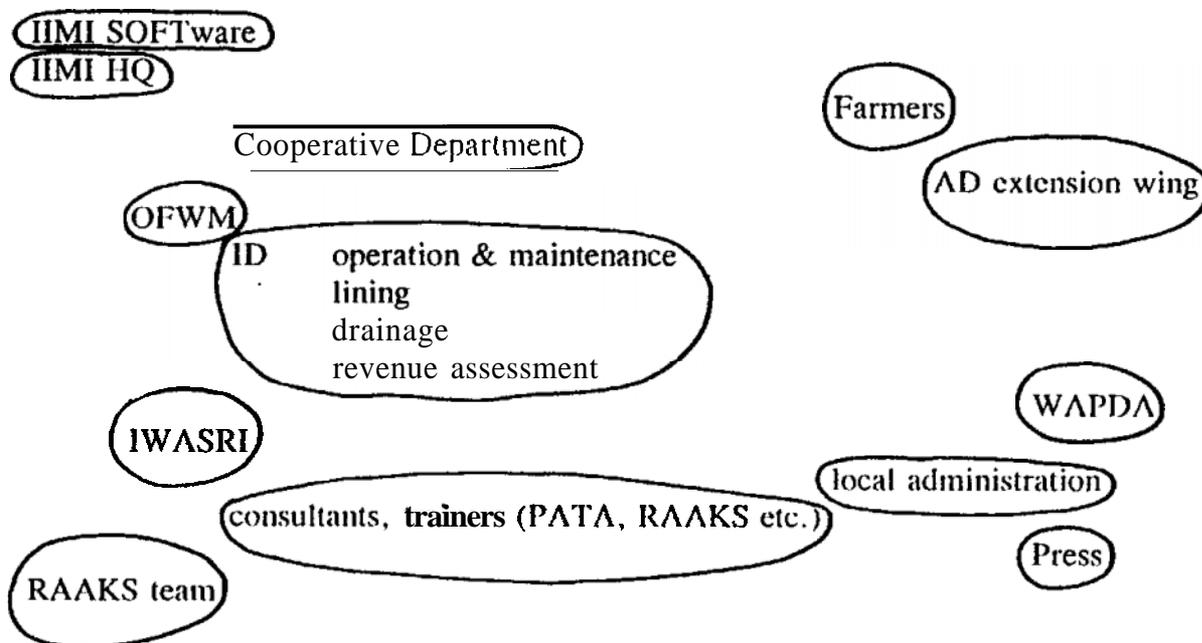
The first point of discussion which came **up**: Should FICC be regarded as an assisting body to the PIM WG? How do/should these collaborative arrangements relate to each other? Some people (Mirza, Abassi) think the TOR should include PIM in the analysis as well ("How can FICC **and** PIM WG make an active and sustainable contribution to..."), because FICC cannot operate without the consent of the PIM members. According to them only PIM WG can lay the foundations for FICC and for a RAAKS team, because it comprises the main decision-making actors. Abbasi and Mirza assume that **both** bodies have **the** same objectives. However, Nathalie puts this assumption to discussion and the following questions are brought **up**:

- \* What are the explicit and implicit objectives of FICC (IIMI) and PIM (OPWM, WB)?
- \* What problems and possible improvements do the members of PIM and future FICC see with regard to irrigation managenent?
- \* Will FICC and PIM WG use the same approach (participatory, farmer-oriented, top-down, bottom-up, oriented at future privatization?) and if not, are these approaches compatible?
- \* Can and should PIM and FICC develop at the same time and on the same track?
- \* Is the development of both bodies (as suggested by some team members) a feasible object/output of a RAAKS study within a period of 5 months?

In spite of the lively debate triggered by **these** questions, most of them are only slightly touched upon, due **to** time pressure and a coming and going of team members during the whole session. Therefore, although the problem statement as proposed in **the** TOR raised a lot of question marks. it has not been reformulated.

#### 4. IDENTIFYING NETWORK OF ACTORS

a



## 5. SWOT ANALYSIS

SWOT	PARTICIPANT	OPPORTUNITIES	CONSTRAINTS
personal	Naqvi	Implementation of extension techniques by continuous interaction with WUOs. Dedication	Farmers non-receptive Insufficient time
	Mehmood IIMI	Training available	Time Blueprints in job engagements
	Mirza IIMI	Training/knowledge (not much) Provides collaboration	Can't decide myself Fixed targets time constraints
organi-zational	OFWM	Some org. very enthusiastic	Some org. reluctant
	Mehmood IIMI	Conducive environment	Resources Blueprints Targets
	Mirza IIMI	Openness	Manpower Funds Specific plan/donors
inter-institu-tional	Naqvi OFWM	Agri-business agencies can cooperate Collaboration with other agencies (IIMI, Ext.)	Inter-departmental rivalries
	Mehmood IIMI	Collaborative attitude agencies	Agencies have their own plans to follow Manpower & time
	Mirza IIMI	Collaboration with OFWM, Ext. WAPDA IWASRI, somewhat ID	No commitment in past from some agencies

SWOT	PARTICIPANT	OPPORTUNITIES	CONSTRAINTS
personal	Basharat Ali Ext.	Lot of know-how to run TOR	Appointments (work schedule)
	Azmat Beg IWASRI	Convinced of RAAKS	Lillie experience
organi-zational	Basharat Ali Ext.	Almost ext. activities in favour of RAAKS (part. job)	Financing problems
	Azmat Beg IWASRI	Inclined to RAAKS in drainage sector	Engineering organization no expertise with RAAKS
inter-instit-utional	Basharat Ali Ext.	Collaboration with IIMI	---
	Azmat Beg IWASRI	Cooperation with NRAP, IIMI	---

Nathalie, Cried and Abassi were not present during the SWOT analysis.

## 6. ACTION PLAN

WHAT ACTIVITIES	WHO and HOW	WHEN
<b>1. Formation research team</b>	Mehmood, Cris, Nathalie	January 15 1996
1.1 Meeting of involved actors	SDO (ID), EADA (Har.), WMS (OFWM), Mehm., N., Cris, WAPDA, Coop. Dept., IWASRI, IMI (HQ)	January 20
1.2 Asking involved actors about interest in working with RAAKS team		January 20
1.3 Permission for participation in RAAKS team		
1.4 Asking about resources that team members can invest	. .	
1.5 Dedication of team members		
<b>2. Formulation research proposal</b>		

## 4.2 Action Plan IIMI Research Component Irrigation Practices

### DISCUSSION POINTS RAAKS RESEARCH PROPOSAL HASILPUR January 1996

#### 1. Introduction

This document merely provides the RAAKS research group (as formed at the end of the RAAKS workshop held from 10-20 December, 1995) in Hasilpur with some key discussion points to be dealt with in future meetings. Therefore, it is emphasized that all the information in this document below is open to dialogue and should be discussed among the RAAKS research group members. Our first task will be to complete the establishment of the actual RAAKS research group in Hasilpur (identification of other important actors?), and to make the roles of all people and institutions involved explicit by means of a group contract. The issues addressed below could well serve as a basis for discussion during the first RAAKS team meetings to decide which topics should be in the final research proposal and who is going to write the content for these topics. Furthermore, a deadline has to be set for the final research proposal. The RAAKS research proposal will be a joint RAAKS research group effort, agreed upon by all RAAKS research group members.

#### 2. Background

This is partly based on the introduction of the Terms of Reference (TOR) for the development of a RAAKS research proposal, December 1995 (Annex 1). This TOR served as a background on IIMI's research activities 'below the mogha' in Hasilpur, and the problems that have arisen. Irieka Margôt Kalwij (IMK, IIMI Lahore) will elaborate more on this and will also give more detailed information on the watercourse management activities undertaken by IIMI in the area.

Key issues to be addressed in this respect are:

- \* objectives IIMI's research activities.
- \* problem definition (general and specific) related to IIMI's research activities in Hasilpur (watercourse management) i.e.:
  - poor contact with farmers;
  - no (strong) linkages with other key actors;
  - no experience with dissemination; and
  - on dissemination => no integration between 3 research components (integration in research?).
- \* in response to the above problems IIMI introduced:
  - a methodology to communicate with farmers in order to create goodwill and carrying capacity among farmers to (keep on) work(ing) with IIMI => PRA training and research!;

- a methodology to communicate and collaborate with other key actors/institutions, and to create goodwill, carrying capacity and involvement of other institutions in order to disseminate IIMI's research results => RAAKS training and research!

IIMI STAFF	DATA COLLECTION
Pierre Strosser Robina Wahaj Saeed ur Rehman (*)	Water allocation and distribution at watercourse level
Ineke Margôt Kalwij (*) Shahid Sarwar M.S. Shafique Dr. Waqar A Jehangir (*)	Irrigation practices at field level
Marcel Kuper Ineke Margôt Kalwij (*)	Irrigation practices and salinity/sodicity at field level
Khalid Riaz Marcel Kuper	Irrigation practices and salinity/sodicity and crop yields
Jean-Daniel Rinaudo Pierre Strosser	Impact of canal supplies on agricultural production at farm level
Professor Skogerboe Dr. M. Aslam Dr. Waqar A. Jehangir (*)	Groundwater management and its sustainability

### 3. Intentions of the RAAKS research

The main objective of the RAAKS research, as defined in the TOR and prior to the discussion in the preliminary RAAKS research group, was redefined as follows:

*"To develop a feasible working relationship between IIMI, farmers, On-Farm Water Management (OFWM) and Extension Services (and other actors?) that will facilitate the process of dissemination of improved irrigation practices (and other research results?) to the farmers of the area."*

Only a few terms and words have been changed in comparison with the initial objective. The term *appropriate* was changed in *feasible*. Still, the implementation of *feasible* working relationships will be open to discussion. The Irrigation Department (ID) has been left out as **an** actor because in this stage it is not clear what this department could contribute to the RAAKS research in Hasilpur. The part *..that will lead to the...* has been replaced by *..that will facilitate the process of,..* because the group was of the opinion that is too early (unrealistic) to talk about an actual implementation of dissemination of research results. Instead, strong emphasis should be put on the process needed to reach these longer-term objectives. IIMI's role in this process will be to provide input related to irrigation practices, and take active part in the discussion with other actors on how to tackle the key issues and problems summarized in Section 2. The possibility for identification and in- or exclusion of other interested actors and to extend the focus to other research results is also open to discussion. The idea is to first narrow the scope of the **RAAKS** research **and** to keep the **RAAKS** research group 'manageable' in that the group should not involve too many people.

Underlying this objective are:

- a (network) analysis of the current activities performed by the different actors;
- the identification of existing and missing links between actors;
- the development of good relationships with farmers;
- the identification of joint activities with staff from government departments; etc.

Ali Hassan Shah	International Waterlogging and Salinity Research Institute (IWASRI), Lahore
Munawar Ahmad	On-Farm Water Management (OFWM), Christian
Muhammad Arshad	Agricultural Extension, Christian
Muhammad Rafique Khan	IIMI Field Station, Hasilpur
Saeed ur Rehman	IIMI Lahore
Waqar A Jehangir	IIMI Lahore
Ineke Margôt Kalwij	IIMI Lahore
Jos van Gostrum	IIMI Lahore/Hasilpur

order to get a clear picture of where the group stands at that point in time and what needs to be done (division of tasks, identification of expectations, time schedule, etc.). In the light of this meeting it is good to summarize the results found with the SWOT-analysis during the training. This analysis pointed out strengths and weaknesses at different levels that will enable or prohibit the formulation and implementation of **RAAKS** research activities in IIMI research areas:

SWOT	Groupmember	Strength	Weakness
Personal level	All	*Involved in transfer of research results to farmers; *Interaction with farmers.	*Still in learning process.
	Munawar	*RAAKS helps to achieve targets; *RAAKS is easy to work with.  *Already working with farmers, RAAKS helpful.	*Job description from his Deptt. differs.
	Rafique	*Interest in using RAAKS for the benefit of farmers.	*Influential farmers don't want to change; *No proper knowledge available.
	Ineke	*For dissemination of agricultural technology to farmers and its evaluation.	*Not yet a good insight in what can be achieved.
	Arshad		*Still in learning process.
Organisational level	Ali (IWASRI)	*Utilization of salt-affected lands through farmers' participation. *Water management is shared work; it will be more rapid.	*Financial constraints
	Munawar (OFWM)	*IIMI introduced RAAKS to better achieve its main objective: diss. of research results.	*Lack of experience with participatory approaches.
	Rafique (IIMI Hasilpur)	*Expertise is available.	*Involvement of many actors may create problems.
	Ineke (IIMI Lahore)	*Increase production by proper use of inputs by the farmers with the use of agricultural recommendations.	*Expertise is difficult to mobilize.
	Arshad (Agr. Ext.)		*Deptt. has no authority/ power to check small practices in case of every input; *Lack of govt. transport facilities for field staff.
Inter- Organisational level	Has not been dealt with!		

ACTOR	CURRENT ROLE
Farmers sample non-sample	
IIMI Head Quarters Lahore Field Station Hazilpur	
RAAKS research group	
OFWM	
Irrigation Department	
Agricultural Dpt • Extension Training	

WIAT (broad)	WIAT (specific)	WHO	HOW	WHEN
formation of RAAKS group				
reporting				
finalizing proposal and start RAAKS				
Phase A RAAKS				
Phase B RAAKS				
Phase C RAAKS				
report writing				

### **4.3 Action Plan IIMI Research Component Decision Support Systems**

**See Annex 11.**

## ACTIVITY 5: Evaluation of Day 9

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### EVALUATION OF DAY 9

#### Strong Points

- + people are eager to start on the 'real' thing
- + time management was good
- + good day / satisfactory

#### Weak Points

- high absence of participants
- low participation of IIMI personnel
- lack of interest of participants
- people still don't listen to each other
- poor participation in group discussions
- short of people for DSS component

#### Suggestions

- allow time for report writing
  - facilitators need to help in finishing action plans in time
  - facilitators need to keep on 'pushing' people on formulating as precise as possible
  - formulation of action plan as a project instead of in small sessions
  - give examples of RAAKS' use in different organizations
  - management should accept suggestions / good advice
  - will expectations be used?
  - closing ceremony earlier
-

## ACTIVITY 6: FINAL EVALUATION OF THE WORKSHOP

Best part of the training	Worst part of the training
<ul style="list-style-type: none"> <li>+ facilities best</li> <li>+ arrangements</li> <li>+ objectives of training</li> <li>+ participants</li> <li>+ overall training good, new ideas of</li> </ul> <p><b>RAAKS</b></p> <ul style="list-style-type: none"> <li>+ RAAKS explanation with practical training (in field)</li> <li>+ comprehensive explanation on RAAKS</li> <li>+ like energizer, group working, tough subject taught in easy way</li> <li>+ learning through participation</li> <li>+ distribution of responsibilities were clear and obeyed</li> <li>+ first day</li> <li>+ actor workshop (4*), actors involved in discussion</li> <li>+ PRA</li> <li>+ facilitators of training were well experienced, cooperative and dedicated. I wish them success in life.</li> </ul>	<ul style="list-style-type: none"> <li>- travelling to the fieldwork site (4*)</li> <li>- always lagging behind schedule</li> <li>- farmers were not informed in advance</li> <li>- first day</li> <li>- less time given to fundamental concepts</li> <li>- phase B was the weakest part</li> <li>- no real team building</li> <li>- language difficult</li> <li>- not enough facilitation</li> <li>- facilitators could not maintain interest in last three days</li> </ul>

## **PART 5. FACILITATION PROCESS**

## PART 5. FACILITATION PROCESS

This part of the report presents learning points on the facilitation of the training workshop. These learning points can be identified in any process in which people have to work together, analyze their situation together, while looking after their own interests, taking pride in what they know and pushing their own perception of the situation.

This part provides practitioners of the RAAKS methodology with insights and instruments to support and facilitate training in RAAKS, research and processes of change.

### 5.1 Creating a learning atmosphere

One of the most important aspects of facilitation is the creation of an atmosphere in which people can learn. This is not to say that people will learn because other factors play a role as well, but the possibility should be there.

In the following a description is given of what we consider essential for a 'learning atmosphere'. We reflect on our own collaboration and what we tried to bring across to the group of participants. Important elements in our facilitation were the learning approaches and learning methods chosen. A essential aspect in using approaches and methods is: to be flexible!

#### 5.1.1 Collaboration between facilitators

Our collaboration as facilitators was enjoyable, relaxed and motivated. The atmosphere was characterised by a lot of laughter, creativity and picking up challenges. There was a non-competitive atmosphere. We acknowledged the other person's qualities and made good use of it. Tasks were divided in a flexible way. During the workshop we constantly changed roles from one facilitator leading activities and the other supporting him/her and vice versa. Personal confessions were also part of our collaboration. First, a sense of failure if one of us had performed very well and the other had not. But instead of getting stuck in that feeling we realized that we had to observe each other to learn from each other. We have tried to create this learning atmosphere in the training workshop.

#### 5.1.2 Learnine Approaches

During the training workshop three different learning approaches could be distinguished:

- Teaching;
- Learning by doing;
- Learning through competition.

The workshop programme was very much directed towards learning by doing|discovery learning. Short presentations on a new subject were followed by exercises in small groups to put into practice what had been presented. Participants were clearly not used to this. Our dynamic and participatory way of working was evaluated very positively. But at the same time participants wanted more lectures and instructions on 'how to do what'. On the second day, the learning process seemed to stagnate because participants felt very insecure about doing exercises without enough knowledge. Participants

insisted that the facilitators would change their teaching method because it was too much different from theirs. They said that in Pakistan the trainer instructed the participants first and showed them how things were done before they themselves would implement it (box 4.1).

**"If you want us to learn how to swim, don't push us into the water but teach us how to swim first".**

**(participant IIMI-training workshop, 1995)**

We had to adapt our approach to participants' needs in order to stimulate learning. It was agreed that for the next day the participants would read the **RAAKS** manual thoroughly and the facilitators would prepare a presentation of how to use the windows. Our flexibility in changing our approach was very much appreciated.

The other side of the story is that by having forced participants to dive into the deep they could formulate more specifically what exactly they needed to stimulate learning about **RAAKS**. Also, the participants were much more willing and eager to pay attention during the lectures.

Monitoring and evaluating learning approaches during the whole process is essential. Adjusting and switching learning approaches can improve learning. It can also lead to new things such as our experiment with learning through competition.

We observed that competition was an essential feature among Pakistani participants. They enjoyed the games we used to energize the groups. During the field work there was a competitive atmosphere between the two field groups. After the field work we were faced with the difficult task to stimulate reflection on what the groups had been doing. We decided to make use of this competitive element and organized a **RAAKS** quiz. There was a striking difference between how the Pakistani participants responded to the quiz and the expatriates. The Pakistani participants enjoyed the quiz very much as they felt the competition stimulated their learning process. Some expatriates were irritated and even felt blocked by this approach.

### **5.1.3**      **Diversifying learning methods**

We tried to vary different learning methods to stimulate learning. New information was repeated, we tried to visualize as much as possible using flip charts, overhead sheets and coloured cards. Activities from the previous day were summarized at the beginning of the day. Participants were provided with checklists and instruments to guide them through the exercises. We also stimulated participants to use different ways of presenting results such as visualizing through drawings and role plays.

Using different learning methods clearly brought out some of the hidden or not used qualities that participants had. Some turned out to be great players in role-plays or artists in making drawings of discussions. These qualities came out when giving clear instructions with each exercise: what are we doing, why and what is expected?

#### **5.1.4**      Explicitizing learning objectives

The first day we asked participants to formulate their expectations of the workshop and their learning objectives. We tried to explain the difference between expectations (what do you expect from the workshop?) and learning objectives (what exactly do you want to learn?) but participants had difficulty to grasp it. We also refrained from referring to the learning objectives during the workshop and at the end. This would have stimulated participants to monitor their own learning process (what have I learned so far and what is missing still?), thus enabling them to take responsibility for their own learning process.

#### **5.1.5**      Learning environment

The environment participants are clearly influences the learning process. This became clear especially during the exercises in small groups. Groups working in different environments were performing differently. The small committee room which had an oval table in the middle stimulated individuals to move around and work together actively. Cards, flip-charts etc were put on the table enabling group members to discuss and work with the material freely.

The big conference room was twice as big as the small room and had tables and chairs arranged in a U-shape. Although there was enough space to sit where and how people wanted (group around tables or moving away from it, sitting on the ground etc) groups tended to work in a passive, formal meeting atmosphere. Most groups remained seated with one person standing in front of the group with a flip chart.

Working outside on the grass encouraged interaction. One of the field groups gathered outside, sitting around a large round table thus facing each other.

The field work confirms that taking people out of a 'formal' environment stimulates interaction between individuals and enhances joint learning. 'Activating' environments are a necessity. They are not always at hand but need to be created.

During the field work the field group that had started off very well during preparations continued to do so. The field group which had had difficulties from the beginning kept on struggling. They needed much more facilitation from our side. Thus, a learning atmosphere is not the only precondition for learning. Other factors are also influential. These will be discussed in the next paragraph.

### **5.2**      **Facilitating learning by groups**

In facilitating learning by groups we came across a number of important aspects. Joint learning starts with team work and learning how to work together. The ability to listen is a prerequisite.

Furthermore, team work requires being aware of dynamics between different cultures, i.e. expatriates and Pakistani, and taking responsibility for solving group conflicts. Specific research activities need good facilitation as well, such as interviewing, presenting results and involving actors actively in the process. Through regular evaluations using different methods we tried to bring out the different aspects of joint learning and stimulate reflection during the workshop.

The aspects discussed in paragraphs 5.2.1. to 5.2.4 are related to internal group dynamics. The comments in paragraphs 5.2.5 to 5.2.7 refer to the question what is needed for active involvement of actors. The last paragraph goes into facilitating evaluation.

### 5.2.1      Team work

From the beginning we tried to make the groups responsible for their own process. internal problems and outputs within the time set. A checklist for group work was given to enable them to work more effectively by dividing tasks. Before the field work the field groups had agreed on rules how to work together.

Our general attitude was to intervene only if groups were not progressing or if they couldn't solve problems among themselves. Group members have their own responsibility in bringing up problems they experience. Groups have the responsibility to address these problems.

Chairing, managing time and making decisions were **most** difficult for the groups. Some participants were non-cooperative, sitting back or walking around, not paying attention or taking responsibility for the work to be done. We observed the groups and discussed if intervention was needed and how this could be done. We also tried to find our own way. One facilitator tended to lead groups more during exercises. The other facilitator intervened more as an outsider if he felt groups were not functioning well, if tasks within the groups were not performed well or if someone was not participating actively. Possible ways of intervention used:

- taking people out of the process;
- asking persons directly what they think;
- describing to the group what an outsider observes from watching them;
- asking who is responsible for a certain task (e.g. time keeping);
- making remarks with respect to content;
- making suggestions.

Especially during the field work we were struggling whether or not to intervene. In the beginning we just observed the groups. Later on, when the groups got stuck in analyzing the information collected, our involvement with the groups was very high. Most participants evaluated this positively, some felt confused by the input of the facilitators. Although we kept checking all group members understood decisions made in the analysis, we have mixed feelings about how much some participants have learned.

### 5.2.2      Listening

The most prominent skill lacking in most participants was the ability to listen to each other. This problem kept reappearing. In class, group work, field groups and during interviewing participants interrupted and overruled one another. During plenary sessions the facilitators set the rules for discussion, but in the small groups their influence was minor and chaos seemed to take over.

### 5.2.3      Group dynamics between expatriates and Pakistani participants

From the beginning it was difficult to involve participants actively. Expatriates tended to dominate in group work. In plenary sessions where participants were asked to categorize their cards, only a few Pakistani participated actively. They were standing up front together with expatriates discussing and arranging cards on the wall. They were doing their own thing, standing with their backs to the other participants, not giving space to others to step in. One of the facilitators tried to involve other participants by addressing questions to them: "Do people in the back row agree with what is happening

up front? What categories do you see?" People became aware of the fact that this was a group exercise and things changed.

In group sessions expatriates often had key-roles: writing on flip charts, chairing discussions, taking notes and presenting results. One of the facilitators intervened several times by asking whether this was an 'expat' show. This is not to say that expatriates are indeed dominant. They have to be aware of the group dynamics of which they are part. We observed that Pakistani participants put a lot of pressure on expatriates to take the lead in exercises. This was especially the case for the RAAKS researchers who were struggling with role confusion. The facilitators had instructed them to function as regular participants, keep a low profile and let others take key-roles. We wanted the group as a whole to set the speed of learning, not by one RAAKS expert pulling the rest. But because of their RAAKS expertise other participants expected the researchers to do exactly that. Their explanation that all group members should take up responsibility for the learning process was misunderstood by some participants as refusal to help the group. Pressure was put on them stating 'the RAAKS researcher in the other group is leading there'.

#### 5.2.4 Solving group conflicts

We tried as much as possible to make clear that problems in the groups should be solved by the groups themselves. Participants asked **us** to help them solve their personal "struggle" in the group. Time and again we pointed out that they were responsible themselves to mention the problem in the group. We suggested they would be open and describe to the group what happened and how it affected them.

Before the actor workshop a conflict arose between the field groups and the facilitating team. The facilitators discussed about how to solve the conflict. One facilitator wanted to intervene because she was afraid the actor workshop would be affected. The other facilitator wanted the groups to solve the problem themselves. He felt we could intervene only if the groups asked for help, which they did. We asked the groups not to quarrel about who had done something wrong, but to Focus on why they were there and what was best for the actors and the workshop. Finally, the groups reached agreement.

#### 5.2.5 Presenting erouo results

Related to the difficulties in listening, participants tended to present their own personal view instead of reproducing and summarizing what had been said by others. This was especially the case during the preparation and implementation of the field work. Next to listening exercises, summarizing exercises would **also** have been useful.

#### 5.2.6 Improving interview skills

Most participants hardly had any experience with (formal) interviewing. We had provided them with a checklist to divide tasks and a checklist for observing the interview process. These checklists were hardly adressed, nor put into practice. The facilitators participated in some of the interviews and observed quite some problems which participants did not seem to be aware of. Interviewers did not introduce themselves properly, they were not clear about the objectives of research and interview. They took all the time they had for the interview and followed their list of questions without paying attention to the interviewee as a person. They asked closed questions and were feeding the answers.

Feedback was given through a role play which was discussed with participants (see Evaluation methods). Developing interview skills will help develop the listening ability of participants.

### 5.2.7            Facilitating an actor workshop

Each field group had appointed two members for the facilitating team of the actor workshop. We provided the team with a checklist of points of attention for organizing the workshop. They were expected to do the work themselves. The facilitators were consulted about the order of activities and to intervene in a conflict with the two field groups. On evaluation day the facilitating team evaluated their group work, raising most of **the** problems observed by the facilitators.

From the workshop it became apparent that facilitating an actor workshop is not an easy thing. Leading the discussions was too much for only one person. Topics for discussion were decided upon by the facilitator. he didn't consult the audience. Problems with listening also occurred here. Some participants started lecturing the audience. thus taking the risk of blocking feedback. Some participants were not satisfied about the workshop because no concrete activities were proposed by farmers. They also questioned whether some actors would have shown up without an incentive from **IIMI**.

In RAAKS the actors are responsible for improving their situation. The **RAAKS** team has to facilitate this process of change. They analyze the problem situation and present their results in a discussion report. These reports serve as input for actor workshops. The workshop is as a forum for debate and negotiation about what the problems are, how these can be solved and by whom. The RAAKS team facilitates these discussions and integrates the results of the workshop into a final report. The actors together are responsible for making sure that agreements reached in the workshop will be executed.

### 5.2.8            Evaluation methods

We tried to evaluate our activities in a participatory manner. Each day was evaluated and throughout the workshop one wall was filled with flip charts of day evaluations (Exercise 6). We adjusted our activities and approach according to participants' comments.

Another method for evaluation was the use **of** role plays. During ~~the~~ field work we observed that **all** groups had problems with interviewing. We discussed how to address these problems considering the limited time we had for plenary sessions. We also felt that a verbal presentation of do's and don'ts was not effective to change people's attitude. Thus, we decided to do a role play in which we would confront participants with their own behaviour. The role play was performed in two scenes (introduction and questioning). After each scene we asked participants what they had seen. The laughter we evoked and the points raised by the participants showed that we had touched the right key. After the role play the groups did improve on interviewing and were giving feedback to their colleagues.

On evaluation day the field groups evaluated their performance in role plays. They had the courage to look at themselves critically and show what problems occurred in group work. It was unfortunate that they could not 'make up for their mistakes' by preparing a role play how they wanted to improve. This would have made the evaluation and learning much stronger.

On the last day of the workshop the facilitators gave a verbal evaluation of the workshop. We used the drawing of phases of the workshop to illustrate the different steps in the learning process. The evaluation would have been much stronger if we had visualized our verbal presentation as well.

## 5.3 Dealing with problems in analysis

### 5.3.1 Multiple perspectives

The linear model was dominant in the thinking of many participants. Two out of three groups saw the problem in Benin as reluctance of farmers to adopt technology. During the discussions it was stressed several times to be open to other people's views. People have their own reasons for (not) doing things, and these are equally valid as others. One participant remarked that in the video on Benin he had seen only one organisation working on extension. Thus, expressing his narrow definition and thus narrow vision on extension. In fact, all three organisations presented in the video were working in the field of extension.

Participants were struggling with how to handle other views within the groups. The facilitators stressed that it was important to acknowledge differences in opinion and present these instead of trying to reach consensus all the time. But it was difficult to make people aware of their behaviour and to change this. During the field work one group 'solved' this problem through dominant individuals pushing their view. Another group solved it through voting. However, both groups had the tendency to strive for consensus, and differences in perception within the groups were omitted from the presentations.

During the formulation of action plans for the RAAKS research, differences in view became apparent as well. Some actors were reluctant to participate in the RAAKS research proposed by IIMI or they were waiting for IIMI to take the lead. We had difficulty with keeping the groups on track because there was a lot of confusion about the objectives and content of the research. And IIMI staff responsible for the research components were coming and going during the day. This tension between the responsibility of individuals and responsibility of the initiators will reappear during the actual RAAKS research and has to be addressed.

Becoming aware of one's own view is a core element in RAAKS. Respecting and accepting different views is another. Differences in views are the starting point for further analysis and negotiation. There is no one true perspective, each view is equally valid. It is important which different views people have and why that is so. This is the basis for creating common ground for problem solving.

### 5.3.2 Coping with uncertainty

From the beginning participants couldn't cope with uncertainty. They were reluctant to do exercises without much background knowledge. They always felt time was not enough to handle all information and analyze it properly to reach valid conclusions. During the field work the groups were afraid to draw conclusions. They kept on discussing and analyzing the information, making new sheets and not using results from the previous analysis. They didn't take decisions on what the problem was and which information was more important than others. Thus they were searching without focus. The last two days the facilitators took the lead in the field groups. We tried to pull them towards drawing

conclusions, forcing them to take decisions and to combine the results from different windows by making drawings. We stressed that if they felt they didn't have enough information they should make assumptions, make these explicit and put them for debate in the actor workshop.

In RAAKS the team is not striving for the one and only true picture. They are not the experts telling actors what to do. They present their perspective as an input for debate and negotiations between the actors involved. The actors together are responsible for the process of change.

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**PART 6.**

**EXERCISES  
CHECKLISTS  
ENERGIZERS**

■

## **6.1 EXERCISES**

## **EXERCISE 1: GETTING ACQUAINTED**

### Objective:

- Getting acquainted.

### Procedure:

- Form a circle (no tables in between people);
- Each person steps into the circle and says **her/his name**; this can be a first name or a name (s)he would like to be called by;
- Another round is made: each person steps into the circle saying his name and an adjective starting with the first letter of **her/his name**; Purpose of this round is to tell something about yourself by putting the adjective before your name e.g. Smart Steve, Musical Monique. The adjectives can tell something very personal about yourself, about your character or something about your hobbies.
- **A** third round can be made following the same procedure telling everybody where you are working and what you do (in one sentence).
- **A** different procedure can be to provide every participant with as many beans as there are participants. These beans should be put into their right pockets or held in their right hands. People are then asked to introduce themselves to every other participant in one sentence telling where they work and what **they do**. After the introduction each person will give one bean to the other person and receiving one bean in return. The received beans should then be held in their left hand or in their left pocket. The exercise ends when everybody has as many beans as there are participants in their left pocket or hand.

### Time:

- 15 to 30 minutes

### Materials:

- Beans

## EXERCISE 2: EXPECTATIONS OF THE PARTICIPANTS

### Objective:

- To make an inventory and analysis **of** the expectations **of** the participants

### Procedure:

- Each participant is given colored cards to write down her/his expectations of **the** training workshop;
- The participants are asked to put them on the wall and see whether their cards match/fit with cards put on **the** wall by others. In this way participants group around the cards on the wall and cluster the cards themselves.
- Discuss the cards and clusters

### Time:

- 30 minutes

### Materials:

- colored cards
- markers
- pins or tape

## EXERCISE 3: FORMULATING LEARNING OBJECTIVES

### Objective:

- To have each participant formulate her/his learning objectives **so that** at the end of the course (s)he can evaluate her-/himself on these objectives

### Procedure:

- Each participant takes one sheet of paper and formulates her/his learning objectives. (option: participants are asked to formulate their learning objectives for each **of** the categories of expectations obtained in the exercise 2.1. (the formulation should be brief and concrete **so** it can be checked), The sheets are placed on the wall so that the participants and facilitators can consult them during the training;
- The learning objectives can be monitored during the various stages of **the** course;

### Time:

- 30 minutes

### Materials:

- sheets
- markers
- pins or tape

## EXERCISE 4: PARTICIPATORY WORKING

### Objectives:

- Gain insights in the associations participants have on participatory working.
- Gain insights/ present experience in participatory methods.
- Inventorize opportunities and constraints of working with participatory methods.

### Procedure:

- each participant receives 3 different colored cards. Each card is used to answer a different question:
  - Red: What would participatory working mean in your work? What would it look like?  
(Option: Finish the sentence: If I could work in a participatory manner I would .....)
  - Blue: What opportunities and constraints within your own organisation do you see for working in a participatory manner?
  - Green: What methods for participatory working do you know? (experience Y/N)
- Make an inventory of the cards and categorize them
- Discuss the clusters of cards

### Facilitation:

- See to it that remarks made are addressed

### Time:

- 60 minutes

### Materials:

- colored cards
- markers
- pins or tape

## EXERCISE 5: **RAAKS** and PRA

### Objective:

- To combine RAAKS principles and analytical design with PRA techniques in order to provide insight in the difference between RAAKS and PRA.

### Procedure:

- Make inventory of the most important **problems** of irrigation in Farooqabad.  
Every participant is given cards on which **(s)he** draws an important problem. These are put on the ground. Cards are inventorized, categorized and discussed **by** the group.
- Prioritize the problems  
Participants are given 3 beans. (option: women and males receive different beans)  
They are asked to **put** the beans on the most important **problem(s)**. The most important problems are separated and spread on the ground. (option: another round **of** prioritizing with beans).  
NOTE: the problems should be documented and the scores of beans **as** well.
- Actor Identification of the most important problems  
Take a **big sheet of** paper. Make a matrix by putting the 3 most important problems on short side (y-line) of the paper. Along the long side then all actors identified can be placed.
  - Participants are given cards to (draw their) **answer(s)** the following questions:
    - what actors are present in the area?
  - ▶ Participants answer the following question:
    - what actors are working on problem 1? problem 2? problem 3? (facilitator marks the actor-problem combination on the sheet)
  - ▶ Participants are then asked:
    - what actors are the most important? Who should take the lead in solving the problem? (participants are given 3 beans to indicate the most important actors for each problem)
- Draw conclusions from the Matrix of actors and problems  
(in RAAKS the exercise is done with different actors and used for debate)

### Time:

- **60** minutes

### Materials:

- flip chart sheets
- colored cards
- markers
- beans

## **EXERCISE 6: EVALUATION OF THE DAY**

### **Objective:**

- o To evaluate the activities on strong and weak points and obtain suggestions for possible adjustment to the program, activities and their content.

### **Procedure:**

- o Each participant is asked to fill out three cards: one card for what **(s)he** liked about the day, one card for what **(s)he** did not like about the day, and one card for a suggestion (for improvement).
- o The facilitators organize and categorize these cards and write them on a flip-chart.
- o The results can be fed back to the participants in different ways:
  - ▶ Reading out loud the cards (per category (good/bad/suggestion) to the participants after they all handed in their cards;
  - ▶ Presenting the results **at** the start of the next day. Then also the facilitators can indicate which points and suggestions they will address and which not.

### **Time:**

- o **10-15** minutes

### **Materials:**

- flip-chart sheet
- o markers
- o cards

## EXERCISE 7: RAAKS METHODOLOGY - PHASE A

### Objectives:

- To familiarize the participants with the Phase **A** of the RAAKS methodology.
- To practice a PRA technique.
- To apply the knowledge system perspective to a specific problem situation.

### Procedure:

- Form 3 groups with a diverse composition consisting of different actors, different sections and levels (HQ or field), gender. (people who often work together should be separated)
- Provide the groups with the Terms of Reference (TOR). In the Benin case the following TOR was given:  
"CARDER would like the group to formulate recommendations to change farmers attitudes in order for farmer to adopt CARDER advised practices on food crops."
- The groups answer the questions below using cards and putting the cards on the ground in such a way that it becomes visible who are actors, their objectives, what are the problems they see and what external factors influence them.
  - ▶ What actors are involved? (Participants use cards to make an inventory of the actors)
  - ▶ What are their objectives? and What do they see **as** (the) **problem(s)**? and How successful are the actors in solving these problems? (Participants use cards to **make** an inventory the actors' objectives and different cards for the problems the different actors see)
  - ▶ What are external factors? (Participants use cards to make an inventory the external factors)
- The groups will then have to decide on the most important problems:
  - ▶ Prioritize the problems  
Participants are given 3 beans. (option: women and males receive different beans) They are asked to put the beans on the most important **problem(s)**. The most important problems are separated and spread on the ground. (option: another round of prioritizing with beans). NOTE: the problems should be documented and the scores of beans as well.
  - ▶ Prioritize the Actors  
Participants are then asked: - what actors are the most important? Who should take the lead in solving the problem? (participants are given 3 beans to indicate the **most** important actors for each **problem**)
  - ▶ Prioritize the External Factors  
Participants are then asked: - what external factors have the strongest influence? (participants are given 3 beans to indicate the most important factors)

- The Groups then have to decide on problem definition vs TOR  
Does the group accept the TOR or is the TOR in line with the outcomes if the analysis of the problem situation.
- GROUPS HAVE TO MAKE A DRAWING OF THE PROBLEM SITUATION AND PRESENT IT.

**Time:**

90 minutes

**Materials**

- flip chart sheets
- colored cards
- markers
- beans
- pins or tape

**EXERCISE 8: RAAKS METHODOLOGY - PHASE B**

**Objectives:**

- To apply the windows and tools.
- To gain insights in analyzing situations using windows and tools.
- To gain insights in combining results from different windows.
- Participants learn to work as a team in analysis.

**Procedure:**

- All groups use two windows/tools from the 9-phase to analyze a situation and draw conclusions by combining the results from the two windows.
- The groups also have the opportunity to interview two actors: the trainers will play an extension worker and a community worker from the NGO PEMR.
- Plenary presentation:
  - ▶ Choice of windows and motivation
  - ▶ Operationalization of the windows and motivation
  - ▶ Result of the windows/tools and conclusions based on the combining of the results
- Discuss plenary the outcomes of the analysis of the small groups

**Facilitation:**

- Watch the group analysis process
- Similarities and differences between the operationalization of the windows e.g. task analysis - groups may identify different tasks but may still achieve similar conclusions;
- Similarities and differences in group results e.g. groups using different (combination of) windows may achieve the same conclusions;
- Groups do the analysis but do not draw conclusions e.g. see social forms (biggest problem in combining the windows)

**Time:**

- 120 minutes (including tea/coffee break)

**Materials:**

- flip-charts
- markers
- pins or tape
- colored cards
- overhead-sheets and projector

## EXERCISE 9: INVENTORY OF QUESTIONS ABOUT RAAKS

### Objective:

- To make an inventory of the (remaining) questions about RAAKS, its intentions and principles, analytical design and procedural design.

### Procedure:

- participants are provided cards on which they can write 1 problem or question per card in not more than 8 words;
- the participants are asked to hang them on the wall and see whether their cards match/fit with cards put on the wall by others. In this way participants group around the cards on the wall and cluster the cards themselves;
- discuss the cards and clusters.

### Time:

- 30 minutes

### Materials:

- colored cards
- markers
- pins or tape

## EXERCISE 10: RAAKS METHODOLOGY -Windows Phase B

### Objective:

- To learn how to use and operationalize windows.
- To learn how to combine the analytical outcomes of two windows

### Procedure:

- Small groups are formed
- All the groups gets the same terms of reference  
Terms of reference:  
"Can the irrigation system in Farooqabad work in a participatory way?"
- Each group uses two windows to draw conclusions
- Groups present their results and conclusions

### Time:

- 60 minutes

### Materials:

- markers
- flip-charts
- pins or tape
- colored cards

## EXERCISE 11: FIELDWORK PREPARATIONS

### Objective:

- To have the groups prepare themselves for the fieldwork.

### outputs:

- The facilitators form:
  - 2 large field groups
  - 6 interview groups
- The field groups are requested to'
  - ▶ Make **use** of the Group Work Checklist (see Checklist 1)
  - ▶ Choose a Group Motto
  - ▶ Make a Group Contract
- Use the Interview checklist

### Procedure

- Facilitators form two field groups. Within each field group 3 smaller interview groups are formed.
- Each field group decides on a group motto for the field work
- Each field group makes up a group contract addressing the questions mentioned above
- Each interview group decides on task division for day 1 using the checklist given above.
- Each interview group makes an interview outline using the Terms of Reference (Problem Statement) and the windows of phase **A**. (The interview groups visiting farmers may want to use the exercise 3 in addition to questions they have) The interview outline can consist of a list of key issues to be addressed or a list of predetermined questions. Interview outline Phase **A** (some points of attention can be found in the manual on pages 33 and **34**)
- Within the field group interview outlines of the different interview groups are then compared, adjusted, complemented.

### Time:

- 90 minutes

### Materials:

- computers
- flip-chart sheets
- markers

## EXERCISE 12: MAPPING EXERCISE

### Objective:

- To acquaint the participants with a PRA technique before trying it out themselves in the field.

### Procedure:

- Before departure to the field an article was distributed in the busses about a mapping exercise, one of the techniques in Participatory Rural Appraisal (PRA). At the field station the mapping exercise was demonstrated by Rafique who had been involved in IIMI's PRA training from November 1994 to May 1995.
- What is mapping?  
So far interviews have been held in a village. It is not clear how the villages look like, how houses are located, where shops are, the fields etc. A mapping exercise is useful to collect this kind of information. It is also a different way of gathering information. It enables villagers to visualize their area, how they see their environment and indicate which places are important to them.
- What information does it provide?  
Different maps can be made, depending on the information one is looking for: a map of a village (social mapping), the surrounding area (resource mapping), or if dwellings and fields are interspersed, a map which includes both (dwellings, schools, fields, rivers, etc). Many different issues can be address in mapping. RAAKS focusses on people and organizations, their different perspectives and linkages and how they communicate. Think about how to get this kind of information from the mapping exercise.
- How to do it?  
Ask people in the village to take you to one of their fields. Choose a wide open space that is relatively flat. Explain the technique and what you would like to know from them. Ask people to collect small branches, leaves, stones etc. Indicate the scale of the map by drawing with a stick in the sand a square of maximum 15 by 15 meters. Ask participants to make a map of their area: houses, shops, school, mosque etc. in the village and the fields. Once you have explained the exercise sit back and watch. Note what is drawn first, as this may provide insight about what people consider important. Then ask questions about the map and ask people to include what you want to know further.
- When the exercise is finished copy the map on paper twice (by a group member or a community member). Leave one copy with the community.  
(Adapted from: Towards Partnership in Development, South Africa 1995)

### Time:

- 60 minutes

### Materials:

- flat sandy space
- sticks, stone, leafs etc

## EXERCISE 13: EVALUATION OF THE FIELDWORK

Objective:

- To evaluate the fieldwork

Procedure:

- Each field group is asked to evaluate the fieldwork on the following aspects:
  - ▶ Group Work:
    - interview
    - analysis and discussions
    - preparing the actor workshop
    - decision making
    - communication
  - ▶ Actor Involvement:
    - interviews
    - PRA
    - actor workshop
  - ▶ Role of facilitation

The following questions can be of help in looking at the mentioned aspects:

- What happened? How did it go?
  - What was changed?
  - How would you change it?
  - Use of group contract?
  - **Use** of interview group checklist?
  - Did **you** achieve the expected outputs
- Each **group** is asked to produce two outputs:
    - a flip chart
    - a role play
  - The team of participants facilitating the actor workshop ~~was~~ requested to do their own evaluation.

Time:

- 90 minutes

Materials:

- Flipcharts
- markers

## EXERCISE 14: EVALUATION WORKING WITH RAAKS: THE RAAKS QUIZ

### Objective:

- To evaluate the use of the methodology RAAKS, what problems have been encountered in using the RAAKS methodology, are the participants familiar with its' principles, framework, windows and tools.

### Procedure:

- Form groups of max 4 people. Each **group** chooses a name.
- A quiz and its' questions:
  - ▶ Set time limit for answering.
  - ▶ Answers are read out loud by the participants.
  - ▶ Good answers are rewarded with one or more beans.
  - ▶ Count group scores regularly and visualize them e.g. using a bar chart.

### Time:

- 120 minutes

### Materials:

- flip-charts
- writing pads
- markers
- beans (two colors)
- colored cards for questions

## THE QUESTIONS

- 1) What are the three elements of RAAKS (framework)?

A: I + A + P = RAAKS

### Questions related to Intentions:

- 2) Name two objectives of the field work?

A: i) involvement of actors, ii) participatory working, iii) RAAKS in real life situation

- 3) Name two expected outputs of the fieldwork?

A: i) actor workshop, ii) problem analysis *and* suggestions together with actors, iii) field report

### Questions related to Analysis

- 4) Why is it important to redefine the terms of reference for the field research ?

A: TOR are view of one actor only

- 5) How did the integration analysis clarify the problem in Farooqabad?

A: i) linkages between actors, ii) gaps between actors (e.g. gaps towards small farmers, ID isolated), iii) coalition of actors or clusters

- 6) How did the task analysis clarify the problem in Farooqabad?

A: what task performed, ii) who is performing these tasks, iii) are there gaps or overlaps

- 7) How did the mapping exercise the problem in Farooqabad?

A: i) visualize local situation / problems and social interactions, ii) clarify problems through involvement of community

- 8) Why is it so difficult to draw conclusions from the analysis?  
**A:** i) choice of windows (amount of information from the different windows), ii) lack of participation (team members) (lack of rules for decision making) iii) lack of clarity in objective **and** problem definition

Questions related to Procedure:

- 9) Why is visualizing important in actor workshops?  
**A:** i) illiteracy. ii) overall picture. iii) clarity. iv) can put a lot of information in a picture v) can remember a picture more easily than words. vi) stimulate creativity
- 10) Why is visualization important in teamwork?  
**A:** i) overall picture / simplify information, ii) stimulate creativity, iii) sharing information
- 11) What does the knowledge system of Farooqabad look like? (visualize!!)  
**A:** visualizing actors and (their) linkages
- 12) Name the two major problems of the knowledge system of Farooqabad?  
**A:** i) no coordination between actors, ii) no feedback from small farmers, iii) research is not oriented towards problems of small farmers
- 13) What methods and techniques have been used to collect information?  
**A:** i) interviews, ii) observation, iii) mapping (PRA), iv) discussion in field group, v) RAAKS windows and tools, vi) discussion with actors / actor workshop, vii) written sources, viii) visualized presentations, ix) brainstorming. x) discussion with facilitators
- 14) Name 3 situations in which 'multiple perspectives' play a role?  
**A:** i) team work, ii) actors / actor workshop, iii) windows and tools
- 15) What is the difference between participation and joint learning?  
**A:** participation is needed in order to get joint learning. participation in an activity may mean that individuals have learned from that activity but not as a whole group. Joint learning requires participation at different levels of the process (e.g. joint decision making: what is to be learned and how?)
- 16) What is RAAKS?  
**A:** i) Rapid Appraisal of Agricultural Knowledge Systems, ii) specific methodology with windows and tools. iii) participatory methodology, iv) sharing with actors, v) visualization of information, vi) formulate suggestions for improvement together with actors, vii) commitment of actors to actions decided upon in an action plan.

Strengths of the participant in using <b>RAAKS</b> :	Weaknesses of the participant in using <b>RAAKS</b> :
Opportunities for using <b>RAAKS</b> within the organization of the participant:	Threats for using <b>RAAKS</b> within the organizations of the participant:
Opportunities for using <b>RAAKS</b> between organizations:	Threats for using <b>RAAKS</b> between the organizations:

**Time:**

- 90 minutes

**Materials:**

- flip chart sheets
- markers
- tape

**EXERCISE 16:           FORMATION OF GROUPS FOR RESEARCH PROPOSAL FORMULATION**

**Objective:**

- Formation of groups which will come up with action plans to formulate research proposals for RAAKS activities within the three component.

**Procedure:**

- A sort of fair is organized where participants could shop around. On three side-walls of the room flip charts are put representing the IFMI component. Participants can enlist themselves.

**Time:**

- 30 minutes

**Materials:**

- Flip-charts
- markers
- tape

**EXERCISE 17:           RESEARCH PROPOSAL FORMULATION - PHASE A**

**Objective:**

- To identify actor networks and proposition for inter-organizational RAAKS research groups.

**Procedure:**

- Groups are asked to identify actors and their networks related to their component
- Each group is asked to present the network of actors related to the component

**Time:**

- 90 minutes

**Materials**

- flip charts
- markers
- tape

**EXERCISE 18: RESEARCH PROPOSAL FORMULATION - PHASE C: ACTION PLANS**

**Objective**

- To formulate action plans for finalizing the Research Proposals

**Procedure**

- the groups are provided with a framework in which they can indicate which actions are needed to finalize a research proposal, who will be participating in the action, and when will the action **be** finished:

WHAT (actions need to taken to finalize the research proposal) ?	WHO (will participate in the action) ?	WHEN (will the action <b>be</b> finished) ?

## **6.2 CHECKLISTS**

## **CHECKLIST 1: GROUP WORK**

Objective:

- To support group working and functioning

Procedure:

- Before starting group work, the members elect persons for the following tasks:
  - Who is chairing the group?
  - ▶ Who is managing time?
  - ▶ Who is taking notes?
  - ▶ Who will present the result of the group?
  - ▶ Who will make the drawing?

Time:

- 5-10 minutes

## **CHECKLIST 2: OBSERVATION EXERCISE**

Objective:

- To support the participants in obtaining the information from the video.

Procedure:

- Participants were divided into three groups of consultants. These consultant groups were invited to do a RAAKS study of the problem situation. The information for the study would be presented on video.
- Participants were instructed to watch the video carefully as the video would be the main source of information for the RAAKS study. After the introduction to the video a list of key-questions was distributed.
  - ▶ What actors (individuals, groups and organisations) are involved?
  - ▶ What are their objectives?
  - ▶ Is there a shared objective?
  - ▶ What problems do you think these actors perceive?
  - ▶ What are external factors? What and/or who are driving/constraining forces?

Time:

- 5-10 minutes

## **CHECKLIST 3: GROUP CONTRACT (FIELDWORK)**

Objective:

- To support field groups in their preparations for the field work

**output**

- contract of working rules agreed upon by all members of the field group including the topics below.

**Contract Topics:**

- How are tasks divided within the (field) group (chair person, time keeper, note taker, person who monitors the decision-making process within the (field) group and intervenes when necessary (see point iii))
- How is exchange of information between the interview groups organised?
- How are decisions taken (time pressure, argumentation, focus on results, consensus, dominant team members)
- How are disputes settled? (consensus, voting etc)

**CHECKLIST 4: INTERVIEW GROUPS****Output:**

Division of tasks and responsibilities

**Checklist Interview groups**

- Who takes notes?
- Who is responsible for the time keeping?
- Who will do the translation (the person translating does not lend the interview !)?
- Who will present the results to the other interview groups?
- Who takes the lead in the interview (each interview different person)?
- How can other members intervene in the interview?
- Who will guard the interview outline?

**CHECKLIST 5: OBSERVATION POINTS FOR INTERVIEWS****A. Content****A1. Interviewee**

- What does the interviewee say in broad lines?
- What themes does (s)he address?
- What subject does (s)he elaborate upon? What subjects are briefly addressed?
- How does (s)he build up her/his story?

## **A2. Interviewers**

- What do the interviewers ask in broad lines'?
- How do they introduce the question?
- What kind of questions do they ask (open/closed, objective/subjective)?
- Do they summarize what has been said?

## **B. Language / Wording & Voice**

- Sentences (simple/complex)
- Length of sentence
- wording (academic/common, concrete/abstract)
- intonation
- volume
- typical words ("O,I see", "Hmmm", "eh")
- breathing

## **C. Non-Verbal Expression**

- facial expression
- gestures
- body language

## **D. Total**

- **Is** there a clear beginning and ending **of** the communication?
- How is the atmosphere? Are both parties at ease (do they laugh)?
- Do interviewee and interviewer understand each other's questions and responses?
- Has the interview been satisfactory for both parties?

## **CHECKLIST 6: FIELD REPORT**

### ***The importance of a field report***

The preparation of the group report at the end of the field exercise is an essential element in stimulating reflection among (representatives of) key actors. Similarly they are crucial to cross-checking the ideas developed by the team with these actors. The report can best be thought **of** as a tentative attempt at making sense out **of** information, opinions and observations gathered so far.

### ***Outline of the field report***

1. Introduction:

2. Methodology:

- 2.1 Approach: Introduction on RAAKS methodology and instruments used for gathering information (interviews - interview outlines and their adjustments, PRA-techniques, the windows used)
- 2.2 Team work: presenting the group contract
- 2.3 Planning: activities planned

### 3. Results and Analysis

#### 3.1 The Results of the RAAKS-exercise

##### 1. Terms of Reference

##### 2. Phase **A**

- What findings and information did you gather from using the windows and tool(s)?

##### 3. Decision making on the TOR: Redefining the TOR?

##### 4. Choice of Windows of Phase B

- What is the relevance of this window and tool(s) to deepening understanding the problem situation? **How** did **the** group operationalize these windows?

##### 5. Windows from Phase B

- What findings and information did you gather from using the windows and tool(s)?
- In how far did the analysis yield interesting ideas / insights? **In** how **far** were these in accordance with results expected beforehand?
- What results did you get in combining the windows?

##### 6. Phase **C**

#### 3.2 The Team process

##### 3.2.1 Decision making

##### 3.2.2 Divisions of tasks

##### 3.2.3 Information exchange and communication within the group:

###### 3.2.3.1 In the field group

###### 3.2.3.2 In the Interview group

#### 4. Conclusions:

presenting the conclusions of the fieldwork and the discussing of the results during the actor workshop.

#### Annexes

- instruments used (interview outlines, PRA techniques,)

## CHECKLIST 7: ACTOR WORKSHOP

### *The importance of a presentation*

The results of the field work will be presented and discussed in a joint workshop with all key actors. This workshop has to be designed to adjust **and** refine the 'images' which have been constructed in the field. The conclusions of the workshop have to be incorporated in the group report for the contractor.

### Checklist A: Steps for preparing the presentations

- What is the objective of the presentation?
- Who is your audience?
- What is the content of **your** presentation?
- Which methods will you use?
- What materials do you need?

Checklist B: **Issues** for analysis

- What is your problem definition (TOR or other)? Draw the overall picture!
- What constraints and opportunities are there in the system?
- What suggestions for improvement do you propose?

Checklist C: Checklist for the facilitating team (**2 persons per field group**)

- Introduction
- Presentations
- Discussions
- Note-taking
- Appointments for follow-up
- High tea

*Additional points of attention*

- Limitations of the location: can the location host all invited peoples that were interviewed? Can they all sit? Is the presentation organized in such a way that everybody present can hear what is being said / explained? The materials used for the presentation: are they clearly visible / readable for the entire audience?
- Visualize the problem situation in all possible forms. Do not work with names, abbreviations etc. too much since you will lose that part of the audience that is illiterate.
- A presentation does not necessarily have to be a lecture-like presentation of the results. It may well be a role play in which the whole group can participate. In "visualizing" the problem situation in a role play, the dynamics of the problem situation can be better presented.

CHECKLIST 8:       FORMAT FOR THE RESEARCH PROPOSAL

1. Background
2. Intentions of the **RAAKS** research
  - expected outcomes
  - preconditions
  - problem definition
3. Procedural design of the RAAKS research
  - research group
  - research activities/phases
  - research methods and techniques
  - group work / group contract
  - actor involvement

#### 4. Analytical design of the **RAAKS** research

- problem definition
- choice of windows
- network of actors

#### 5. Planning

#### 6. Budget

Annexes

- group contract

### **CHECKLIST 9: INSTRUMENT FOR ACTION PLAN**

#### **WHAT ?**

- preconditions that have to be met for the formulation and implementation of the **RAAKS** research. These need to be translated into concrete actions to be taken up by the participants:
  - ▶ e.g. participants in the **RAAKS** workshop ask permission from their organisations to dedicate time, attention and/or resources to the **RAAKS** research;
  - ▶ e.g. participants identify other important actors that they want to be involved in the formulation and implementation of the **RAAKS** research.
- all participants and interested actors come together for a meeting to establish a **RAAKS** research group. This is formalized by a group contract.
- the **RAAKS** research group decides which topics should be in the research proposal and who is going to write the content for these topics.

#### **WHO (and HOW)?**

- task division to finalize the formulation of the research proposal: Who is going to do what (and how)?

#### **WHEN ??**

- deadlines set for the final research proposal. Tasks need to be done within that time limit.

## **6.3 ENERGIZERS**

## ENERGIZER 1: THE NUMBER GAME

### Objectives:

- To create a relaxed atmosphere.
- To form groups.
- To awaken participants and raise their energy-level (e.g. after period of intense listening)

### Procedure:

- The facilitator counts the number of participants present. He or she then asks the participants to form groups according to the number called by **him/her**. This is repeated **a** couple of times, each time the number of group members required is changed. For instance: **5** groups of **5**, 7 groups of 3 and 1 group of **4**, 3 groups of 6 and 1 group of 7. The participants have to act very quickly, they start shouting and grahing each other to get their group together.
- Option: The last call may be used to form groups whtr will work together **on** assignments.

### Time:

- 10 minutes

## ENERGIZER 2: SIMON SAYS

### Objectives:

- To create a relaxed atmosphere
- To awaken participants and raise their energy-level (e.g. after period of intense listening)

### Prncedure:

- Participants are asked to follow the facilitator's instructions, hut **only if** the instruction is preceded **by** the sentence "Simon says". Anyone who acts **on** instructions not given by Simon is out. For instance, "Simon says walk" "Simon says stop" "Simon says lift your right arm" "Drop your arm",... The faster the facilitator gives instructions the higher the chance that participants will drop out.
- Option: Participants take turns in giving instructions.

### Time:

- 10 minutes

### **ENERGIZER 3: ANIMAL FARM**

#### **Objectives:**

- To create a relaxed atmosphere.
- To form groups.
- To awaken participants and raise their energy-level (e.g. after period of intense listening)

#### **Procedure:**

- The facilitator determines how many groups need to be formed of how many members, for instance 6 groups of 4 persons. The facilitator takes 24 cards and makes 6 piles of 4 cards. Every pile of cards will have a different animal written on it (e.g. chicken, monkey, cow, horse, pig and donkey). The cards are shuffled. The participants are asked to take a card without showing it to others. They are then asked to find their group members by making the sound of the animal that is written on their card.

#### **Time:**

- 10 minutes

### **ENERGIZER 4: DANCING LESSON**

#### **Objectives:**

- To create a relaxed atmosphere.
- To awaken participants and raise their energy-level (e.g. after period of intense listening)

#### **Procedure:**

- Participants are asked to form a circle or line up and start clapping in the same rhythm. The facilitator demonstrates a number of dance steps. Participants are asked to follow the facilitator.
- Option: If the participants have picked up the dance steps, the facilitator may add other movements, e.g. waving with arms, bending down, making a turn and speeding up the rhythm.

#### **Time:**

- 15 minutes

## **ENERGIZER 5: FRUIT SALAD**

### **Objectives:**

- To create a relaxed atmosphere.
- To form groups.
- To awaken participants and raise their energy-level (e.g. after period of intense listening)

### **Procedure:**

- ● Participants are asked to arrange as many chairs in a circle as there are participants. The facilitator stands in the middle. (S)he asks a person to name a fruit, his/her neighbour to name another fruit, the following neighbour another fruit and **the** next neighbour another fruit. Then the fifth person is asked to take the first fruit, the sixth person the second etc. This is repeated until all participants have a fruit. The number of fruits depends on the number of participants, but there should be at least **4** people per fruit.
- The facilitator then asks the participants to change chairs if their fruit is called out. While the participants are running for another chair the facilitator will run to the closest chair. The person that does not succeed in taking a chair stays in the middle. (S)he will then call another fruit and will run for the closest chair. This procedure is repeated several times. Make sure that all fruits are mentioned at least once.
- Option: If the person in the middle calls "fruit salad" everyone has to change seats including the facilitator (who doesn't have a fruit name).  
After the energizer the 'fruit groups' will work together on assignments.

### **Time:**

- **10** minutes

# ANNEXES

## **ANNEX 1**

**1 Presentation of the results of Phase A of a RAAKS exercise: the actors, their objectives and the problems they face.**

**2 Characteristic for RAAKS: a drawing showing the main actors and their linkages in a system.**

**3 Production of a 'linkage matrix', a tool to be used for the integration analysis in Phase B.**

**4 Women use natural materials to make a map of their village and talk about its inhabitants, castes and water sources.**

**5 During the actor workshop results from 3 days fieldwork are presented in the form of a role play.**

**6 In the actor workshop interviewees give comments on the present situation and suggestions for improvement.**

**REPORT**  
**FIELD GROUP A**  
**RAAKS TRAINING**  
**ON HUMAN RESOURCES MANAGEMENT**  
**IN IRRIGATED AGRICULTURE**

**1. INTRODUCTION**

Agriculture is the major sector of economy in Pakistan. The fertile land resources of the Indus Basin System coupled with the waters of the river Indus and its tributaries provided ideal conditions for the development of irrigated agriculture in the country. The irrigation system in Pakistan comprises a number of dams, barrages, major and minor canals, and drains. It is the world's largest irrigation network.

The land and water resources of the Indus Basin have the potential of increasing crop yields by about three times. Although, at present, per acre yields are far less than the international standards despite an ideal combination of climate, temperature, soil and water resources.

Recently, Agrisearch has conducted various technical feasibility studies in Manawala Distributary, District Sheikhupura. Agrisearch has also come to conclusion that there is a lot of potential for raising crop production in the area. However, a serious constraint is the unequitable and unreliable supply of agricultural inputs such as water, seed, fertilizer etc. Furthermore, Agrisearch is convinced that better management of the human resources available in the irrigated agriculture sector can play a decisive role in making improvements possible.

Agrisearch gave a consultancy to RECKY group of consultants to formulate recommendation for mobilizing the existing human resources in order to bring about a more equitable and reliable supply of agricultural inputs.

RECKY Enterprises decided to apply Participatory action-research methodology called RAAKS (Rapid Appraisal of Agricultural Knowledge Systems). It provides a flexible and participatory approach for improving innovative performance in agriculture.

## 2. METHODOLOGY

### 2.1 Approach

Rapid Appraisal of Agricultural Knowledge Systems (RAAKS) is an action-oriented methodology that provides organizations with a framework to monitor and evaluate their practices in rural development, agriculture, natural resources management, health care etc. It is a specific participatory methodology in visualizing information with the help of windows and tools through sharing ideas of actors to formulate Suggestions for the solution of the problem with the help of actors involved in the real life environment. This methodology helps identifying possible constraints and opportunities. All such analysis allows the participants to design measures to improve their current interaction and to adjust it to changes in the environment.

RAAKS uses different analytical perceptions, called windows to achieve an integral analysis, and transparent problem definition and recommendations for action. For gathering information, instruments used were semi-structured interviews of the actors throughout lines adjusted at the time of interview according to the prevailing situation. It involves interviews in which the interviewer goes to the informant as a totally ignorant person.’

Participatory Rural Appraisal (PRA) is a technology in which we go to the informants as facilitators. Informants are asked to prepare drawings to identify their problems and suggestions. Informants are confident as they are involved in defining their problems and suggestions. PRA provides information and does not go much in detail about the conclusions. The mapping component of PRA helps to visualize local situation/problems and social interaction to clarify problems through involvement of community. Additional benefit of PRA is that informants feel relaxed and unhesitated. Some of the basic PRA principles are team work; multi-disciplinary team composition; farmer participation; regular cross checking of the information collected; discussion among farmers; and facilitation by the teams. PRA also involves drawing and flow charts to be prepared by the informants.

#### 2.2 Group contract

1. Group motto: Recky

2. Task division:

Mr. Khan: Chairman

Mr. Gulrez: Presentor

Mr. Ali: Note taker

Mr. Rafiq: Time keeper

3. Ms. Cris and Mr. Gulrez Khan: monitoring decision making process
4. Exchange of information between the interview groups
  - 11.30 - 11.45 Discussion in individual groups
  - 11.45 - 12.00 Exchange of information
  - 12.00 - 12.30 Discussion & analysis
5. Decisions are made through
  - 1) Concensus
  - 2) Voting
  - 3) Intervening by chairman
6. Any dispute should be solved through discussion
7. Notes should be taken with the report format in mind
8. From each interview group there should be one editor

## 23 Planning

The field work was carried out in Mananwala distributary, Farooqabad.  
Day one: Collecting information and analysis of phase A.

To come to a good problem identification and situation analysis **six** interviews were conducted in the morning and early afternoon. Informants included **EADA**; AO; **WMS** Water Management; and with three farmers from the Village Thatta Bahadir Shah. In the afternoon the analysis of phase A **was** made and windows and tools for phase B had to be selected.

Day 2: Collecting data and analysis of phase B

With the ~~chosen~~<sup>windows</sup> in mind **six** other interviews were planned in the morning and early afternoon again. Informants included: SDO/PID; In-charge Adaptive Research Farm Sheikhpora; Farm Manager Adaptive Research Farm Farooqabad; Input Supplier; Tibi Mitto. After the interviews there was little time left for evaluation of the phase B windows.

Day 3: **PRA** exercise and analysis of phase A and B and formulation of recommendations (Phase C)

In the morning we had an introduction on PRA techniques. After the introduction we did a mapping exercise in a village. The women did this exercise with women of the village. During this **exercise** some additional data could be collected or gaps in the analysis **could** be filled.

#### Day 4: Preparation and Actor workshop

In the morning we had time to finish our analysis and to formulate our recommendations. The rest of time was used to prepare the actor workshop. After the lunch the workshop was held.

### 3. RESULTS AND DISCUSSION

#### 3.1 Results from RAAKS-exercise

##### 3.1.1 TOR

The terms of reference was given to the two different field groups by an (imaginary) international agricultural research institute, Agrisearch. It aims at improved and sustainable productivity of irrigated agriculture. The following terms of reference was given to the two field groups:

*Agrisearch would like the consultants to formulate recommendations for mobilizing the existing human resources in Manawala Distributary, Farooqabad, in order to bring about a more equitable and more reliable supply of agricultural inputs.*

##### 3.1.2 Phase A/ Problem identification and situation analysis

Having interviews with different actors working in the area in the field of irrigated agriculture and group discussions, the shortage of water was identified as being the main problem. Water supply was not sufficient and **also** its distribution (what **so** ever available) was not equal. The group also identified that inputs like fertilizers, seeds, and pesticides are not available on time when it is needed. The **prices** are too high and there is also a severe problem of black marketing. **Dissimination** of knowledge is also very poor. farmers are not **accepting/following** the **advices** given by extension workers because messages are not **problem oriented**. It was observed that adaptive **research is** not doing adaptive research but do research just the they want to do it. Poor **linkage/coordination** amongst the line-agencies **as** well with the **farmers** was **also** another area of great concern. PID is **working** isolated, other agencies like OFWM, Extension, and research institutes have very weak linkages. The only actor **i.e.** big **farmers/** influential farmers/ **politicians** have linkages with **all** the concerned agencies and pulling **all** the resources for their **own** benefits. **For** these problem identification see **figure ...**

The major actors which have been identified during the **A** phase are: Irrigation department; private and governmental input suppliers; banks and credit institutes; market; On-farm water **management**; agri-extension; training; adaptive research; **politicians**; big farmers and **small** farmers (see figure ..). The objectives, activities, problems and constraints of the interviewed informants are **reflected** in the following table.

Actors	Objectives	Activities	Problems/constraints
<b>WMS</b>	Manage water problem according to engineering standards	- water course improvement - Community TW's - Land levelling	- <b>Flow</b> of funds - Coordination from line-agencies not good
<b>EADA</b>	organize the extension workers	- supervision of AO's and FA's and defining their task? - Training AO's and FA's - <b>M &amp; E</b> their activities	- Operates in bureaucratic system - Budget - Influential people
<b>AO</b>	Dissimilate knowledge to farmers	- Transfer technology to FA's and farmers - 'Solve' farmers problems	- Farmers not following their advise due to resource constraints - Unavailability of inputs on time - Shortage of water - Degradation of land - Political influence
<b>Farmers</b>	Produce sufficient agr. output (to survive)	- Farming	- Water shortage (outlets too small) - Inputs not available/expensive - Yield not enough - Land is degrading (due to unfit grw) - Influential people
<b>SDO (ID)</b>	Water distribution	- Scheduling, maintenance, <b>M &amp; E</b>	- Lack of funds/ manpower - Non-cooperation with police/farmers
<b>Ang.</b>	Adoptive research for the farmers of the area	- Demonstration, dissemination - Research	- <b>Political</b> pressure - Small farmers not using results - <b>No good</b> coordination between agencies
<b>DD training</b>	Identify training needs and give training to training people	- Receive knowledge from research institutes and adaptive research farm - train own staff - train extension <b>people</b>	- Message is not being conveyed properly - <b>Research</b> is not problem oriented - People not committed to their jobs - Political influence

### 3.1.3 Decision making on the TOR

After going through phase A it was decided that each group member should reconsider the initial TOR as given by Agrisaerch. the group decided to accept the TOR as given in paragraph 3.1.1. The following points had been discussed in the group on basis of which the decision was taken:

1. In phase A it was very clear that all the involved agencies had good available human resources.
2. Coordination within the agencies and among the different agencies is missing. Potentially only mobilization is required.
3. Inputs are the major problems in the area i.e. water shortage, and non availability of agricultural inputs (fertilizers, pesticides, seeds).

So in the light of above mentioned points the given TOR is upto the mark and it fulfils the purpose and with in solving the problem.

(3.1 The results of the RAAS exercise)

3.1.4 Choice of windows of Phase B

Phase B is an analysis of constraints and opportunities. During this second phase of the RAAS exercise, the team members again would go into the field to gather information on relating to the problem statement. This time using different windows to look at the situation. Possible windows are: impact analysis, actor analysis, knowledge network analysis, integration analysis, task analysis, coordination analysis, communication analysis and an analysis to understand the social organization of innovation.

Actually, the field groups are supposed to select the windows they want to use. However, on the way to our field work area, the facilitator proposed to use at least the integration analysis and task analysis. If the group found it necessary to select a third one, this of course would be possible. While travelling we all read what these two aforementioned windows were actually focussing at, discussed in what way the selected windows were suitable in our case, and discussed on whether or not to select a third one. We decided not to select a third one, because we were of the opinion that the integration analysis and task analysis would deliver us answers to our questions. A second reason was, that we did not see the direct use of the other windows that were given in the manual. Besides that, we found it better to use our scarce time for two windows in a nice way, instead of trying to deal with three windows.

Justification of use of the two windows.

Window B 4: Integration Analysis

One of the outcomes of Phase A was, that a lot of actors are involved in delivering and receiving inputs for agricultural production. It was not very clear however, what kind of contacts these actors have with each other, how often they really meet, who is in a central position in the system and who is more isolated. So, we thought that doing an integration analysis would help us finding answers to these questions.

The manual gives the following characteristics of the integration analysis:

This window is about linkages. Who has contact with whom, why, and how intensively? Can different clusters of actors be distinguished and what characterizes these clusters? Clusters may appear around key actors.

The tool we used is the Linkage Matrix. From each interview group one person was involved in working on this Linkage Matrix and this person was responsible for focussing on the issue of integration during the interviews

## Window 8 5: Task Analysis

After having defined all the actors, it is important to get a clear view of what are their tasks, how do they perform these tasks? It will give a better insight into the reasons why some people/organizations involved are actually not performing like they should. And maybe it turns out that tasks that have to **be** carried out by a certain actor, in reality are done by an other actor or groups of actors. It may help us to identify constraints and possibilities in performing tasks.

The manual gives the following description of the Task Analysis:

Who does what in the system? Do functional connections *between* system actors exist? Do these function adequately? This window refers **to** the study of 'who does what?' Practices relevant **to** innovation are identified, such **as** farming, research, trade or quality control **as** well as the actors in charge. Gaps or overlaps may appear **as** to the performance of tasks.

The tool we used is the Task Analysis Sheet. From each interview group one person worked with two other people from other interview groups on this Task Analysis, which *mainly* meant producing the Task Analysis Sheet.

Conclusions Integration analysis?

### 3.1.5 Task analysis

Task analysis window was used in RAAKS study because it clarifies that **who** does what in the system and whether functional connections exist between actors. During the field visit and interviewing different actors involved in agri-business the task analysis window helped to see the problem in the perspective of task vs actors. Analysis through this window indicates that:

- Private supplier is well connected with input supply, credit and marketing. Their monopoly leads towards the adulteration, higher prices and self created shortage in essential inputs.
- Credit is not integrated: Credit facilities are in hands of government so the influential people avail this facility but the needy farmers do not.
- Coordination among the agencies was very poor. As a result everybody is doing his own task and the farmer remained deprived from the facilities.
- Research is not farmer oriented. Hence, it failed during application in the field.
- Water shortage due to bureaucratic hold of Irrigation Department.

For the task analysis sheet in which the tasks of the identified actors are indicated see figure ...

## 4. CONCLUSIONS

This report elaborated on the way we have used **RAAKS** methodology to redefine problems, actors involved and their objectives and tasks, gaps in between these **tasks**, and possible places for improvement. After this process these are our conclusions, which are helping **us** to formulate the recommendations for mobilizing the existing human resources in **Manawala Distributary**, in order to bring about a more equitable and reliable supply of agricultural inputs. These conclusions came out after interviews of different actors, group discussion, presentations and mainly **on** actor workshop.

About the question **WHO** can do **WHAT**? The conclusions were:

1. Participation of farmers is necessary during ID operation and maintenance work.
2. The **farmers'** organizations should be better organized for timely availability of seeds, fertilizers, and pesticides etc.
3. There should be enforcement of law, and if necessary make new laws which should fulfil the requirements of present situation.
4. **There is also strong feelings of all participants**, that there is a need to make a close

relation between field people and their higher officers.

9

Suggestions for improvement of input supply:

- Department of Agricultural Extension should have input depots.
- Government and private sector who are supplying inputs should have balance positions, at present private sector has more share.
- District Administration should have control on price of inputs.

Coordination between agencies:

- Monthly workshop to all agencies or their representatives, and discuss problems of farmers.
- Different agencies i.e. ID, AD, and OFWM should work together.

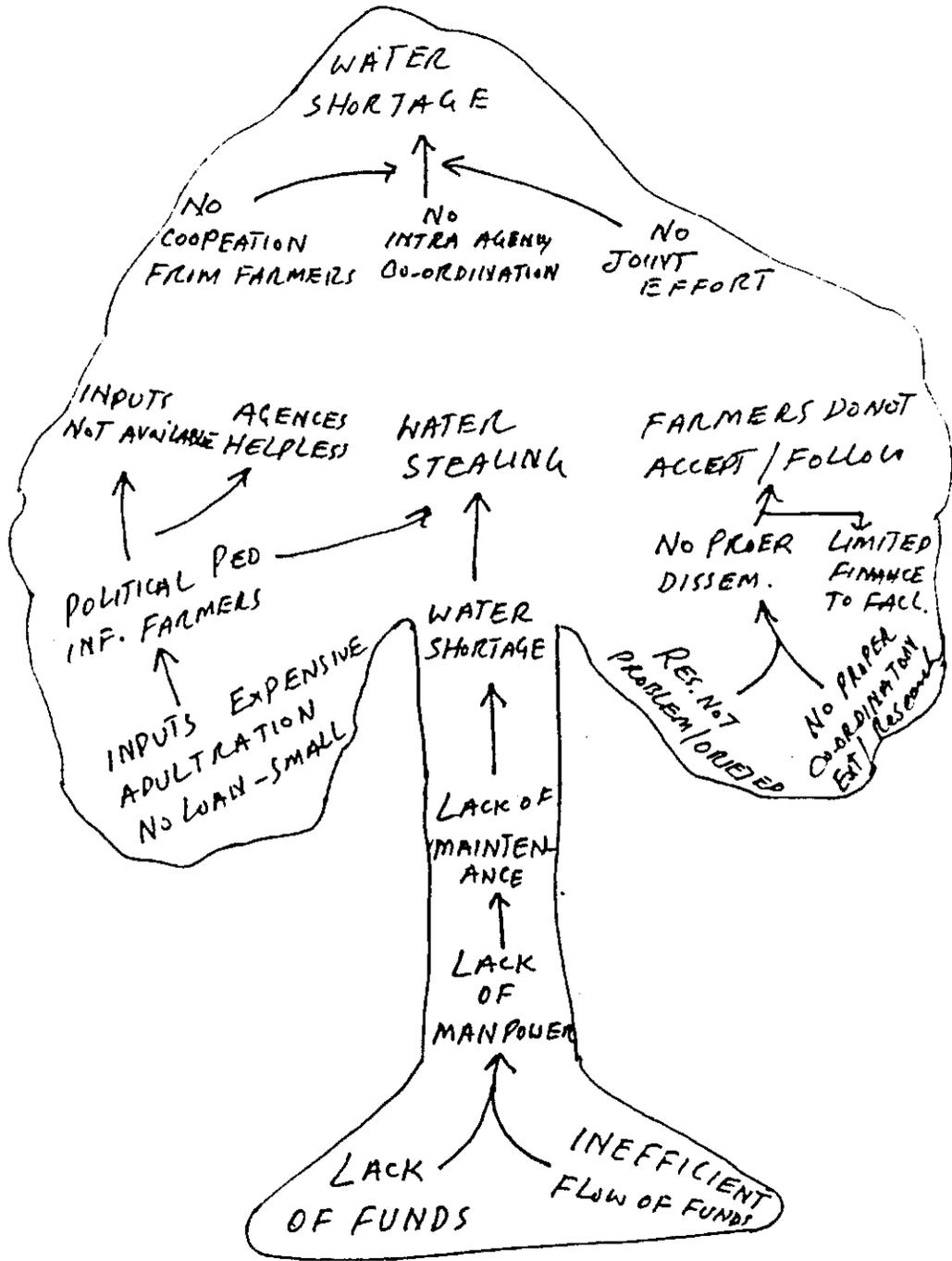
Provide useful knowledge to farmers:

- Adaptive research should be problem oriented
- AO's and FA's of extension department should have meetings with communities instead of big farmers only in order to get feed back.

During the actor workshop, there were mainly farmers who participated along with three persons from extension and one supply dealer. Farmers gave some useful suggestions:

- Farmers agreed to make associations and their view as that these associations should be involved in every activity which is related to their communities. with the help of administration, members should be 5,7,9, not elected in gathering.
- Government should provide all of their required water. If the government is not able to do this then they should give relief electricity billing. here one farmer said that all tubewell owners should pay equal bills.
- In every village should be a fertilizer supplier who supposed to estimate the village requirements and pass to some agency. This should be provided directly to the village dealer.
- Need new laws and specially inforcement of these laws.

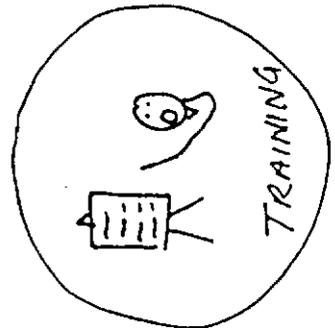
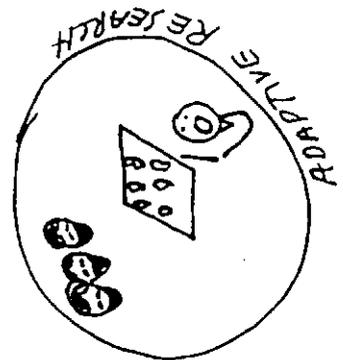
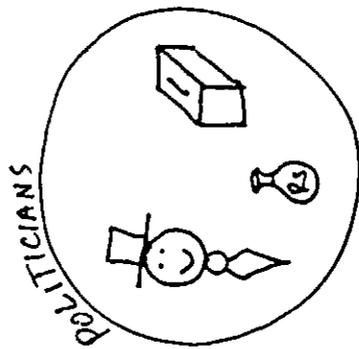
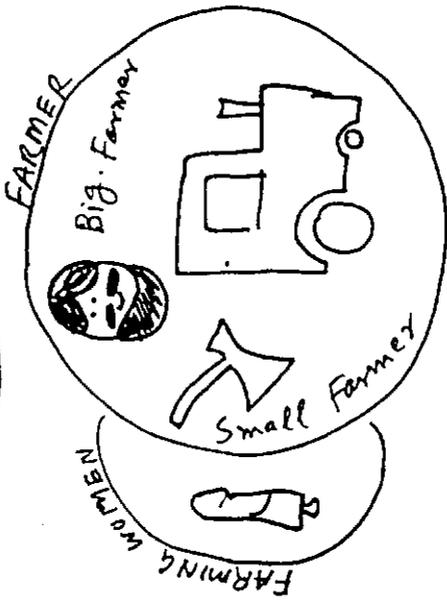
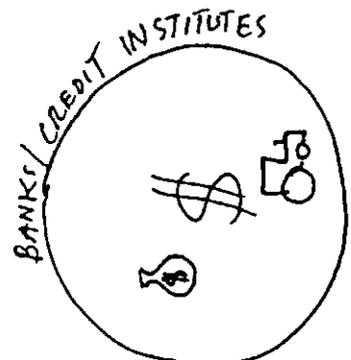
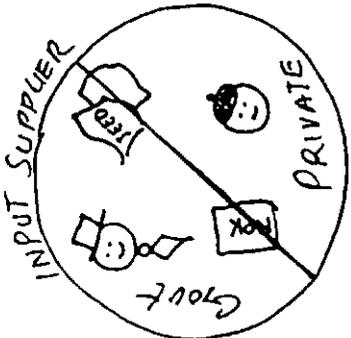
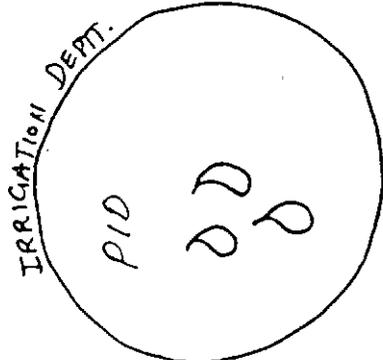
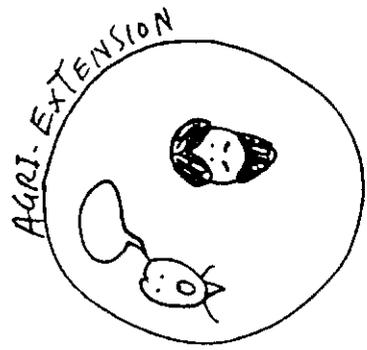
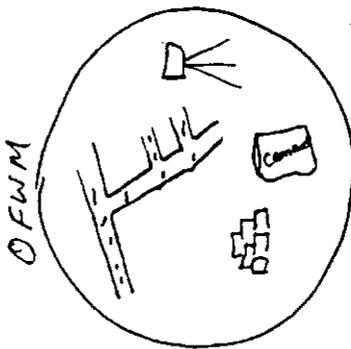
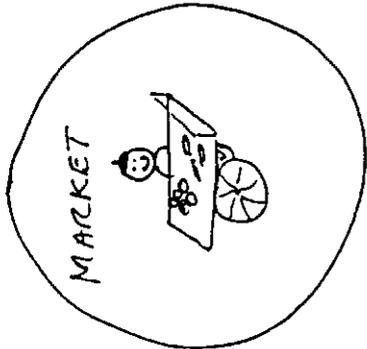
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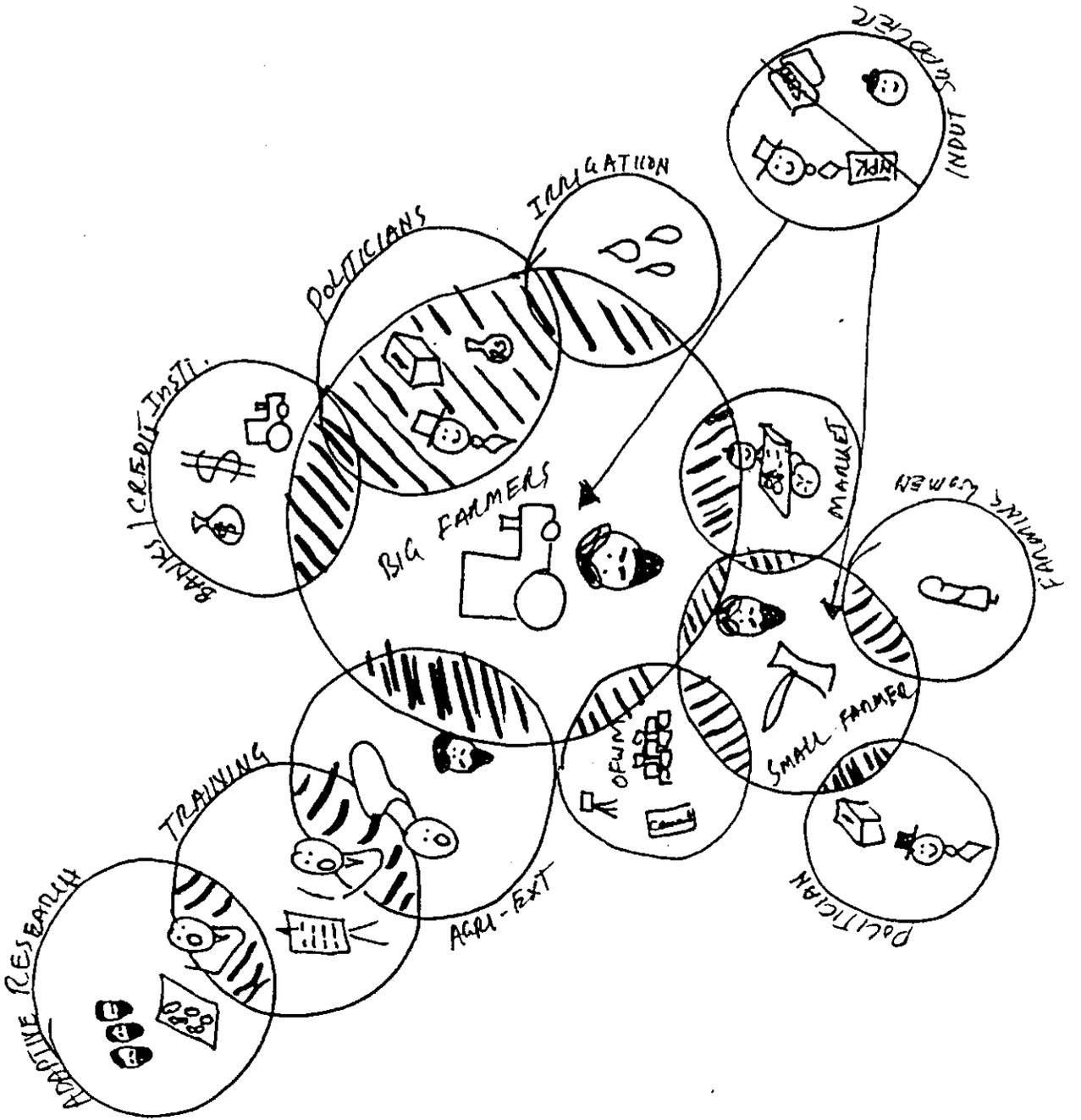
PROBLEM TREE

PHASE - A

ACTORS RELATED TO PROBLEMS

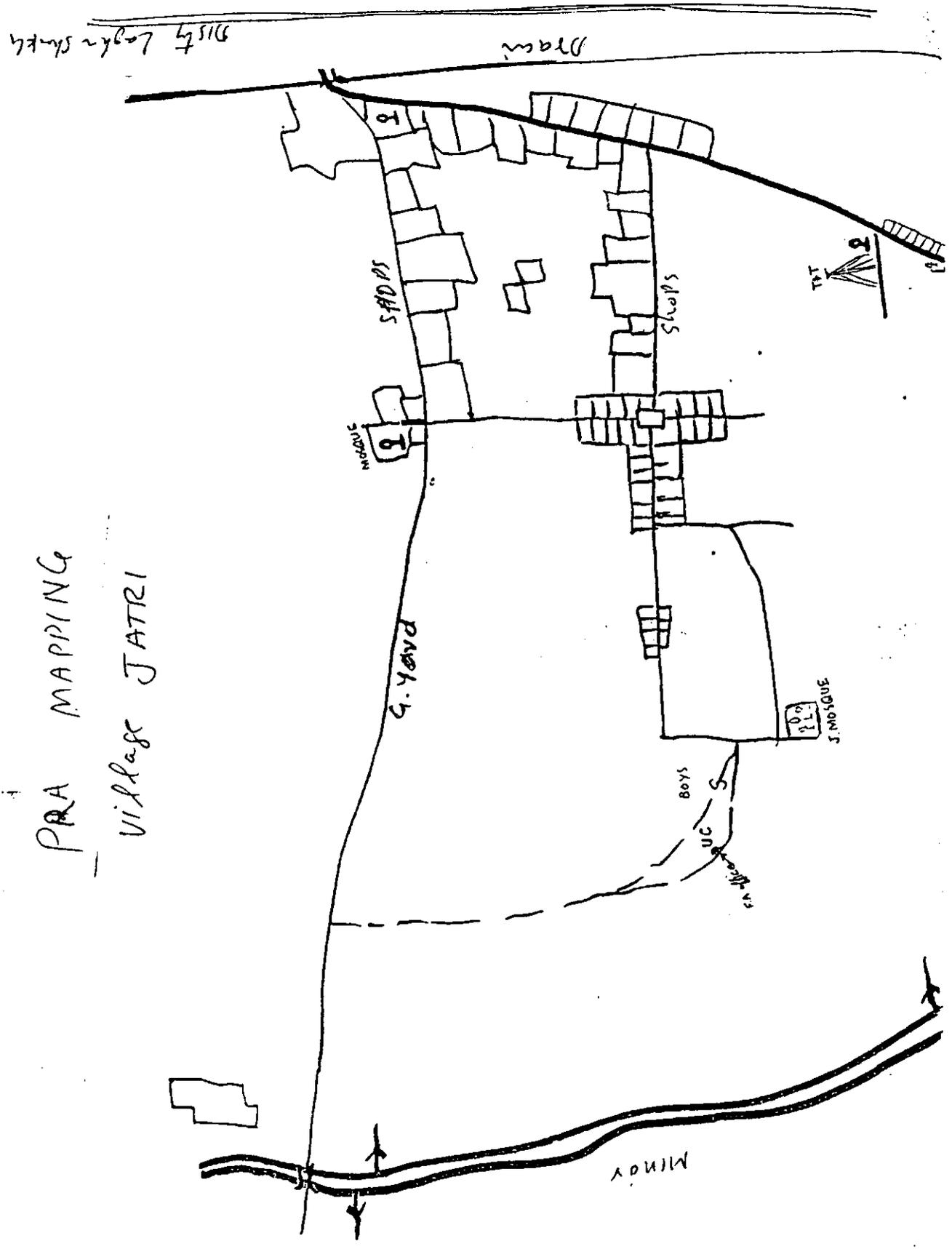


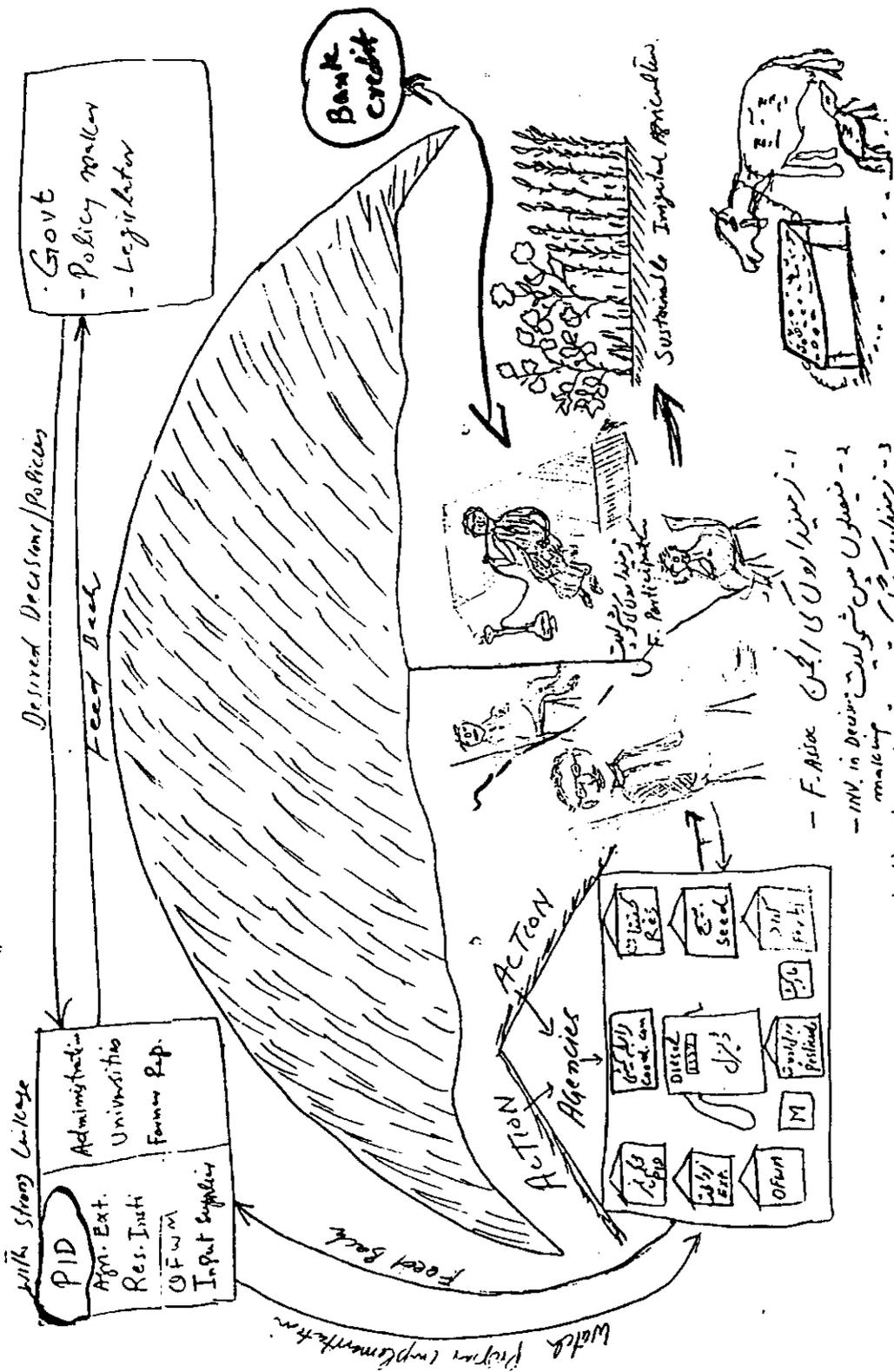
# COORDINATION BETWEEN DIFFERENT ACTORS





# PRA MAPPING Village JATRI





8- نسلوں کا قانون

Action Plan

- 1- زمینداروں کی ایجنسی
- 2- زمینداروں میں شمولیت
- 3- زمینداروں کے قریب نام فرم کرنا
- 4- مقررہ ریلوے کی کمی کا قیاس
- 5- مسئلہ کے مطابق زمینداروں (Problem oriented)
- 6- پیداوار کی مناسب قیمت
- 7- پیداوار کی قیمت

SUGGESTION for IMPROVEMENT

DATE: 13.12.95  
TIME: Afternoon  
PLACE: Tatta Bahadra Shah  
SETTING: In a dera in the centre of the village  
PEOPLE  
PRESENT: 2 male interviewees and 2-3 other men

#### Impression of the village

Brick road to the village. The village looks poor, although there are brick houses.

#### THE INTERVIEW

There are 3 castes in the village, all having small landholdings.

#### Problems in agriculture

- 1 Shortage of water
- 2 Inputs not available
- 3 Agricultural income too low
- 4 Salinization
- 5 High prices inputs

ad 1 Great shortage of canal water. For the use of tubewell water they get an electricity bill from WAPDA and they are also charged by the ID, which gives an unreal bill. Outlets are too small.

They get 16 minutes per acre after 8 days; but it takes 4 to 5 hours to irrigate 1 acre.

ad 2 Inputs are not available. Esp. at time of sowing. Middlemen hide the inputs.

Cost for seed from Seed Corporation is high, so normally farmers use their own seed.

Insecticides are available in the market.

Shortage of diesel and petrol at time of sowing (intentionally kept behind by sellers to increase price).

They have to pay Rs 10 instead of Rs 7 per liter.

Loan facilities: difficult to get loan from the bank. They ask for lot of documentation (like property documents).

ad 3 Income from agriculture is not enough, since they get low prices for their wheat. Yield is not enough to buy inputs.

ad 4 Land is degrading due to unfit ground water. On the places where you see salts on the soil, the production is declining day by day. Decline of calcium in the soil due to too much tubewell water.

ad 5 Inputs are too costly. 1 Bag of Potash costs Rs 200 and they cannot afford it. And for black rate it is Rs 300. They buy DAP and UERD (?) from commission agent

#### Agencies

\* Extension people are the only ones to visit the village. Maybe a few farmers can follow the advice of Ext Deptt.

\* The ID is doing good job, only they want more water. 3 To 4 farmers went to ID (in Oct-Dec; Kharif, rice crop) to ask for more water, but they didn't get. They say they didn't bribe.

\* OFWM came, but was not successful in improving. The bed of the water course is now higher so less water is available.

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### Suggestions

- 1 SSP back. They want SCARP tubewells by the government. They pump from below 300 feet and that ground water is good. These tubewells used to be there, but the government closed them down. They were promised to get motor etc. for new tubewells, but nothing happened.
- 2 They say it is not possible that farmers have more operation and maintenance tasks at disty level. Even within 1 family there are problems to organize things, so how would it be possible to arrange this with 4 or 5 villages?  
They cannot give a clear reason why it would not be working. The small things that are working is only because of pressure of the government, like cleaning the canals or cutting the trees.
- 3 They pay Rs 600 per acre of wheat for tubewell water. Abiana to ID is Rs 52 per acre of wheat. We ask: if we ensure you canal water supply for Rs 250/acre, you close the tubewell, do you agree? One farmer says yes, the other one says that the crops might need water every 4 days, instead of 8, and thus tubewell is necessary.  
Inputs should be available at government fixed rates at times needed. (diesel included)
- 5 Proper price for outputs.
- 6 Canal water should increase.
- 7 Those fields that are irrigated with tubewell water should not be counted by the ID.
- 8 Full lining of water courses.

### Solutions

PID, OFWM, Government (inputs)

### INTERVIEW OBSERVATION LIST

- A The issues most often raised by the interviewees are as given under the heading 'main problems in agriculture'. They were complaining a lot about unreal shortage of inputs, especially at sowing time.  
The issue of using unfit ground water for irrigation and the implications of this, was also mentioned several times.

The interviewers mainly ask about the problems these farmers experience in agriculture, with which agencies they have contact and their opinion about those relationships, as suggestions for improvement.

Questions were open. In advance the interview group discussed on which issues to emphasize, but there was enough room for changing the subject; this depended upon the interest of the respondent. We did not talk about issues in which the respondent was not interested.

The transition from one question to the other was fluent. A new question was often introduced with: "You say that....," (then questions).

- B Of course language problems (concepts, ideas) are there when you don't speak each others language, no matter how good the translation/translator might be. But our task division (leading

the interview, taking notes, translating) worked out very well and without disturbing the process of the interview, questions and answers could be easily translated.

It seemed to be quite difficult to explain in easy words about our purpose of coming. In the interview itself we only talked about subjects that were (very well) known to the interviewees.

C The welcoming and saying goodbye were essential parts of the interview. After the introduction with the whole field group in the middle of the village, we went inside with a smaller group to do the interview. It was clear that the interview started once we were seated. The same goes for the end of the interview, that was followed by words of thanks, talking about some other things, and leaving.

The atmosphere was good. From our side as interviewers most probably because we already have quite some experience in this. We had the impression that the interviewees were glad to be able to tell about their problems.

For us the interview certainly was satisfactory, but whether this also was the case for the interviewees is difficult to say. The minibus stuffed with interviewers, entering their village, must have been overwhelming, even though they were expecting us.

DATE: 14.12.95  
TIME: Afternoon  
PLACE: Tibba Mit'o  
SETTING: Small square in front of dera.

### Impression of the village

The village looks more wealthy than the other villages in the area. The villagers say that literacy rate is 80%, that there is no fighting and they don't use narcotics like in the other village, Tatta Bahadra Shah.  
All inhabitants are from the same caste (a sub-caste of Jat).

### THE INTERVIEW

The interviewee's age is 75. He and his 3 brothers, all educated, share 75 acres of land.  
Common crops are sugarcane, wheat and rice.  
Yield is 25-30 mands / acre. This is average; a good farmer can come upto 40.

Input from the dealer are not available in time.  
In general people do not have enough financial resources for inputs.

Sources of knowledge:

- tradition
- observation (neighbours)
- agr. ext. deptt. (about seed, fertilizer, chemicals)
- insect/pest suppliers little bit
- PTV (agricultural programme) and radio (this is through agr. deptt.

### Main constraints in agriculture

- 1 water shortage
- 2 diesel shortage
- 3 fertilizer shortage
- 4 maintenance canal
- 5 no communication with agency officials
- 6 Difficult to get a loan (in cash or kind)

1 Main reasons are:

- warabandi in disty
- weak banks of the canals
- no repair of the banks
- the discharge in the canal decreases
- influential farmers take more water

Especially in sowing time there is water shortage. The ID sometimes gives them the warabandi schedule in the disty, but even then there sometimes is no water on times they expect it.

- ad 2 At time of sowing. Especially in sowing time. Dealers in diesel keep the diesel behind and increase the prices.
- ad 3 The prices on the government side are high, and black market prices even higher!
- ad 4 Farmer don't repair the banks themselves. It is a task of the ID. ID people get their salary and all so why don't they do this? They are only eating their money.
- ad 5 only bildars are there, no other officials.
- ad 6 Loan in form of kind from ADBP is difficult, since one needs a

passbook of the land.

#### Agencies

\* Extension: This farmer is OF for the ext. deptt.

\* OFWM people came to improve the water course. This village has 4 outlets of which 1 is lined. This one is lined only for 4 acres and now they are working on 8 to 10 acres more. Farmers would like the other water courses to be lined, but they think they cannot pay the recovery. Still they applied for lining, but their application has not been approved. Farmers are satisfied with OFWM for the following reasons: i) more water is saved now because the water course is pakka, ii) more area is irrigated, iii) less water theft, which is to the benefit of the tail enders

\* Last year they (some farmers from this village) went to XEN of the Irrigation Department to ask for more water. The XEN said that it was not possible to release more water.

Work of ID is affected through political pressure. The ID exaggerates this. The farmers say that in practice the political pressure is not so much as the agencies are claiming.

#### Suggestions

- 1 Farmers would not be able to manage the canal, because they cannot get/be organized for this purpose.
- 2 SCARP tubewells should be installed again, because that time production was good. They paid both for canal and tubewell water, but it was okay. The government said they would promote individual tubewells because government tubewells were too high in price and income for government was less.
- 3 Government should not demand more than Rs 5000 for a farmer as minimum contribution to get a tractor. Nowadays, the government is demanding more, so it is difficult for farmers to get this loan in kind.
- 4 Water has to be available at proper time
- 5 Inputs (incl diesel) must be available
- 6 Farmers ought to get proper prices for their produce

# Phase C

## TEAM PROCESS

### 1) Decision Making:

It was very important factor among the groups and participant after discussion and arguments. Any dispute during decision was not noted separately. And any issue for decision dispute will be resolved by the voting of the members of that group. If there will be no any issue or dispute the decision will be made through consensus.

### 2) Divisions of Tasks:

The different tasks about RAAKS were given to different members of the same group. And each member of the group will be responsible for doing that task. e.g

1	member	asking the Question
2	member	translating into English
3	member	writing all the discussion

Settled here.

There are 7 Mogas for 500 Acres, so there is a great problem of irrigation from Mogas.

All the water in that region is used up by the Governor of Baluchistan.

There are 3 main problems of water shortage

- 1) Not cleaning the canals
- 2) Stealing of irrigation water
- 3) Carelessness of higher officers relating to irrigation.

Govt. is uninstalling all the Govt. tubewells due to the non-payment of electricity charges by the farmers.

There is not so much production due to the shortage of water. Now farmers are installing their own petrol engines.

Ten farmers collectively form one tubewell, and are very nervous and confused to the shortage of irrigation water and are ready to ~~leave~~ <sup>sell</sup> their all property. Tractors are not available to farmers and also there is non-availability of fertilizer and pesticide at right time.

Interview group 1

December 14

Interview with EADA: Mr Abdul Hamid

## A1 Content

The interview mainly focused on 5 points

- 1) Organization of extension
- 2) Tasks and responsibilities of different functions
- 3) Contacts and meetings within extension and with other actors
- 4) Distribution of inputs
- 5) Major problems in agricultural sector

The structure of the interview was in line with above mentioned points. A summary of the interview is given in the next pages. Figure 1 summarizes points 1 to 3. Figure 2 and 3 visualize the the input distribution structures. The major problems that the agricultural sector faces, according to the EADA are brought back to four major points.

Our major findings from this interview were: the extension service reacts very slow to problems which are faced in the field due to its bureaucratic system; many agents are involved or somehow related to extension

A2 Questions were asked in line with above mentioned points. After the introduction the interviewee was asked to tell something about his function and position within EADA. The next questions were mostly posed on basis of what had been told before. Checklists were used to make sure that all prepared topics were discussed.

Fig 1: Functions and duties within Extension and meetings

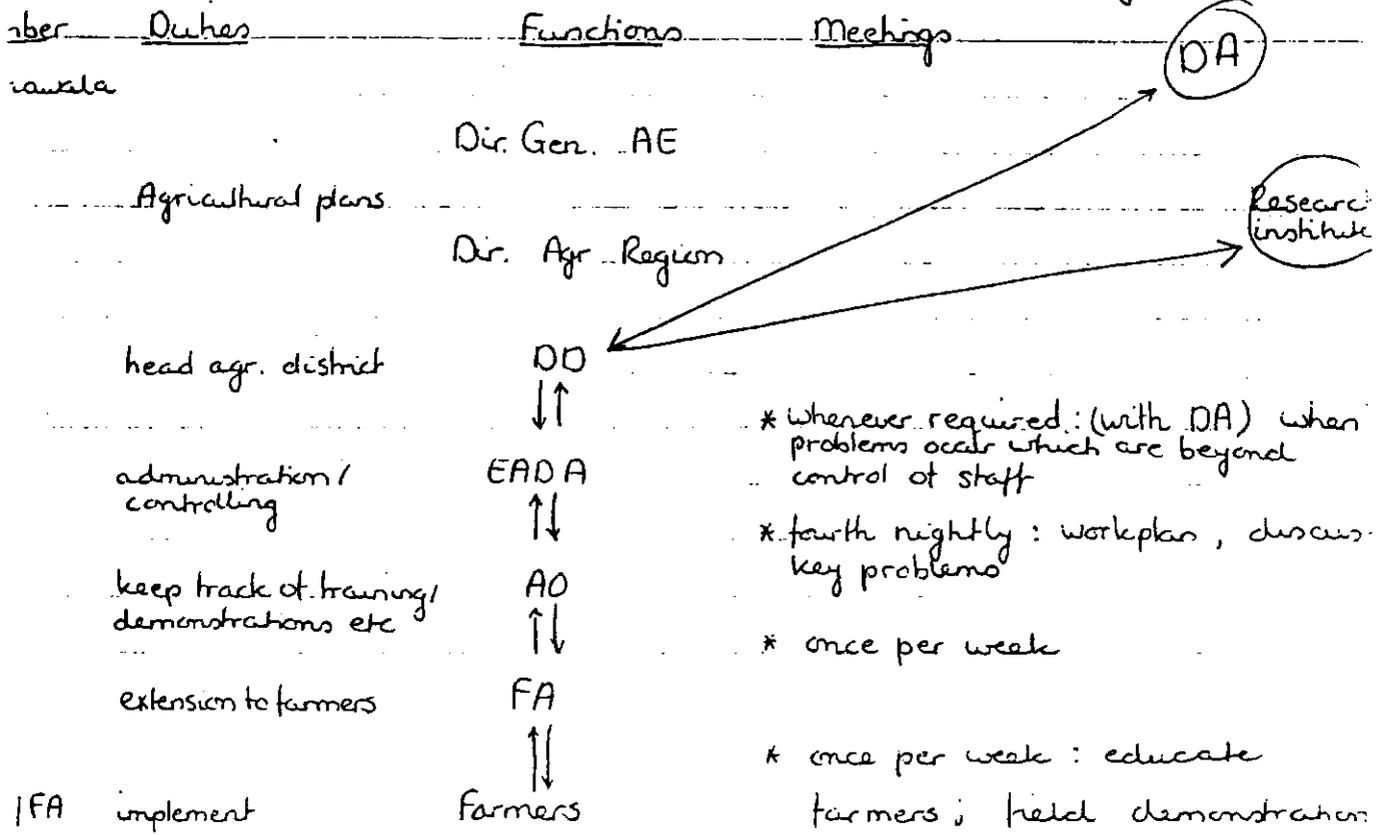
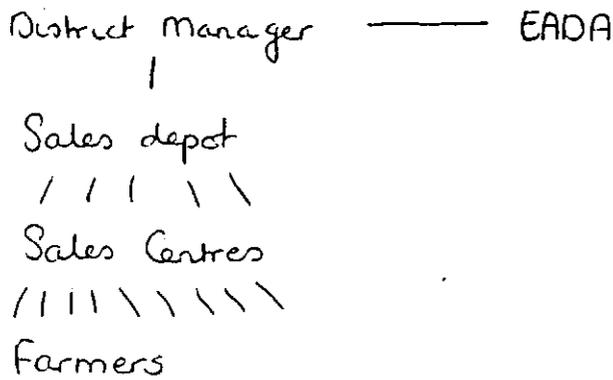
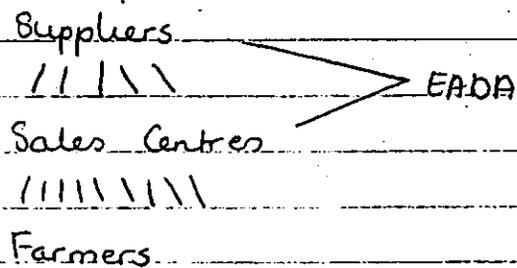


Fig 2: Distribution structure of fertilizers



### Fig 3: Distribution structure of pesticides and seeds



### problems according to EADA

shortage of inputs

in time knowledge transfer (expertise not at the right time)

shortage of water

Influential people (politicians / big farmers)

### findings

Ext. is bureaucratic thus slow

There are too many agents involved

## 1) Information exchange and Communication within the group.

All the informations collected from the field were exchanged from ~~one~~ <sup>during</sup> ~~member~~ <sup>within group meeting</sup> of the group to other.

During journey or traveling from Lahore to Sheikhupura all the informatory things were discussed in the wagon, because our most time was consumed during travel in the field group. ~~A, the members~~ of this group, the informations & their problems ~~are~~ taken by the farmers, were identified and then discussed within each sub-group to ~~go~~ other.

Within the sub-groups, the members were divided to obtain the more knowledge into 3 categories

1st was time keeper

2nd was translator

3rd was noting the problems

4th was asking the question.

# Group 1

(Interview to Fertilizer Supplier) 14:12:9

We interviewed a fertilizer supplier, Muhammad Hanif Qureshi, at Farooq Abad.

He told that in these years there was shortage of fertilizer supply but in previous year there was no any problem faced by suppliers.

According to him, there was no any difference between influential and poor farmers, in sales who first comes to his shop, first receives the supply.

He sales 50% to Arties on booking and other 50% at net rates.

He sales according to actual retail price recommended by Government.

But Arties give fertilizer in the form of credit to farmers getting more price than that of actual price.

As the farmers do not return the price, so he sales to Arties getting net cash.

But Generally other suppliers also favour the most influential farmers.

Fertilizer become short because Marketing officer only oblige his influential <sup>dealers</sup> farmers and other <sup>dealers</sup> farmers become deprive of fertiliz

He said that actual price of urea is 295 Rs. per Bag but instead of this, corrupt dealers sales it at the rate of 400 Rs. per bag.

Mr. Muhammad Hanif also told us the factors that are responsible for the shortage of fertilizer that may be summarized as following.

- 1) Inadequate supply from agencies
- 2) Unsuitable rates
- 3) Unequal distribution to dealers.
- 4) Lawlessness of district Administration
- 5) Influence of politicians.

He told that some non-owner farmers also get 2 or 3 trucks of fertilizer by MNA or MPA Cota, creating the problem of black marketing.

He also told that phosphate fertilizer was sold in second form on cheap rates doing the farmer but farmers still get on 20 or 30 Rs. less/bag.

He told Dawood factory of fertilizer changes its retail price after every month having no any retail price list.

# Group 1

16/12/95

(Interview at Jatany Kohna)

Here we went to interview of some farmer working <sup>hoeing</sup> with Kasela in the field nearby to ~~this~~ village Jatany Kohna. But these 4 farmers refused to interview saying that they have no any time for interview. According to them interview was useless because they have abundant shortage of irrigation water. They directed us to go to other farm for interview.

So therefore we moved ahead and reached a place where there was the installation of drill machine for boring.

Here we met with a farmer naming Muhamad Jamil Chohan (Ex district Council member. He was drilling the bore for 350 ft. deep, requiring 70,000 rupees.

There were 4 or 5 bores of such type in that village, consisting of mostly migrated people. Mostly Jat brothers migrated from Indian District Hushiarpur, having the population of 10,000.

He told that 2 or 3 houses of Alian and 7-8 houses of Awan Brothers have been settled here.

In addition to that 200 houses of Gakhar and 2 or 3 houses of Chohan Brothers are at

Settled here.

There are 7 Mogas for 500 Acres, so there is a great problem of irrigation from Mogas.

All the water in that region is used up by the Governor of Baluchistan.

There are 3 main problems of water shortage

- 1) Not cleaning the canals
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Govt. is uninstaling all the Govt. tubewells due to the non-payment of electricity charges by the farmers.

There is not so much production due to the shortage of water. Now farmers are installing their own petrol engines.

Ten farmers collectively form one tubewell, and are very nervous and confused to the shortage of irrigation water and are ready to ~~leave~~ <sup>leave</sup> their all property. Tractors are not available to farmers and also there is non-availability of fertilizer and pesticides at right time.

## 2. Methodology:

2.1 Approach: RAAKS (Rapid Appraisal of Agricultural Knowledge Systems) is an action-oriented methodology that provides organizations with a framework to monitor and evaluate their practices in rural development, agriculture, natural resources management, health care, etc. It is a specific participatory methodology to visualize information with the help of windows and tools through sharing ideas of actors to formulate suggestions for and the solution of problems with the help of actors involved in the real life environments. This methodology helps identify possible constraints and opportunities. All such analysis allows the participants to design measures to improve their current interaction and to adjust it to trends and changes in the environment.

RAAKS uses different analytical perspectives, called windows to achieve an integral analysis, a transparent problem definition and recommendations for action. For gathering information, instruments used were semi-structured informal interviews of the actors through outlines adjusted at the time of interview according to the prevailing situation. It involves interviews in which interviewer goes to the informant as a totally ignorant person.

1. Participatory Rural Appraisal (PRA) is a technology in which we go to the informants as facilitators. Informants are asked to prepare drawings to identify their problems and suggestions. Informants are confident as they are involved in defining their problems and suggestions. PRA provides information and does not go much in detail about the conclusions. The mapping component of PRA helps visualize local situation/problems and social interaction to clarify problems through involvement of community. Additional benefit of PRA is that informant feels relaxed and unhesitated.

~~Moreover~~ PRA is some of the basic PRA principles are team work, multidisciplinary team composition, farmer participation, regular cross checking of the information collected, discussion among farmers and facilitation by the field teams. PRA also involves ranking <sup>and</sup> flow charts to be prepared by the informants.

### 3.1 The results of the RAAKS exercise

#### 4. Choice of Windows of Phase B

Phase B is an analysis of constraints and opportunities. During this second phase of the RAAKS exercise, the team members again would go into the field to gather information relating to the problem statement, this time using different windows to look at the situation. Possible windows are: impact analysis, actor analysis, knowledge network analysis, integration analysis, task analysis, coordination analysis, communication analysis and an analysis to understand the social organization of innovation.

Actually, the field groups are supposed to select the windows they want to use. However, on the way to our field work area, the facilitator proposed to use at least the integration analysis and task analysis. If the group found it necessary to select a third one, this of course would be possible.

While travelling we all read what these two aforementioned windows were actually focussing at, discussed in what way the selected windows were suitable in our case, and discussed on whether or not to select a third one. We decided not to select a third one, because we were of the opinion that the integration analysis and task analysis would deliver us answers to our questions. A second reason was, that we did not see the direct use of the other windows that were given in the manual. Besides that, we found it better to use our scarce time for two windows in a nice way, instead of trying to deal with three windows.

#### Justification of use of the two windows.

##### Window B 4: Integration Analysis

One of the outcomes of Phase A was, that a lot of actors are involved in delivering and receiving inputs for agricultural production. It was not very clear however, what kind of contacts these actors have with each other, how often they really meet, who is in a central position in the system and who is more isolated. So, we thought that doing an integration analysis would help us finding answers to these questions.

The manual gives the following characteristics of the Integration Analysis:

*This window is about linkages. Who has contact with whom, why, and how intensively? Can different clusters of actors be distinguished and what characterizes these clusters? Clusters may appear around key actors.*

The tool we used is the Linkage Matrix. For each interview group one person was involved in working on this Linkage Matrix and this person was responsible for focussing on the issue of integration during the interviews

## Window B 5: Task Analysis

After having defined all the actors, it is important to get a clear view of what are their tasks, how do they perform these tasks? It will give a better insight into the reasons why some people/organizations involved are actually not performing like they should. And maybe it turns out that tasks that have to be carried out by a certain actor, in reality are done by an other actor or groups of actors. It may help us to identify constraints and possibilities in performing tasks.

The manual gives the following description of the Task Analysis:

*Who does what in the system? Do functional connections between system actors exist? Do these function adequately? This window refers to the study of 'who does what?' Practices relevant to innovation are identified, such as farming, research, trade or quality control as well as the actors in charge. Gaps or overlaps may appear as to the performance of tasks.*

The tool we used is the Task Analysis Sheet. From each interview group one person worked with two other people from other interview groups on this Task Analysis, which mainly meant producing the Task Analysis Sheet.

### 5. Windows from Phase B

Findings from the Integration Analysis are:

There are some clusters in which we can identify actors that have strong relationships with each other and some actors operate isolated in the system. Based on the linkage matrix and our experiences in the field, we conclude the following:

- i) Big farmers have linkages with almost all the actors in the system;
- ii) Strong linkages withing Extension Department;
- iii) Linkages between Extension Department and OFWM only at higher level, not field level;
- iv) Strong links between Extension Department and both governmental and private input suppliers;
- v) The Irrigation Department forms an isolated block in the whole;
- vi) Private input suppliers have links with most of the actors in the system;
- vii) Strong cluster politicians, ADBP and input suppliers.

Actors	FARMERS		DEPT. OF EXTENSION			OFWM		ID		INPUT-SUPPLIERS		ADBP	POLITI- CIANS
	<sup>1</sup> Small	<sup>2</sup> Big	<sup>3</sup> F.A.	<sup>4</sup> A/O	<sup>5</sup> EADA	<sup>6</sup> A/O	<sup>7</sup> WMS	<sup>8</sup> Sub-E.	<sup>9</sup> SDO	<sup>10</sup> govt.	<sup>11</sup> pvt.	<sup>12</sup>	<sup>13</sup>
<sup>1</sup>	+	-	-	-	-	(+)	(+)	-	-	-	+	-	-
<sup>2</sup>	-	+	+	+	+	+	+	+	+	+	+	+	+
<sup>3</sup>	-	+	+	+	+	-	-	-	-	-	+	-	-
<sup>4</sup>	-	+	+	+	+	-	-	-	-	-	+	-	-
<sup>5</sup>	-	+	+	+	+	-	+	-	-	+	+	+	+
<sup>6</sup>	-	+	-	-	-	+	+	-	-	-	+	-	-
<sup>7</sup>	-	+	-	-	+	+	+	-	-	+	+	+	+
<sup>8</sup>	-	+	-	-	-	-	-	+	+	-	-	-	+
<sup>9</sup>	-	+	-	-	-	-	-	+	+	-	-	-	+
<sup>10</sup>	-	+	-	+	+	-	-	-	-	+	-	+	+
<sup>11</sup>	+	+	+	+	+	-	-	-	-	-	+	+	+
<sup>12</sup>	-	+	-	-	-	-	-	-	-	+	+	+	+
<sup>13</sup>	-	+	+	+	+	-	+	+	+	+	+	+	+

Matrix : Identification of Actors and Linkages.

Some notes with regard to filling out the linkage matrix should be made. First of all, it seemed to be difficult to assess the intensity of the relationship. Furthermore, there is the problem of defining the quality of the relationship. We considered several ways of giving scores (like 1 to 5), but finally optioned for the + / - method. If for a certain linkage a minus is given, it may mean that these two parties do not have contact, but it could also mean that the relationship between them is just not good/positive. Also it should be noted that the picture is not complete, since (for no particular reason) both the Training Department (Deputy Director Training, EADAs and A/Os), as well as Adaptive Research Farms and research institutes are not included in the matrix. From the interviews it became clear that there are close linkages between people working for the Training Department, between Training Department and Extension Department, and between the Adaptive Research Farms and research institutes. This could be considered as a strong cluster as well.

**INTERNATIONAL IRRIGATION  
MANAGEMENT INSTITUTE PAKISTAN**

**MOBILIZING HUMAN RESOURCES FOR  
EQUITABLE AND RELIABLE SUPPLY  
OF AGRICULTURAL INPUTS IN  
MANANWALA DISTRIBUTARY COMMAND  
AREA**

**RAAKS TRAINING REPORT  
DEC 20, 1995**

Introd: RAAKS training at IIME  
RAAKS methodology  
why?

## 1 BACKGROUND

Agrisearch is an international agricultural research institute that aims at improved and sustainable productivity of irrigated agriculture.

Recently, Agrisearch has conducted various technical feasibility studies in Mananwala Distributary, Farooqabad. Agrisearch has come to the conclusion that there is a lot of potential for raising crop production in the area. Nevertheless, a serious constraint is the unequitable and unreliable supply of agricultural inputs such as water, seeds, fertilizers, etc.

### 1.2 THE CONSULTANTS AND THE CONTRACT

The consultant group, FOOD FOR FUTURE comprised of eleven members. A group contract was prepared for the group task division as was desired by the client. The agreed contract is as follows:

#### 1.21 TASK DIVISION:

1	Mr. Raza ur Rehman Abbasi	(Chairman/ Translator)
2	Mr. Niamatullah	(Time Keeper)
3	Mr. Derk Kuiper	(Performance Monitor)
4	Mr. Sajjad Hussain Naqvi	
5	Mr. Saeed ur Rehman	
6	Dr. Waqar Jehangir	(Translator)
7	Miss Nathalie Roovers	(Note Keeper)
8	Mr. Munawar Ahmad	
9	Mr. Muhammad Arshad	
10	Mr. Azmat Beg	(Performance Monitor)
11	Mr. Mehmood Ul Hassan	(Note Keeper/ Presentation)

#### 1.22 INTERVIEW SUB-GROUPS

Since the group had to conduct its research in a very short period of time, the client wished that the consultants should work in small groups of three to four members. The interview groups were also suggested by the client as follows:

##### A) INTERVIEW SUB-GROUP 4

- 1 Mr. Muhammad Arshad
- 2 Mr. Azmat Beg
- 3 Mr. Mehmood Ul Hassan

B) INTERVIEW SUB-GROUP 5

- 1 Mr. Saeed ur Rehman
- 2 Dr. Waqar Jehangir
- 3 Mr. Derk Kuiper
- 4 Mr. Munawar Ahmad

C) INTERVIEW SUB-GROUP 6

- 1 Mr. Raza ur Rehman Abbasi
- 2 Mr. Niamatullah
- 3 Miss Nathalie Roovers
- 4 Mr. Sajjad Hussain Naqvi

1.23 INFORMATION EXCHANGE:

It was agreed that the information exchange within the groups for the interviews will take place after each interview session through a brief oral presentation of ten minutes every day per group just after the interviews so that loss of information could be minimized. Besides, such an exchange will also help in keeping all the members at the same wavelength.

1.24 DECISION MAKING AND DISPUTES WITHIN THE GROUP

The process of decision making shall take place with open voting if a consensus is not arrived at. In case of conflict in opinion or dispute within the consultant group, chairman shall take a lead in explaining the situation/ problem and then an open voting afterwards.

1.25 INTERRUPTIONS DURING THE DISCUSSION

A time-out sign was agreed upon in case of urgent interventions/ suggestions.

1.26 EXCHANGE OF INFORMATION WITHIN THE SUB-GROUPS

The note taker within each sub-group was made responsible for presentation of individual interviews to other members of the group. They could stop the interviewer in case of urgent questions/ suggestions during the interviews. Although every body within each sub-group should keep an eye on time, a time keeper is to be appointed. Friendly invitations are to be refused in case of time shortage, especially at the end of the interviews.

## 1.27 MISCELLANEOUS:

- No two persons should talk simultaneously
- Any member who is absent at the time of the decision has no right to object later
- Chairman is responsible for making a daily time schedule keeping in view the group programme and has to hand it over to the time keeper, who has authority to press the group/ chairman to speed up or stop.

## 2.3 PLANNING:

The activities were already planned by the client and the consultant followed the plans. Although there was always a huge time constraint, the consultant tried to stick to the client's planning and consequently the results achieved may be assessed keeping in view this constraint.

## 3 RESULTS AND ANALYSIS:

### 3.1 THE RESULTS OF THE RAAKS EXERCISE:

#### 1 TERMS OF REFERENCE:

Agrisearch (client) asked the FOOD FOR FUTURE (consultant) to formulate recommendations for mobilizing the existing human resources in Manawala Distributary, Farooqabad, in order to bring about a more equitable and reliable supply of agricultural inputs.

Agrisearch is convinced that better management of human resources available in the irrigated agriculture sector will play a decisive role in making improvements possible. Human resources comprise of knowledge, manpower, skills, experience, organizational capacities, institutional set-up, budget and facilities.

#### 2 PHASE A

Exposing the gathered information to the windows and tools available in RAAKS, the group concluded that:

- a) Gross root level is not benefiting from current agricultural services
- b) No equal supply of input to resource poor farmers at proper time and at proper price

- c) Rules and Regulations in the agro-irrigation system are not obeyed and are violated

### 3 DECISION MAKING ON THE TERMS OF REFERENCE

The consultants unanimously agreed to the terms of reference because the main problem identified was with contacts and communication and not with the availability of human resources themselves. If human resources are better coordinated, all the problems can be solved because the system works fine. Institutions are present only functioning is to be improved. Within the physical system, available services can be better and equally distributed and in a reliable manner.

### 4 CHOICE OF WINDOWS

Two windows were chosen for analysis of the situation i.e. task analysis, and the integration analysis. Since the overlaps and gaps had to be identified in task performance of various actors, task analysis was thought to serve better. The group operationalized it in terms of analysing the allocated tasks, functional relations with reference to performance of tasks with other actors, and finally ranking the task performance.

The Integration analysis helps in identification of missing links. The links were defined in terms of official contact of various actors among themselves.

### 5 WINDOWS FROM PHASE B

The task analysis indicated that the functional performance of all the actors was below desired except for OFWM, that too fulfils lining tasks efficiently.

The integration analysis indicated that functional relations among actors were either very skeptical or non-existing altogether. The influentials were very much in the picture everywhere influencing negatively the performance of the system. Looking at the reason why at all they influence can, however, indicate what weaknesses are really there in the knowledge system.

There had been an apprehension among the group members that the influentials are very much in the picture everywhere and that proved more or less the case after the analysis.

The analysis through above mentioned windows revealed three main constraints in the knowledge system.

It was found that the most important constraint are due to institutional factors such as culture, isolation, lack of motivation/ incentives, hierarchical structure and control, and bureaucratic attitude within the organizations. The institutional constraints help in inducing and fostering corruption at both organizational and individual level, that is mainly due to political and influential people within the system. This promotes financial and human resource constraints in proper functioning of the knowledge system. These constraints further cause social in-equity and leads to further institutional constraints. Thus this forms a vicious cycle of inequity and inefficiency.

## 6 PHASE C

The RAAKS analysis, therefore, points that if institutional constraints can be taken care of, whole the knowledge system will start improving. The general belief that political and social influence exerted is the prime cause of inefficient performance, therefore proved to be untrue.

### 3.2 THE TEAM PROCESS

#### 3.2.1 Decision Making:

During the process of decision making, most of the time the group agreed to the proposals of the members.

Other team dynamic issues were not discussed.

most nice letter

## 2 PROCEEDINGS

The group started with study of the Terms of Reference and some clarifications were requested from the client especially on terminology used in the ToR such as equitable distribution, human resources, etc. A list of key words was identified to lead each question to be asked from the actors. These key words were:

- WHO
- WHAT
- HOW
- WHY/ WHY NOT
- WHEN
- WHAT RESULT etc.

Each sub group was requested to make an outline of issues to be taken up with the actors. Later, these issues were discussed with respective actors. An interview outline in terms of time allocation was unanimously agreed upon as under:

INTRODUCTION	5 MINUTES
MAIN INTERVIEW	35 MINUTES
OTHER MEMBERS	10 MINUTES
CONCLUSION	5 MINUTES
FEEDBACK	5 MINUTES

### 2.1 INTERVIEWES

Several relevant actors were interviewed for problem identification and analysis of the situation. Main points of these interviews are given in the sub-sections below.

#### 2.11 WMO WATER MANAGEMENT SHEIKHUPURA (Mr. Kamal Ahmad)

His area of work was not Farooqabad or command area of Mananwala but he hoped that he could give his own perception. He briefed the interviewers about the organizational structure of OFWM. He was of the opinion that the inadequacy of irrigation water was due to low capacity of the system as it was designed for a 50% cropping intensity while the cropping intensity has shot up to the tune of three to four times by now. Therefore, three times additional water is needed to fulfil current water requirements. Water is especially short in rabi season due to canal closure, rice cultivation which results into delayed sowing of wheat, problems in maintenance of canals etc.

This could be supplemented through tube well water as the aquifers in the area are sweet. For increasing number of tube wells in the area, a subsidy should be given to farmers who want

to install since most of the SCARP tube wells have been removed. Another way could be to install community tube wells.

By lining, 40 % losses of water have been reduced. The OFWM basically improves the watercourses (up to 50% kacha improvements and 30% lining). Pakka Nakkas are also installed. Precision land levelling is also done with the help of laser. The farmers do not line watercourses by themselves at all because they believe that it is the job of the government (OFWM). Additional funds are required to do that. There should be a policy to line 50% watercourse.

Regarding mobilizing existing human resources, he opined that OFWM can only provide extension services. However, farmers do not only want extension but they want government (OFWM) to invest. The shortcomings in the organization are caused by low funding as OFWM is to be funded by the the revolving fund. Since the revenue department is responsible for recovery, they are less interested in recovery and that results in funding problem. This problem can be tackled if OFWM is made responsible for recovery and attached to Irrigation Department and given the same authority/power. Moreover, the technical staff (AO, WMO etc.) are demotivated due to improper task division. The degree holders (AOs and WMOs) and the diploma holders (supervisors) have to do the same job.

OFWM achieves targets and tries to accommodate maximum farmers rather there is over achievement that are adjusted from the next year's budget. Financial constraints are, however, there.

Main problems are that many farmers do not cooperate with the department. There are disputes among the farmers of the head and tail reaches. He did not agree that there is some problem with motivation of the farmers by the OFWM people. The influentials especially the politicians also interrupt their functioning.

The inadequacy, inequitable distribution and unreliability is caused by the low financial availability with general farmers.

Sufficient extension services available to farmers through radio, television, extension staff and demonstration effect of the progressive farms. They possess required skills but do not practice it.

## 2.12 AO WATER MANAGEMENT SHEIKHUPURA (Mr. )

The main tasks of the AO in OFWM are to motivate and organize people to form WUAs, train the farmers, provide extension services on water application, to operate model farms for demonstration of agro-irrigation trials. They invite farmers and people from adaptive research to their demonstrations.

Sixty percent of the invited farmers do come to their field days. Farmers are generally invited from the lined watercourses. He feels that the staff requirements are not met properly as he faces shortage of staff (only 2 field assistants). There is no proper conveyance arrangements. There is no collaboration between ID and OFWM.

The inputs are short in general which is artificially created because the big farmers buy in bulk and stock. PID should be forced to collaborate with OFWM.

#### 2.13 SDO UG, LCC, PID SHEKHUPURA

Initially it was planned that XEN will be interviewed but he was not available. The SDO was only water focused and had a narrow vision. He opined that the water shortage at the tail was the result of poor maintenance which caused weak banks and frequent breaches. Influentials and lack of knowledge on part of the general farmers are the main causes of frequent breaches which can be controlled by lining of canals. Influentials also manipulate transfers of irrigation functionaries which causes inefficiency. The illiterate farmers do not cooperate with each other.

There is coordination between PID, OFWM, and farmers. Besides, they meet other departments once in a month in the DC office. There is no problem in communication with other departments and other facilities are also enough to perform tasks. The skills available are adequate as there is a learning from experience and they exchange knowledge among other staff members. The system can be re-modelled to cater to the needs of increased demand. He suggested that canal committees can improve the working of ID.

He did not have any knowledge about other agricultural inputs. He was aware that ADBP provides credit to the farmers.

#### 2.14 FARMER 1 VILLAGE TIBI MITTO (Mr. )

The farmer was a medium farmer (12.5 acres holding). He partly agreed to the ToR and said that not all problems can be solved by mobilizing human resources.

The irrigation water is short which can be to some extent augmented by tube well water. Irrigation department is responsible for breaches and water supply and shortage. Therefore they can solve this problem by desilting distributaries and controlling breaches. SCARP tube wells are not functioning properly due to lack of maintenance, corruption etc. WAPDA should also extend storage capacity for water.

Fertilizers are not only short but high priced as well. Good and honest administration can check black marketing.

Seed is not a problem because they use their own farm seed. new varieties are bought at high prices but those are cost effective.

The pesticides are of poor quality and very high priced. Government can control price and quality.

Banks are corrupt and do not want to provide credit to the small farmers because we cannot bribe them. Higher officials should visit small farmers and have feedback from the field and punishment be imposed on wrong doers.

Knowledge is adequate with the farmers. Extension people visit them of and on. If there are some problems, farmers go to their office for advice.

There is a labour shortage at peak seasons due to migration of workers and employment in factories.

#### 2.15 FARMER 2 VILLAGE TIBI MITTO (Mr. )

Yields are stagnant. Inputs are expensive. The agricultural production is low because of water shortage.

The fertilizers are short in short run due to big landlords and influentials. Good quality seed is not available in the market. Government should take proper steps to ensure adequate supply.

The credit is not available to small farmers because of cumbersome procedure. Small farmers get credit from commission agents and they exploit farmers. Farmer organizations are not helpful because they behave like cooperatives that are owned by single person and are only in papers. There is a recovery problem as well because big landlords miss use money.

Labour is expensive to pay.

Small farmers do not need knowledge and are satisfied with their skills. Big farmers want to have it. Only extension people visit but they too do not give an advice. OFWM people do not have a follow up after they line the watercourses. Major source of knowledge is TV and radio.

#### 2.16 FARMER 3 VILLAGE TIBI MITTO (Mr. )

Inspector, ID Patwari should be there. Input store at the village level be there.

Main hinderance is the influentials.

2.18 AO TRAINING SHEIKHUPURA (Mr. )

2.19 DEPUTY COLLECTOR REVENUE, PID, SHEIKHUPURA (Mr. )

Irrigation Department has control over water so they are responsible also. There is 80% corruption by influentials and 20 % by the ID.

2.120 INPUT SUPPLIERS SHEIKHUPURA (M/S )

The source of fertilizer supply is Fauji Fertilizer Company which produces and imports fertilizers. Government also imports directly and the loaded ships are contracted for sending it inland. These are the careers (trucking companies) who delay it or do not transport for having more fare. The ultimate impact is that the supply is delayed at the farmgate.

The input dealers are less responsible because they deposit money to the companies quite early but the companies hoard stocks in anticipation of price rise and start demanding more money than booking price. The supply should reach the dealers at least two months before the peak demand. There are three main reasons for price rise/ shortage at the peak:

- the stockists stock it in anticipation of a price rise and black market it
- government places late import orders to the exporting firms
- carriage contractors delay it

The prices are fixed by the producers and the dealers are only authorized to charge a commission of Rs. 6 per bag.

Even with slow supply, lot of people could purchase fertilizer if arhtias do not purchase in advance. Since they are rich, they pay us advance for 400-500 bags and we have to deliver it on their messages (chits).

In slack seasons, demand is low so we reduce price by charging less commission. The dealers can only help if supplies are regular. Even they collect fertilizer from other areas such as Vehari, Tonsa etc. to meet local requirements.

The quality of non-standardized fertilizers is low otherwise there is no quality problem. There are only complaints about the colour of fertilizers but we got it checked by EADA and it was alright.

In case of pesticides, there is no shortage at all. Only problem is that there are a lot of companies and their products are branded. The farmer is confused and does not know about the suitability of these for various insects. Since diseases and pests are complex, sometimes the diagnosis is not proper.

Each year the demand is almost high by 10%. Extension is responsible for quality control. Following points may help

- extension services be improved
- companies should also educate farmers
- dealers should be educated and trained in farming and especially in insect/pest control

2.121 FARMER 4 VILLAGE TIBI MITTO (Mr. )

2.122 FARMER 5 VILLAGE TIBI MITTO (Mr. )

### 3 PROBLEM DEFINITION

The main problem is lack of control mechanism and its implementation in task performance of almost all the actors. Monitoring and evaluation procedures of the task performance are weak as well. This can be systematically and effectively undertaken by mobilizing human resources effectively. Therefore, the consultants after some back and forth argumentations reached at a unanimous agreement.

### 4 SITUATION ANALYSIS AND PROBLEM SPECIFICATION

#### 4.1 IRRIGATION WATER

ID has control over O & M which is not done properly due to corruption and result is inequitable distribution and unreliable supply of irrigation water. They also do not cooperate with other departments such as training, OFWM, adaptive research and extension. ID believes that influentials are responsible for 80% of corruption as they have instruments (transfers) to intervene in systematic performance of the department.

The extension staff is inefficient in transfer of knowledge while farmers too, due to financial constraint, do not act on their advice.

OFWM is less interested in enhancing applied knowledge as they do not attend training meetings. Other agencies within agricultural department do not coordinate with training people.

Financial institutions such as ADBP favour influentials and do not lend to small farmers because they do not have repaying capacity, colateral and bribe.

Government's administrative machinery does not have contact/care for small farmers and is corrupt while farmers themselves are hesitant to change and do not get organized.

Input suppliers exploit, commission agents exploit by high interest rate lending to farmers and buying their products cheap. Cooperatives are dominated by influentials.

Research institutions such as IIMI have not produced tangible results for the farmers.

#### 4 CONCLUSIONS

##### 4.1 Conclusion of the fieldgroup and presentation of results

The group concluded that the actors in the region should cooperate in a participatory manner to tackle the problems mentioned above. The group presented this result in the actor workshop that was held on December 17, 1995 in the ID Rest House Farooqabad.

The form of presentation was a role play in two acts. The actors in the role play were:

0. Story teller
1. Small farmer
2. Big farmer / Influential
3. Extension
4. Bank
5. Input supplier
6. Irrigation Department
7. On Farm Water Management
8. Research organisations
9. Corruption

##### Act 1. The way things are

The actors (except the small farmer, the big farmer, the story teller and corruption) sit in half a circle with their backs to each other, in other words it shows lack of communication. The small farmer comes in and visits the agencies one by one with his problem. The agencies turn him down, send him to another place or do not even listen to him. When the small farmer goes off, corruption comes in and seduces the agencies to take bribes. After this the big farmer comes in. The agencies receive him amiably and promise him to try and solve his problem. The story teller announces the second act of how things should be.

##### Act 2. The way it should be

All the actors form a circle and are busy discussing about the problems of input supplies and irrigation management.

#### Act 3. Final presentation

The storyteller points out that communication among actors can solve problems. To represent and strengthen farmers, organisations of farmer should be formed in the region.

#### 4.2 Discussion in actor workshop

After the presentations of fieldgroup A and B a plenary discussion took place among the people that were invited. These comprise officials from AD, an input supplier and farmers. The officials generally did not contribute in the discussion.

The results of the discussion can be grouped in two categories e.g. problems and possible solutions. Problems that were mentioned in the discussion were:

- Shortage of canal water (fulfil requirements with tubewell)
- Overcharging on electricity bills for tubewell operation
- Farmers have to pay for water they do not get
- Black marketing and high prices of inputs
- At the time of need the fertilizer is not available
- Compulsion by dealers to buy a combination of fertilizers
- Even when SCARP tubewells are turned over to the community the farmers still have to pay SCARP bills
- The area of cultivation has become bigger but the size of the mogha has remained the same
- Bad quality of inputs
- Government Commission sets the prices for the outputs without taking the input prices into account.

Solutions mentioned:

4

- Electricity bills should be flexible, only what has been used should have to be paid
- The same counts for water charges
- Banks and departments should provide the farmer with fertilizer instead of credit
- Input dealer at village level
- Construct social organizations to control agro-irrigation inputs

Generally the actor workshop was a success because the fieldgroups could give back their findings and discuss about them with at least one actor, the farmers. To elaborate on the above mentioned problems and solutions another workshop should be organized. Ultimately, the participants in the actor workshop remarked that they were enthusiastic about the way in which the research results were given back and discussed.

## ANNEXES

The annexes serve as an illustration of the process of analysis and conclusion.

- 1 PROBLEM CYCLE
- 2 TWO PRA-MAPPINGS
- 3 LINKAGE MATRIX
- 4 LINKAGES
- 5 ACTORS OBJECTIVES / POTENTIAL / CONSTRAINS
- 6 TASK ANALYSIS

1

# INSTITUTIONAL CONSTRAINTS

- 1- LACK OF ACCOUNTABILITY
- 2- NO INCENTIVE TO IMPROVE PERFORMANCE
- 3- I.D. ISOLATED
- 4- LACKING QUALITY CONTROL INPUTS
- 5- NO. COORDINATION

## SOCIAL INEQUITY

- 1- SMALL FARMER NO ACCESS INPUTS
- 2- STRONG INFLUENCE OF ALL ACTOR

## RESOURCE CONSTRAINTS

- 1- SMALL FARMER RESOURCES
- 2- SMALL AND MEDIUM F. NOT BENEFITED

## CORRUPTION

CORRUPTION INCREASING!

# PROBLEM CYCLE

SOURCE - FOOD FOR FUTURE

DEC 17, 1995 FAROOQ ABAD



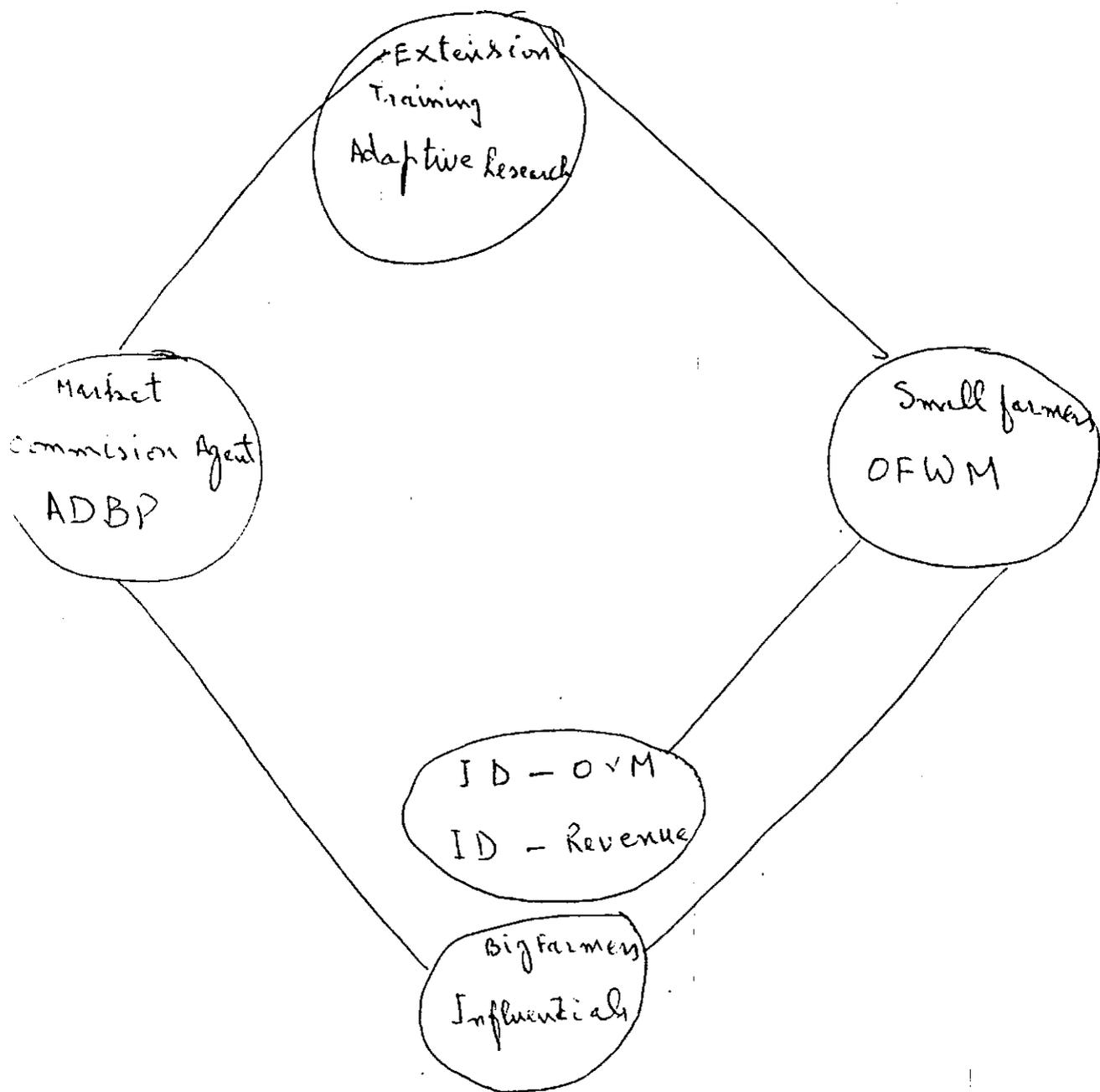


MATRIX

ACT	ACT	OFWA	EXT	Tng.	AR.	DEM. I.D.	REV. I.D.	SMALL FARMER	BIG FARMER	INFL	GOVT.	MARKET	COMM. AGENTS	ADBP	PAD <sup>+</sup> S.C.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	*	?	?	-	-	-	*	*	*	*	*	-	-	-	-
2	*	?	*	*	*	-	-	*	*	*	*	*	*	*	-
3	-	-	*	*	*	-	-	-	+	-	*	-	-	+	-
4	-	-	*	*	*	-	-	-	+	-	*	-	-	-	-
5	-	-	-	-	-	*	*	-	+	*	*	-	-	-	-
6	*	*	-	-	-	*	*	*	*	*	*	-	-	-	-
7	*	*	+	-	-	*	*	*	*	*	-	*	*	?	-
8	*	*	+	+	-	*	*	*	*	*	-	*	*	*	-
9	*	*	*	+	-	*	*	*	*	*	*	*	*	*	?
10	*	*	*	*	-	*	*	-	*	*	*	*	*	*	*
11	-	-	*	-	-	-	-	*	*	*	*	*	*	*	-
12	-	-	*	-	-	-	-	*	*	*	*	*	*	*	-
13	-	-	*	+	-	-	-	*	*	*	*	*	*	*	-
14	-	-	-	-	-	-	-	-	-	?	*	*	*	*	*

4.

# LINKAGES



FOOD OR FUTURE

ACTORS	OBJECTIVES	ACTIVITIES	POTENTIAL	CONSTRAINTS
W.M.D.	<ul style="list-style-type: none"> <li>- Save water</li> <li>- Increase water use efficiency</li> <li>- Improve production</li> </ul>	<ul style="list-style-type: none"> <li>- Limning of water courses</li> <li>- Improve water courses</li> <li>- P.L.L.</li> </ul>	<ul style="list-style-type: none"> <li>- Over achievement</li> <li>- Attachment to I.D.</li> <li>- Improve recovery</li> </ul>	<ul style="list-style-type: none"> <li>- No task division</li> <li>- Low funds. Because low recovery.</li> <li>- Demotivation.</li> </ul>
A.D. (W.M.)	<ul style="list-style-type: none"> <li>- Improve production</li> <li>- Adoption of new farm technology</li> </ul>	<ul style="list-style-type: none"> <li>- Organisation of COOAS</li> <li>- Extension</li> <li>- Model farm</li> <li>- D. plots</li> <li>- P.L.L.</li> <li>- Maintenance w/c</li> <li>- Molecrating ext-Reseach</li> <li>- Training - farm visit</li> </ul>	<ul style="list-style-type: none"> <li>- Important link between farmers &amp; research</li> <li>- I. D. involvement</li> <li>- Close to farmers &amp; farming</li> </ul>	<ul style="list-style-type: none"> <li>- Lack of power</li> <li>- Staff</li> <li>- Transport</li> <li>- Funds</li> <li>- Private emp.</li> <li>- inputs supply</li> </ul>
S.P.O.	<ul style="list-style-type: none"> <li>- Distribution of water exceeding design.</li> </ul>	<ul style="list-style-type: none"> <li>- Co-ordination of all of branches &amp; districts</li> </ul>	<ul style="list-style-type: none"> <li>- Power to improve</li> <li>- Experience</li> </ul>	<ul style="list-style-type: none"> <li>- No. contact</li> <li>- No interest</li> <li>- Water focused</li> <li>- Transfer (impl)</li> <li>- Political influence</li> <li>- physical system</li> </ul>



**NOMINEES FOR AWARD**  
**BEST FACILITATING PERSON**  
**OF THE RAAKS TRAINING**

***MR. MUHAMMAD RAFIQUE KHAN***  
*modest PRA expert*

***MS. CRIS DE KLEIN***  
*good arrangements are crucial*  
*for succes of training*

***MS. MANON***  
*interpreter and communicator*  
*with women's group*

**NOMINEES FOR AWARD**

**MOST THREATENED PERSON  
OF THE RAAKS TRAINING**

**MR. SAEED UR REHMAN**  
tough job organizing the fieldwork

***MR. RAZA UR REHMAN ABASSI***  
*works for organisation most spitted  
upon*

***MR. RANA BASHARAT ALI***  
*caught while escaping from training*

**NOMINEES FOR AWARD**

**BEST ACTOR  
OF THE RAAKS TRAINING**

***MR. MUNAWAR AHMAD***  
*small farmer*

***MR MEHMOOD UL HASSAN***  
*storyteller*

***MR BEG***  
*IIMI imitator*

# Discoveries on the farmers' track



prints and pictures on agricultural innovation

ANNEX 5

Discoveries on the farmers' track  
prints and pictures on agricultural innovation  
(ISBN 90-801876-1-5)  
consist of the following titles.

A day in the country  
a documentary film about farming in Holland  
The system and the soil  
a documentary film about agriculture in Benin  
The setting  
background on agricultural innovation  
Ideas and images  
workbook

"Farmers don't take my advice seriously at all," complains an extension agent in the documentary film *The system and the soil* about agriculture in Benin. Undoubtedly many colleagues, both in the 'North' and in the 'South', will identify with this cry from the heart. After all, extension on new production methods or crops, often still leaves a lot to be desired. In some countries, for example in the Netherlands, at first sight everything seems to be very well taken care of. The documentary film *A day in the country* demonstrates that agricultural innovations in the Netherlands are applied relatively quick as a result of close collaboration between farmers, industry, agricultural research and extension services.

A unique aspect of the *Discoveries on the farmers' track* package is the possibility to compare issues on agricultural innovation and the diffusion of these innovations in different cultures. This is due to the fact that the films are made from the perspective of thinking in knowledge systems, and, with this, surpass the level of case-studies. *Discoveries on the farmers' track* is therefore being seen as a product of extremely high quality by various key-persons in the international world of agriculture and rural development.

The theme of *A day in the country* (40 min.) is the Dutch Agricultural Knowledge and Information System, with special reference to animal husbandry. The system and the soil (50 min.) is about agriculture in Benin (West Africa), and shows various co-existing approaches to extension. The unique quality of these films emanates from the fact that they both show the wider context and the problems in view of a farming family's every day life. The films are made for group use.

The *Work Book Ideas and Images* is the key to the ideas in the films and a help to the intermediary or trainer to gain as much as possible from discussions among the group members. During such discussions, however, it might be desirable to have more extensive and detailed information available, especially because the situations and ideas depicted in the films are not always common knowledge. That is why *Discoveries on the farmers' track* is completed by the *The setting*. This information book is intended to fill in gaps that might occur, thus ensuring that the themes can be placed in a broader framework.

The stimulus to produce this package came from the very positive reactions all over the world to both films. The production has been made with the financial aid of a number of international sponsors among which the European Union, the Technical Centre for Agricultural and Rural Cooperation (CTA), the French Ministry of Development and Cooperation and the Dutch Ministry of Foreign Affairs. The material has been developed mainly for those professionals in the 'South' who are interested in rural development and in the application of agricultural knowledge with regard to innovations. We have in mind those who are active in policy-making and management, both in Governmental and Non-Governmental Organisations (NGOs). We also assume that the package can be used in agricultural education. It is also of considerable interest to those with the same profile in the 'North'.

*Discoveries on the farmers' track* is made by Peter Linde Productions, Wageningen, the Netherlands. Peter Linde specialises in the design and realisation of video- and (interactive) multi media products for educational and informative purposes. Peter Linde Productions works closely with I & D, a research centre for new and interactive media of the Wageningen Agricultural University and various national and international institutes dedicated to the development of the use of media for education, information, extension services and publicity.

Peter LINDE Productions

P.O. Box 485  
6700 AL Wageningen  
the Netherlands  
tel +31 8370 25917  
fax +31 8370 14187

The package is available  
in French and English  
and can be ordered from:  
TVE Training and Distribution  
Centre, P.O. Box 7  
3700 AA Zeist  
the Netherlands  
tel +31 3404 20499  
fax +31 3404 22484

The package is free of  
charge voor governmental and  
non-governmental organisations  
and educational organisations  
in Low and Middle Income  
countries. Subscribers are  
requested to send a letter of  
motivation. The price of the  
package for commercial  
organisations and organisations  
from High Income countries  
is 150 \$. Please indicate  
the desired language version  
and video system.

## DISCOVERIES ON THE FARMERS' TRACK: REVIEWS

■ The breadth and scope of this material means that it could be used in a variety of situations..... A great deal of thought and effort has gone into the production of the videos and the booklets and Peter Linde is congratulated with his commitment on this project.

*David Gibbon, School of Development Studies, University of East Anglia,  
Norwich, UK*

■ The package is excellent and will be of great use to everyone involved in agriculture, rural development, and extension services in both the north and south. This is the first production of its type that puts the agricultural knowledge systems of the north and south on an equal perspective. It is certain to make a great impact at the global level.

*Mike Warren, CIKARD, Iowa State University, Ames, USA*

Cet ensemble de présentation parfaitement exécutée et agréé, est un excellent matériel d'animation d'une discussion à propos des structures institutionnelles d'innovation agricole et des relations entre les agriculteurs et leur environnement technologique. Il faut souligner la clarté de l'exposé et des cas choisis en illustration.

Cet ensemble est particulièrement recommandable pour débiter une formation ou une réflexion sur les dispositifs et processus d'innovation en agriculture, même auprès de certains professionnels qui déclarent, souvent de façon superficielle, comprendre les limites d'un modèle linéaire.

*Christophe Albaladejo, INRA, Département de Recherche sur les Systèmes Agraires et le Développement, Unité de Toulouse, France*

**CURRICULUM VITAE**

Name	Salomon
Christian names	Monique Louise (Monique)
Nationality	Netherlands
Home-Address	Van Oldenbarneveltstraat 67 6512 AT Nijmegen Tel +31 (0)24 3604096
Business-Address	Wageningen Agricultural University Department of Communication and Innovation Studies Hollandseweg 1 6706 KN Wageningen Tel +31 (0)317 484310 / 482551 Fax +31 (0)317 484791 E-mail Monique.Salomon@Alg.Vlk.Wau.NL
Education	M.A. Cultural Anthropology at the University of Nijmegen, The Netherlands.  Certificate Teacher Social Studies at the University of Nijmegen, The Netherlands
Languages	Dutch, mother tongue English, fluent Indonesian, active French, active German, passive

## **Key qualifications**

Research, development and training in Rapid Appraisal of Agricultural Knowledge Systems (RAAKS) in the Netherlands and abroad

Consultancies on knowledge management

Consultancies on user driven technology development

## **Special Interests**

Participatory development in rural areas

Facilitation of learning

Intercultural communication

## **Relevant work experience**

Museum of Ethnology, University of Nijmegen  
Assistant to the Curator  
Sept - Jan 1990

Afrikamuseum, Berg en Dal  
Facilitator of educational projects  
Jan 1990 - Sept 1991

Stichting Pelita, The Haque  
Social worker for warvictims from the former Dutch Indies  
April 1990 - Oktober 1995

Wageningen Agricultural University, Department of Communication and  
Innovation Studies

Lecturer, researcher and supervisor

December 1992 - present

### **Specific international experience**

Co-organizer of an International Conference on Agricultural Extension in  
Africa in Yaoundé, Cameroon, January 1994 in collaboration with CTA

Facilitator of a RAAKS workshop for the International Irrigation Management  
Institute (IIMI) in Lahore, Pakistan, April 1995

Visiting lecturer at the Department of Agriculture, University of Zululand in  
Kwa Dlangezwa, South Africa, May-July 1995

Speaker at an International Work Week of ETC in Kericho, Kenya, October  
1995

Co-facilitator of a RAAKS training workshop for the International Irrigation  
Management Institute (IIMI) in Lahore, Pakistan, December 1995

Study tour to Tanzania: Sugar Company and Agroforestry Projects on  
mainland Tanzania and Zanzibar, January 1991

Study tour to Indonesia: Former internee camps for Dutch prisoners of war on  
Java, January 1992

Study tour to Indonesia: Rural Development Project in Merauke and Project  
on Integrated Pest Management in Yogyakarta, July 1994

## Relevant publications

Adolfse, Luc, Monique Salomon & Paul Engel (1993)

*Met de Landbouwwuniversiteit Wageningen. Communicatiegedrag en telefoongebruik van LUW medewerkers.* Publication of Department of Communication and Innovation Studies, Wageningen.

Engel, Paul G.H. & Monique Salomon (1994)

*RAAKS: A Participatory Action-Research Approach to Facilitating Social Learning for Sustainable Development.* Paper for the International Symposium on Systems-Oriented Research in Agriculture and Rural Development, Montpellier, France, 21-25 November 1994.

Engel, Paul G.H. & Monique Salomon (to be published in 1996)

*Facilitating Innovation for Development.* Resource box.  
Royal Tropical Institute, Amsterdam.

Engel, Paul G.H., Monique Salomon, Maria Fernandez & Niki Dieckmann, Niki (1995)

*RAAKS: A Participatory Action-Research Approach for Improving performance in Extension. Version 5.2*

Engel, Paul G.H., Niels Röling, Annemarie Groot & Monique Salomon (1993)

*New concepts in agricultural extension: facilitating social learning in sustainable irrigation water management.* Paper for the Consultation on Irrigation Extension, Accra, Ghana, 5-9 December 1994.

Noordhuizen, Prof.Dr. J., E. de Boer, Drs. M. Salomon & N. den Daas (1995)

*Beloning overwegen in de aanpak van IBR. Bestrijding koeiegriep moet uit impasse gehaald.*

Boerderij/Veehouderij 80, nr. 13, 27 juni 1995.

Salomon, Monique, Willem van Weperen & Paul Engel (1994)

*Onderzoek naar draagvlak voor gebruik van bio-ethanol als motorbrandstof in de Noordelijke provincies met behulp van de RAAKS-methodologie.* Publication Department of Communication and Innovation Studies, Wageningen.



Personal data

Date of birth: 19 July 1962  
 Nationality: Netherlands

Qualifications

1980 - 1988 M.Sc. at the Agricultural University Wageningen (AUW).  
 Majors: Communication and Innovation Studies and Crop Protection  
 1991 - 1994 Courses in Communication Techniques (1991), Conflict Management (1992),  
 and Scientific Journalism (1991/92), Technologies for Creating (1994/95).

Expertise profile

Research and consultancy in communication, extension, research - technology transfer linkages, management of Farming Systems Research, knowledge development and utilization, organisational learning, learning and innovation studies.

International experience

Latin America: Bolivia, Colombia, Peru  
 Asia: Philippines, Sri Lanka  
 Africa: Ghana  
 Europe: Danmark, England, France, Netherlands

Languages

	speaking (mothertongue)	reading	writing
Dutch			
English	E	E	G
French	F	F	P
German	G	G	P
Spanish	G	G	F

(E = excellent, G = good, F = fair, P = poor)

Employment record

1995 - Advisor Communication and Knowledge Management  
 1992 - 1994 Information and Knowledge Management expert, Foundation TOOL,  
 Amsterdam, The Netherlands  
 1990 - 1992 Researcher Research Management, Royal Tropical Institute, Amsterdam, The  
 Netherlands  
 1989 Researcher, Department of Communication and Innovation Studies,  
 Agricultural University Wageningen, The Netherlands  
 1989 Research Assistant, International Service for National Agricultural Research  
 (ISNAR), The Hague, The Netherlands  
 1988 Staff Member, Department of Phytopathology, Agricultural University  
 Wageningen, The Netherlands

Professional experience

(Selection of projects)

- 1985/86 *Colombia, Peru.* As a research assistant working with Centro Internacional de Agricultura Tropical (CIAT), Cali, Colombia and Centro Internacional de la Papa (CIP), Lima, Peru, responsible for laboratory, greenhouse and field experiments on fungi and bacterial crop diseases.
- 1987/91 *Sri Lanka, The Netherlands.* As a research assistant of the International Service for National Agricultural Research (ISNAR), The Hague, and subsequently as consultant responsible for the analysis and synthesis of literature and case study materials on the linkages between research and technology transfer organizations. The desk research and field research (6 months) conducted in 1987 in Sri Lanka, based on in-depth interviews, participation in training and meetings, resulted in two publications. The synthesis of the case study material produced by the project, conducted in cooperation with researchers of the AUW resulted also in publications.
- 1989 *Danmark, England, France, and the Netherlands.* As a researcher of the Agricultural University of Wageningen, responsible for a comparative study on the development, dissemination and utilization of agricultural knowledge in three European countries and the development of a manual for the analysis of systems for knowledge development and utilization. These assignments were commissioned by the Dutch National Council for Agricultural Research (NRLO) and the Dutch Ministry of Agriculture respectively. The final report of the comparative study was based on a literature study and interviews in the various countries with policy makers, research, technology transfer and farmer agencies.
- 1990/92 *Netherlands.* Support activities to Farming Systems Research and Development teams in various countries. As a researcher of the Royal Tropical Institute (KIT) I was mainly responsible for the conceptual framework for the workshop on Priority Setting and the logistics of that workshop. Contributions from different KIT supported field projects and experts in the field of Farming System Research were discussed during a five-day workshop and resulted in a publication. In preparation of the workshop a deskresearch on methods for farmer participation in research priorities setting was completed.
- 1992 *Netherlands, Ghana.* As TOOL consultant involved in the development and implementation of an instrument to identify potentials for cooperation and projects in the fields of Renewable Energies, Food Processing and Metal Working.
- 1992/94 *Ghana and Philippines.* A research project implemented jointly by TOOL and the International Labour Organisation (ILO), Geneva. The research concerned the role of information in the development of micro and small enterprises and the effectiveness of organisations in the dissemination of information. As consultant I contributed to the research design and methodology, and as TOOL consultant responsible for the training and supervision of researchers and marketing research organisations executing the qualitative and quantitative field research. Furthermore, I conducted part of the qualitative research and made the final analyses of the qualitative results.
- 1993 *Bolivia.* As TOOL consultant involved in the formulation of short-term and long-term cooperation programmes with NGOs on small scale industry development and evaluation of the executed programmes. Being the moderator in various formulation, planning and evaluation sessions was part of the assignment.
- 1993/94 *Philippines and Thailand.* A consultancy assignment for Foster Parents PLAN - South East Asia for the development of a system which will enable collective learning by FPP-SEA field offices. As TOOL consultant I was responsible for the project formulation, execution of the preliminary study among field offices and formulation of the institutional learning system.

## Publications

- Seegers, Stephan and David K. Kaimowitz. "Relations Between Agricultural Researchers and Extension Workers: The Survey Evidence." Journal for Farming Systems Research - Extension, 1(2) (1990): 29-45.
- Seegers, Stephan and Niels Röling. Institutional Imperatives of Technology Development: an Analysis of Case Study Material. Paper presented at Workshop 11, "Science, Technology and Modernisation Crisis" of the 14th Congress of the European Society for Rural Sociology, Giessen. July 16-20, 1990.
- Seegers, Stephan. Linking Research and Extension through the implementation of the Training and Visit Extension System: The case of rice in Matara District. Linkages Discussion paper No 9. The Hague: ISNAR, 1990.
- Röling, Niels and Stephan Seegers. Designing knowledge systems for farm innovation. A case study update for managers. A synthesis of some results of ISNAR's RTTL study for NARSs, IARCs, and donor agencies. Synthesis paper written for the Research / Technology Transfer Linkages Project of ISNAR, the Hague, the Netherlands. March 1991.
- Engel, Paul G.H. and Stephan Seegers. Different Technology Subsystems require a Different Design and Management of Linkages. The Art, Craft and Science of Making Agricultural Technology Systems Work. Synthesis paper written for the Research / Technology Transfer Linkages Project of ISNAR, the Hague, the Netherlands. March 1991.
- Seegers, Stephan, Douwe Meindersma and Willem Stoop. "Setting Research Priorities for FSR&D Programmes". In: Meindersma J.D. (Ed). Setting Research Priorities. Practical Experiences in Managing System-oriented Agricultural Work. DORA: Royal Tropical Institute (KIT), Amsterdam. The Netherlands (forthcoming).

## Reports

(selection of relevant documents)

- Engel, P., Kuiper, D., Röling, N., en Seegers, S. (1989). The Agricultural Knowledge Systems in Denmark, France and the United Kingdom. Indications for Knowledge and Technology Policy. Department of Communication and Innovation Studies, Wageningen Agricultural University. (In Dutch)
- Engel, P., and Seegers, S. (1989). Guidelines for the Analysis of Agricultural Knowledge Systems: AKSA. Department of Communication and Innovation Studies, Wageningen Agricultural University.
- Pijnenburg, B. and Seegers, S. (1991): Increasing Farmer Participation, in the Research Priority Setting: An overview of methods and techniques. DRAFT. Agricultural Development Programme, Royal Tropical Institute, Amsterdam, the Netherlands.
- ILO-TOOL. (1994): Information demand, supply and transfer in relation to the development of micro and small enterprise sector. Results of field research in Ghana and the Philippines. Draft Report for the ILO-TOOL project INT/90/M17/NET.

## DEPARTMENT OF COMMUNICATION AND INNOVATION STUDIES

Wageningen Agricultural University  
The Netherlands

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INFORMATION FOR  
INTERNATIONAL STUDENTS

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1. Focus on non-coercive change

The Department has its origins in the needs of Dutch agriculture. In the late fifties, Dutch agriculture started to be transformed into its present very high input, very productive, but unsustainable character. Tremendous investments in research, extension, land improvement and so forth, were made. The University became the support base for this development. The Department was started in 1964 in direct response to the need to inform agricultural extension policies, strategies and approaches on the results of research in social psychology, communication studies, sociology, management science and political science. In fact, in those days, we were called the department of 'extension education' and later 'extension science'. The focus was on production and productivity increase, especially among small 'forgotten' farmers.

Towards the eighties, tremendous changes began to take place everywhere in the world. In the Netherlands, agriculture was 'discovered' to have multiple objectives, not just productivity, but also ecological sustainability, equity and stability. The system began to crack. Internationally, the singular focus on the linear paradigm of transfer and high input agriculture began to be seriously questioned. The focus shifted from research and extension only, to also taking into consideration NGOs, peoples' organisations, etc.

From a narrow focus on 'extension', the Department shifted to a broad focus on

facilitating non-coercive change

It recognises that beneficial change, usually called 'development', can seldom be brought about by authoritarian, coercive measures. What's more, coercive change becomes increasingly unacceptable as more and more countries turn to democratic forms of government.

Policy makers therefore increasingly turn to policy tools fostering con-coercive, voluntary change. That is, they turn to communication and facilitation of learning to promote

innovation. This approach has implications for the nature of the support institutions and conducive policies needed to make non-coercive change 'work'.

At present, we are witnessing a change in the promotion of non-coercive change. Where earlier paradigms focused either on transfer of knowledge from science to practice or on the implementation of policies emanating from the centre, the present emphasis is on changes which emerge from interaction among various complementary or inter-dependent actors.

A great many professionals are engaged in the 'business' of non-coercive change, not only in extension, but also in health promotion, environmental protection, integral water catchment management, sanitation, nutrition education, slum improvement, family planning and so forth. These professionals work at all levels, as policy makers, strategists, managers, specialists, trainers and field workers. One cannot think of these professionals in isolation from their clients. Clients and change professionals are engaged in complex interactions which are only intermittently beneficial for the former.

The Department assumes that it can help improve these interactions. It tries to support professionals and their clients by studying professional practice and by developing theories, approaches and methodologies which can, in turn, inform practice. To put it in jargonize: the Department develops praxeology which informs practice. Practice informed by theory becomes praxis.

The mission of the Department goes beyond understanding and criticizing to taking a stand in the search for solutions.

## 2. Issues of interest in research and teaching

The Department cannot afford to study interaction in isolation. Such interaction serves a concrete field of human endeavour, such as farming, health or natural resource management. It tries to influence learning processes in this field of endeavour. Interaction takes place in institutional settings and policy contexts. Hence the Department looks at the following five interrelated and supposedly coherent elements:

- (1) the practices in the domain of human endeavour, e.g., high input farming, folk medicine.
- (2) the learning processes involved, e.g., adoption of innovation, discovery learning, etc.
- (3) the promotion of learning, e.g., transfer of technology, advisory work, or facilitation.
- (4) the supportive institutional framework, e.g., research/extension/farmer chains, or decentralised knowledge networks.
- (5) conducive policy contexts, e.g., the nature of budget support, regulatory frameworks, etc.

Within this broad framework, researchers in the Department focus on the following issues:

(1) Learning processes. For many years, one of the main areas of research was the adoption of innovations. But the focus shifted from looking at how people deal with external information to problem solving and learning, and especially social learning, that is, collective learning to solve shared problems. At present, we have a great deal of interest in forms of discovery and experiential learning and the reasons why such learning generates so much energy.

(2) Facilitation. The process of deliberately fostering non-coercive change remains a key focus of our research and teaching. We look at concrete methods and media, approaches and strategies, planning and so forth. Where in the past the emphasis was on transfer and teaching of pre-determined solutions to problems we had defined, we are now more interested in facilitating learning to solve local problems. This means that we are increasingly interested in participatory forms of diagnosis (such as PRA), technology development (such as PTD) and discovery learning (participatory use of resource flow diagrams, agro-ecosystem analysis, farmer observation and experimentation methods, tools for making things visible, etc.).

(3) Institutions. We started out by looking only at extension organisations, and their specific problems, such as the choice of working with specialists or generalists ('unified extension'), the manner of supervision of autonomous field workers, etc. Later on, we looked at such issues as research-extension linkages, the tendency of extension agencies to focus on, and be controlled by, progressive farmers and so on. Now, we are interested in knowledge networks supporting innovation and in platforms allowing stakeholders in a natural resource to negotiate more sustainable forms of managing the natural resource. We are particularly interested in the conditions for the emergence of such networks and platforms and in participatory rapid appraisal methodology for institutional analysis and interaction (RAAKS).

(4) Policy. Where the department used to focus on using non-coercive tools for policy implementation and for creating public opinion support, it is now more interested in facilitating interactive policy formation and the issues related to it. In addition, 'policies that work' for promoting sustainable agriculture and the related practices, forms of learning and facilitation, and institutional frameworks, draw our particular attention.

For the MAKS student interested in management, our work on these issues offers vital perspectives for the learning manager. Management is working through people. It is the core of our interest.

### 3. Supporting disciplines

In our effort to support professional practice, we draw on a number of disciplines to feed the useful perspectives which we try to develop. We have staff trained as social psychologists,

sociologists, communication specialists, irrigation engineers, social work specialists and political scientists. The Department has a large number of PhD students from various backgrounds. In 1995, the following PhD studies were completed:

- \* a study of the facilitation of innovation and the development of the RAAKS methodology;
- \* a study analyzing learning processes in various institutions related to agricultural development in Benin under the influence of Structural Adjustment and democratisation;
- \* a study of various experiences with introducing sustainable forms of agriculture in Nepal;
- \* a study of various experiences with introducing sustainable forms of agriculture in the Philippines;
- \* a study using discourse analysis to study the speech acts of Dutch government communicators;
- \* a study of an adult learning extension project focusing in tillage practices in Southern Queensland, Australia.

4. English-language courses offered by the Department  
At present, the following courses are officially registered.

C150-224 RAAKS Seminar. This seminar offers hands-on training, including a field excursion, to become acquainted with a methodology for participatory facilitation of the interaction among various institutions which can make complementary contributions towards solving a problem. Offered in the second trimester. A manual is available from Monique Salomon. Maximum participation: 24. At present the RAAKS Seminar is compulsory for MAKS students.

C150-228 PTD. This is an intensive training lab which focuses on methods, strategies and internalisation of Participatory Technology Development. The seminar uses a well-developed manual produced by IIED, and stimulates students to experiment alone and in groups with using participatory methods in the class. Participatory methods are placed within the context of a constructivist approach. Maximum participation is 24. PTD takes place in the third trimester. PTD is optional for MAKS students.

NOTE: RAAKS and PTD are likely to be amalgamated in spring 1996 to form 'Participatory Research Methodology' which is compulsory for MAKS students.

C150-221 Design, Implementation and Evaluation of Extension Programmes (DIEEP) This course offers an opportunity to apply the knowledge gained in other courses in designing an extension programme. The course aims at professionals who are asked to plan, implement and evaluate programmes of non-coercive change. Optional. Second trimester.

C150-225 AKIS. The cryptic name of this course stand for 'Agricultural Knowledge Systems. The course offers an inten-

sive working seminar which focuses on knowledge system theory and can be considered as the theoretical underpinning of the RAAKS seminar. The course focuses on systems thinking, soft systems theory, and the knowledge systems and platforms perspectives based on them. The format is as follows: students form permanent groups of about 7. They divide the readings (various articles related to the subject of the day) among themselves, taking turns to present readings to the rest of the group. Each meeting has three hours. During a typical day, during the first two hours, two students would present a reading each. The third hour is used for plenary discussion of the readings, guest speakers, etc. Second trimester. Optional.

C150-210/211 Open study (Open courses of 2 or 3 credit points). The Department has always followed the policy that students should be given optimal freedom in putting together a package of courses which suits their interest and thesis subject. We are aware that some of the issues looked at by members of the department are not offered in english language courses. Therefore, we offer open study courses which allow students to select a subject of their choice from the interests of the Department and carry out literature study under supervision of the faculty member of their choice.

Studycoordinator: Anne Koning is working as studycoordinator for the department. She can answer general questions about the courses or thesis subjects. You can call her on tuesdays between 10:00 and 11:00, dialling 0317-485205. Appointments can be made at the secretariat for tuesdays between 11:00 and 12:30 and between 13:30 and 14:30.

**MANAGING IRRIGATION  
FOR ENVIRONMENTALLY  
SUSTAINABLE  
IRRIGATED AGRICULTURE**

**An Action Research Project by the International  
Irrigation Management Institute  
with Support from the Government of the  
Netherlands**

**1994-1998**

## **PART 4. RESULTS**

**DAY 1: Sunday, December 10**

## **GENERAL OBJECTIVES**

- 1. To develop and implement, using action research, a set of improved management strategies and techniques which can reduce the aggravating effects of irrigation on waterlogging and salinity;**
- 2. To expand the institutional capacity to effectively manage the solutions; and,**
- 3. To maximize the role of farmers and rural communities in irrigation management for increasing agricultural production**

# **RESEARCH COMPONENTS**

## **OPERATIONAL MANAGEMENT**

- . Main system management**
- . Watercourse management**

## **INSTITUTIONAL DEVELOPMENT**

- . Water Users Organizations**
- . Institutional support for Water Users Organizations**
- . Coordinated Irrigation Agriculture services**

## **SALINITY MANAGEMENT**

- . Soil chemistry and groundwater management**
- . Rechna Doab salinity management**
- . Sindh waterlogging and salinity management**

# **MAIN SYSTEM MANAGEMENT**

- 1. To create a "visible success story" on Decision Support Systems for main system management that can be disseminated among all of the provincial irrigation departments**

## **Four basic concepts**

**Involvement of PID staff from the inception of the activities**

**Thorough diagnosis**

**No standard pre-determined package**

**Intervention at a specific level (allocation, scheduling, distribution, maintenance)**

# **WATERCOURSE MANAGEMENT**

- 1. Application of state-of-the-art technology in surface irrigation to small banded units for improving water and salinity management practices in the Fordwah/Eastern Sadiqia (South) with the MONA Reclamation Experimental Project, PAD and the Center of Excellence in Water Resources Engineering**
- 2. Improved water market practices for tubewell water in the Fordwah/Eastern Sadiqia (North)**
- 3. Application of low-cost pressurized irrigation technologies for tubewell water in the Fordwah/Eastern Sadiqia (North) with the Water Resources Research Institute**
- 4. Improved water and salinity management practices for watercourses in the two pilot distributaries in the Fordwah/Eastern Sadiqia (South) with PAD and the Department of Agricultural Extension**

## **INSTITUTIONAL DEVELOPMENT**

- 1. To learn "how" to organize farmers as Water Users Associations (WAUs) at the watercourse level and Water Users Federations (WUFs) at the minor and distributary level**
- 2. To strengthen the cooperation between PIDs and PADs as well as interactions with WAUs and WUFs at the two pilot distributaries in the FES(S) and the three pilot distributaries in the Sindh province**
- 3. To promote institutional measures with the Provinces of Punjab and Sindh that will strengthen WUAs and WUFs**
- 4. To promote institutional arrangements with the Provinces of Punjab and Sindh that will enhance government services for irrigation development**

# **TOWARDS COLLABORATIONS WITH ACTORS**

- 1. Main system component: Provincial Irrigation Department, farmers**
- 2. Farmer organizations: farmers, Provincial Irrigation Department, On-Farm Water Management, extension services**
- 3. Watercourse management: farmers, extension services, On-Farm Water Management**

**= > development of research collaboration with the Department of Communication and Innovation Studies, Wageningen Agricultural University, to implement participatory approaches focused on information and knowledge**

# **PARTICIPATORY RURAL APPRAISAL:**

## **FIRST EXPERIENCES AT IIMI**

### **BACKGROUND**

**Analysis of performance in the Chishtian sub-division (South-Punjab)**

**Irrigation performance for whom?**

**Irrigation system managers  
Policy makers  
and farmers**

**Assumption: Participatory approaches lead to better results**

## **PREPARATION OF ACTIVITIES**

**Initial preparation of field activities (collection of primary and secondary information)**

**Training in the use of Participatory Rural Appraisal (one week, 8 IIMI staff, IIMI-HQ trainer)**

**= > Research proposal: Performance indicators from a farmer's perspective**

## **IMPLEMENTATION**

**4 weeks of Participatory Rural Appraisal**

**Tentative combination of Participatory Rural Appraisal and Rapid Appraisal of Agricultural Knowledge Systems**

**Watercourses of the Azim and Fordwah distributary command areas**

**Combination of interactions with individuals and groups**

## **RESULTS**

**Performance indicators from a farmer's perspective**

**Thorough understanding of local conditions**

## **LIMITATIONS**

**Context**

**Participatory Rural Appraisal for "traditional" research**

**= > Expectations of farmers**

**Tools become objectives**

**Experience**

## **CONCLUSION**

**Continuous training for change in attitude**

**Formal integration of Participatory Rural Appraisal into research activities and work plans**

**Participatory: yes, but from the inception phase**

ACTIVITY 3.7: PRESENTATION OF THE FIELDWORK

3.7.1 Presentation of the field work

***RAAKS TRAINING***

***ON HUMAN RESOURCE MANAGEMENT  
IN IRRIGATED AGRICULTURE***

***FIELD WORK  
MANANWALA DISTRIBUTARY, FAROOQABAD  
DECEMBER 13, 14, 16 & 17, 1995***

**TERMS OF REFERENCE**  
**FIELD WORK IN MANANWALA DISTRIBUTARY, FAROOQABAD**  
**December 13, 14, 16 and 17, 1995**

Agrisearch is an international agricultural research institute that aims at improved and sustainable productivity of irrigated agriculture.

Recently, Agrisearch has conducted various technical feasibility studies in Mananwala Distributary, Farooqabad. Agrisearch has come to the conclusion that there is a lot of potential for raising crop production in the area. However, a serious constraint is the unequitable and unreliable supply of agricultural inputs such as water, seeds, fertilizer etc.

Agrisearch is convinced that better management of the human resources available in the irrigated agriculture sector will play a decisive role in making improvements possible. Human resources comprise knowledge, manpower, skills, experience, organizational capacities, institutional setup, budget and facilities.

Agrisearch would like the consultants to formulate recommendations for mobilizing the existing human resources in Mananwala Distributary, Farooqabad, in order to bring about a more equitable and reliable supply of agricultural inputs.

**LIST OF PARTICIPANTS - RAAKS TRAINING  
10-20 DECEMBER, 1995 - IIMI LAHORE**

<u>Sr.No.</u>	<u>Name</u>	<u>Organization</u>
1.	Mushtaq Khan	IIMI Bahawalnagar
2.	Niamatullah	PATA Project, Swat NWFP
3.	Waqar Jehangir	IIMI Lahore
4.	Mehmood ul Hassan	IIMI Haroonabad
5.	Derk Kuiper	IIMI Bahawalnagar
6.	Nathalie Roovers	IIMI Haroonabad
7.	Jos van Oostrum	IIMI Hasilpur
8.	Neeltje Kielen	IIMI Lahore
9.	Rana Basharat Ali	Deptt. of Agri. Ext. Haroonabad (EADA)
10.	Saeed ur Rehman	IIMI Lahore
11.	M.Rafique Khan	IIMI Hasilpur
12.	Z.I.Mirza	IIMI Lahore
13.	Azmat Beg	IWASRI Lahore
14.	Ali Hassan Shah	IWASRI Lahore
15.	Cris de Klein	IIMI Lahore
16.	Gulrez Akbar	Water Management, Lahore (Coord.Training)
17.	Raza ur Rehman Abbasi	Irrigation Deptt. Lining Haroonabad (SDO)
18.	Munawar Ahmad	Water Management, Chishtian (WMS)
19.	Sajjad Hussain Naqvi	Water Management, Donga Bonga (WMS)
20.	Gulraiz Khan	Water Management, Hasilpur (A/O)
21.	Muhammad Arshad	Deptt. of Agr. Ext. Chishtian (A/O)
22.	Khalid Riaz	IIMI Lahore
23.	Pierre Strosser	IIMI Lahore
24.	Ineke Kalwij	IIMI Lahore
25.	Jan Knops	NRAP/IWASRI Lahore

## INTERVIEW GROUPS

DAY 1: DECEMBER 13 (WEDNESDAY) and

DAY 2: DECEMBER 14 (THURSDAY)

FIELD GROUP A		
Group 1	Group 2	Group 3
Mushtaq Neeltje Gulraiz Khan	Rafique Cris Mirza	Gulrez Akbar Jos Ali Rana Basharat Ali

FIELD GROUP B		
Group 4	Group 5	Group 6
Mehmood Mohd. Arshad Azmat Beg	Munawar Ahmad Derk Waqar Saeed	Nagvi Nathalie Niamat Abassi

DAY 3: DECEMBER 16 (SATURDAY)

There will be an extra group of female researchers. This will be interview group 1. The males from (former) interview group 1 and 2 (from DAY 1 AND 2) will do an interview together on DAY 3.

DAY 4: DECEMBER 17 (SUNDAY)

Both FIELD GROUP A (groups 1, 2 and 3) and FIELD GROUP B (groups 4, 5 and 6) present their results.



**DAY 3:      DECEMBER 16 (SATURDAY)**

- 08.15              Leave for the field
- 10.00 - 11.00    Introduction PRA techniques in IIMI staff house  
Farooqabad
- 11.00 - 13.00    PRA exercises in the field
- 13.00 - 14.00    Lunch
- 14.00 - 15.30    Discussions in Field Groups (Including Break)  
- exchange of information  
- analysis - phase A and B  
- formulate recommendations using the windows in Phase C  
- make a systems drawing (not just visualizing actors,  
lines to represent their relationships etc but also the  
visions of actors, what oppportunities and constraints  
have been identified)
- 15.30 - 16.30    Plenary session and wrap up
- 16.30              Leave for Lahore

**DAY 4:      DECEMBER 17 (SUNDAY)**

- 08.15              Leave for the field
- 10.00 - 13.00    Preparation of the presentations
- 13.00 - 14.00    Lunch
- 14.00 - 16.00    Actor workshop
- 16.00              Tea
- 16.30              Leave for Lahore

## Interview Schedule (Field)

	1	2	3	4	5	6
13/12/95 10/10:30 Morning	EADA (Extension) Sheikhupura	AO (Extension) Sheikhupura	WMS Water Management Sheikhupura	WMO Water Management Sheikhupura	AO Water Management Sheikhupura	XEN UG, LCC PID Sheikhupura
Afternoon	Village Thatta Bahadir Shah					
14/12/95 Morning	SDO/PID Farooqabad	In-charge Adaptive Research Farm Sheikhupura	Farm Manager Adaptive Research Farm Farooqabad	Deputy Director Agriculture Training Sheikhupura	AO Training Sheikhupura	Deputy Collector (Revenue) PID Sheikhupura
14/12/95 Afternoon	Input Supplier Farooqabad	Afternoon Tibi Mitto		Input Supplier Sheikhupura	11:30-12:30 Thatta Bahadir Shah	
16/12/95 11:00	Village Mananwala (Tail Area)					
17/12/95 14:00- 16:00/ 17:00	Presentation Irrigation Rest House Farooqabad					
Transport: 1 IIMI Vehicle 2 Mini Wagons						Women's Interview Group

**TERMS OF REFERENCE**  
**IIMI'S INSTITUTIONAL DEVELOPMENT COMPONENT**  
**A RAAKS STUDY**

**4-R DISTRIBUTARY, OFF-TAKING HAKRA BRANCH,**  
**EASTERN SADIQIA,**  
**HAROONABAD**  
**December 19, 1995**

There is a growing awareness among Pakistan policy makers, academics and line agency staff that increased farmers' participation in operation and maintenance at the secondary and tertiary level would enhance the sustainability of irrigated agriculture. Recent agreements between the World Bank and the Pakistan government to reorganize the whole irrigated agriculture sector further stresses the need to reconsider, but also to actually implement Participatory Irrigation Management (PIM).

IIMI Pakistan in its present research project puts a great emphasis on institutional issues for improved irrigation management.

The main objectives of the 'Institutional Development' component under this project are:

- i) To develop feasible irrigation management strategies regarding WUOs that will alleviate trends in soil salinity and groundwater quality that threaten the sustainability of irrigated agriculture in Pakistan;
- ii) Create institutional support for WUOs at both the watercourse and distributary, along with strengthening the interactions between farmers and government agencies;
- iii) Explore institutional arrangements for coordinated irrigation services by the Provincial Agriculture and Irrigation Department.

Although the activities emanating from these objectives cannot be considered isolated from each other, the main focus of the research in the first two years of the project is on 'establishing farmers organizations'. The main objective is to learn how to organize farmers and to create awareness among all the parties involved. The role of IIMI is mainly the role of facilitator in this process.

An Action Research Program has been launched in 4-R distributary off-taking from Hakra Branch from the Eastern Sadiqia irrigation system. IIMI's field station team in Haroonabad, called SOFTWARE (Social Organization Field Team) carries out the activities within

this Action Research Program. It is hoped that this pilot study will lead to a visible success-story of active farmers' participation in irrigation management at the distributary level, to take away pessimism regarding PIM from the side of the line agencies and uncertainty from the side of the farmers in Punjab as well as in other provinces.

For this purpose, collaborative relationships with line agency staff at both field and senior level are being built informally through trainings, meetings and joint field visits to farmers and formally through discussion meetings, through a PIM working group and a Field Implementation Coordination Committee.

While IIMI's SOFTWARE group plays a catalyst's role, the responsibility for organizing water users lies with the operating agencies and the water users themselves. To give effect to this concept, the suggested mechanism is to have a number of selected field agency staff and water users to form a Field Implementation and Coordination Committee (FICC). This will help IIMI staff, field staff from operating agencies and water users to collaborate closely, and on a regular basis. Details of deployment of staff, scheduling of work, constraints and opportunities encountered in the field, possible improvements, assistance needed from elsewhere, such issues can be discussed by the FICC.

IIMI is of the opinion that a 5 months RAAKS study could provide an answer to the following question.

How can the Field Implementation and Coordination Committee make an active and sustainable contribution to the process of developing WUOs in 4-R Distributary?

IIMI

Managing irrigation for environmentally sustainable agriculture in Pakistan.

① Operational Component

\* Main system + Disty.

Bahawalnagar

\* Watercourse level

Hasilpur

② Institutional Development Component

\* Distributary + W/C level

Haroonabad

# INSTITUTIONAL DEVELOPMENT COMPONENT

## MAIN OBJECTIVES:

- 1> Establish Water Users Organizations at watercourse and distributary level in 4-R.
- 2> Create institutional support for WUOs along with strengthening interactions farmers-agencies.
- 3> Coordinated Irrigation Services

F ield

I mplementation and

C oordination

C ommittee

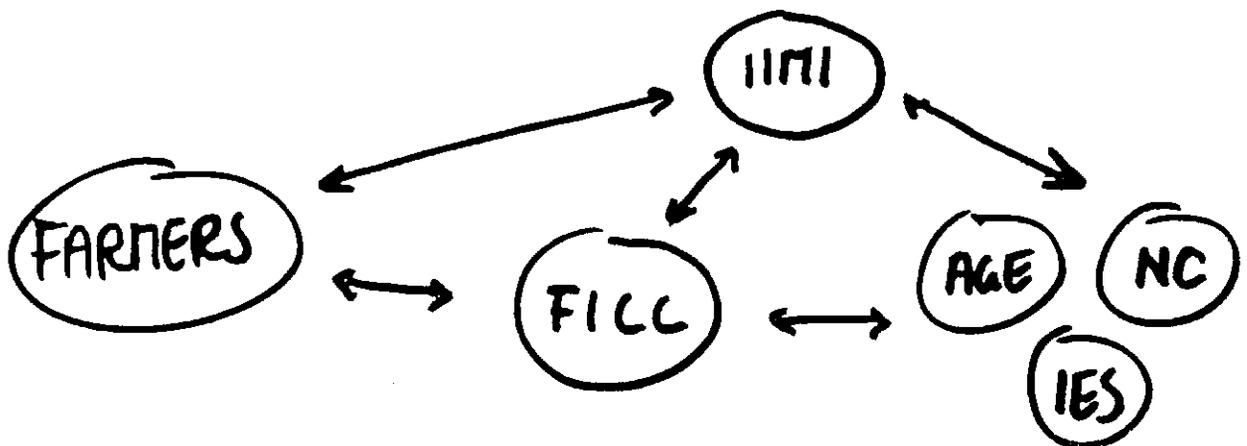
= Platform of all actors  
involved

Collaboration through:

\* Discussion

\* Joint planning + decision-  
making

\* Joint action



## **Basic Data Of 4-R Distributary**

<b>Authorized Discharge</b>	<b>193 Cusecs</b>
<b>Off take at</b>	<b>Head Gulab Ali from main Hakra</b>
<b>Total Length</b>	<b>57 Km</b>
<b>Total Outlets</b>	<b>132</b>
<b>Irrigation Outlets</b>	<b>120</b>
<b>Gross Command Area</b>	<b>20,015 Ha</b>
<b>Culturable Command Area</b>	<b>17,938 Ha</b>
<b>Minors</b>	<b>2</b>
<b>Water users</b>	<b>4723</b>
<b>Population (1981)</b>	<b>66,945</b>

**TOWARDS DISSEMINATION  
OF IIMI'S RESEARCH RESULTS  
IN THE FORDWAH BRANCH IRRIGATION SYSTEM**

**Terms of Reference  
for the development of a RAAKS research proposal**

**December 1995**

IIMI's research activities in the Fordwah Branch irrigation system started in 1990, with the opening of its field station in Hasilpur. Initially, the main focus of activities was the identification of management improvements that would mitigate salinity problems due to the use of irrigation water of poor quality. These improvements would then be pilot-tested in collaboration with respective government Departments.

With the passage of time, activities have first diversified, including for example a comprehensive collaborative programme with the Punjab Irrigation and Power Department on Management Information Systems along with watercourse based research activities concentrated on secondary salinity and conjunctive use management. At present, and as part of the project titled *Managing Irrigation for Environmentally Sustainable Irrigated Agriculture in Pakistan* financed by the Government of the Netherlands, the main emphasis is on the development of improved irrigation practices and allocation/distribution mechanisms to tackle both productivity and salinity/sodicity issues.

Although IIMI's experience in the area has led to a large number of research results and reports/publications, several important issues have arisen recently that question the way IIMI is undertaking research activities in the area.

1. The main thrust of the project *Managing Irrigation for Environmentally Sustainable Irrigated Agriculture in Pakistan* has shifted from a (mainly) research objective regarding the identification of management options towards action research and the dissemination of research results to farmers.
2. As IIMI does not have the required manpower and skills to disseminate research results itself, there is a growing awareness that collaboration with appropriate government departments is required to achieve the long-term dissemination objective of the project.
3. IIMI has conducted watercourse level research in isolation since 1990 and without any interaction with other actors. There is now a need to involve other actors in the research

process to adapt research activities to the requirements of farmers working in the area.

4. Farmers monitored by IIMI for several seasons or even years show an increasing fatigue towards IIMI's extraction activities and the lack of tangible and visible (positive) changes in their environment and irrigation water supply.

The recognition of the importance of these issues have led to the decision to modify the research development process as part of IIMI's watercourse management research component. Initial steps taken to address some of these issues have been: the organization of meetings with sample farmers to discuss research results related to the impact of irrigation water supply on wheat yield (August-September 1995); the organization of a one day seminar at Hasilpur field station (October 1995) to present IIMI's research programme and identify possibilities for collaboration with staff from On-Farm Water Management and extension services; joint field visits with extension services staff (November 1995).

As a follow-up and to formalize these interactions with other actors and in order to fully integrate collaborative activities as part of IIMI's research programme, it was decided to use a participatory methodology, namely Rapid Appraisal of Agricultural Knowledge Systems (RAAKS). Jos van Oostrum, graduated from the Department of Communication and Innovation Studies, Wageningen Agricultural University (the Netherlands), has been hired to participate in the development of collaborative arrangements that would facilitate the long-term dissemination of research results to farmers. An initial two week training in the use of RAAKS, involving staff from government departments working in the research area, has been organized in December 1995 by two consultants from the Department of Communication and Innovation Studies.

The main objective of the use of RAAKS is:

to develop an appropriate working relationship between IIMI, farmers, On-Farm Water Management, Extension Services, Irrigation Department, etc, that will lead to the dissemination of improved irrigation practices (and other research results) to farmers of the area.

Underlying this objective are the analysis of the current activities performed by the different actors, the identification of existing links and missing links between actors, the development of good relationships with farmers, the identification of join activities with staff from government department, etc.

## Actor

## Role

Farmers  
-sample farms  
-water courses

Data, knowledge, practical experience

IIMI-Fieldstation

Data collection. Contact with farmers.

IIMI-Researchers Lahore

Coordination of research activities, implementation,

RAAKS-Researcher

Facilitator in defining and establishing the collaboration

Agricultural  
Engineering Wing

Of importance of improved irrigation practices

Punjab Agricultural Department  
(Hasilpur, Lahore)

Practical & technical feedback.  
To facilitate in the dissemination process.

Irrigation Department  
Chistian

O&M irrigation system

Manager (PAD & SC)

Timely Supply of seeds & gypsum

Manager (ADBP)

Credit Availability

Regional Manager (CBA/Hoechst)

Avail. of Insecticide

Dep. dir. ID  
Fertilizer import Dir.

Avail. of compound fertilizer

dep. dir.  
Irr. revenue assess.

Facilitate in irri. revenue assessment

MONA Reclamation  
Experimental Project

Collaboration on irrigation practices on  
Fordwah-Eastern Sadiqia South

Center of Excellence  
in Water Resources

Technical assistance on irrigation practices  
(Fordwah-Eastern Sadiqia South) and  
supervision of PhD.-student

Water Resource institute

Technical assistance concerning  
low-cost pressurized irrigation.  
The institute can provide us also in  
developing improved land preparation  
methods.

Ali Tareen Farm (Lodran)

Evaluation of different irrigation methods.

Students

Research

Wapda. Sarp

Wapada.

Soil fertility survey

Soil testing lab.  
(Bahawalnagar)

**TERMS OF REFERENCE**  
**IIMI'S DECISION SUPPORT SYSTEMS COMPONENT**  
**A RAAKS STUDY**

BAHAWALNAGAR FIELD STATION  
December 19, 1995

The Indus Basin represents one of the largest contiguous irrigation systems in the world, annually irrigating an area of about 16 million hectares. Originally the system was designed for cropping intensities of 50-70 %. Currently these have increased to more than 125%.

The increased demand of water due to higher cropping intensities necessitates an optimal management of the scarce water resources by irrigation managers. In recent years, Decision Support Systems (DSS) have been developed to support irrigation managers in the decision making on operation and maintenance of their system.

IIMI-Pakistan has focused its research in the main system on the development, application and pilot-testing of a DSS through a collaboration with the Punjab Irrigation and Power Department (PIPD). Since 1990 work on the introduction of DSS has started in the Chistian subdivision and was later extended to the Malik subdivision (Fordwah Eastern Sadiqia Area). The objective of the work is to create visible success stories that can serve as an example for implementation in other areas.

The decision support tool that is implemented by the IIMI-PIPD collaboration is the computer-based Irrigation Management Information System (IMIS). The IMIS provides the irrigation manager with up to date data concerning the distribution of water in the system. Based on this information the irrigation manager can take decisions concerning operation and maintenance.

The IMIS implementation by the IIMI-PIPD collaboration is facing problems in both subdivisions. Therefore IIMI would like the research team to write a research proposal for a RAAKS research of five months in order to:

*Identify opportunities to improve the DSS implementation process in Chistian and Malik subdivision.*

Based on this Terms of Reference, the actors that could be involved comprise IIMI (different levels), PID (different levels), farmers, research institutes in the area, OFWM, extension, WAPDA and politicians.

PRESENTATION  
IIMI'S DECISION SUPPORT SYSTEMS COMPONENT  
A RAAKS STUDY

BAHAWALNAGAR FIELDSTATION  
December 19, 1995

Outline:

10 minutes presentation  
10 minutes questions

Problem in the research area

- > Scarcity of irrigation water with respect to crop requirements
- > results in: water shortages, unequal distribution, etc...
- > efficient use and distribution of available resources
- > necessitates good decision making by irrigation managers

IIMI's involvement in the area

- > DSS have been developed to support the D/M by irrigation managers
- > test and adapt a DSS (IMIS) to the conditions in the Malik and Chistian subdivisions
- > set up and sustain collaboration with PIPD for DSS implementation.

Why collaboration

- > PIPD has the system, IIMI has the tool, etc...
- > the tool can be tested and adapted

Focus of collaboration

- > past experiences in the collaboration PIPD-IIMI result in TOR
- > Improve the DSS implementation in the Chistian and Malik subdivision.

Possible actors

- > PIPD, IIMI, farmers, research institutes (IRI, IWASRI, ISRIP), OFWM, WAPDA and politicians

### 4.3 Action Plan IIMI Research Component Decision Support Systems

Discussion paper RAAKS in the DSS component  
by Derk Kuiper, IIMI, December 1995

Distribution: MK, MUK, CK, JO, NR, RAAKS research team (DSS)

#### 1. Introduction

This paper is the result of a meeting on 7 December 1995 between Marcel Kuper and Derk Kuiper. Therefore it reflects their views and opinions concerning the RAAKS research on the DSS component of IIMI's research activities in the South Punjab. Hereafter the broad guidelines of the RAAKS research will be outlined as well as possible methods of inquiry. The content of this paper is meant for discussion. New insights and comments arising from discussion will change the problem statements and methods outlined in this paper.

#### 2. Background

The implementation of IMIS in the Chistian Subdivision has met with certain difficulties. After the experiences with the implementation of the IMIS in Sri Lanka it was decided implement the IMIS in Pakistan (Fordwah & Malik). The overall objectives are twofold: to test the approach used in Sri Lanka (by a.o. Jacques Frey) and to find out if the tool is generic. Experiences with the SDO Chistian have shown that strong commitment is needed to support the implementation process. It was decided among Marcel Kuper and the Chief Engineer Shafi (Bahawalpur Zone) to select an area and person suitable to carry out the process. Malik branch was selected and a SDO (Mr. Shabir) was found to carry out an inception study (subject of M.Sc thesis) concerning the implementation of the IMIS in Malik subdivision. After handing in the draft inception report the SDO was transferred. This is a sensitive blow for the research and implementation process. Even the CE Mr. Shafi was not informed about the transfer before it happened. At the moment a new SDO is installed in Malik subdivision. This is Mr. Sadaqat. Already there has been contact between the IIMI field staff and the new SDO. Even a first introduction in IMIS was given. At present the status of the commitment of the SDO for supporting the implementation process is not known.

Now the planning of activities for the year 1996 must be discussed with Mr. Shafi. When agreement is reached upon the new person (and subdivision) the implementation can be followed up. It might be the case that the new SDO Malik Branch is suitable for this

Next to this it is planned that IIMI is to implement IMIS in Sind and Pehur. At this moment the experiences in Chistian and Malik subdivision are not fully used in these new projects. The question arises how to communicate former experiences to new projects and project staff.

It has to be pointed out that the implementation process is for a major part based on communication and good relations between the parties that are involved. Therefore the process is highly

dependent on commitment and goodwill.

### 3. RAAKS in IMIS pilot implementation

RAAKS is a methodology that seeks to actively involve actors to solve or tackle a certain problem. It may establish a platform for discussion on important issues that relate to more effective collaboration between actors. The output of a RAAKS is an action plan that outlines the activities that are to be undertaken by the actors to tackle the problem.

A RAAKS research starts with a problem statement. In the context of IMIS implementation possible problem statements can be:

- \* What lessons can be learned from past experiences with IMIS implementation in Sri Lanka and Pakistan (Christian subdivision)?
- \* Can we identify alternatives that make the implementation process more effective?
- \* How can the experiences from the Christian and Malik subdivision be communicated to new projects and project staff?

These statements will serve as an initial input for the RAAKS research team that is to be formed for the DSS research component during the RAAKS training of 10 December - 20 December 1995. This team will write a RAAKS research proposal based on the discussions about the initial problem statement. It needs to be mentioned that the mentioned problem statements might change during this process.

### 4. Getting started with RAAKS

Form a research team

During the training the first basis for the research team will be established. Other people that are considered important to be involved need to be contacted after the training.

Problem statement

The above mentioned problem statements will serve as a first input to focus the attention on the IMIS implementation process and its problems. The outcome of discussion within the preliminary research team is a research proposal which at least contains a well defined problem statement.

Research proposal

The proposal contains the boundaries (e.g. subject) within which the team is going to operate. It should contain the first actions that need to be undertaken by the team members. For example to contact other possible team members and the way in which this should be done. It should contain a time schedule with activities that need to be undertaken. Also the amount of time that each team member needs allocate to the RAAKS research should be clear. Procedures for reporting and meeting need to be outlined.

## Methodology

The methodology of research is RAAKS. Within this methodology the research team needs to select methods / windows for inquiry that are to be used in the research. For example if the problem is focused to collaboration between actors the analysis of the Knowledge network or the Integration of actors can provide important insights.

SWOT ANALYSIS RAAKS / DSS, DECEMBER 19, 1995  
 by Mushtaq Khan, Pierre Strosser and Derk Kuiper

SWOT	Subject	Strength	Weakness
Personal	<ul style="list-style-type: none"> <li>- Derk</li> <li>- Mushtaq</li> <li>- SDO X XEN X</li> </ul>	<ul style="list-style-type: none"> <li>- Raaks expertise, time, backup, outsider</li> <li>- Knowl, contacts, Raaks, open eyes</li> <li>- Knowl, willingness ?, fighter</li> </ul>	<ul style="list-style-type: none"> <li>- no irrig., no language, realisation</li> <li>- time, knowl.</li> <li>- no Raaks, no support, no resources</li> </ul>
Organisation	<ul style="list-style-type: none"> <li>- IIMI</li> <li>- PID</li> <li>- IRI</li> </ul>	<ul style="list-style-type: none"> <li>- freedom, resources, contacts everywhere, int. netw., pusher</li> <li>- Knowl, free radicals</li> <li>- research, generate \$</li> </ul>	<ul style="list-style-type: none"> <li>- raaks for few, no interagency particip., pusher, turn over staff, small man calling in desert</li> <li>- closed eyes, turn over staff, resources, isolated, anti-participatory, influentials</li> <li>- not problem oriented, lack appl research, no raaks, no FES</li> </ul>
inter organisational	<ul style="list-style-type: none"> <li>- IIMI-PID</li> <li>- PID-IRI</li> </ul>	<ul style="list-style-type: none"> <li>- willingness by few, contacts at all levels, collaborati on</li> <li>- same philosophy</li> </ul>	<ul style="list-style-type: none"> <li>- nor priority, paper bodies, no real commitment, no formal communication, no joint project</li> <li>- lack of formal links, absence research based on ID request, not working</li> </ul>

## ACTION PLANNING

WHAT(broad)	WHAT(specific)	WHO	HOW	WHEN FINALIZE?
form research group	<ul style="list-style-type: none"> <li>- identify names</li> <li>- select criter.</li> <li>- outlin. meet</li> <li>- appointm. DK</li> <li>- meetings</li> <li>- follow up</li>   <li>- prelim. meet.</li>   <li>- research group meeting</li>   <li>- evaluate RAAKS, output, groupwork</li> </ul>	<ul style="list-style-type: none"> <li>- MUK</li> <li>- DK, MUK</li> <li>- DK, MUK</li> <li>- MUK, DK</li> <li>- DK, MUK(?), ANW</li> <li>- MUK, DK</li>   <li>- DK &amp; names</li>   <li>- DK, MUK, others?</li>   <li>- group</li> <li>- IIMI HQ</li> </ul>	<ul style="list-style-type: none"> <li>- SWOT, own info</li> <li>- SWOT, discuss</li> <li>- discuss</li> <li>- tele, informal</li> <li>- problem, outl.</li> <li>- letter, disc., invitation prelim. meeting</li> <li>- invit. proposal, RAAKS method., get acquainted</li> <li>- input problem, RAAKS, ask commitment</li> <li>- use cards, priorit., discuss, report</li> </ul>	<ul style="list-style-type: none"> <li>- Dec 29, 1995</li> <li>- Dec 21, 1995</li> <li>- Dec 29, 1995</li> <li>- Dec 29, 1995</li> <li>- Jan 10, 1996</li> <li>- Jan 14, 1996</li>   <li>- Jan 18, 1996</li>   <li>- Feb 28, 1996</li>   <li>- Jan 28, 1996</li> <li>- Jan 30, 1996</li> </ul>
reporting	<ul style="list-style-type: none"> <li>- process docum., SWOT, action plan</li> <li>- evaluate</li> </ul>	<ul style="list-style-type: none"> <li>- DK</li>   <li>- DK/IIMI HQ</li> </ul>	<ul style="list-style-type: none"> <li>- writing</li>   <li>- discuss issues</li> </ul>	<ul style="list-style-type: none"> <li>- till Jan 28, 1996, afterwards new task division</li> </ul>
proposal and start RAAKS	<ul style="list-style-type: none"> <li>- go through RAAKS, explain windows ABC, start and finalize A, actor workshop?</li> <li>- evaluate</li> </ul>	<ul style="list-style-type: none"> <li>- group</li>   <li>- group/IIMI HQ</li> </ul>	<ul style="list-style-type: none"> <li>- discuss tasks, planning, strategy</li> <li>- use phase A and problem definition of Dec 19, 1995</li> <li>- actor workshop?</li>   <li>- same as above</li> </ul>	<ul style="list-style-type: none"> <li>- Feb 7, 1996</li> <li>- Feb 17, 1996</li> <li>- March 7, 1996</li> <li>- March 7, 1996</li> </ul>
phase B	<ul style="list-style-type: none"> <li>- gather and analyze information about problem</li> <li>- evaluate</li> </ul>	<ul style="list-style-type: none"> <li>- group</li>   <li>- group/IIMI HQ</li> </ul>	<ul style="list-style-type: none"> <li>- interview, meet, present, discuss, actor workshop</li>   <li>- same as above</li> </ul>	<ul style="list-style-type: none"> <li>- March 25, 1996</li> <li>- March 30, 1996</li> <li>- March 30, 1996</li> </ul>
phase C	<ul style="list-style-type: none"> <li>- propose actions to tackle the problem</li> <li>- evaluate</li> </ul>	<ul style="list-style-type: none"> <li>- group</li>   <li>- group/IIMI HQ</li> </ul>	<ul style="list-style-type: none"> <li>- discuss, formulate action plan</li>   <li>- same as above</li> </ul>	<ul style="list-style-type: none"> <li>- April 17, 1996</li>   <li>- April 17, 1996</li> </ul>
report	<ul style="list-style-type: none"> <li>- write report</li> <li>- give back to group/IIMI</li> <li>- evaluate group work, outputs</li> <li>- evaluate RAAKS research DSS</li> <li>- evaluate RAAKS research in IIMI</li> </ul>	<ul style="list-style-type: none"> <li>- DK, (NR, JD)</li> <li>- DK, group, IIMI HQ</li> <li>- group</li>   <li>- IIMI HQ</li>   <li>- RAAKS researchers, IIMI HQ</li> </ul>	<ul style="list-style-type: none"> <li>- use group docum</li> <li>- workshop</li>   <li>- end of workshop</li>   <li>- input from May 10, 1996 for workshop</li> <li>- combine experiences with RAAKS in three components</li> </ul>	<ul style="list-style-type: none"> <li>- May 10, 1996</li> <li>- May 10, 1996</li>   <li>- May 10, 1996</li>   <li>- May 10, 1996</li> <li>- May 11, 1996</li> </ul>

\* dates are preliminary and need to be checked by the members of the group.