Report No. R-68

**Managing Irrigation for Environmentally Sustainable Agriculture in Pakistan**

# PRE-TAKEOVER COMPARATIVE PERFORMANCE OF WATER USERS ORGANIZATIONS OF HAKRA 4-R DISTRIBUTARY, PUNJAB, PAKISTAN

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November 1998
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LAHORE

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## ACKNOWLEDGEMENTS

This research effort is the outcome of one-and-a-half-years of research on organizational-specific activities of the water user organizations (WUOs) along the Hakra 4-R Distributary Pilot Project, Punjab Province, Pakistan. The information, data and analysis presented in this report, to assess the performance of the WUOs, is based on 1) process documentation, 2) opinion surveys, 3) field measurements and 4) organizational records. Data sources 1, 2 and 3 were results of collective efforts of the Social Organization Field Team, of which the authors were also members. The efforts of the team are gratefully acknowledged. Specifically, the authors appreciate the efficient support provided by social organizers Khalid Rashid, Amjad Kamran, Bilal Asghar, and Nasir Sultan, for providing the information for this report.

The authors owe thanks to members of executive bodies of the Water Users Federation and the five sub-system WUOs for access to organizational records.

The authors would like to acknowledge the cooperation provided by Anwar Iqbal and Tipu Naveed Asghar, team members of the Hakra 4-R Distributary pilot project. The organizational activities of these WUOs formed part of IIMI-Pakistan's research "Managing Irrigation for Environmentally Sustainable Agriculture in Pakistan" funded by the Royal Netherlands Government. The authors gratefully acknowledge the support given by the donors.

The authors would like to thank Dr. Yameen Memon, Mehmood–ul-Hassan and Mirza Zafar Iqbal for their cooperation during the completion of this report.

The authors acknowledge Prof. G.V. Skogerboe, Director, IIMI-Pakistan, for his valuable advice, moral support and appreciation for this work. We also acknowledge his invaluable editorial comments on the final draft. His interest in finalizing this research report is gratefully appreciated.

We would like to thank Dr. Prathapar, Research Coordinator, IIMI-Pakistan, for his moral support and encouragement.

Verenia Duke, for thorough and accurate editorial scrutiny of the first draft of this research report, is also thankfully acknowledged.

Special thanks go to Manzoor Hussain, Secretary, for his untiring work of formatting and incorporating changes when this report took its final shape; Muhammad Akram and Tabrez Ahmad for making life easy by providing administrative support, and for their hearty friendship.

## Foreword

The water users organizations (WUOs) are expected to play a vital role in the management of distributary system for the foreseeable future, in Pakistan. The International Irrigation Management Institute (IIMI) initiated a pilot project on Hakra 4-R on which WUOs were formed in the start of 1997. The WUOs took many strides in their organizational and management performance in the pre-take over period (Before the Joint Management Agreement). These functions were voluntary and without legal cover. In many of the areas (e.g resource mobilization), the performance and achievement of the WUOs was unprecedented. This report has successfully documented all the achievements of these WUOs. This performance measurement, it is hoped, will be of great interest to researchers, policy makers and donors for refining policies and methodologies for forthcoming institutional reforms.

The authors of this report, are the most experienced members of the Social Organization Filed Team. They were involved in the formation of farmer organizations through its implementation. They have shown remarkable success in documenting the achievements with so much intricate detail. These details itself reveal a lot of new areas of potential activities for WUOs.

The report encompasses the four distinct features related to the performance measurement in the pre-take over period. First, it identify and define the indicators suitable for local environment. Second, it documents all the details of WUOs achievements. Thirdly, it provides comparative look of the performance of WUOs in their pre-takeover period. Fourthly, the last two chapters gives the detail of potential activities and current status of organizational performance of WUOs, focussing on the role of WUOs leaders. The hope is that this research effort will be of considerable interest to many researchers involved in social organization process, and will be a valuable reference on the performance assessment of WUOs.

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## SUMMARY

This research report deals with the pre-take over comparative performance of the Hakra 4-R water users organizations (WUOs). The report first describes the extent and scope of the study, covers the performance indicators in theory, provides the objectives of studying the performance of the WUOs. After a detailed description of the Pilot Project site and organizational structure of the WUOs, the identifies 11 indicators and 30 parameters for assessing performance of the WUOs as voluntary organizations. Before assessing the performance of WUOs under each indicator and parameters the report provides definitions for each.

Three chapters of the report deal with performance assessment related to organization specific indicators, which provide a comparative evaluation of the WUOs on the basis of frequency, regularity and participation in the meetings. After measuring the performance related to each parameter of these three indicators, the report examines the comparative performance using socio-organizational indicators such as formulation of codes of conduct, adherence to WUO rules, decision-making, and punitive measures taken by the WUO.

Four chapters cover the performance evaluation on socio-technical parameters of resource mobilization, ensuring equitable water distribution, role in organizational development activities and conflict management.

Each chapter concludes with discussion on the comparative performance of each WUO. While testing each indicator and parameters the factor of relatively low and high performance have been hinted at. The causes and factors of the individual performance of WUO leaders have been dealt with. For some areas of investigation on performance such as decision-making, resource mobilization and conflict management, the research has highlighted the extent and types of each.

Finally, the report draws some conclusions and, later, gives some recommendation; delineating the potential activities for which the performance of a volunteer organization can be assessed, and rounds off discussion with the current status of the organizational functioning of each WUO and suggesting strict standards of process documentation to refine the social organization process.

# CHAPTER 1

# INTRODUCTION

## 1.1 Extent of the Study

The Hakra 4-R Distributary Water Users Organization (WUO) Pilot Project was designed to transfer the major irrigation management responsibilities to the water users. The 121 watercourse level associations (WUAs) formed five sub-system WUOs at the beginning of 1997. These five WUOs subsequently created its apex body at the distributary level on March 7, 1997. One-and-a-half years after the formation of WUOs, the management responsibilities were still not handed over to them. The WUOs, however, have become operational since its formation. The WUOs undertook many capacity-building activities related to organizational and management aspects. These functions were voluntary and without legal cover. The WUOs took many strides to achieve short-term impacts in both, organizational and management aspects. Process documentation of the activities related to this period fascinated and inspired the authors to write this research report.

Thus, the title of this research, for this reason, has been purposely chosen in order to show the exact scope of the present inquiry. The investigation covers the **Pre-takeover Comparative Performance of Water Users Organizations of the Hakra 4-R Distributary,** from March 1997 to September 1998.

## 1.2 Delineation of the Title

- *Pre-takeover*: Because responsibilities were not transferred to the WUOs in the period under investigation.

- *Comparative*: Because the performance of 6 WUOs, which are apex bodies of the 121 watercourse level associations, is investigated.

- *Performance:* The definition here is the degree to which an organization achieves its objectives. In the context of the WUOs, reference performance indicators are not used while testing the indicators, but the concept of relative performance has been adopted for evaluation.

- *6 WUOs*: The investigation covers the functioning of five sub-system level WUOs and one distributary level WUF, thus, equaling 6. Critics may argue how the performance of an apex body WUF can be compared with its lower tier WUOs. This comparison is done on the basis of those indicators that are suitable to users' organizations, i.e., voluntary, created for irrigation management, and for all tiers. Therefore, the apex body (Hakra 4-R Distributary WUF) is treated as a user organization only, regardless of its tier. For easy reference, it is referred to as WUO 4-R in the text and tables.

## 1.3 Scope

This report assesses the performance of these WUOs on two types of objectives.

- *Organizational objectives:* These are measurable and directly related to organizational development activities.

The research provides an opportunity to acquire an initial understanding of basic indicators that can be used to assess the organizational performance.

- *Impact objective*: This is aimed at assessing the performance of WUOs in the pre-take-over period.

Here, opportunities to evaluate the performance that are measurable, and to rationalize effects that can be quantified, are afforded.

The assumption is that readers will not expect the evaluation of long-term performance that cannot be assessed without transferring responsibilities and providing an adequate period to introduce technical interventions. The study also assumes that readers will be interested in the assessment of how a volunteer organization functions. The hope is that assessment of comparative performance will help implementers to reframe, readdress and redefine concepts, strategies and approaches, and their understanding of the social engineering.

## 1.4 Background

The long-term effect of the WUOs' ultimate objective is to improve agriculture productivity through improved equity by adopting changed cropping patterns and cropping intensities. These are important indicators on which the performance of WUOs can be measured. The performance of the WUOs on such indicators, however, can be measured only if the responsibility is transferred for WUOs to manage the system, enabling these to come into operation on a realistic basis. Until finalizing this research report, the Hakra 4-R Distributary was not handed over to the WUOs due to various legal constraints.

During September 1997, the WUOs developed a negotiation plan, with technical guidance from IIMI-Pakistan incorporating technical results. IIMI-Pakistan forwarded this plan to the Secretary of Irrigation, Punjab. A series of formal meetings between the Secretary of Irrigation and IIMI-Pakistan senior staff has been held over the last two years. Despite the WUO pilot project being high on the agenda, however, effective interaction has not taken place between representatives of the WUF and the Irrigation Department. Until the completion of this report, sharing responsibilities had not yet evolved. The WUOs, however, started functioning immediately after formation. Therefore, figuratively speaking, the status of these WUOs can be regarded as informal and voluntary. Monitoring performance was important in order to provide organizational support, as well as to refine social organization processes. Thus, it is hoped that the performance

assessment of the WUOs in the pre-takeover period would interest many of those involved in social organization research. Furthermore, documentation on the performance of WUOs is beneficial as a mechanism to obtain continuous feedback on organizational development activities of WUOs.

Several indicators were the focus of our analysis that helped assess the performance of WUOs. (These indicators are defined and discussed in **Chapter 3**). While developing and defining these indicators, the following objectives were formulated.

## 1.5 Objectives

- to delineate the potential activities for which the performance of an organization can be assessed;
- to develop normative indicators to assess WUOs' performance as volunteer organizations;
- to assess the pre-takeover performance of WUOs along the Hakra 4-R Distributary project; and
- to test the defined performance indicators in the local environment.

This research provides discussions about all these objectives.

## 1.6 Approach

The criteria to examine the organizational performance of the WUOs are developed using various indicators. The criteria analyze the comparative performance in terms of organizational development objectives pertaining to regularity, frequency of participation in meetings, adherence to WUO rules, formulation of a code of conduct, decision-making and punitive measures. Moreover, it provides an understanding of the impacts of social organizations with regard to efforts to induce equity, resolution of disputes, resource mobilization. These indicators are applied to assess the comparative performance of 6 WUOs along the Hakra 4-R Distributary pilot project of the southern Punjab Province, Pakistan, as volunteer organizations. The usefulness of these indicators has been put to the test in the functioning of 6 WUOs. The performance of the WUOs, on the basis of these indicators, was vigorously investigated.

Testing these indicators in a local environment has provided a valuable insight into delineating potential activities on which the performance of volunteer organizations can be assessed. Indicators used in this research are suitable for volunteer water users organizations, at any tier, that are entrusted with irrigation management responsibilities within the distributary command.

## 1.7 Why Performance Evaluation ?

The question of why there is a need to assess the performance of WUOs arises. Measuring performance is necessary because implementers want to improve their strategies by suggesting measures for organizational weaknesses, planners want to clear their concepts,

and researchers want to develop effective models and methodologies. Donors also want to witness the success of their investments. The performance assessment may also be useful to improve the feedback processes in organizational development activities.

### 1.8 Evaluation by Whom ?

Another question of whether performance assessment should be conducted by internal, or external, evaluators also arises. Our belief is that internal evaluators should always conduct the performance assessment of social organizations, especially when they have been involved in implementing the social projects. Their rapport can be used to procure detailed information about the social aspects of performance indicators. They are particularly helpful to gather information on the sensitive areas related to these indicators, like that of water disputes, equity (which involves collecting information about water theft), etc..

However, some critics believe that the performance of WUOs should be assessed through external evaluators. Their argument is that external evaluators can play an impartial role. This is a hollow pretext, as an outsider can hardly gauge, in merely a few visits, the true picture of how social organizations function, or even by staying in the area for a few weeks. We believe that outsiders lack background information on the people's:

- beliefs;
- values;
- behavior;
- attitudes; and
- social interactions.

The lack of background information by the external evaluators may introduce more bias than bias created by the internal evaluators' affinity with the project.. Moreover, all professionals, at all times and on all occasions, are expected to be impartial, especially in the evaluation of those projects that are socially very sensitive, as for the case of the Hakra 4-R Distributary WUO pilot project. For evaluations in a social project of this nature, the division of professionals based on the criteria of "external versus internal" should much rather encompass the consideration of a long social rapport, against less, or no rapport at all.

# CHAPTER 2

# METHODOLOGY

## 2.1 Methodology

Four chief sources of data collection have enriched this report. These are 1) process documentation; 2) opinion surveys; 3) organizational records; and 4) field measurements. Information collected from these sources / methodologies are briefly enumerated below.

### 2.1.1 Process Documentation

Irrigation management, through user participation at the distributary level, is a new experiment in Pakistan. In this context, the experiences of the Hakra 4-R Distributary WUO pilot project were of paramount importance, as this is the biggest experiment of its kind in South Asia. Donors, planners, policy makers and researchers have all set their sights on the results that this pilot experiment will yield. Thus, the implementers of this project place a very high importance on process documentation. The following text sheds light on the main features of the methodology that has been incorporated to process documentation.

The members of the Social Organization Field Team (SOFTware) were delegated to take notes of all the activities undertaken by the WUOs (e.g. periodic WUO meetings, meetings between WUO leaders and agency staff), or those organized by IIMI-Pakistan for capacity-building (e.g. training courses). Usually, three SOFTware members were appointed to take notes. Of these three, one took detailed notes and the other two recorded only the main points. Sometimes, two members were involved in note taking. In these cases, both had to record detailed proceedings of the event. Special diaries were used for this note taking exercise. This technique helped tremendously to avoid the loss of information.

For the WUO meetings that involved debates on the points at issue, more purposeful notes were taken. This was accomplished by having, once more, three team members attending, and appointing one member to take detailed notes, another to record negative points, and the third to register the positive aspects of the debate. This was an effective way to gather facts on the hottest issues. This methodology helped to avoid faulty inferences on the issues at debate.

After recording the details of a particular activity, event or meeting, the members who had been in attendance had to compile a summary, based on the structure provided by the field team leader, on the same day. Every important point was also discussed among all the members involved in note taking, with the field team leader present. These discussions helped collecting sufficient evidence to draw portentous conclusions on the related events.

For the documentation of special events, such as the WUO members forming a *panchayat* to resolve disputes, the social organizers were sent as observers. Later, they were required

to submit a detailed report on the origin and history of the dispute, as well as the decisions taken. The social organizers acted as the main repositories for such information.

### 2.1.2 Opinion Surveys

A considerable amount of information related to some of the important indicators, such as conflict management and equity, were collected from the key informants, who were mostly from among the farmer leaders. In order to probe different areas of investigation, both, door-to-door and group-administered interviews were conducted. The main features of the methodology adopted are listed below.

Like that of the method adopted for note taking, usually, two members of the SOFTware were sent into the field. One person conducted the interview and the other recorded responses into the diary or a notebook. Before the interviews, orientation on the conceptualization of the areas of investigation was provided to the members of the SOFTware.

In one case, when only one person could attend an interview, a checklist system was followed. He was required to record the main points during the interview and complete its notes later, before the next interview commenced. All these investigations were conducted by asking free-response questions. These "free-response" questions are, however, "easy-to-ask, difficult-to-answer", and still more "difficult-to-be-analyzed" (Oppenheim, 1966 Pg-41). These responses and statements were, however, carefully analyzed.

### 2.1.3. Organizational Records

The WUOs started maintaining their records, which include the ledger, proceedings of meetings, register for monthly progress report, records of applications on organizational and water management-related matters. These organizational records provided a wealth of information regarding all indicators required for performance assessment. The organizational record, for example, of Sub-system 4's WUO, was kept adroitly and with great care. Processing this record was meticulously done. In some cases, this was achieved with the help of WUO office bearers.

In addition, the five WUO office bearers were provided with registers, enough to maintain three records of the farmers who visited them. These records contained the following information:

- The date;
- The farmer's name and number;
- The outlet number;
- The *chak* number;
- The purpose / request / problem; and
- The action taken by the WUO leader.

The information in these registers was brief and succinct. These registers, however, provided the data for the extent and types and degrees of the problems that farmers in the region were facing. This was also one of the sources that helped to quantify information based on certain performance parameters.

The SOFTware members initially processed the data and information gathered through the sources already referred to.

### 2.1.4. Field Measurement

#### 2.1.4.1. Establishing Benchmarks

Collecting topographic data for the Hakra 4-R Distributary was initiated in November 1996. Before undertaking detailed hydraulic surveys, the IIMI-Pakistan hydraulic survey team conducted a benchmark (BM) survey. The survey was conducted with reference to the BM at Head Ghulab Ali, which had been established with 62 permanent *pucca* structures along the distributary (Annex 1), from the head at RD 00+00 to the tail at RD 112+050, by the Matt Mcdonald. The distance between BM points varies between 400 and 4000 feet. However, on average, BMs have been established after every 2000 feet, given on common structures of RD stones, outlet brick structures and bridge walls. More specifically, the structures on which BMs were established include top and base floors of RD stones, upstream and downstream sides of outlet brick structures, tops of bridge walls, tops of bifurcation structure walls, tops of drop structure walls, pier noses of bridges, foot bridge walls, village road bridge walls, walls of rest houses, *ghat* point brick structures, pump house structures and *pacca nakka* structures.

In order to maintain accuracy, the survey was conducted by taking turning point readings at intervals of two hundred feet apart. All BMs were allocated by closing the survey at each structure selected for this purpose. This, however, points out that each survey short was closed at every turning point reading, which reduced the risk of accumulated error, and consequently, saved considerable time.

#### 2.1.4.2. X-Sections and Profiles

The x-section and profile survey was undertaken after establishing BMs along the Hakra 4-R Distributary during the fourth week of December 1996, when the distributary had been closed for annual repair and maintenance. This survey was also carried out by the IIMI-Pakistan four-member team based at Haroonabad. X-section and profile data were taken with reference to the permanent BMs already established along the distributary on all *pacca* structures. These BMs facilitated the staff rod reading (SRR) for required x-sections near the nodes (outlets), drop, and bifurcation structures. However, the x-sections and profiles at each RD still consumed considerable time because typical RD stones were non-existent at each 1000 feet interval, hence, BMs could not be given at these distances. X-sections and profiles at RD points were covered with reference to any BM located upstream, or downstream, from the point of interest. For some time, the elevations of the

profile survey at 1000-feet intervals connected with the BM by moving turning points (TP) upstream, to downstream, and vice versa.

Longitudinally, the x-sections and profiles were consistently taken after every 1000 feet interval (RD), upstream of each outlet (approximately 15 to 30 feet u/s), and upstream and downstream of each drop structure and bifurcation structure. In addition to recording leveling data at constant intervals, the x-sections and profiles were also measured on all unusual points along the whole distributary. There were about 15 unusual points, for which a separate set of x-sections and profiles were taken.

This data helped to identify the maintenance deficiencies of the channel. The results were used in the implementation of maintenance activities undertaken by WUOs in the annual closure of 1997-98. These maintenance activities were an important measure of WUO performance.

### 2.1.5. Rating

Rating here means giving the relative value of judgment to each indicator. In measuring the performance of the WUOs, the rating is described in such a manner that enables it to have consistent criteria for all WUOs. For example:

Frequency of the meeting is rated as:

- low;
- moderate; and
- high.

Similarly, the regularity is rated as:

- irregular;
- moderately consistent; and
- very consistent.

The rating for decision-making is:

- not followed at all;
- followed for some of the time; and
- followed strictly.

And so forth for other parameters.

### 2.1.6. Scoring

Scoring takes place by providing the absolute weight, or number, to each rating step. Since our steps are from 1 to 3, scoring adopts a three-point scale. For example, the rating scores 1 when a particular WUO performance parameter is low, 2 if medium, and 3 if it attains a high rating.

### 2.1.7. Ranking

Based on its relative performance, all the WUOs are then arranged in a specific order. The ordering uses the cumulative score of all ten indicators and the related parameters achieved by each WUO.

# CHAPTER 3

# PERFORMANCE INDICATORS

## 3.1 Performance Indicators in Theory

The summary of proceedings for an international workshop on "Farmer-managed Irrigation System Network" organized by the International Irrigation Management Institute (IIMI), Pakistan, and The Instituto Nacional de Ciencia y TecnicaT Hidricas (INCYTH) Manor and Chambouleyron (1993), mentioned that universal indicators could not be defined for performance assessment. They have, however, suggested the indicators that can be generalized to measure the performance of Farmer-managed Irrigation System (FMIS). These are; 1) extent of farmer participation, 2) nature and mode of water distribution, 3) maintenance of the system, 4) water use efficiency, 5) social and economic profitability of the system, 6) sustainability, 7) method adopted for conflict management, and 8) equity, reliability and timeliness associated with water distribution.

In the overview of the proceedings for this international workshop on Farmer-managed Irrigation System Network organized by IIMI-Pakistan and INCYTH, Abernethy (1993) has proposed eight predictors for organizational sustainability. These criteria of sustainability have been suggested with the empirical validation of the Nepal context. These include; 1) clearly-defined boundaries, 2) fair proportioning between the benefits received and the contributions made by each irrigator member, 3) collective decision-making arrangements, 4) accountable monitoring, 4) graduated sanctions against rule violations, 5) swift, low-cost, accessible conflict management processes, 6) government recognition of irrigators' rights to organize, and 7) nested and layered organization to address different functions.

Ambler (1993) emphasizes understanding management boundaries, as well as management practices, as a foremost requirement for the accurate performance measurement of the Farmer-managed Irrigation System. While comparing internal and external evaluations, he further suggests that yield, production, irrigated area and cost per unit of water are criteria for external performance measurement.

While describing the performance indicators for the newly developed FMIS in Bali in Indonesia, Pitana (1993) mentioned several indicators to assess performance. These include; 1) equity in water distribution, 2) equity in members' contributions for FMIS development, 3) social functions of irrigation water, 4) relationship between FMIS and the broader society in which the FMIS exists (the village, in this case), 5) economic productivity, 6) social productivity, and 7) the irrigated area.

## 3.2 Indicators Suitable for the Local Environment

The literature survey covered in the foregoing paragraph shows that there are no universal indicators that can be applied to every environment. Every irrigation environment is unique in terms of its social and physical boundaries. While selecting the performance

indicators for the WUOs along the Hakra 4-R Distributary, the following were important considerations:

- The WUOs are not legally recognized, therefore, the indicators selected should be suitable to examine the performance of volunteer organizations.
- Testing these indicators typically, and in a local environment.
- Making indicators consistent with users' perceptions, social and physical infrastructure.
- Gathering available data and information in the simplest and most cost-effective way in order to quantify these indicators.

In the case of performance evaluation for the WUOs along the Hakra 4-R Distributary, the subject has been deeply examined from many angles. The indicators used, and their definitions, are given in the following sections.

- Regularity of the WUO meetings
- Frequency of WUO meetings
- Participation in the WUO meetings
- Adherence to WUO rules
- Decision-making
- Punitive measures
- Resource mobilization
- Organizational development activities
- Performance in maintenance activities
- Ensuring equitable water distribution
- Conflict Management

### 3.3 Definitions of Indicators to Assess Performance

#### 3.3.1 Regularity

Regularity as defined by the Collins Cobuild English Language Dictionary, *is a state or situation in which things happen repeatedly, often according to a definite plan*. Regularity of WUO meetings implies how well meetings were organized and planned. In this context, the definition of the regularity of meetings can further be expounded here as:

- regularity in terms of average absolute spread from the mean interval between the meetings.
- duration of the meetings;
- observance of times; and
- adherence to the meeting's agenda.

### 3.3.2. Frequency of WUO Meetings

Frequency of the meetings may be defined here as:

> *The rate at which the meeting was organized, for example, the number of times it takes place during a particular period of time.*

The rating is not conducted by assigning a relative weight, as this may lead to strong criticism. Rather, the amount of average days between meetings has been used to assess the performance in this regard, i.e., if intervals in between meetings were low, the rating would be "frequent".

### 3.3.3. Participation

Here, participation is not defined by just an absolute number of participants attending the meetings, but rather, defined as:

> *Members' participation in meetings, both physically and intellectually.*

This concept of participation has been explained using five parameters as indicators for participation, i.e.:

- members' attendance, or sometimes invited non-members;
- attendance by ordinary farmers;
- members' attendance;
- active involvement of members in discussions during meetings (this will be measured as percentage of vocal members w.r.t. old members of the general body of WUO);
- members' attendance;
- Quality of discussion; and
- the number of permanent inactive members (the ratio of inactive members will provide the comparative level of interest of participation among the WUOs).

This can be further measured giving the relative weight to three types of inactive members (deadbeats):

- those who never participate
- rare participation in the meeting, but in the discussions
- regularly participation in the meeting but no participation in the discussion

Indicators have been assessed by allocating relative weights for low, medium and high.

### 3.3.4 Enactment and Adherence to WUO Rules and Regulations

There is a two-fold approach when assessing this indicator.

- The number of elements of rules enacted; and
- Enacting rules within the prescribed frame work of time.
- The degree of adherence to rules.

The degree of adherence to rules has been evaluated by using criteria for:

- not followed at all;
- followed for some of the time; and
- followed strictly.

### 3.3.5 Decision-making

There can be three parameters to evaluate this indicator, i.e.:

- The number of decisions taken by the WUOs during the period under investigation;
- The degree of consensus on decisions among the WUO members, whether the decisions taken were with consensus, or by a dominant majority; and
- subsequent action taken after the discussions.

### 3.3.6 Punitive Measures

This indicator may be defined as the WUOs' capability to implement their rules and regulations, and to impose sanctions against those in violation of these. The indicator can further be explained as:

- The number of elements of punitive rules formulated;
- The number of instances for which members were penalized; and
- The number of instances members complied with punitive action.

### 3.3.7 Resource Mobilization

Rana, J. (1991) defined resource mobilization as the ability to mobilize labor, cash and equipment. This research, however, defines this as:

> *The mobilization of manpower, tools (machinery and equipment), funds, knowledge and networking.*

The ability of all the WUOs under all the five main elements of resource mobilization is evaluated as:

a) Mobilization of funds

This covers the mobilization of two types of funds, i.e.:

- General funds; and
- Contingency funds.

b) Mobilization of manpower

c) Tools (machinery and equipment, and transport);
d) Knowledge; and
e) Networking

**a) Mobilization of Funds**

By our definition, this covers both, general and contingency funds. The WUOs' performance in the mobilization of funds can be assessed by the total amount contributed per member over a specific period of time. There can be three possible modes of contribution to generate funds, i.e.:

- Contribution by one person;
- Contributions from every member, but amounts are voluntary; and
- Contributions from every member, but amounts are equal and compulsory.

For the purpose of performance assessment,

- If the amount contributed to the WUO fund was by one person, the lowest rating will be assigned because of the lack of collective action.

- If the contribution was by every member, but for voluntary amounts or donations, the performance of that particular WUO will be considered medium, because although everybody contributes or donates, there is a lower element of obligation.

- If funds are collected from all the members in equal and compulsory amounts, the performance will be considered high because of the high sense of responsibility displayed.

**b) Mobilization of Manpower**

The mobilization of manpower is defined here as the voluntary mobilization of skilled and unskilled labor for the activities undertaken to manage an irrigation system, such as operations, repair, and maintenance activities. This will be in number of person days for labour. In this context, if an association uses hired labor for a particular activity, this falls under "mobilization of cash", rather than mobilization of manpower.

**c) Mobilization of Tools**

This is defined as mustering machinery and equipment and transport to undertake management activities. This is the number of hours/days/tools utilized.

**d) Mobilization of Knowledge**

In the context of WUOs, this is defined as the dissemination of the leadership and organizational skills, indigenous knowledge, and experiences related to agriculture. This will be measured in the number of instances skills and techniques were applied.

***e) Mobilization of Networking***

Defining resource mobilization as the ability to mobilize labor, cash and material is a limited concept. By our definition, networking is also an important resource. Here, it is defined as:

> *the ability to get support from the WUO members, using organizational linkages, to explore avenues to handle their day-to-day problems related to irrigated agriculture.*

Our second definition is the number of instances that outside resources to influence decision making of agency staff were utilized through the mediation of a member without provision of monetary compensation.

### 3.3.8. Role in Organizational Development Activities

The role in organizational development activities is an important indicator to evaluate the performance of WUOs, i.e.:

This may be defined here as:

> *Initiatives taken to design organizational structure for sharing various responsibilities, and using it to interact with other organizations to gain information, experience and collective benefit.*

These parameters can be tested using the following six parameters.

1) Selection of office bearers for different tiers;

    a) Nomination of office bearers for the distributary level WUF;
    b) Restructuring of the watercourse level WUAs;
    c) Addition of the office bearers at the sub-system level WUOs.

2) Formation of sub-committees to delegate specific responsibilities.

3) Number of contacts with government departments through individual and group meetings.
4) Number of contacts with private organizations through individual and group meetings;
5) Number of letters written to different organization; and
6) Management functions.

### 3.3.9 Performance in Maintenance Activities

The WUOs undertook a massive maintenance campaign. They formed an evaluation committee to assess the maintenance work. The evaluation committee discussed, and agreed, that each WUO's performance would be assessed using five key indicators.

**Indicators for maintenance work**

| Indicator | Total value |
|---|---|
| 1. Participation by ordinary farmers | |
| 2. Participation by WUAs Presidents | |
| 3. Participation by other office bearers | |
| 4. Participation of machinery (tractors) | |
| 5. Discipline during the execution of work | |
| 6. Volume of work | |
| 7. Quality of work | |

Each indicator was assigned a relative weight.

*Definitions for Indicators*

a) Participation by ordinary farmers:

- with respect to the total number of water users in the sub-system.

b) Participation of machinery (tractors):

- in consideration of the number of participating tractors, against watercourses.

c) Discipline during the execution of work:

- time observance;
- effectiveness of supervision; and
- farmers' compliance to supervisors.

d) Quality of work:

Giving the relative weight as:

- low;
- medium; and
- high

d) Volume of work:

Similar to the above, giving the relative weight as:

- low;
- medium; and
- high

### 3.3.10 Ensuring the Equitable Distribution of Water

An important, and very basic requirement, is to sustain the WUF. Many researchers have defined the equity in different ways. Some define it with respect to the distribution of water according to the design discharge. Others consider parameters like soil types, and cropping patterns and intensities.

> *We define the equity in its simplest meaning, "fairness". In the context of assessment of the WUOs' performance, the criteria will be the types and degrees of measures taken to maintain the fairness of water distribution among the water users.*

### 3.3.11. Conflict Management

The ability to resolve disputes locally is efficient and cost-effective and is a valuable indicator of WUO performance.

A literal translation for a Punjabi proverb is:

"Woman, money and land are causes of agonies"

In the context of WUOs' jurisdiction, this covers the disputes related to water, land, money and family (especially women).

The ability to settle disputes can be gauged by using four main parameters for dispute resolution.

- *Occurrence of disputes* :Number of disputes among the WUOs.
- *Disputes referred to WUOs*: Ratio of disputes referred to WUO and police, or to the court of the Executive Engineer will, show the water users confidence on the organization.
- *Disputes referred to WUOs, but unresolved/ resolved*: This will show the adjudication power of the leaders
- *Acceptability of the decisions by the parties*: This will show the water users degree of confidence on the WUOs.

# CHAPTER 4

# THE PILOT PROJECT SITE

## 4.1 General

This chapter deals with the description of the Hakra 4-R Distributary's WUO pilot project site shown in Figure 1. In the first instance, it:

- describes the location of the pilot site;
- provides information about the physical features of the distributary;
- discusses the slopes in the pilot site;
- covers the extent of precipitation and the detail of available data at site;
- examines the water supply conditions in the region;
- evaluates the socio-economic conditions of the water users; and finally,
- delineates the WUOs' organizational structures and nomenclatures.

## 4.2 Location of the Pilot Site

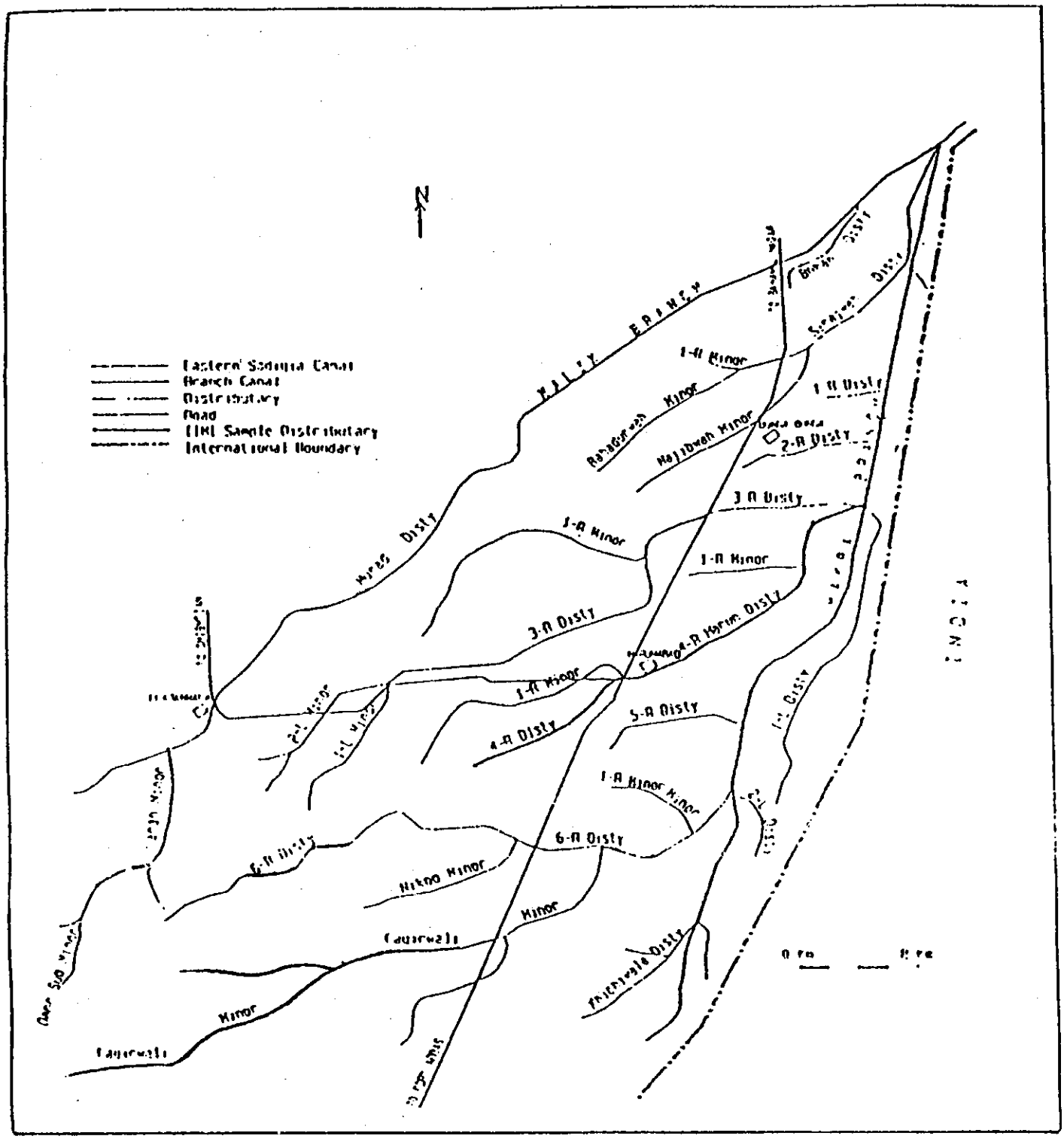
The nexus of the irrigation system in relation to the study site starts with a diversion from the left bank of the river Sutlej at Sulemanki Headworks to the Eastern Sadiqia Canal. This canal is approximately 74 km in length and trifurcates into the Hakra and Malikwah Branch Canals, and the Sirajwah Distributary at RD 242. The Hakra Branch Canal originates from Head Jalwala and trifurcates into 1-L, 3-R and 4-R at RD 89750 (29th km) of Head Ghulab Ali of this branch canal. The Hakra 4-R Distributary off-takes at RD 89750 at the right side of Head Ghulab Ali of the Hakra Branch. The Hakra 4-R Distributary forms part of the Fordwah Eastern Sadiqia Canal (FESS). The FESS area falls in an expanse of 203 km, and is between 18 and 80 km wide along the left bank of the Sutlej River between Suleimanki and Islam Headworks. This stretch encompasses irrigable lands in the Eastern Sadiqia and Fordwah Canal commands. The location is between latitudes 29 and 6 25 N to 30 22 45 N, and longitudes 72 16 47 E to 73 58 30 E, comprising an area of 1.67 million acres in southeast Punjab.

Encompassing parts of *Tehsil* Haroonabad and Bahawalnagar, the study area is encircled by the Hakra 3-R Distributary in the northeast, the command areas of the Hakra 5-R and 6-R Distributaries in the north, and by the Hakra Branch to the east. The Hakra Branch Canal runs almost parallel to the Indian border, which is only 2.5 km away from Head Ghulab Ali towards the east.

## 4.3 Description of the Pilot Site

The Hakra 4-R Distributary makes provision for direct water supplies to 75 watercourse commands located along a 35-kilometer length, and indirectly, to another 48 watercourses through its two minors, which is equal to approximately 23 kilometers. Thus, the total length of the system is 58 km. The Gross Command Area (GCA) and the Culturable Command

Figure 1. Location Map of Hakra 4-R Distributary






Next >>

Area (CCA) of the distributary, including its two minors, are 48649 and 43801 acres, respectively. The Hakra 4-R Distributary has 5 drop structures, located along a 35-kilometer stretch. The distance between these drop structures varies between 6 and 8 kilometers. Each drop structure is located at RDs 25, 46, 72, 82 and 107, respectively. Each of two minors originates from RD 23+200 and 72+100, respectively. In this respect, the Hakra 4-R Distributary could easily be divided into 7 hydrological units for purposes of monitoring water supplies. However, for social organization work purposes, the system was divided into 5 convenient sub-systems. The mean CCA, per sub-system, is 8760 acres, and the largest being 10621 acres. The mean CCA, per watercourse, is 356 acres, and the largest is 1003 acres (w/c No. 16290-R) (Waheed-uz-Zaman, 1998).

### 4.4 Slopes in the Pilot Site

The average natural slope at the Hakra 4-R Distributary is 0.71 foot per km from north to south, with a greater elevation difference on each of four drop structures that varies between 2.50 feet and 7.50 feet. The crests of the off-take head and tail outlet cluster have elevations of 525.011 feet and 500.641 feet above sea level, respectively. The irrigated fields (Natural Surface Level, or NSL) are situated in a range from 526.606 feet to 498.666 feet above sea level, between the head and tail areas (Waheed-uz-Zaman, 1998).

### 4.5 Precipitation in the Area

The climate in the region is hot and arid. The average rainfall ranges between 125 and 250 mm. July and August are months of highest precipitation. October and November are dry months. The hot and dry climate, insufficient rainfall and brackish ground water demand reliable and adequate water supplies for both, irrigation and drinking purposes ( Mirza and Hassan 1996).

### 4.6 Data Available

IIMI-Pakistan has already conducted a baseline survey in the area. This survey covers information about the characteristics of farm holdings, cropping patterns, cropping intensities, water supplies and its reliability, irrigation practices, water logging and salinity, use of agricultural inputs, farm machinery and yields of different crops (Cheema *et al.* 1997). These data will serve as benchmark information, and can be used to test different indicators and the impacts of irrigation supplies after the application of operation and maintenance activities. In addition, the Watercourse Monitoring and Evaluations Directorate (WMED) is monitoring five watercourses in the distributary command in order to assess the impact of water logging and salinity on crop production, especially in consideration of existing management practices. These data will also be helpful for project gestation, or monitoring and evaluation.

## 4.7 Socio-economic Characteristics of the Farmers of the Hakra 4-R Distributary

IIMI-Pakistan conducted a baseline survey along the Hakra 4-R Distributary during July 1995. The survey revealed (Asghar *et al.* 1995) that overall, the mean number of family members per household along the sample watercourses was 8.78. The mean age of respondents along the Hakra 4-R Distributary was 48.69 years. Farmers have an irrigation experience of 28.2 years, on average. Local respondents were equivalent to about 20 percent, while the rest of the sample farmers were either settlers or migrants. The Jat, Rajput and Arain farmers form about 80 percent of inhabitants along the distributary. The majority of farmers were illiterate, about 61.6 percent. Sample farmers with education below matriculation constituted about 34 percent, whereas only 5 percent of farmers had post-matriculation education.

The mean number of males engaged in agriculture, full-time, was higher than that of females. The mean number of family members in full-time agriculture among respondent households, was 1.97 percent. Females of working age were involved in common agriculture on a part-time basis.

The majority of sample farmers (55%) owned up to 5 acres of land. About 83 percent of farmers had landholdings below the subsistence level, and about 12 percent of farmers had land from 12.6 to 25 acres, while 6 percent of the total sample farmers owned 25.1 acres and above. The mean operated area was about 13 acres in total. The mean area owned by the sample farmers was 8.34 acres. The mean operated area, in total, was higher at the head than at the tail reach. The number of farmers owning tractors was 17 percent, and the number of tubewell owners, 11.7 percent. The majority of cultivators (50.7%) were the actual landowners. Tenants constituted 16 percent, while owner-cum-tenants were 33 percent.

## 4.8 Irrigation Supply Conditions in the Region

The baseline survey of the Hakra 4-R Distributary (Asghar *et al.* 1995) also provides interesting background information on water supply conditions. The majority of farmers had access to canal water as a source of irrigation supplies. About 43 percent of the sample farmers used other water sources, like private tubewells or purchasing canal water from other farmers. Farmers of the view that canal water only fulfilled crop requirements to some extent was 80.1 percent, and 4 percent pointed out that canal water did not fulfill their crop requirements. About 15 percent of farmers reported that canal water fulfilled the water requirements to a larger extent.

In instances of short water supplies, 54 percent of farmers maintained fallow land. On average, about 26 minutes of water supply were allocated to farmers to irrigate one acre of land. About 132 minutes are required to irrigate one acre. During the 1994 *kharif* season, water was deficient at times of sowing and harvesting. About 30 percent of farmers said that water was in acute shortage during June, *kharif* 1994. About 22 percent of farmers were of the view that canal water was in acute shortage at the time of harvesting the *kharif* crop, i.e., September. Around 80 percent of farmers reported that canal water was in acute shortage during the 1995 *rabi* season. An insufficient water supply was also noticed by 13.1 of the

farmers during December. About 24 percent of farmers were of the view that the present system of canal water distribution was unsatisfactory. The majority of sample farmers (68.8%) were of the opinion that government agencies had the ability to improve the present distribution of canal water. About 45 percent of the sample farmers were of the view that distributary water was not equally distributed, while about 52 percent of respondents held the opposite view. About 80 percent of the sample farmers indicated inequity in water distribution within the Hakra 4-R Distributary command area. Overall, 42 of the sample farmers were of the view that PID officials were responsible for the inequitable distribution of water.

### 4.9 Organizational Structures and Nomenclatures

The formation of the Water Users Federation (WUF) at the Hakra 4-R Distributary is a three-tier system in which 4500 water users were organized (at first tier) into 121 WUAs (Figure 2). Each WUA comprises of all the farmers along a watercourse. The number of WUA members varies from 5 to 7, depending on the number of factions (*baradaries*, number of potential leaders) along a watercourse, with the exception of 1 or 2 watercourses where the WUA comprised of only one member who owned the entire watercourse command.

Watercourse level meetings facilitated the nomination of WUA members by water users. These 121 WUAs nominated 121 watercourse representatives, who, in most cases, were nominated by the WUA executive bodies. In some other cases, however, the general water users elected the members.

The Hakra 4-R Distributary was grouped into 5 sub-systems based on social and physical divisions. Each sub-system comprises of 15 to 33 WUAs, depending on the size of the hydrological unit. These WUAs were, at the time, organized (second-tier) into five Water Users Organizations (WUOs). The electoral body for each WUO also comprises of 15 to 33 watercourse representatives. Each WUO comprises of 7 to 10 executive body members, depending on social and hydrological units (villages, *baradaries* and watercourses). Each sub-system WUO nominated 5 members for the WUF general assembly. In most cases, sub-system level WUO presidents and general secretaries were also chosen for the WUF general assembly. The remaining three WUO members were co-opted from among the watercourse representatives. Thus, the WUF general assembly comprises of 25 members. These members then selected a five-member executive body (third-tier) for the WUF for the entire distributary command on March 5, 1997.

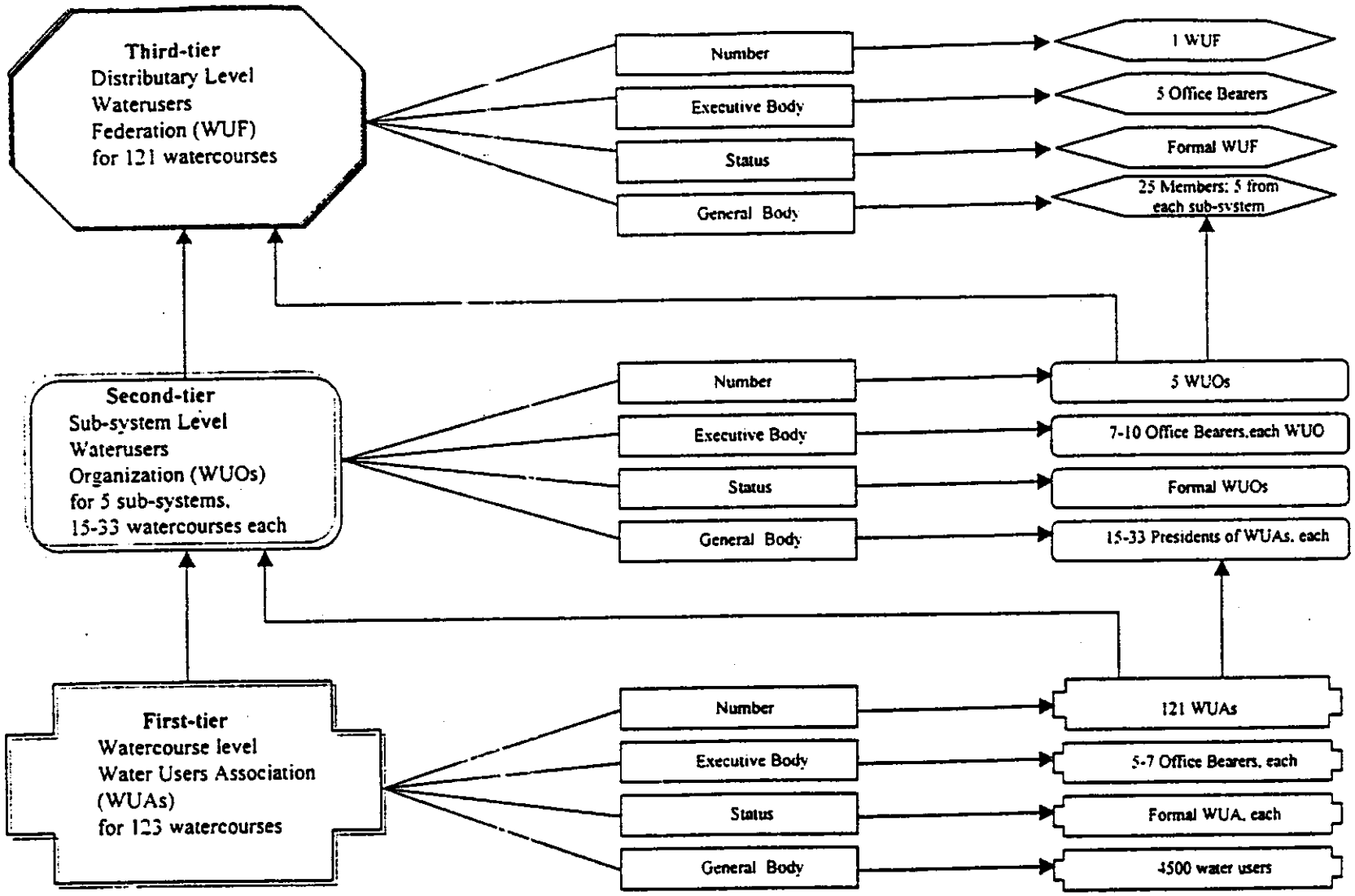



Figure 2. The organizational structure and nomenclature of the Hakra 4-R Distributary Water Users Federation (Waheed-uz-Zaman etc. al., 1998).

# CHAPTER 5

# REGULARITY OF MEETINGS

## 5.1 Regularity

Regularity as defined by the Collins Cobuild English Language Dictionary, *is a state or situation in which things happen repeatedly, often according to a definite plan*. Regularity of WUO meetings implies how well meetings were organized and planned. In this context, the definition of the regularity of meetings can further be expounded here as:

- Regularity in terms of the average absolute spread from the mean interval between meetings;
- Duration of the meetings;
- Observance of timings; and
- Adherence to the meeting's agenda.

Regularity is a useful indicator with which to assess the comparative performance of the WUOs.

## 5.2 Rating Criteria

The following rating criteria are used to assess relative performance.

- Irregular;
- Moderately consistent; and
- Very consistent.

## 5.3 Scoring

Scoring assigns a relative weight to each meeting.

The rating will be 1 if a meeting was "irregular", 2 if "moderately consistent" and 3 if "very consistent". These ratings are used to quantify the regularity of WUO meetings. In the following sections, each of four criteria for regularity is evaluated.

## 5.4 Average Absolute Spread from the Mean Interval Among Meetings

The regularity of meetings has been assessed by calculating the average absolute spread from the mean interval among meetings. The majority of the WUOs, however, did not fix dates for periodic meetings. There were, however, some WUOs that decided to organize periodic meetings on a fixed date. Two criteria have been used to calculate the average absolute spread from the mean interval among meetings, i.e.:

- WUOs not fixing dates for periodic meetings; the date of their first meeting is used as a reference date to calculate the average deviation from the meeting interval.
- WUOs not conducting meetings in any particular month; those months are not included as these may introduce a biased average.

The following table shows an absolute spread from the mean intervals of meetings.

**Table 1. Absolute Spread From Mean Intervals of Meetings.**

| WUO | Number of meetings | Average spread of meetings from mean intervals (days) | Rating | Scoring | Remarks |
|---|---|---|---|---|---|
| WUO 1 | 8 | 8 | Irregular | 3 | Months devoid of meetings are excluded |
| WUO 2 | 5 | 7 | -do- | 3 | Months without meetings are excluded |
| WUO 3 | 9 | 9 | -do- | 3 | Months without meetings are excluded |
| WUO 4 | 19 | 9 | -do- | 3 | Regular monthly meetings |
| WUO 5 | 7 | 9 | -do- | 3 | Regular monthly meetings |
| WUO 4-R | 13 | 8 | -do- | 3 | |

The table shows that all the WUOs significantly deviated from the mean interval of the meetings. The absolute spread among WUOs ranges from seven days to nine days. The WUOs' performances, in this regard, have not been encouraging. None of the WUOs achieved regularity below 25 percent of the time.

### 5.5 Duration of the Meetings

This criterion refers to whether meetings concluded in the planned time. Ratings are irregular, moderately consistent and very consistent, and 1, 2 and 3 are used to assess the duration of the meetings. If the duration of the meeting is too extensive, it is regarded as "irregular" (1), if the duration is moderately prolonged, it is regarded as "moderately consistent" (2), and if the meeting finished in the prescribed timeframe, it is regarded as "very consistent" (3). The documentation of the meetings revealed that every meeting continued for longer than the planned time. There is, however, much difference in the duration of meetings among the WUOs. The following table shows the difference in the planned and actual times of meetings. The performance of the WUOs is then evaluated by assigning a relative rating.

**Table 2. Duration of Meetings; Deviations from Planned Times.**

| Name of the WUO | Number of meetings | Difference in planned and actual times of meetings | Rating (Relative) | Rating (Relative) |
|---|---|---|---|---|
| WUO 1 | 8 | 175 minutes | Irregular | 1 |
| WUO 2 | 5 | 120 minutes | Moderately consistent | 2 |
| WUO 3 | 9 | 120 minutes | Moderately consistent | 2 |
| WUO 4 | 19 | 231 minutes | Irregular | 1 |
| WUO 5 | 7 | 135 minutes | Moderately consistent | 2 |
| WUO 4-R | 13 | 210 minutes | Irregular | 1 |

Table 2 indicates that the duration of meetings expanded from between 120 minutes and 231 minutes among the WUO meetings. None of the WUOs achieved consistency in maintaining the duration of meetings.

### 5.6 Observance of the Start Timings

Giving relative weight to the observance of timings, the planned start times versus the actual start times are assessed. The ratings, irregular, moderately consistent and very consistent, or 1, 2 and 3, respectively, are used to assess the observance of the start timings of meetings.

If meetings started later than the planned time, it is regarded as "irregular" (1), if meetings were moderately delayed, it is regarded as "moderately consistent" (2), and if meetings started at the planned time, it is regarded as "very consistent" (3). This is a good indicator for assessing organizational discipline and performance. But, here it could not be quantified due to lack of information.

### 5.7 Agenda of the Meetings

All meetings started with an agenda, which, usually, was circulated in advance of the meetings. The regularity of WUO meetings can be evaluated by using criteria related to whether the agenda was "not followed" and "followed". The relative weight for an agenda "not followed" (0) and "followed" (5) is used to assess regularity.

Field documentation revealed that all the WUOs followed the agenda strictly. There were one or two instances when the agenda was not followed because of the absence of an important WUO general body member, or an important invitee of the meeting. For example, the WUO of Sub-system 5 could not follow an agenda because the SDO, Public Health, was invited to deliver a lecture on public health issues, but he could not come and ultimately the agenda could not be followed. The following table shows the status of meetings and the agenda.

**Table 3. Adherence to Agenda Items.**

| WUO | Status of Meeting | Number of Meetings | | | Rating | Remarks |
|---|---|---|---|---|---|---|
| | | Agenda followed | Agenda not followed | Total meetings | | |
| WUO 1 | General body | 5 | 0 | 5 | 25 | |
| WUO 2 | General body | 2 | 0 | 2 | 10 | |
| WUO 3 | General body | 6 | 0 | 6 | 30 | |
| WUO 4 | General body | 14 | 1 | 15 | 70 | Absence of one WUO member |
| WUO 5 | General body | 4 | 1 | 5 | 20 | Absence of SDO, Public Health |
| WUO SS 5 | Executive body | 2 | 0 | 2 | 10 | |
| WUO 4-R | General body | 13 | 0 | 13 | 13 | |

The table indicates that the WUO of Sub-system 4 has performed best in terms of conducting the maximum number of meetings. Moreover, the instances of "not following agenda", like other WUOs, are insignificant in the case of this WUO. Other WUOs performed moderately well because relative to Sub-system 4, the number of meetings was significantly low.

# CHAPTER 6

# FREQUENCY OF THE MEETINGS

## 6.1 Frequency of WUO Meetings

Frequency of the meetings may be defined here as the rate at which meetings was organized, for example, the number of times meetings were conducted over a particular period of time.

This is a useful indicator to assess the comparative performance of the WUOs. Some critics believe that more frequent meetings might result in more problems. This is a very hollow and flimsy pretext. In new pilot projects, such as at the Hakra 4-R Distributary, frequent meetings, besides addressing organizational and irrigation issues, may help in concept clearance for WUO members. On the other hand, less frequent meetings might be indicative of lack of initiative and lack of activity. Thus, frequency of the meeting could be an effective indicator to examine comparative organizational performance.

## 6.2 Rating Criteria

To assess how frequently meetings are conducted, rating are ascertained as:

- low;
- moderate; and
- high

Ratings are not ascertained by assigning a relative weight. Rather, the average interval between meetings, in days, has been used to assess the performance.

- If intervals are small, meetings are regarded as "frequent".
- If intervals are moderate, meetings are regarded as "less frequent".
- If intervals are high, meetings are regarded as "infrequent".

## 6.3 Scoring

- The rating value will be 1 if the frequency is low (infrequent).
- The rating value will be 2 if the frequency is moderate (less frequent).
- The rating value will be 3 if the frequency is high (frequent).

The meetings organized by the WUOs, usually, served the purpose of their periodic meetings. Some WUO meetings were arranged at the requests of project staff. Most meetings were according to a well-planned agenda. Sometimes, these were organized at the motivation of a single office bearer. Others were arranged at the request of IIMI-Pakistan. Specific agendas were circulated at all meetings. The following sections present the status of the meetings of all five WUOs.

## 6.4 Frequency of Meetings in Sub-system 1

The WUO of Sub-system 1 conducted five meetings in eighteen months. The average interval between meetings is 3.6 months.

The table indicates that three out of five meetings were periodic WUO meetings. These meetings addressed issues related to organizational development activities. Meetings conducted at IIMI-Pakistan's request were used to discuss matters related to capacity building and to arrange visits for outside professionals.

**Table 4. Frequency of Meetings in Sub-system 1.**

| Meeting Date | Meeting requested by | Main Agenda Items |
|---|---|---|
| 1.3.97 | WUO | Nomination for the WUF executive body; Formation of accountable committee; Selection of joint secretary; and formulation of items for the codes of conduct. |
| 12.3.97 | WUO | Formulation of items for the codes of conduct. |
| 12.6.97 | WUO | Fund raising, formulation of codes of conduct and Bed-and-Furrow experiment. |
| 1.10.97<br>2.10.97 | WUF & IIMI | Planning flow measurement training. |
| 26.2.98 | WUF & IIMI | Visit of Halcrow social organization Field Team. |
| | | More Meetings |
| 29.7.1998 | WUO | Bank Account - Tree Plantation |
| 29.9.1998 | WUO | Membership Drive |

## 6.5 Frequency of Meetings in Sub-system 2

The WUO of Sub-system 2 conducted three meetings in eighteen months. The average interval between meetings is 6 months.

The following table indicates that a different mover organized each meeting. These meetings, however, were held to discuss issues related to organizational development activities. The meeting that was organized at IIMI-Pakistan's request was to discuss matters related to capacity building.

**Table 5. Frequency of Meetings in Sub-system 2.**

| Meeting date | Meeting requested by | Main Agenda Items |
|---|---|---|
| 15.2.97 | WUO members | Nomination for the WUF executive body |
| 28.6.97 | General Secretary | To review the WUO's performance and to develop some elements for codes of conduct |
| 28.9.97<br>29.9.97 | IIMI | Participation in flow measurement training |
| 30.7.97 | WUO | Bank Account - Tree Plantation |
| 20.8.1998 | WUO | Membership Drive |

## 6.6 Frequency of Meeting in Sub-system 3

The WUO of Sub-system 3 conducted six meetings in eighteen months. The average interval between meetings is 3 months.

The following table shows that the four meetings were periodic WUO meetings. These meetings addressed issues related to organizational development activities and to discuss the mobilization of resources for the self-help maintenance campaign. Meetings organized at IIMI-Pakistan's request were to discuss matters related to capacity building and to establish a legal framework with the visiting legal consultant.

**Table 6. Frequency of Meetings in Sub-system 3.**

| Meeting date | Meeting requested by | Main Agenda Items |
|---|---|---|
| 29.2.97 | WUO | Nomination for the WUF executive body |
| 23.3.97 | IIMI | Discussion of bylaws with the legal advisor (Dr. Dil Muhammad) |
| 10.6.97 | WUO | Bed-and-Furrow experiment |
| 13.9.97<br>14.9.97 | IIMI | Flow measurement training |
| 23.10.98 | WUO | No confidence move against the vice president |
| 16.1.98 | WUO | Maintenance campaign |
| 29.7.98 | WUO | Bank Account - Tree Plantation |
| 15.8.98 | WUO | Membership Drive |

## 6.7 Frequency of Meetings in Sub-system 4

The WUO of Sub-system 4 conducted fifteen meetings in eighteen months. The average interval between meetings is 1.2 months.

The following table shows that this WUO has been a main focus with outside visitors, as this WUO had established the WUF office immediately after its formation. This WUO

displayed many organizational development activities when compared to other WUOs. IIMI staff, also, has purposely been taking visiting outsiders to that area.

The table shows that of fifteen meetings, five were periodic WUO meetings, two were organized at the request of WUO office bearers. These meetings addressed issues related to organizational development activities and to discuss the mobilization of resources for the self-help maintenance campaign. Members also discussed the nomination for the Nepal Study Tour. The remaining seven meetings organized at IIMI-Pakistan's request were to discuss matters related to capacity building and to establish a legal framework with the visiting legal consultant. Advance arrangements for visitors were also discussed.

**Table 7. Frequency of Meetings in Sub-system 4.**

| Meeting date | Meeting requested by | Main Agenda Items |
|---|---|---|
| 1-3-97 | WUO | Nomination for the WUF executive body |
| 4-3-97 | WUO | To establish the WUO's office |
| 23-3-97 | WUO President | Lack of activity of a WUO member |
| 24-3-97 | IIMI | Discussing by-laws with legal advisor (Dr. Iftikhar Tarar) |
| 13-4-97 | WUO | Fund-raising and formulation of codes of conduct |
| 9-5-97 | WUO | Fund-raising and formulation of codes of conduct and establishing the WUO's office |
| 28-7-97 | WUO | Visit of WUF president and discussion on increasing the jurisdiction of FICC |
| 25-9-97<br>26-9-97 | IIMI | Flow measurement training |
| 18-11-97 | IIMI | Dr. Tissa Bandaragoda's visit |
| 23-11-97 | General Secretary | Nepal Study Tour |
| 29-11-97 | Information Secretary | Visit of WUF president |
| 10-1-98 | IIMI | Visit of Dr. Petersen |
| 26-2-98 | IIMI | Halcrow visit |
| 23-4-98 | IIMI | Visit of Dr. Pam |
| 30-4-98 | IIMI | Developing Movie |
| 12-7-98 | WUO | Lecture of representatives |
| 24-7-1998 | WUO | Bank Account - Tree Plantation |
| 28-8-1998 | WUO | Membership Drive |
| 29-9-1998 | WUO | Lining Matter |

## 6.8 Frequency of Meetings in Sub-system 5

The WUO of Sub-system 5 conducted five meetings in eighteen months. The average interval between meetings is 3.6 months.

The table shows that four of seven meetings were periodic WUO meetings. These meetings addressed issues related to organizational development activities and to discuss the mobilization of resources, establishment of office and to discuss prospects for the Bed-and-Furrow experiment. Meetings organized at IIMI-Pakistan's request were to discuss matters related to capacity building and the legal framework with the visiting legal consultant. Advance arrangements for visitors were also discussed. The following table gives the detail of Sub-system 5's meetings.

**Table 8. Frequency of Meetings in Sub-system 5.**

| Meeting date | Meeting requested by | Main Agenda Items |
|---|---|---|
| 24-2-97 | WUO | Nomination for the WUF executive body |
| 23-3-97 | IIMI | Discussion of by-laws with the legal advisor (Dr. Dil Muhammad) |
| 7-5-97 | General Secretary | Bed-and-Furrow experiment. Apprising farmers about water shortages caused by the defective structure at Head Sulemanki |
| 15-7-97 | President | Fund-raising, formalization of WUAs and discussion of agricultural tax |
| 29-9-97 30-9-97 | IIMI | Flow measurement training |
| 26-2-98 | IIMI | Visit of the Halcrow Social Organization Field Team and establishment of the WUO's office |
| 2-4-98 | WUO | Establishment of the WUO's office |
| 1-8-1998 | WUO | Bank Account and Tree Plantation Membership Drive |

## 6.9 Comparative look at Frequencies of Meetings among the WUOs

The following table presents the frequencies of meetings among the six WUOs, ranging from infrequent to frequent.

**Table 9. Frequency of Meetings Among the Six WUOs Within the Last 18 Months.**

| WUO | Number of Meetings | Meeting Interval (months) | Ratings |
|---|---|---|---|
| WUO SS 1 | 7 | 3.6 | Less frequent |
| WUO SS 2 | 5 | 6 | Infrequent |
| WUO SS 3 | 9 | 3 | Less frequent |
| WUO SS 4 | 19 | 1.2 | Frequent |
| WUO SS 5 | 7 | 3.6 | Less frequent |
| WUF 4-R | 13 | 1.4 | Frequent |

Immediately after its formations, all the WUOs, except that of Sub-system 5, decided to conduct periodic meetings on a monthly basis. Sub-system 5 decided to organize its periodic meetings after every two months. Table 9 indicates that the majority of the WUOs could not conduct planned periodic meetings. The intervals between meetings range from approximately 1 month (frequent) to six months (infrequent). Sub-system 4 performed best and Sub-system 2 worst. Other WUOs performed moderately well.

The WUO president's lack of activity is the main reason for infrequent meetings in Subsystem 2. In Subsystem 4, the WUO executive body has been taking a deep interest in organizational development activities.

# CHAPTER 7

# PARTICIPATION IN MEETINGS

## 7.1. Participation

The comparative performance of the WUOs can be evaluated from the rate of member-participation in periodic meetings. The participation here is not defined by just the absolute number of participants, but rather, defined here as "taking part" in the meeting, both physically and intellectually. This concept of participation has been expounded here using five sub-indicators for participation, i.e.:

a) **Attendance by members and invited non-members;**
b) **Attendance by the ordinary farmers;**
c) **Attendance in terms of active involvement in discussions during the meetings (this will be measured as % of vocal members with reference to the total members of the general body of WUOs);**
d) **Attendance in terms of the quality of the content of discussions in meetings; and**
e) **The number of deadbeats.**

## 7.2. Attendance by Members and Invited Non-members

This sub-indicator is easily measured. WUO periodic meetings were held on monthly bases. WUO general body members were routine members. Their membership varies from 15 to 33, based on the size of the hydrological unit. The participants, however, were usually more than the actual members; ordinary farmers have also been participating in these meetings. These ordinary farmers have been participating without invitation, therefore, it was difficult to assess WUO performance on the basis of total participants. A uniform criterion has been adopted to assess the rate of participation. Performance ratings for WUOs are only based on member-participation. In the case of WUOs, these were general body members. The second criterion could be the participation of invited members. This situation was non-existent, and is, therefore, ignored.

The participation in WUO meetings has always been more than the quorum requirement. Thus, overall, in absolute terms, the participation rate given in the table can be regarded as high among the WUOs. Relatively speaking, however, the participation in the WUO meetings varies from low to high.

A comparative look at the participation shows that the participation remained low in Sub-systems 1 and 2 mainly because of the inertness of a few executive body members. The member-participation in WUO meetings of Sub-systems 4 and 5 has been high. In Sub-system 4, the cohesion of membership and the presence of a few active executive body members, coupled with a sound organizational set-up, were the reasons for the high participation. In Sub-system 5, besides clear polarization among the leadership, the reason for high participation is the personal interest taken by a few active executive body

Immediately after its formations, all the WUOs, except that of Sub-system 5, decided to conduct periodic meetings on a monthly basis. Sub-system 5 decided to organize its periodic meetings after every two months. Table 9 indicates that the majority of the WUOs could not conduct planned periodic meetings. The intervals between meetings range from approximately 1 month (frequent) to six months (infrequent). Sub-system 4 performed best and Sub-system 2 worst. Other WUOs performed moderately well.

The WUO president's lack of activity is the main reason for infrequent meetings in Subsystem 2. In Subsystem 4, the WUO executive body has been taking a deep interest in organizational development activities.

The table shows an enormous variation in participating non-members in WUO meetings. In Sub-systems 2, the low participation is due to the lack of interest of the few main executive members, and consequently, of the common farmers. In Sub-system 4, the low participation of non-members has been attributive to discipline and steps taken towards the organizational development activities. In the remaining three sub-systems, the participation of non-members was quite uniform. The reported reason for the high participation of common farmers is dependent on the place and location of the meeting.

### 7.4. Participation in terms of Active Involvement in Discussions during the Meetings

Active involvement in discussion during meetings is defined as the extent to which members involve themselves in making speeches, posing questions, giving suggestions, arguing, debating and hassling over issues related to the farming community. Measuring the active involvement for discussion during meetings yielded serious complications. This needed intensive record keeping. Each participant who had spoken has been recorded, including the content of his speech. Members of the Social Organization Field Team took detailed notes. This process was routine documentation and was not very time-consuming. Later, these notes were scrupulously processed to write this report.

Relying on these routine notes, active involvement has been examined. Based on available records, the following members of each WUO have been assessed for their vocal contributions, thus rated as "active participants".

The tables in the following sections list vocal members from each WUO. These names are taken from social organizers working in respective WUOs. This evaluation is reliable because these SOs have been interacting with the WUOs since its formation.

#### 7.4.1 Vocal Members Sub-system 1's WUO

In Sub-system 1, 9 of 23 people actively participated in discussions held in WUO meetings, which include three main office bearers and six members.

**Table 12. List of Vocal Members from Sub-system 1's WUO.**

| S. No. | Name of the member | Designation in the Sub-System level WUO |
|---|---|---|
| 1 | Manzoor Shah | General Secretary |
| 2 | Akram Wattoo | Member |
| 3 | Muzaamal Wattooo | Member |
| 4 | Jamshed | Member |
| 5 | Iqbal | Member |
| 6 | Qasim | Member |
| 7 | Abdul Shakoor | Vice President |
| 8 | Rizwan | Joint Secretary |
| 9 | Nazar Khan | Member |

#### 7.4.2 Vocal Members from Sub-system 2's WUO

In Sub-system 2, only 6 of 23 people were active participants in discussions held in the WUO meetings, which include two main office bearers and four members.

**Table 13. List of Vocal Participants from Sub-system 2's WUO.**

| S. No. | Name of the member | Designation in the Sub-System level WUO |
|---|---|---|
| 1 | Abdul Wahid | General Secretary (president WUF) |
| 2 | Amin Jatala | Member |
| 3 | Hanif | Member |
| 4 | Raja Gusanfar | Vice President |
| 5 | Haji Ashiq | Member |
| 6 | Ashiq Jat | Member |

### 7.4.3 Vocal Participants from Sub-system 3's WUO

In Sub-system 3, 8 of 27 people actively participated in discussions held in the WUO meetings, which includes two main office bearers and six members.

**Table 14. List of Vocal Participants from Sub-system 3's WUO.**

| S. No | Name of the Member | Designation in the Sub-System level WUO |
|---|---|---|
| 1 | Sofi Iqbal | President (WUF Information Secretary) |
| 2 | Talib | General Secretary |
| 3 | Hashmat | Member |
| 4 | Bashir | Member |
| 5 | Mumtaz | Member |
| 6 | Hamid | Member |
| 7 | Jamil | Member |
| 8 | Hamid | Member |

### 7.4.4 Vocal Participants from Sub-system 4's WUO

In Sub-system 4, out of 15, 6 people were active participants in the discussions held in the WUO meetings, which include two main office bearers and four members.

**Table 15. List of Vocal Participants from Sub-system 4's WUO.**

| S. No | Name of the Member | Designation in the Sub-System level WUO |
|---|---|---|
| 1 | Fiaz | Information and Joint Secretary |
| 2 | Asghar | General Secretary |
| 3 | Khair Din | Member |
| 4 | Shakoor | Member |
| 5 | Ismail | Member |
| 6 | Majeed | Member |

### 7.4.5 Vocal Participants from Sub-system 5's WUO

In Sub-system 5, out of 33, 10 people were active participants in the discussions held in the WUO meetings, which include three main office bearers and four members.

**Table 16. List of Vocal Participants from Sub-system 5's WUO.**

| S. No | Name of the Member | Designation in the Sub-System level WUO |
|---|---|---|
| 1 | Amin | General Secretary of the WUF |
| 2 | Rashid | Member |
| 3 | Munir | General Secretary |
| 4 | Allah Dittah | Member |
| 5 | Akram Chattah | Member |
| 6 | Humayun | Member |
| 7 | Hafiz Sanaullah | President |
| 8 | Naeem | Joint Secretary |
| 9 | Nazir | Member |
| 10 | Saif | Member |

The percent of vocal members participating in the WUO meetings ranges from 26 to 40. Sub-systems 1 and 2 performed relatively better than the other sub-systems because of the presence of some enthusiastic leaders. Sub-system 2 scored lowest with respect to the level of active participation in the meetings because of the very obvious presence of a few non-functional executive body members.

Important to note is that the SOs rated all the vocal WUO general secretaries. This fact is indicative of the awareness of farmers to select appropriate people for WUO positions. The following table indicates the percent of "*vocal members*" among the WUO members.

**Table 17. Percentage of Vocal Members Among the WUO Members.**

| Name of the WUO | Number of general body members | % of vocal members | Rating (Relative) | Score |
|---|---|---|---|---|
| WUO 1 | 23 | 40 | High | 3 |
| WUO 2 | 23 | 26 | Low | 1 |
| WUO 3 | 27 | 30 | Medium | 2 |
| WUO 4 | 15 | 40 | High | 3 |
| WUO 5 | 33 | 30 | Medium | 2 |
| WUO 4-R | 25 | 50 | High | 3 |

## 7.5. Participation by the Quality of Discussions Content

During discussions, some members speak with brevity, providing logic to prove their points, and prepare prior to participating in intentional talks. Such members do not indulge in irritating discussions, while others speak at length, raise impertinent and impolite questions, and speak thoughtlessly. Although the latter speaks more, the former is more productive. This type of participation by the members could have been more precisely assessed if their speeches had been recorded. This level of record keeping and data collection and processing was extremely difficult and time consuming. Processing data on this scale was not cost effective. Therefore, participation with respect to the quality of speeches and discussions among WUO members has not been evaluated. This indicator, however, can be a good way to assess performance.

## 7.6 Number of Deadbeats

The performance of individuals also varies much among the WUOs. For different reasons, in every WUO, there are some members who are complete deadbeats. Three types of

deadbeats are identified as:

- Non-participants ;
- Rare participation in meetings, and participation in discussions and
- Regular participation in meetings, but no participation in discussions.

### 7.7 Rating Deadbeats

For non participation the score will be 0, for rare participation the value will be 2, and for regular participation, but no indulgence in discussions, the score will be 3. Our second criteria to measure this parameter of participation is the ratio or percentage of inactive members with respect to the membership.

**Table 18. Status of the Deadbeats Among the Six WUO Members.**

| S. No | Name of the deadbeat | Designation | Participation status in meetings | Rating | Total Score |
|---|---|---|---|---|---|
| | | **WUO 1** | | | |
| 1 | Rana Munem | WUF member | Never | 0 | 9 |
| 2 | Akmal Khan | WUO member | Never | 0 | |
| 3 | Mian Riaz Ahmad | WUO member | Regularly, but no participation in discussions. | 3 | |
| 4 | Mumtaz Ahmad | WUO member | Regularly, but no participation in discussions. | 3 | |
| 5 | Ali Sher Lanooka | WUO Vice Pr. | Regularly, but no participation in discussions. | 3 | |
| | | **WUO 2** | | | |
| 1 | Rao Inaam ur Rehaman | WUO President | Never | 0 | 2 |
| 2 | Raja Nasir Javaid | WUO member | Never | 0 | |
| 3 | Raja Sultan Daud | WUO member | Never | 0 | |
| 4 | Rao Abdul Haque | WUO member | Never | 0 | |
| 5 | Mian Waris | WUO member | Rarely | 2 | |
| | | **WUO 3** | | | |
| 1 | Haji Ata Muhammad | WUF member | Rarely | 2 | 11 |
| 2 | Iftikhar Ahmad | WUO member | Rarely | 2 | |
| 3 | Haji M.Hanif | WUO member | Rarely | 2 | |
| 4 | Muhammad Akram Jioa | WUO member | Rarely | 2 | |
| 5 | Dr.Akhtar Ali | WUO member | Regularly, but no participation in discussions | 3 | |
| | | **WUO 4** | | | |
| 1 | Sofi M.Saddique | WUO member | Regularly, but no participation in discussions | 3 | 6 |
| 2 | M.Hafeez | WUO member | Regularly, but no participation in discussions | 3 | |
| | | **WUO 5** | | | |
| 1 | Bao Khalid | WUO member | Rarely | 3 | 6 |
| 2 | Riaz Ahmad | WUO member | Rarely | 2 | |
| 3 | Munir Hussain Wakeel | WUO member | Rarely | 2 | |
| | | WUF 4-R | | | |
| 1. | Bao Khalid | WUO member | Never | 0 | 0 |
| 2. | Rao Jamshed | WUO member | Never | 0 | 0 |

This table shows the percentage of deadbeats in relation to physical attendance.

**Table 19. Percentage of Deadbeats Among WUOs.**

| Name of the WUOs | Total | No. of Deadbeats | Percentage of Dead Beats |
|---|---|---|---|
| WUO 1 | 23 | 5 | 21 |
| WUO2 | 23 | 5 | 21 |
| WUO3 | 27 | 5 | 18 |
| WUO4 | 15 | 2 | 13 |
| WUO5 | 33 | 3 | 9 |

The performance of table shows that the percent of deadbeats varies from 9 to 21 among the WUOs. WUO 4 and WUO 5 are good, relative to other WUOs in relation to this parameter of participation.

**Table 20. Total Rating on the Status of Deadbeats (Considering Element of Participation in the Decision).**

| Name of the WUO | Total Rating |
|---|---|
| WUO 1 | 9 |
| WUO 2 | 2 |
| WUO 3 | 11 |
| WUO 4 | 6 |
| WUO 5 | 6 |

This table shows rating covering the element of participation in discussions. The table indicates that WUO 1 and 3 performed relatively better the other WUOs. WUO 2 remains at the bottom, because the majority of this WUO's office bearers is completely inactive.

# CHAPTER 8

# ENACTMENT AND ADHERENCE TO WUO RULES AND REGULATIONS

## 8.1 General

The WUOs of the Hakra 4-R Distributary have been functioning without legal cover since its formation. The absence of a legal framework remained a discouraging factor in enacting the WUOs' by-laws, which, until the conclusion of this report, had still not been enacted. However, WUO leaders had been provided with model by-laws to facilitate the process. The WUOs have formulated some informal by-laws for the development of organizational activities. These are called informal because they are unwritten, and enacted in the absence of legal cover. These rules were framed in the WUO meetings. The number of rules enacted, and adherence to rules by the six WUOs are evaluated here.

## 8.2 Enactment and Adherence to WUO Rules and Regulations

Adherence to rules by the members is an important performance indicator.

Definition:

There is a three-fold approach in defining, and when assessing, this indicator, i.e.:

- The number of elements of the rules enacted;
- Enacting rules within the prescribed time period; and
- The degree of adherence to rules.

## 8.3 Rating Criteria

The number of elements of the rules enacted; for example, from 1 to 6. The degree of adherence to rules will be measured using the following criteria:

- not followed at all;
- followed some of the time;
- followed strictly.

## 8.4 Scoring

The WUO performance rating is conducted by assigning a relative weight to each element. The rating will be:

- 1 if an element of the code of conduct was "not followed at all";
- 2 if a particular element was "followed some of the time"; and
- 3 if it was "followed strictly".

These ratings are used to quantify the six WUOs' adherence to the rules.

## 8.5 Adherence to Rules and Regulations by the WUO of Sub-system 1

The WUO of Sub-system 1 enacted six rules and regulations. The first two, imposing penalties on absentees in meetings and sharing of responsibilities by the WUA presidents, were "not followed at all". The rule about the General Secretary presiding over the meeting was "strictly followed". The remaining three rules were "followed some of the time".

Table 21 presents the status of the number of rules enacted, and adherence to rules and regulations by the WUO of Sub-system 1.

**Table 21. Number of Rules Enacted and its Adherence by the WUO of Sub-system 1.**

| S. No. | Number of Elements | Not Followed | Followed some of the time | Strictly followed | Rating |
|---|---|---|---|---|---|
| 1 | A fine of Rs. 100 for absentees | ✓ | | | 1 |
| 2 | General Secretary will conduct the meeting | | | ✓ | 3 |
| 3 | Letter headed stationery will be used to interact with all agencies | | ✓ | x | 2 |
| 4 | WUO meetings will be held on a monthly basis | | ✓ | | 2 |
| 5 | Watercourse presidents will also assist the Information Secretary with organizational development activities | ✓ | | | 1 |
| 6 | Participants of the meeting should raise questions with the chair's permission | x | ✓ | x | 2 |
| | | | | **Total Rating** | 11 |

## 8.6 Adherence to Rules and Regulations by the WUO of Sub-system 2

The WUO of Sub-system 2 enacted five rules and regulations. Of the five, one, pertaining to organizing meetings on a monthly basis, was "not followed at all". A rule about imposing penalties was "followed some of the time". Rules related to the use of letter headed paper, raising questions with permission from the chair, and the General Secretary presiding over the meeting, were "strictly followed".

Table 22 presents the status of the number of rules enacted, and adherence to rules and regulations by the WUO of Sub-system 2.

**Table 22. Number of Rules Enacted and its Adherence by the WUO of Sub-system 2.**

| S. No. | Elements of Code of Conduct | Not followed | Followed some of the time | Strictly followed | Ratings |
|---|---|---|---|---|---|
| 1 | Letter headed stationery will be used to interact with all agencies. | x | x | ✓ | 3 |
| 2 | A fine of Rs. 50 for latecomers and Rs. 100 for absentees | x | ✓ | * | 2 |
| 3 | Participants of the meeting should raise questions with the chair's permission | x | x | ✓ | 3 |
| 4 | The General Secretary will present the proceedings of the previous meeting, as well as the performance of the WUO & WUF before the meeting commences | x | x | ✓ | 3 |
| 5 | WUO meeting will be held on monthly a basis | ✓ | x | x | 1 |
| | | | | **Total rating** | 12 |

## 8.7. Adherence to the Rules and Regulations by the WUO of Sub-system 3

The WUO of Sub-system 3 enacted four rules and regulations. All four rules were followed to varying degrees. Of the four, only one rule, regarding the use of letter headed paper, was "followed strictly".

Organizing meetings on a monthly basis, raising questions with the permission of the chair, and the General Secretary presiding over meetings, were "followed for some of the time".

Table 22 presents the status of the number of rules enacted, and adherence to rules and regulations by the WUO of Sub-system 3.

## 8.8. Adherence to the Rules and Regulations by the WUO of Sub-system 4

The WUO of Sub-system 4 enacted seven rules and regulations. Of the seven elements, four, regarding the imposition of penalties on absentees, the use of letter headed paper, checking water theft, and having the General Secretary preside over meetings, were "followed for some of the time". The remaining three rules, pertaining to leave applications, organizing monthly meetings, and maintaining the decorum of the meeting, were "followed strictly". There was not even a single rule that was "not followed". The total performance rating of Sub-system 4's WUO, for the adherence to rules, is 17.

Tables 23 and 24 present the number of rules enacted, and adherence to rules and regulations by the WUO of Sub-system 3 and Sub-system 4 respectively.

**Table 23. Number of Rules Enacted and its Adherence by the WUO of Sub-system 3.**

| S. No. | Number of Elements | Not followed | Followed some of the time | Strictly followed | Rating |
|---|---|---|---|---|---|
| 1 | Only the office-bearer is authorized to use letter headed stationery | x | x | ✓ | 3 |
| 2 | Participants of the meeting should raise questions with the chair's permission | x | ✓ | x | 2 |
| 3 | General Secretary will conduct the meeting | x | ✓ | x | 2 |
| 4 | WUO meeting will be held on a monthly basis | x | ✓ | x | 2 |
| | | | | **Total Rating** | 9 |

**Table 24. Number of Rules Enacted and its Adherence by the WUO of Sub-system 4.**

| S. No. | Number of Elements | Not followed | Followed for some of the time | Strictly followed | Rating |
|---|---|---|---|---|---|
| 1 | WUO meetings will be held on monthly a basis | x | x | ✓ | 3 |
| 2 | Individuals should wait for a turn to speak | x | x | ✓ | 3 |
| 3 | Latecomers and absentees will be fined, but will pay voluntary amounts | x | ✓ | x | 2 |
| 4 | President & General Secretary will be authorized to use letter headed stationery to interact with agencies | x | ✓ | x | 2 |
| 5 | Absentees will provide applications for leave | x | x | ✓ | 3 |
| 6 | W/C reps will be accountable for water theft in their respective watercourses. | x | ✓ | x | 2 |
| 7 | General Secretary will present the proceedings of the previous meeting before the meeting commences. | x | ✓ | x | 2 |
| | | | | **Total Rating** | 17 |

## 8.9. Adherence to Rules and Regulations by the WUO of Sub-system 5

The WUO of Sub-system 5 also framed seven rules and regulations. Of seven rules, three, regarding organizing periodic meetings, the role of the General Secretary and arriving late for meetings, were "followed some of the time". The remaining four rules, pertaining to maintaining the decorum of meetings, using letter headed paper, and protecting watercourse tampering, were "followed strictly". The total performance rating of the WUO for adherence to rules is 18.

Table 25 presents the number of rules enacted, and adherence to rules and regulations, by the WUO of Sub-system 5.

**Table 25. Number of Rules Enacted and its Adherence by the WUO of Sub-system 5.**

| S. No. | Number of Elements | Not followed | Followed for some of the time | Strictly followed | Rating |
|---|---|---|---|---|---|
| 1 | WUO meetings will be conducted once every two months | x | Yes | * | 2 |
| 2 | Individuals will speak at an appropriate turn, and also with the chair's permission | x | x | ✓ | 3 |
| 3 | W/C president will always be accountable to WUO for W/C tampering | x | x | ✓ | 3 |
| 4 | General Secretary will present the proceedings of the previous meeting before each meeting commences | x | Yes | x | 2 |
| 5 | Office-bearers will be authorized to use letter headed stationery | x | x | ✓ | 3 |
| 6 | Each WUO meeting will start with a recitation from the Holy Quran and end with prayer | x | x | ✓ | 3 |
| 7 | Fifteen minutes' leniency will be allowed for meeting attendance | x | Yes | ✓ | 2 |
| | | | | **Total Rating** | 18 |

## 8.10. A Comparative View of the Enactment and Adherence to Rules Among the 5 WUOs

Table 26 presents the rating of the WUOs' performance with regard to adherence to rules and regulations. The number of elements, and the degrees of adherence to these rules varies among the WUOs. Sub-system 4 performed best by obtaining a performance rating of 35. This WUO was the second best performer, scoring 20. The WUO of Sub-system 5 netted an overall rating of 18 and ranks third. The WUO of Sub-system 3 scored a total of 12, the lowest among all the WUOs. The remaining two WUOs performed moderately well with regard to the enactment, and adherence of rules and regulations.

The analysis presented in the preceding sections betokens that the organizational performance of WUOs is not conspicuous. Performance is at the optimum level, because the total rules enacted, more than 50 percent, were, "followed some of the time". Thus, their performance can be rated as high.

**Table 26. Performance Rating for Adherence to Rules of the Six WUOs.**

| Name of WUO | Number of elements for code of conduct | Status of adherence to rules corresponding to number of elements for code of conduct | | | Rating |
|---|---|---|---|---|---|
| | | Not followed | Followed for some of the time | Strictly followed | |
| WUO 1 | 6 | 2 | 3 | 1 | 14 |
| WUO 2 | 5 | 1 | 1 | 3 | 15 |
| WUO 3 | 4 | 0 | 3 | 1 | 12 |
| WUO 4 | 7 | 0 | 4 | 3 | 20 |
| WUO 5 | 7 | 0 | 3 | 4 | 18 |
| WUO 4-R | 12 | 0 | 3 | 9 | 35 |
| Total | 42 | 3 | 14 | 12 | |

## 8.11 Areas of Codes of Conduct

Based on the review of the foregoing sections, the rules enacted by the WUOs can be classified into two broader areas, i.e.:

1. Organizational Development Activities; and
2. Irrigation Management.

Table 27. presents these areas of codes of conduct corresponding to their numbers.

**Table 27. Areas of Codes of Conduct among the Six WUOs.**

| WUO | Area of Code of Conduct Corresponding to Member | | | Comments |
|---|---|---|---|---|
| | Irri. Management | Organizational Dev | Total Elements | |
| WUO 1 | 0 | 6 | 6 | |
| WUO 2 | 0 | 5 | 5 | |
| WUO 3 | 0 | 4 | 4 | |
| WUO 4 | 1 | 6 | 7 | |
| WUO 5 | 2 | 5 | 7 | |
| WUO 4-R | 0 | 12 | 12 | |

Interesting to note is that all the emphasis of all the WUOs, for framing rules, was related to organizational development activities. Only two WUOs developed some rules relating to irrigation management. The apparent reason for this trend is that the responsibilities of systems management were not transferred to WUOs until the time this report had been written. Consequently, the WUOs focused the enactment of laws on organizational aspects. The enactment of rules relating to irrigation management by the tail sub-systems indicates the scale of problems in the final sections of the distributary system. Table 26 also indicates that the apex body of the Hakra 4-R Distributary (WUO-4-R) performed the best by framing 12 codes of conduct. Less attention paid to the enactment of rules related to irrigation management activities by the WUOs' demand that responsibilities be transferred immediately.

# CHAPTER 9

# DECISION-MAKING

## 9.1 Decision-making

Decision-making by the WUOs is an important indicator to assess comparative performance. There can be three parameters in the evaluation of this indicator, i.e.:

- The number of decisions taken by the WUOs;
- The degree of consensus on the decisions among the members of the WUOs; whether the decisions taken by the WUOs were with consensus, or with dominant majority; and
- The subsequent action taken on the decisions.

All of three elements related to the decisions are evaluated here. The decisions made by the WUOs are available in the process documentation. The social organizers from the respective WUOs sifted through this information. In the following sections, the follow-up on decisions by each will be evaluated. Two parameters; the number of decisions made, and the subsequent action taken on decisions are easily quantifiable. The third parameter, regarding the degree of consensus on the decisions taken among members is hard to quantify. Had there been enough detail in the documentation covering who disagreed, and why, this would have been easy to quantify.

## 9.2 Rating Criteria

1) The number of decisions taken, for example, from. 5-10).
2) Degree of consensus
   - with dominant majority, 1; and
   - with consensus, 2.
3) Subsequent action taken on decisions, i.e.:

   - Not followed at all;
   - Followed some of the time; and
   - Followed strictly.

## 9.3 Scoring

- The number of decisions taken, for example, from 5 to 10.
- The degree of agreement to reach a decision. Decisions made with a dominant majority will take the value of 1. If the decision is made with consensus, the rating will be 2.
- The rating for the follow-up of decisions by WUOs is done by assigning a relative weight to each decision.

The rating will be 1 if a decision was "not followed at all", 2 if a particular decision was "followed for some of the time", and 3 if it was "followed strictly". These ratings are used to quantify the subsequent action taken for the decisions made by the WUOs.

## 9.4. The Number of Decisions and Subsequent Action, taken on Decisions made by the WUO of Sub-system 1

The WUO of Sub-system 1 made six decisions related to organizational development and capacity-building. All six decisions were "followed for some of the time". There was not even a single decision that was "not followed". None of the decisions, however, was "followed strictly". The rating is presented in the following table.

**Table 28. The Status of the Number of Decisions and Subsequent Action taken on Decisions made by the WUO of Sub-system 1.**

| S. No. | Decision | Not followed | Followed for some of the time | Followed | Rating |
|---|---|---|---|---|---|
| 1 | All WUO members will disseminate the main achievement of the WUO and WUF for awareness at the grassroots level. | x | ✓ | ✓ | 2 |
| 2 | The WUO will organize village lectures on improved agriculture practices. | x | ✓ | x | 2 |
| 3 | In the absence of the WUO president, any other office bearer can preside over the WUO meetings. | x | ✓ | x | 2 |
| 4 | All the members of the WUO executive body will participate in the maintenance campaign. | x | ✓ | x | 2 |
| 5 | All the WUO office bearers will visit the bed-and-furrow fields for wheat crop in SS 5. | x | ✓ | x | 2 |
| 6 | All the WUA presidents will get flow measurement training at their respective watercourses. | x | ✓ | x | 2 |
| | | | | **Total** | **12** |

## 9.5 The Number of Decisions and Subsequent Action, taken on Decisions made by the WUO of Sub-system 2

The WUO of Sub-system 2 made four decisions related to organizational development, resource mobilization and capacity-building. Two decisions, related to organizational aspects, were "not followed at all", and another, related to resource mobilization, was "followed for some of the time". One decision that was "followed strictly" pertained to the participation of the WUA presidents in formalization meetings. The rating is presented in the Table 29.

**Table 29. The Status of the Number of Decisions and Subsequent Action taken on Decisions made by the WUO of Sub-system 2.**

| S. No. | Decision | Not followed | Followed for some of the time | Followed strictly | Rating |
|---|---|---|---|---|---|
| 1 | All the WUA presidents will organize flow measurement training at their respective watercourses. | ✓ | x | x | 1 |
| 2 | Funds should be raised to meet routine expenditures. | x | ✓ | x | 2 |
| 3 | All the members will request the WUO president to attend periodic meetings. The president has been continuously absent from the WUO meetings. | ✓ | x | x | 1 |
| 4 | The WUA presidents will ensure their own participation, as well as higher participation of the ordinary farmers in the formalization meetings. | ✓ | x | ✓ | 3 |
| | | | | **Total Rating** | 7 |

## 9.6. The Number of Decisions, and Subsequent Action taken on Decisions made by the WUO of Sub-system 3

The WUO of Sub-system 3 made ten decisions related to organizational development, resource mobilization and capacity-building. There is not even a single decision that was "not followed at all". Seven decisions related to organizational development, resource mobilization and capacity building were "followed for some of the time". Three decisions concerned with organizing village lectures, participation in formalization meetings and establishment, were "followed strictly". The rating is presented in the following Table 30.

## 9.7 The Number of Decisions, and Subsequent Action taken on Decisions made by the WUO of Sub-system 4

The WUO of Sub-system 4 made 23 decisions related to organizational development, resource mobilization and capacity building, improvement works and irrigation management. There were two decisions that were "not followed at all". Only one decision related to organizational development was "followed for some of the time". The remaining 20 decisions, related to organizational development, resource mobilization and capacity building, improvement works and irrigation management, were "followed strictly". The rating is presented in the Table 31.



Next >>

**Table 30. The Status of the Number of Decisions and Subsequent Action taken on Decisions made by the WUO of Sub-system 3.**

| S. No. | Decision | Not followed | Followed for some of the time | Followed strictly | Rating |
|---|---|---|---|---|---|
| 1 | All the WUA presidents will organize flow measurement training at their respective watercourses. | x | ✓ | x | 2 |
| 2 | The WUO will organize village lectures on improved agriculture practices. | x | x | ✓ | 3 |
| 3 | The office bearers will participate in the formalization meetings. | x | x | ✓ | 3 |
| 4 | All the office bearers will study the model by-laws to prepare themselves for discussion with legal advisors. | x | ✓ | x | 2 |
| 5 | In the absence of WUO presidents, any other office bearer can preside over the WUO meetings. | x | ✓ | x | 2 |
| 6 | Funds will be raised to meet routine expenditures. | x | ✓ | x | 2 |
| 7 | All the WUAs will open bank accounts to complete legal formalities. | x | ✓ | x | 2 |
| 8 | The WUO will locate a building for its office. | x | x | ✓ | 3 |
| 9 | The WUO office bearers will personally contact the common farmers for maintenance activities. | x | ✓ | x | 2 |
| 10 | All the members of the WUO will be responsible for arranging at least one tractor for maintenance activities. | x | ✓ | x | 2 |
| | | | | **Total Rating** | **23** |

## 9.8 The Number of Decisions, and Subsequent Action taken on Decisions made by the WUO of Sub-system 5

Since its formation, the WUO of Sub-system 5 made 14 decisions related to organizational development, resource mobilization, capacity building and irrigation management. Similar to Sub-system 3, there is not even a single decision that was "not followed at all". Of the 14, five decisions, related to organizational development, resource mobilization and capacity building were "followed for some of the time". The remaining nine decisions related to organizational aspects, irrigation management and awareness building, were "followed strictly". In this way the WUO of Sub-system 5 acquired a total rating of 37. The rating is presented in Table 32.

**Table 31. The Status of the Number of Decisions and Subsequent Action taken on Decisions made by the WUO of Sub-system 4.**

| S. No | Decision | Not followed | Followed for some of the time | Followed strictly | Rating |
|---|---|---|---|---|---|
| 1 | WUO office will be established. | x | x | ✓ | 3 |
| 2 | The Information Secretary will be the officer in charge. | x | x | ✓ | 3 |
| 3 | Only WUO office bearers will participate in the study tour to Khan. | x | x | ✓ | 3 |
| 4 | A warning will be given to Abdul Malik, a WUO member absent from three consecutive meetings. | x | x | ✓ | 3 |
| 5 | A signboard, indicating the office location, will be installed on the main road. | x | x | ✓ | 3 |
| 6 | If the need arises, emergency WUO meetings will be held. | x | x | ✓ | 3 |
| 7 | Time and venue of the meeting will be conveyed to the WUO members in writing. | x | x | ✓ | 3 |
| 8 | The Information Secretary will submit monthly progress reports to the WUF and IIMI-Pakistan. | x | x | ✓ | 3 |
| 9 | Rs 200 will be procured from each member for the WUF common fund. | ✓ | x | x | 1 |
| 10 | The WUO will hold meetings with the lining contractors (CBC) for the purpose of rectifying problems. | x | x | ✓ | 3 |
| 11 | The Information Secretary will also perform the duties of the Joint Secretary. | x | x | ✓ | 3 |
| 12 | A sub-committee will monitor the lining work undertaken at the 1R-A Minor. | x | x | ✓ | 3 |
| 13 | The office bearers will conduct door-to-door visits for the maintenance campaign. | x | x | ✓ | 3 |
| 14 | A sub-committee will be set up to frame the by-laws. | x | x | ✓ | 3 |
| 15 | A sub-committee will manage the furrow-shaper to implement bed-and-furrow experiments. | x | x | ✓ | 3 |
| 16 | For the Nepal Study Tour, the WUF Treasurer will replace the sub-system WUO's Information Secretary (age factor). | x | x | ✓ | 3 |
| 17 | The WUO joint account will be opened in the name of the Information Secretary and Treasurer. | ✓ | x | x | 1 |
| 18 | The construction of a culvert will be requested from the PID, Lining. | x | x | ✓ | 3 |
| 19 | Patrolling by farmers will be arranged along 1R-A Minor to check water | x | x | ✓ | 3 |

| S. No | Decision | Not followed | Followed for some of the time | Followed strictly | Rating |
|---|---|---|---|---|---|
| | theft. | | | | |
| 20 | Before the end of every periodic meeting, the date, time and venue of the next meeting will be decided. | x | x | ✓ | 3 |
| 21 | Every meeting will commence with a recitation from the Holy Quran. | x | x | ✓ | 3 |
| 22 | Two-member committee will look after the office, including locking and unlocking. | x | x | ✓ | 3 |
| 23 | The WUF members belonging to this WUO will convey the decisions of the WUF to grassroots levels. | x | ✓ | x | 2 |
| | | | | **Total Rating** | **64** |

**Table 32. The Status of the Number of Decisions and Subsequent Action taken on Decisions made by the WUO of Sub-system 5.**

| S. No. | Decision | Not followed | Followed for some of the time | Followed strictly | Rating |
|---|---|---|---|---|---|
| 1 | The WUO executive body will arrange at least one general body meeting. | x | ✓ | x | 2 |
| 2 | All the office bearers will study the model by-laws to prepare themselves for discussion with legal advisors. | x | x | ✓ | 3 |
| 3 | The WUO will organize village lectures on improved agriculture practices. | x | ✓ | x | 2 |
| 4 | All the WUO members will disseminate the program for concept clearance at the grassroots level, especially along respective watercourses. | x | x | ✓ | 3 |
| 5 | The WUO office bearers will participate in the formalization of the WUA. | x | x | ✓ | 3 |
| 6 | The WUO will meet the AC against the imposition of agriculture tax. | x | x | ✓ | 3 |
| 7 | Funds will be raised to meet routine expenditures. | x | ✓ | x | 2 |
| 8 | WUO office will be established. | x | ✓ | x | 2 |
| 9 | The office bearers will make personal contact with common farmers for maintenance activities. | x | x | ✓ | 3 |
| 10 | All the WUO members will be responsible to arrange at least one tractor, and the maximum number of persons for maintenance activities. | x | x | ✓ | 3 |

| | | | | | |
|---|---|---|---|---|---|
| 11 | All the WUO members will prepare banners identifying their villages for the maintenance procession. | x | x | ✓ | 3 |
| 12 | The WUO members will be responsible for monitoring the lining work and report to the office bearers, in case of mishaps. | x | x | ✓ | 3 |
| 13 | After Khanpur visit, the office bearers will disseminate the bed-and-furrow technique in the area. | x | ✓ | ✓ | 2 |
| 14 | Nobody will demand a pick-and-drop service for any of the meetings | x | x | ✓ | 3 |
| | | | | **Total Rating** | **37** |

## 9.9 The Number of Decisions, and Subsequent Action taken on Decisions made by the WUO of the Hakra 4-R Distributary.

The WUO of the Hakra 4-R Distributary made 36 decisions related to organizational development, resource mobilization, capacity building, irrigation management improvement works, and agriculture inputs. Two decisions were "not followed at all". Eight decisions related to organizational development, etc., were "followed for some of the time". The remaining 26 decisions, related to organizational development, resource mobilization and capacity building, improvement works and irrigation management, were "followed strictly". The rating is presented in the Table 33.

**Table 33. The Status of the Number of Decisions and Subsequent Action taken on Decisions made by the WUO 4-R Distributary.**

| S. No | Decision | Not followed | Followed for some of the time | Followed strictly | Rating |
|---|---|---|---|---|---|
| 1 | The WUF will arrange monthly meetings. | x | x | ✓ | 3 |
| 2 | The WUF will establish its office as early as possible. | x | ✓ | x | 2 |
| 3 | The minister will be invited to chair the oath ceremony of the WUF. | - x | x | ✓ | 3 |
| 4 | Every WUF member will study the model by-laws for discussion with legal advisors. | x | ✓ | x | 2 |
| 5 | The WUF will organize a study tour to Khanpur. | x | x | ✓ | 3 |
| 6 | The WUF will supply certified seed to the farmers. | x | x | ✓ | 3 |
| 7 | The WUF will raise common funds to meet overhead expenditures. | x | x | ✓ | 3 |
| 8 | The sub-system WUOs will deposit Rs. 2000 in the WUF common fund. | x | ✓ | x | 2 |
| 9 | A Joint Management Agreement document will be prepared by the WUF in consultation with IIMI staff. | x | x | ✓ | 3 |
| 10 | WUF members will participate in the | x | ✓ | x | 2 |

| S. No | Decision | Not followed | Followed for some of the time | Followed strictly | Rating |
|---|---|---|---|---|---|
| | WUA formalization meetings at watercourse levels. | | | | |
| 11 | Flow Measurement Training Courses will be organized jointly by the WUF and IIMI-Pakistan. | x | x | ✓ | 3 |
| 12 | A sub-committee will look after the affairs related to lining works. | x | x | Yes | 3 |
| 13 | The WUF maintenance committee will identify reaches to be repaired before the start of the maintenance campaign. | x | x | ✓ | 3 |
| 14 | The Evaluation Committee will be established to assess the maintenance work. | x | x | ✓ | 3 |
| 15 | The WUF members will make door-to-door contact for the maintenance campaign. | x | ✓ | x | 2 |
| 16 | Every WUF member will provide at least one tractor for the maintenance campaign for the 1997 closure. | x | x | ✓ | 3 |
| 17 | A sub-committee will look after the WUF office. | x | x | ✓ | 3 |
| 18 | The WUF will organize financial, organizational and resource mobilization training. | x | x | ✓ | 3 |
| 19 | The WUF will open its Joint Account. | x | x | ✓ | 3 |
| 20 | The WUF president will lead the maintenance campaign procession. | x | x | ✓ | 3 |
| 21 | All the decisions of the WUF will be conveyed to the sub-system level WUOs. | x | ✓ | x | 2 |
| 22 | The WUF executive body will participate in the study tour to Nepal. | x | x | ✓ | 3 |
| 23 | In the local body elections, nobody will use the WUF platform for politics. | x | x | ✓ | 3 |
| 24 | All the officers from government departments, District Bahawalnagar, will be invited to the oath ceremony. | x | x | ✓ | 3 |
| 25 | A sub-committee will be formed to enact the by-laws of the WUF. | x | x | ✓ | 3 |
| 26 | The first meeting of the By-laws Sub-committee will be held in June 1998. | ✓ | x | x | 1 |
| 27 | The WUF will manage requests for the furrow shaper. | x | x | ✓ | 3 |
| 28 | Every member will provide the information on the area to be irrigated by the newly installed outlets (impact of lining) to the WUF to negotiate with the PID lining staff. | x | x | ✓ | 3 |
| 29 | The WUF's main leaders will contact common farmers to listen to their grievances. | x | ✓ | x | 2 |
| 30 | The WUF will have a meeting with the Secretary of the PID for the transfer of | x | x | ✓ | 3 |

| S. No | Decision | Not followed | Followed for some of the time | Followed strictly | Rating |
|---|---|---|---|---|---|
| | responsibilities. | | | | |
| 31 | The WUF will measure the discharge of the distributary jointly with help from IIMI and the PID. | x | x | ✓ | 3 |
| 32 | The regulation for *karies* (wooden logs) will be introduced by the WUF at the drop structures. | x | x | ✓ | 3 |
| 33 | The WUF will discourage the no confidence move of watercourse representatives at initial stages. | x | ✓ | x | 2 |
| 34 | The WUF will accept the responsibilities under Section 4-A of the Canal and Drainage Act, 1973. | NA | NA | NA | |
| 35 | The WUF will hold a press conference to introduce itself at the national level. | ✓ | x | x | 1 |
| 36 | The WUF will inspect the lining work jointly with IIMI and the PID Lining staff. | x | x | ✓ | 3 |
| | **Total Score** | | | | **96** |

## 9.10 A Comparative View of Decision-making of the 6 WUOs

The comparative view of the performance of the 6 WUOs, regarding the number of decisions and subsequent action taken on those decisions, shows that the WUO of the Hakra 4-R Distributary took the maximum number of decisions. Consequently, it also performed better in subsequent action taken by getting the highest score of 96. The WUO of Sub-system 4 made the maximum number of decisions after the WUF, and its follow-up decisions were more encouraging than those of the WUF, mainly because the number of instances when decisions were "followed for some of the time" were more in the case of the WUF. The variety of decisions taken by the WUOs of Sub-system 4 was also more than the other WUOs. Sub-system 5 bagged the middle slot, with Sub-systems 2 and 3 at the bottom with respect to performance related to both, the number of decisions taken as well as subsequent action taken for follow-up. The summary of the rating of the 6 WUOs, on the number of decisions taken and subsequent action are given in Table 34.

**Table 34. Performance Rating of Six WUOs on the Number of Decisions and Subsequent Action Taken.**

| WUO | Number of Decisions | Follow-up of Decisions | | | |
|---|---|---|---|---|---|
| | | Not followed | Followed for some of the time | Followed strictly | Rating |
| WUO 1 | 7 | x | 7 | x | 7 |
| WUO 2 | 4 | 2 | 1 | 1 | 4 |
| WUO 3 | 11 | x | 7 | 4 | 11 |
| WUO 4 | 23 | 2 | 1 | 20 | 64 |
| WUO 5 | 14 | x | 5 | 9 | 14 |
| WUO 4 | 36 | 2 | 7 | 27 | 96 |
| T. Rating | 36 | 2 | 20 | 14 | 36 |

## 9.11 Areas of Decision-making

Based on critical analysis of the decisions taken by all 6 WUOs, these can be broadly classified into six main areas, which include organizational development activities, resource mobilization, improvement works, agriculture inputs and capacity building. Nearly 50 percent of the decisions taken pertained to organizational development activities. Resource mobilization follows next with respect to the importance of decisions taken. Capacity building ranked third. Irrigation management and improvement works ranks at the lowest order. This analysis clearly shows that the WUOs focused their efforts mainly on organizational affairs, and less on irrigation management, which seems quite logical because the responsibilities for irrigation management were not transferred until the time of the conclusion of this research. See Table 35.

**Table 35. Areas of Decision-making Among the 6 WUOs.**

| WUO | Number of Decisions | Areas of decision-making corresponding to number | | | | | |
|---|---|---|---|---|---|---|---|
| | | Organi-zational Devlop. | Resource Mobiliz-ation | Improv-ement works | Irrigation Manage-ment | Agri. Inputs | Capacity building |
| WUO 1 | 6 | 2 | 3 | 0 | 0 | 0 | 3 |
| WUO 2 | 4 | 2 | 1 | 0 | 0 | 0 | 1 |
| WUO 3 | 10 | 4 | 4 | 0 | 0 | 0 | 2 |
| WUO 4 | 23 | 14 | 3 | 3 | 1 | 0 | 2 |
| WUO 5 | 14 | 5 | 6 | 1 | 0 | 1 | 2 |
| WUF 4-R | 36 | 18 | 9 | 1 | 5 | 1 | 2 |
| **Total Decisions** | 93 | 45 | 26 | 5 | 6 | 2 | 12 |

# CHAPTER 10

# PUNITIVE MEASURES TAKEN BY THE WUOS

## 10.1 Punitive Measures

This is also an important indicator for evaluating WUO performance. Some even believe that the WUOs' capability to impose sanctions on offenders is its actual strength (Bandaragoda et. al, 1997). We defined this indicator as:

> *The WUOs' capability to implement rules and regulations, and to impose sanctions on offenders.*

These will be measured based on the following three criteria:

## 10.2 Rating criteria

- The number of elements formulated for punitive rules;
- The number of instances members were penalized; and
- The number of members who complied with punitive actions.

## 10.3 Scoring

Here, relative weight is assigned to the numbers.

- The number of elements for punitive rules, for example, from 1-5.
- The number of instances members were penalized, i.e.,
  - if penalized, 1; and
  - if not penalized, 0.
- The number of members who complied with punitive actions, i.e., the ratio of members who complied with, and those who did not, will measure the extent of confidence and compliance towards the WUOs.

Overall, the performance of the WUOs in the enactment of punitive rules is not so impressive with regard to both, the enactment of the number of elements for punitive rules, and the imposition of sanctions on offenders. The WUOs enacted only a few organizational norms. Among the few rules enacted by WUOs, there were variations and differences in the nature and number of enacting the rules among the six WUOs, and consequently, when applying punitive actions. The rules legislated by WUOs, and whatever punitive measures were imposed by the six WUOs, are presented in the following Table:

## Table 36. Status of Punitive Measures.

| S. No. | Punitive Rule | Punitive Action |
|---|---|---|
| | **Punitive Measures by the WUO of Sub-system 1** | |
| 1 | Late comers will be punished. | Late comers were admonished in the presence of all the participants of the meeting. |
| 2 | Participants should speak with the permission of the chair. | When many people start speaking, the chair admonished them. |
| | **Punitive Measures by the WUO of Sub-system 2** | |
| 3 | Fines will be imposed on those absent from periodic meetings. | Rs. 200 were imposed on the WUO vice president, which he paid. |
| 4 | Late comers will be punished. | Late comers were admonished in the presence of all the participants of the meeting. |
| | **Punitive Measures by the WUO of Sub-system 3** | |
| 5 | Fines will be imposed on those absent from periodic meetings. | No instances of sanctions imposed. |
| 6 | Late comers will be punished. | They were admonished. |
| | **Punitive Measures by the WUO of Sub-system 4** | |
| 7 | Fines (of voluntary amounts) will be imposed on those absent from periodic meetings. | There was one instance of imposing a penalty. |
| 8 | If a member remains continuously absent from three meetings, a two-member committee will decide his penalty. | No penalizing instances. |
| | **Punitive Measures by the WUO of Sub-system 5** | |
| 9 | No reclamation pipe will be installed along Sub-system 5 during the 1997 *Kharif*, to overcome the short water supplies, due to the damage of hydraulic structure at Sulemanki Head Works. | Three influentials installed reclamation pipes, but were removed by the leaders of WUO SS 5, accompanied by farmers. |
| 10 | WUA presidents will be responsible for tampering at their respective outlets. The rule was formulated on the instigation of tail-enders. | Investigation of four tampered outlets along the sub-system, conducted by WUA presidents. Three undertook that the water users were not to blame. |
| 11 | Late comers will be punished. | Late comers were admonished; some WUO leaders apologized on behalf of the participants. |
| 12 | Participants should speak with the permission of the chair. | When many people start speaking, the chair admonished them. |
| 13 | Members delaying payments of common funds will be accounted for. | Members who failed to pay in time were accounted for in the periodic meetings. Resultantly, the majority of the members paid. |
| | **Punitive Measures by the WUF, Hakra 4-R Distributary** | |
| 14 | Failing to perform major organizational duties, office bearers may be replaced. | The treasurer was admonished for not maintaining the ledger. He apologized for his idleness and indolence. |
| 15 | WUO presidents delaying payments of common funds will be accounted for. | Presidents who failed to pay in time were accounted for. |
| 16 | Late comers will be punished. | Late comers were admonished; some WUO leaders apologized on behalf of the participants. |
| 17 | Participants should speak with the permission of the chair. | When many people start speaking, they were admonished by the chair |
| 18 | Failing to perform their tasks, sub-committee members for the oath ceremony and establishing the office will be accounted for. | The progress of the committees was reviewed strictly in the periodic meeting. |

### 10.4 Common Punitive Rules

The punitive measures mentioned in the preceding tables that relate to maintaining the organizational discipline. The most common among these are related to the observance of time and maintaining norms of discussion in meetings. This displays that a high degree of organizational discipline prevails here.

The punitive measures were usually taken in the WUOs' periodic meetings. The common modes of punitive measures were "admonishing" and the use of "social pressure". Monitory sanctions to maintain the discipline, except for one or two instances, were not imposed. The following table gives the comparative performance of WUOs on both, the number of enacting rules for WUOs and the application of punitive actions. Regarding the third parameter, compliance of punitive measures by the members, all the members who were admonished accepted these punitive measures. Had there been evidence of monetary sanctions, the parameter would have been better quantified. Thus, this parameter can be quantified at this stage. See Table 37.

**Table 37. Comparative Performance of the WUOs When Applying Sanctions.**

| Name of the WUO | Number of punitive rules enacted | Instances of penalizing | Total points |
|---|---|---|---|
| WUO 1 | 2 | 2 | 4 |
| WUO 2 | 2 | 1 | 3 |
| WUO 3 | 2 | 0 | 2 |
| WUO 4 | 2 | 1 | 3 |
| WUO 5 | 5 | 1 | 6 |
| WUO 4-R | 5 | 5 | 10 |
| **Total** | **18** | **2** | |

This comparative view indicates that the WUO of the Hakra 4-R Distributary and the WUO of Sub-system 5 have performed better than the others, and shows the organizational strength of these WUOs. The WUO of Sub-system 3 scored least, which shows that WUOs still need much motivation and assistance to develop their organizational strength. The WUOs of Sub-systems 2 and 3 scored medium ratings.

### 10.5 Areas of Punitive Measures

The analysis of the rules on punitive measures, listed in the preceding table, indicates that punitive norms enacted covers the following areas.

- Discipline;
- Organizational development;
- Irrigation management; and
- Fund raising.

The WUOs' performance to enact punitive rules was not conspicuous in terms of the types of rules and its implementation. Whatever the WUOs accomplished focused on the areas

of discipline and organizational development. Of the 18 rules enacted, 13 relate to discipline and organizational development. Few punitive measures were suggested in the areas of irrigation management and fund raising. The Table 38 gives the breakdown of the rules enacted corresponding to the number of elements of punitive measures.

**Table 38. Areas of Punitive Measures Among the Six WUOs.**

| Areas of Punitive Measures Corresponding to Number of Elements | | | | |
|---|---|---|---|---|
| **WUO** | **Discipline** | **Organizational Development** | **Irrigation Management** | **Fund Raising** |
| WUO 1 | 2 | 0 | 0 | 0 |
| WUO 2 | 2 | 0 | 0 | 0 |
| WUO 3 | 2 | 0 | 0 | 0 |
| WUO 4 | 2 | 0 | 0 | 0 |
| WUO 5 | 2 | 0 | 2 | 1 |
| WUO 4-R | 1 | 2 | 1 | 1 |
| Total | 11 | 2 | 3 | 2 |

# CHAPTER 11

# RESOURCE MOBILIZATION BY THE WUOS

## 11.1 Resource Mobilization

Researchers have defined resource mobilization as the ability to mobilize labor, cash and material (Rana, J. 1991). This research, however, defines it as the mobilization of manpower, tools (machinery and equipment), funds, knowledge and networking.

The ability of five WUOs, under all the five main elements of resource mobilization, is evaluated here. The resource mobilization of the Hakra 4-R Distributary's WUO (apex body) cannot be separately assessed because the five WUOs mobilized resource activities planned by the apex body.

The following are the types of resources:

**Mobilization of Funds**
**Mobilization of Manpower**
**Mobilization of Tools (machinery, equipment and transport)**
**Mobilization of Knowledge**
**Mobilization of Networking**

### 11.1.1 Mobilization of Funds

Definition:

By our definition, this category covers both;
a) general funds and b) contingency funds. The WUOs' performance to mobilize funds can be assessed by calculating the total amount of money contributed, per member, over a specific period of time. Three possible modes of contribution to generate funds exist, i.e.:

1. Contribution by one person;
2. Contribution by every member, but of voluntary amounts; and
3. Contribution by every member, but of equal and compulsory amounts.

For the purpose of performance assessment;

- If the amount contributed to the WUO's fund was by one person, the lowest rating will be awarded because elements of collective action are not present.

- If every member made a contribution to the common fund, but of voluntary amounts or as a donation, the performance of that particular WUO will be rated as medium, because in this instance, the element of obligation is lacking.

- If funds are collected from all the members, and amounts are all equal and compulsory, the performance rating will high, because a high sense of responsibility is evident.

*a) Mobilization of General Funds*

***11.1.1.1 Definition: To meet the overhead expenditures of the WUF***

Funds under this category were not procured under any specific head, but were intended to meet the overhead expenditures of the WUF. The WUF decided to collect a fixed amount from the five WUOs to meet expenditures under this head.

The common funds generated by the WUOs of the Hakra 4-R Distributary were also used for overhead expenditures related to capacity-building and technology transfer activities. The following table gives a detailed illustration of the amounts collected under general funds.

**Table 39. Status of Contributors for General Funds Collected by WUOs.**

| Contributed | | Percentage of contributors (% w.r.t. membership) | Mode of payment | Rating | Scoring |
|---|---|---|---|---|---|
| WUO 1 | 1500 | 65 | Compulsory | Medium | 2 |
| WUO 2 | 1300 | 60 | Compulsory | Medium | 2 |
| WUO 3 | 4900 | 70 | Compulsory | High | 3 |
| WUO 4 | 2900 | 66 | Compulsory | Medium | 2 |
| WUO 5 | 2500 | 75 | Compulsory | High | 3 |

A comparative look at Table 39 shows that there is no significant variation among those WUO members who contributed. Among the members, the percent of contributors ranges from 60 to 75.

The contribution amounts, however, vary greatly among the WUOs; from Rs 90/= to Rs 290/= per payee. The WUO members of Sub-systems 3 and 4 have paid almost three times more than other sub-system membership. The reason is that WUO members from Sub-system 3 are relatively better off financially, coupled with a strong organizational set-up. Although Sub-system 4's WUO members are relatively weaker financially, they are organizationally stronger than all the other WUOs. Therefore, they can generate funds more effectively than the other WUOs. On the other hand, Sub-system 2's WUO members are financially better off, have performed low in contributing funds. The reason is because this WUO is organizationally very weak. The president, who is an influential person in the region, is inactive in organizational activities. Consequently, the performance of this WUO is relatively poor in resource mobilization activities. See Table 40.

**Table 40. Status of Contribution of Payee Among the WUOs.**

| Name of the WUO | Contributed | Contribution per member (considering payee only) | Relative Rating | Scoring |
|---|---|---|---|---|
| WUO 1 | 1500 | 100 | Medium | 2 |
| WUO 2 | 1300 | 87 | Medium | 1 |
| WUO 3 | 4900 | 290 | High | 3 |
| WUO 4 | 2900 | 290 | Medium | 3 |
| WUO 5 | 2500 | 100 | High | 2 |

## Mobilization of Contingency Funds

### *11.1.1.2 Definition: Funds collected for the specific head of expenditures.*

The WUF decided to collect a fixed amount from the five WUOs for specific heads related to organizational development and capacity-building expenditures. Until the conclusion of this report, the WUOs had raised contingency funds in only two instances; once, for the study tour to a progressive farmer's farm in Khanpur, and the second time for funds to establish offices.

In Table 41, the percent of participants with respect to membership have been presented.

**Table 41. Percent of Participants in the Study Tour with Respect to Membership.**

| Name of the WUO | Total members | Participated in the tour | Percent of participants w.r.t membership | Mode of participation | Relative rating | Scoring |
|---|---|---|---|---|---|---|
| WUO 1 | 23 | 4 | 17 | Voluntary | Low | 1 |
| WUO 2 | 25 | 4 | 16 | Voluntary | Low | 1 |
| WUO 3 | 27 | 4 | 14 | Voluntary | Low | 1 |
| WUO 4 | 15 | 7 | 46 | Voluntary | High | 3 |
| WUO 5 | 33 | 10 | 30 | Voluntary | Medium | 2 |

The number of participants from each sub-system was not fixed. Rather, participation was voluntary. The total number of participants, however, was fixed. The WUO members of Sub-system 4 displayed more interest in participation of the study tour. Again, this shows the strength of their organization, with 46 percent of the membership participating. For the highest participation rating in the study tour, Sub-system 4 scored 3 points. The WUO of Sub-system 5 secured the middle slot, with 30 members participating, scoring 2 points. The percent of participants from other WUOs was relatively less, ranging from 14 to 30 percent.

The Table 42 shows WUO funds generated for the study tour to the farm of a progressive farmer.

**Table 42. Funds Generated by WUOs for the Study Tour.**

| Name of the WUO | Total members | Partici-pated in the tour | Contri-bution | Contribution per member (considering payee only) | Mode of payment | Rela-tive rating | Scoring |
|---|---|---|---|---|---|---|---|
| WUO 1 | 23 | 4 | 600 | 150 | Compulsory | High | 3 |
| WUO 2 | 25 | 4 | 600 | 150 | Compulsory | High | 3 |
| WUO 3 | 27 | 4 | 600 | 150 | Compulsory | High | 3 |
| WUO 4 | 15 | 7 | 1050 | 150 | Compulsory | High | 3 |
| WUO 5 | 33 | 10 | 1500 | 150 | Compulsory | High | 3 |

A comparative view of the above table indicates that since the amount to be paid by the participants was compulsory, therefore, all the participants deposited the amount. Thus, 100 percent of the participants contributed. Every WUO, therefore, was awarded a high rating, with each securing 3 points. The total amount generated, however, was contingent upon the total number of participants from respective WUOs, the subject of variation.

### 11.1.2 Mobilization of Manpower

*Definition:*

*The mobilization of manpower is defined here as the voluntary mobilization of skilled and unskilled labor for the activities undertaken to manage an irrigation system, such as operations, repair, and maintenance activities. In this context, if an association uses hired labor for a particular activity, this will not be classified as mobilization of cash, but rate, mobilization of manpower.*

The status of the mobilization of manpower, as generated by WUOs, is described below.

The Water Users Federation of the Hakra 4-R Distributary undertook a five-day maintenance campaign with technical assistance from IIMI-Pakistan, from January 18 to 22, 1998. The main objectives of the campaign were:

1. to repair the damaged bank and service road;
2. to test the WUF's credibility among lower tier organizations; and
3. to ascertain the extent to which the WUF could mobilize resources for distributary maintenance (*Waheed-uz-Zaman, 1998).*

The Table 43 shows the manpower mobilized for the maintenance campaign by each grassroots-level WUO.

**Table 43. Participation of Common Water Users in the Maintenance Campaign.**

| Name of the WUO | WUs | Participating members | % of participation | Relative Rating | Score |
|---|---|---|---|---|---|
| WUO 1 | 697 | 95 | 14 | Low | 1 |
| WUO 2 | 315 | 95+12=107 | 30 | High | 3 |
| WUO 3 | 860 | 215 | 25 | Medium | 2 |
| WUO 4 | 628 | 117 | 19 | Low | 1 |
| WUO 5 | 929 | 260 | 28 | High | 3 |
| | 3429 | 794 | 24 | | |

Overall, and on average, 24 percent of the water users participated in the maintenance campaign. The percent of participation, however, varies among the sub-systems.

A comparative view of the manpower mobilized by the WUOs shows that Sub-system 2 performed best. This WUO's participation equaled 30 percent of the total water users involved. The reason for this high participation is attributed to the personal interest of the WUF president, who is also the General Secretary of Sub-system 2's WUO. In addition to the volunteer labor of 95 farmers, he also hired 12 people for the maintenance work. By our definition, this can be included under the category of mobilization of manpower, but comes under cash. Apt to mention here, is that the performance of this WUO has been poor in organizational development activities, because of the inactivity (lack of interest, laziness) of some of its main office bearers. The other office bearers of this WUO, however, were not active in this maintenance campaign.

The performance of Sub-system 1's WUO was low. The reason for low participation in this sub-system was the inertness of the office bearers, coupled with the factor of farmers residing in scattered hamlets along this command area. Thus, it has been difficult to gather them at a common place. The WUOs of Sub-systems 3, 4 and 5 performed well, with an average participation rate of 24 percent.

### 11.1.3 Mobilization of Tools

*Definition: This is defined as mustering machinery and equipment and transport to undertake management activities.*

#### 11.1.3.1 The Mobilization of Machinery by the WUF was Massive

The participation rate of the machinery varies greatly among the WUOs. The highest participation was exhibited by the WUO of Sub-system 5. The reason was that they participated in the first day of the campaign and wanted to impress their resources as if that of a big sub-system. They wanted to set an example for the remaining WUOs, who were still to participate in ensuing days of the campaign. The participation rate of the machinery from Sub-system 1 was the lowest. The reasons were the disinterest of a few of its leaders, coupled with its scattered population. The following table shows the status of machinery mobilized by the five WUOs under the aegis of the WUF.

**Table 44. Participation of Tractors for the Maintenance Campaign.**

| Name of the WUO | Total Watercourses | Total tractors participated | Tractors per 25 watercourses | Relative Rating | Score |
|---|---|---|---|---|---|
| WUO 1 | 23 | 10 | 11 | Low | 1 |
| WUO 2 | 23 | 19 | 21 | Medium | 2 |
| WUO 3 | 27 | 38 | 35 | High | 3 |
| WUO 4 | 15 | 11 | 18 | Medium | 2 |
| WUO 5 | 33 | 42 | 31 | High | 3 |

### *11.1.3.2 Mobilization of Equipment*

Definition:

*This is defined as mustering of machinery, equipment and transport to undertake management activities. This is measured number of hour/day tools utilized.*

Under this category, the WUOs gathered five kinds of equipment, i.e.:

- spades;
- cultivators;
- trolleys;
- front-mounted tractor blades; and
- rear-mounted tractor blades.

### *11.1.3.3 Mobilization of Spades*

Table 45 betokens the status of the spades used in the maintenance campaign, as undertaken by the 5 WUOs. On average, 52 percent of the participants had spades during the maintenance operations. This percent varies among the WUOs, from 43 to 63. Relatively speaking, Sub-system 1 and 2 performed highest, Sub-system 2's performance was mediocre, and Sub-systems 3, 4 and 5 remained at the bottom in relation to others. See Table 45.

**Table 45. Mobilization of Spades in the Maintenance Campaign.**

| Name of the WUO | Water users | Participating members | No of Spades | % of spades w.r.t participants | Relative Rating | Score |
|---|---|---|---|---|---|---|
| WUO 1 | 697 | 95 | 60 | 63 | High | 3 |
| WUO 2 | 315 | 107 | 64 | 60 | High | 3 |
| WUO 3 | 860 | 215 | 105 | 51 | Medium | 2 |
| WUO 4 | 628 | 117 | 50 | 43 | Low | 1 |
| WUO 5 | 929 | 260 | 115 | 44 | Low | 1 |
| | 3429 | 384 | | | | |

### *11.1.3.4 Mobilization of Cultivators*

Table 46 denotes the number of cultivators used in the maintenance campaign undertaken by the 5 WUOs. On average, each WUO mobilized 1 cultivator during the maintenance operations. This number varies among the WUOs, from 0 to 3. Relatively speaking, Sub-systems 2 and 3 performed highest, Sub-system 1's performance was medium, and Sub-systems 3, 4 and 5 remained lowest, due to not being able to mobilize this equipment. See Table 46.

**Table 46. Number of Cultivators Mobilized in the Maintenance Campaign.**

| Name of the WUO | Water Users | Participating Members | No of Cultivators | Relative Rating | Score |
|---|---|---|---|---|---|
| WUO 1 | 697 | 95 | 1 | Medium | 2 |
| WUO 2 | 315 | 107 | 3 | High | 3 |
| WUO 3 | 860 | 215 | 3 | High | 3 |
| WUO 4 | 628 | 117 | 0 | Low | 1 |
| WUO 5 | 929 | 260 | 0 | Low | 1 |
| | 3429 | 794 | 7 | | |

### *11.1.3.5 Mobilization of Trolleys*

Table 47 bespeaks the number of trolleys used in the maintenance campaign undertaken by the 5 WUOs. These trolleys were used to transport the participants from their villages to the maintenance sites. On average, 6 trolleys per WUO were brought to the sites during the maintenance operations. This number varies greatly among the WUOs, from 1 to 12. Relatively speaking, Sub-systems 3 and 5 performed highest in mobilizing trolleys as a means of transportation. Sub-systems 2 and 4's performances were mediocre, and Sub-system 1 remained lowest, mobilizing only one trolley.

**Table 47. Mobilization of Trolleys in the Maintenance Campaign.**

| Name of the WUO | Water Users | Participating Members | No of Trolleys | Relative Rating | Score |
|---|---|---|---|---|---|
| WUO 1 | 697 | 95 | 1 | Low | 1 |
| WUO 2 | 315 | 107 | 3 | Medium | 2 |
| WUO 3 | 860 | 215 | 10 | High | 3 |
| WUO 4 | 628 | 117 | 4 | Medium | 2 |
| WUO 5 | 929 | 260 | 12 | High | 3 |
| | 3429 | 794 | 30 | | |

### *11.1.3.6 Mobilization of Front-mounted Scraper*

Table 48 shows the number of front-mounted blades used in the maintenance campaign undertaken by the 5 WUOs. Only 2 front-mounted blades were used in the maintenance activities, one each from Sub-systems 2 and 3. They are given the value rating of 3, while the other three WUOs remained at the bottom because they were unable to mobilize this equipment. See Table 48.

**Table 48. Mobilization of Front-mounted Scrapers in the Maintenance Campaign.**

| Name of the WUO | Water users | Participating members | No of front-mounted scrapers | Relative Rating | Score |
|---|---|---|---|---|---|
| WUO 1 | 697 | 95 | 0 | Low | 1 |
| WUO 2 | 315 | 107 | 1 | High | 3 |
| WUO 3 | 860 | 215 | 1 | High | 3 |
| WUO 4 | 628 | 117 | 0 | Low | 1 |
| WUO 5 | 929 | 260 | 0 | Low | 1 |
| | 3429 | 794 | 2 | | |

### *11.1.3.7 Mobilization of Rear-mounted Scraper*

Table 49 gives the status of the rear-mounted scrapers used in the maintenance campaign undertaken by the 5 WUOs. On average, 11 percent of the participants had rear-mounted scrapers during the maintenance operations. This percentage varies from 7 to 11 among the WUOs. Relatively speaking, Sub-systems 2 and 4 performed very high in mobilizing this equipment, Sub-systems 3 and 5 also performed high, but less than 2 and 4, and Sub-system 1 remained lowest. See Table 49. The participation of the common water users is given in Table 50.

**Table 49. Mobilization of Rear-mounted Scrapers in the Maintenance Campaign.**

| Name of the WUO | Water users | Participating members | No of rear-mounted scrapers | % of scrapers w.r.t participants | Relative Rating | Score |
|---|---|---|---|---|---|---|
| WUO 1 | 697 | 95 | 7 | 7 | Low | 1 |
| WUO 2 | 315 | 107 | 13 | 12 | High | 3 |
| WUO 3 | 860 | 215 | 24 | 11 | High | 3 |
| WUO 4 | 628 | 117 | 14 | 12 | High | 3 |
| WUO 5 | 929 | 260 | 30 | 11 | High | 3 |
| | 3429 | 794 | | | | |

**Table 50. Participation of the Common Water Users in the Maintenance Campaign.**

| Name of the WUO | Water users | Participating members | % of participation | Relative Rating | Score |
|---|---|---|---|---|---|
| WUO 1 | 697 | 95 | 14 | Low | 1 |
| WUO 2 | 315 | 107 | 34 | High | 3 |
| WUO 3 | 860 | 215 | 25 | Medium | 2 |
| WUO 4 | 628 | 117 | 19 | Low | 1 |
| WUO 5 | 929 | 260 | 28 | High | 3 |
| | 3429 | 794 | 24 | | |

### *11.1.3.8 Mobilization of Transport*

The WUOs also mobilized transport to facilitate the flow measurement activities at their respective sub-systems. Sub-systems 2, 3 and 5 performed relatively better in this regard because of the presence of some wealthy WUO members. Sub-system 1 performed low because the majority of these members is immobile and not well off economically. The Table 51 gives the status of the transport mobilized in each sub-system.

**Table 51. Participation of Volunteer Transport in the Flow Measurement Activities Among the Sub-systems.**

| Name of the WUO | Number and type of transport | Relative Rating | Score |
|---|---|---|---|
| WUO 1 | 1 motorbikes | Low | 1 |
| WUO 2 | 4 motorbikes 2 cars | High | 3 |
| WUO 3 | 7 motor bikes | High | 3 |
| WUO 4 | 4 motorbikes | Medium | 2 |
| WUO 5 | 11 motorbikes | High | 3 |

### 11.1.4 Mobilization of Knowledge

*Definition:*

> *In the context of the WUOs, this is defined as the dissemination of the leadership and organizational skills, indigenous knowledge and experiences related to agriculture. This indicator will be measured by the number of instances that WUO leaders delivered lectures in other sub-systems, or the number of instances they were used as resource persons. This is measured by the number of instances skills and techniques were applied.*

The higher tier WUO leaders disseminated knowledge to the lower tiers. They delivered lectures and speeches on organizational and technical aspects in other sub-systems. This dissemination of knowledge became possible due to the organization achieved. Had there not been the formation of WUOs, the leaders would have been unable to participate in the dissemination program. The following WUO leaders made speeches and lectures in different sub-systems. The rating is presented in Table 53.

**Table 52. Names of WUOs Leaders Who Delivered Speeches and Lectures.**

| Name of the Resource Person | Designation | Name of the Sub-system where lecture was delivered | Instances |
|---|---|---|---|
| Mian Abdul Wahid | President WUF | Sub-system 1 | 2 |
| Sofi Ashraf | Member WUA | Sub-system 1 | 1 |
| Rashid Gill | Member WUF | Sub-system 2 | 1 |
| Anwar | President WUA | Sub-system 2 | 1 |
| Mian Wahid | President WUF | Sub-system 3 | 5 |
| Ch. Amin | General Secretary WUF | Sub-system 3 | 2 |
| Hafiz Sanaullah | President WUO SS 5 | Sub-system 3 | 1 |
| Mian Abdul Wahid | President WUF | Sub-system 4 | 1 |
| Anwar | President WUA | Sub-system 4 | 1 |
| Anwar | President WUA | Sub-system 5 | 1 |
| Mian Abdul Wahid | President WUF | Sub-system 5 | 3 |
| Sofi Iqbal | Secretary Information, WUF | Sub-system 5 | 1 |
| Abdul Shakoor | Vice President, WUF | Sub-system 5 | 1 |

**Table 53. Rating on the Dissemination of Knowledge.**

| Name of the WUO | Number of instances that lectures were delivered | Relative Rating | Score |
|---|---|---|---|
| WUO 1 | 3 | Low | 1 |
| WUO 2 | 2 | Low | 1 |
| WUO 3 | 8 | High | 3 |
| WUO 4 | 2 | Low | 1 |
| WUO 5 | 6 | Medium | 2 |

### 11.1.5 Mobilization of Networking

*Defining resource mobilization as the ability to mobilize labor, cash and material is a limited concept. By our definition, organizational networking is also an important resource.*

Definition:

Literature provides the definition of networking as "making potentially useful contacts and building relationships with individuals, groups and organizations (Davidson, 1993-151).

> *We defined it as the ability for WUO members to acquire support by themselves using organizational linkages to explore avenues to handle their day-to-day problems related to irrigated agriculture.*
>
> *Our second definition is the capability of the WUO members to solve their problems related to irrigated agriculture, using their useful contacts, and without the necessity for informal payments.*

The WUOs demonstrated their ability to mobilize linkages through organizational networking for the betterment of the farming community. Examples are:

#### *11.1.5.1 Networking to Solve Problems Related to Improvement Works*

- During the 1997-98 annual closure, the entire length of Sub-system 5, which comprised of Minor 1-R was being lined adjacent to Rashid Gill's Chak (54/4-R). Rashid Gill is an active WUF member. The CBC (contractor company for lining work) suddenly suspended the lining work near Gill's village. The contractors started work in another reach saying that they will restart work in this reach after the annual closure. Undertaking improvement works in running water requires the construction of a diversion channel, in contrast to the lack of a diversion channel in the annual closure. Rashid Gill immediately wrote an application requesting the continuation of the lining work in the annual closure so that the construction of the diversion channel adjacent to his village could be avoided. He acquired the signatures of 100 villagers. The application was then submitted to the WUF Secretary of Information. He took this application to the project manager of the contracting company, conveying the strong feelings of exasperation of the residents of Chak 54/4-R. Upon his persuasion, the project manager ordered the continuation of the lining work in the closure adjacent to Gill's village. This is an excellent example of mobilizing a triangle of networking, i.e. ordinary WUF members to WUF leaders to agency staff.

- After the completion of the lining work in the reach near Gill's village, the reach could not maintain the required surface water profile upstream from RD 8+00, affecting the discharge in this reach. Rashid Gill approached the president of the sub-system on this issue. Both met the Executive Engineer, Lining, requesting the construction of a drop structure at RD 8+00. The Executive Engineer promised to

entertain their request. However, action on this request had not been taken until the conclusion of this report.

Over 50 farmers from the tail section of Sub-system 5 contacted the president of the WUO, and protested against the short water supply. They also pointed out the fault of the lining between RD 0+00 and RD 6+00, due to which the inflow through the head regulator had reduced. The president of the WUO led the procession and took them to the CBC office (contracting company). The project manager listened to their complaint carefully, and promised to rectify the problem

On September 26, 1997, some farmers informed the Secretary of Information that the design of the route of the minor had been changed. In turn, he reported the matter to the IIMI team leader, with a request for detailed information on the design. Later upon his persuasion, the minor was lined according to the route proposed by the farmers.

On January 15, 1997 some farmers informed the Secretary of Information that the lining contractors were dumping earth load on the minor bed, which was not laboratory-tested. They had placed this earth load on the bed during the night for its own reasons. The WUO secretary met the Sub-engineer, Lining, and conveyed the problem to him. The Sub-engineer immediately ordered the poor quality earth work to stop.

During the lining work of 1-RA Minor, a dispute about the route of the minor arose between the lining staff and farmers. As a result, two farmers moved court stay orders to stop the lining work. On February 18, 1998 the lining staff approached the WUO and Secretary of Information seeking reconciliation with these farmers. The Secretary of Information met the farmers and requested them not to create hindrances in the execution of lining work. Upon his request, they withdrew the stay order and the lining work continued.

#### *11.1.5.2 Networking to Solve Problems related to Agricultural Loans, and Inputs and Marketing*

Getting loans from the Agricultural Development Bank of Pakistan (ADBP) is a long process, is exacting on patience and involves rent seeking. The General Secretary of the WUF has helped many farmers to acquire agricultural loans without informal payments. He announced in a WUF meeting that anybody could approach to him for such assistance.

In the *Kharif,* 1997, Muhammad Amin, General Secretary of the WUF, procured certified seed and distributed it to the farmers. Moreover, he also collected material (leaflets etc.) on the methods of sowing, quantities, rates, timings of agriculture inputs and shared it with farmers in the area.

Besides solving water related problems, the general secretary also assisted farmers to purchase certified seed from the market at discount rates, using his contacts.

### *11.1.5.3 Networking to Solve Problems related to Environmental, Drinking Supply and Electrification*

In a Field Implementation Coordination Committee (FICC) meeting, presided over by the Assistant Commissioner, Haroonabad, the President of the WUO of Sub-system 5 raised the issue of loud music at night when tractors worked in the farmers fields. As a result, it is difficult for residents of surrounding villages to sleep. He requested the AC to ban loud music at night. Later, he gave the AC a written application narrating the problem. Upon his request, noise at the night was banned

The residents of Chak 66/4-R were in need of a water delivery pipe to feed the drinking water pond. The villagers contacted the WUF Secretary of Information to request him to use his linkages to acquire pipe from CBC. Upon the request of the Secretary of Information, the Project Manager of CBC granted a pipe, free of cost, to the villagers for their drinking pond.

The president of Sub-system 5 SS WUO helped lots of farmers to solve problems related to the WAPDA office. This includes the correction of over billing, faulty meters and installing electric meters.

### *11.1.5.4 Networking to Promote Collective Action in Maintenance*

- The water users of a watercourse belonging to Chak 66/4-R undertakes periodic maintenance and cleaning operations. A faction of the shareholders of this watercourse was constantly absent from activity for the cleaning operations. The other group, who performs desilting periodically, complained to the WUF Secretary of Information about their non-cooperation. The Secretary of Information met those people personally, and at his motivation, they started participating in the maintenance operations.

- The president of the WUO compromised his tractor for five days for the maintenance campaign, organized during the annual closure of 1997.

### *11.1.5.5 Networking to Provide Jobs to Farmers' Families*

Rashid Gill, an active and vibrant member of the WUF, requested the researcher of the Mona Reclamation and Experimental Project (MREP) to employ four persons from his village. At his request, they were employed by the MREP on a daily waged basis. The MREP staff had links with Gill because he allocated an agriculture plot for the Bed-and-Furrow experiment for the wheat crop, undertaken by MREP. This networking was of him being a member of the WUO.

Rashid Gill has helped many villagers using the support of the local Member of the National Assembly (MNA), to solve their problems concerning unemployment, disputes referred to police and districts courts. The people of the area contact him because he is a WUF member.

### 11.1.5.6 Networking to Solve Problems related to Irrigation Management

During May 1998 the PID Sub-engineer reduced the size of an outlet related to Chak 58/4-R for rent seeking Nearly 15 people contacted the WUO president, Sub-system 5, requesting that the outlet brought to its original size. The WUO president met the Sub-engineer and conveyed the request of the farmers. This action resulted in the outlet being adjusted to its original size.

The General Secretary of the WUF used his personal vehicle to contact government staff to solve farmer problems on several occasions. He also used his personal vehicle to inspect the tail of the Hakra 4-R Distributary many times in the past.

Farmers in the region always experienced difficulties when needing empty bags from the PASCO for their wheat sales. When PASCO give the empty bags, it always demanded guarantee money. As a result of the interaction between WUO leaders and PASCO staff through the FICC platform, PASCO staff accepted a letter-headed guarantee from WUO leaders, provided a copy of the guarantee to many farmers.

On September 23, 1997, the crest of the Head Regulator of 1R-A Minor was raised to a height of six inches to reduce the discharge of the minor. This was a deliberate attempt by the agency staff for rent seeking. The Information Secretary of the WUO of Sub-system 4 contacted the WUF president requesting that the crest be adjusted to its original elevation.

On September 24, 1997, a farmer from Sub-system 4 reported to the Secretary of Information, WUO- 4, that a *beldar* (a member of the PID field staff) had demanded the grain from the farmers to increase the water supplies of a watercourse related to their village. The Secretary of Information arranged for an announcement from the mosque loud speakers advising farmers not to pay the grain to the beldar. Thus, the farmers did not pay the grain to him.

The Secretary of Information complained to PID senior staff about the short water supply at the tail of the minor. On September 29, 1997 a beldar reported to the Secretary of Information, that due to complaints filed by him, the PID senior had appointed him to check the tail gauge on a daily basis, and to get verification from the Secretary of Information against each inspection by the beldar .

Some farmers complained against the rent-seeking behavior of a beldar and asked PID senior staff to transfer him. On October 10, 1997 the beldar approached the Secretary of Information, WUO-4, and asked him for help to stop the transfer. The Secretary of Information wrote a letter to the XEN requesting that the transfer be stopped. At his recommendation, the beldar's transfer was stopped was stopped.

### *11.1.5.6 Networking outside the distributary command*

The General Secretary of the WUF helped his friend, who is the share holder of a direct outlet of Hakra Branch Canal , in getting new water turn for 50 acres that was, earlier an un-

command area. For this he just used the influence of being the office bearer of the WUF. Had the friend of the General Secretary not used his contacts. He would have paid about fifty thousands rupees, as a special charges. Using the networking he has saved this amount.

On February 29, 1998, a farmer from 1-L Distributary informed the Secretary Information that he had a serious quarrel with the executive Engineer Lining. He further told that the XEN has approached the police to register the case against him . He requested him to help him through WUF. The Information Secretary of the Sub-System 4 contacted the General Secretary of the WUF to help this farmer. . The General Secretary, then approached the Station House Officer (SHO) of the Police station of Dounga Bounga requesting him not to pursue on XEN's complaint and begging time for reconciliation between two parties. Later, the General Secretary acted as mediator for the patch up between the farmer and the XEN. Both removed their misunderstandings and the XEN withdrew the case.

### 11.1.5.7 Networking for Organizational Development

During the formalization process of the watercourse level WUAs related to Chak No. 69/4-R, there was a serious controversy on the selection of the office bearers. This Chak falls in the Sub-system 3. The Information Secretary belongs to this sub-system. The opposing faction was having the contacts with the General Secretary of the WUF . The General Secretary belongs to Sub-system 5. The Information Secretary requested the General Secretary to contact those farmers to resolve the controversy. The General Secretary contacted the opposing faction, who were his friends, requesting for cooperation. On his request they formalize the WUA amicably.

At the initial formation phase, a faction of the water users from Chak Number 57/4-R opposed the formation of a WUA related to one of its watercourse. They did not sign as the member of the WUA. They were in general opposing the project activities. During the formalization phase (2$^{nd}$ phase) of the WUA, on the motivation of the General Secretary they agreed to sign as the member of the WUA. This faction now also contact the General Secretary of the WUF for solving their problem.

### *11.1.5.8 Networking to Solve Domestic Problems*

On January 1, 1997 a farmer from Sub-system 4 contacted the Secretary Information that his wife had some differences with him and in a gust of anger has gone to her parents home. Their misunderstanding and alienation went to the extent, that at one stage, as reported by the Information Secretary, it seemed that their union was going to be dissolved. He told him that he want to bring her back. Her parents were living in Sub-System 1. The farmer requested the Secretary information that if the Vice President of the WUF, who is the resident of Sub-system 1 could help him, his wife could come back. The Secretary Information wrote a letter to the Vice President of the WUF on the WUO letter head requesting to help the farmer to return his wife. The Vice President of the WUF met to the parents of his wife and they returned her to her husband.

Besides these example of networking quoted in the foregoing paragraphs,. the members of the executive body informed that lots of water users have been contacting them on the varieties of issues .The following table give the picture of networking between the ordinary water users and the executive body of the water users.

# CHAPTER 12

# ORGANIZATIONAL DEVELOPMENT ACTIVITIES

## 12.1 Organizational Development Activities

This may be defined here as:

> *Initiatives taken to design organizational structure to share various responsibilities, and using it to interact with other organizations to gain information, experience and collective benefit.*

This parameter can be tested using the following six parameters.

1) Selection of office bearers for different tiers:

   a) Nomination of office bearers for the distributary level WUF;
   b) Restructuring watercourse level WUAs;
   c) Addition of office bearers to the sub-system level WUOs.

2) Formation of sub-committees to delegate specific responsibilities.
3) Number of contacts with government departments through individual and group meetings.
4) Number of contacts with private organizations through individual and group meetings;
5) Number of letters written to different organizations; and
6) Management functions.

## 12.2 Scoring

1) Selection of office bearers for different tiers:

Nomination of office bearers for the distributary level WUF, giving relative weight to the percentage of members who disagreed with the nomination. The score will be highest if co-opted with consensus. The scoring will be, for example, 1 to 5.

1. strong disagreement;
2. mild disagreement; and
3. selected with consensus.

2. Restructuring watercourse level WUAs.
3. Initiative to restructure the watercourse level WUAs.

Rating will be on the following criteria:

0, if restructuring for the negative reasons
5, if restructuring for the positive reasons

4) Participation of WUA Presidents in formalization meeting, rating will be on the following criterion:

   a) Relative weight to the percentage of participation of WUAs presidents in formalization meetings, to restructure the executive bodies.

5) For addition of the new Joint Secretaries at the sub-system level WUOs, the rating will be as follows:

   0, if the joint secretary was not added to the executive bodies; 5, if the joint secretary was added to the executive bodies.

6) Formation of sub-committees to delegate specific responsibilities.

   1, if it had not performed its assigned function; 5, if it had performed its assigned functions

7) Number of contacts with government department through individual and group meetings;

   Giving absolute weight to the number of meetings, individual and by the executive body, with the department staff, e.g. score will be 1 for 1 meeting.

8) Number of contacts with private organizations through individual and group meetings;

   Giving absolute weight to the number of meetings individual and by the executive body with the private organizations e.g. score will be 1 for 1 meeting.

9) Number of letters written to different organizations;

   Giving absolute weight to the number of contacts through letters to department staff, e.g. score will be 1 for 1 contact (letters).

### 12.3 Selection of office bearers for different tiers

### Nomination of WUO members for WUF Executive Body

This parameter can be evaluated by the degree of consensus on the nomination of the office bearers by the sub-system WUOs to the apex body. The detail of the nominations by each of five WUOs is given below.

### Nomination by WUO-1

The WUO of Sub-system 1 organized a meeting on March 1, 1997 in order to nominate a person from the WUO executive to represent the sub-system in the Water Users

Federation WUF. Participants unanimously nominated Abdul Shakoor Aakooka as the WUF sub-system representative.

**Nomination by WUO-2**

The executive body of Sub-system 2's WUO, met on March, 5, 1997 to nominate a member from the WUO executive for the WUF executive. This was the day when the 5 WOUs co-opted their members for the apex body. The WUO members unanimously nominated Mian Abdul Wahid for the Executive of the WUF.

**Nomination by the WUO-3**

The executive body of WUO Sub-system 3's WUO met on March, 2, 1997 to nominate a member from the WUO for the WUF executive. The WUO members unanimously nominated Sofi Iqbal for the WUF Executive.

**Nomination by WUO-4**

The executive body of Sub-system 4's WUO met on March 4 to nominate a member from the WUO executive for the WUF executive. The WUO members unanimously nominated Ch. Ali Muhammad for the WUF Executive.

**Nomination by the WUO-5**

The executive body of Sub-system 5's WUO met on February 24 to nominate a member from the WUO executive for the WUF executive. The WUO members unanimously nominated Ch. M. Amin for the WUF executive.

The distinctive feature of these decisions was that all five WUOs co-opted their members for the executive body of the WUF.

**Nomination by WUF-4-R**

After nomination by the sub-system level WUOs to the apex body, the apex body had to distribute the offices among the five sub-systems. This task has been taken as the parameter of its performance measurement. The apex body had decided the three offices quite calmly and without any disagreement. Although, at last, the WUF managed to distribute all the offices and settled all questions of disagreement, there was, however, serious disagreement about the distribution of the president and information secretary Office, between the WUO of Sub-systems 2 and 3. The WUF 4-R rating, therefore, will be according to their performance in this task. Table 54.

**Table 54. Degree of Consensus for Nominating Executive Body Members Among Six WUOs.**

| Name of the WUO | Rating | | | Scoring |
|---|---|---|---|---|
| | Strong Disagreement | Mild disagreement | Consensus | |
| WUO 1 | | | ✓ | 5 |
| WUO 2 | | | ✓ | 5 |
| WUO 3 | | | ✓ | 5 |
| WUO 4 | | | ✓ | 5 |
| WUO 5 | | | ✓ | 5 |
| WUO 4-R | ✓ | | | 3 |

Parameter-2

## 12.4 Restructuring Watercourse Level WUAs

This section is heavily drawn from the IIMI Pakistan Research Report -57 (Waheed-uz-Zaman, et. al 1998).

### 12.4.1 The Need to Restructure WUAs

The process of creating informal water users associations was completed between July and December 1996 (1st phase). During this process, the association office bearers were not given formal titles. These associations were created *informally,* and were called *Water Users Associations (WUAs),* or *khal* committees.

The restructuring or formalization process of these associations started in April 1997 and continued until March 1998 (2nd phase). One of the main objectives of formalizing these associations was to elevate them to a level that would qualify for legal registration, according to the legal requirement. In this phase, each WUA executive body office bearer was given a title. The WUAs, however, used this opportunity to restructure their executive bodies at the watercourse level. The following were the reasons that led to the need to restructure the watercourse level WUAs.

- illiteracy;
- disinterest in organizational affairs;
- migration of share holders from the areas;
- changes in the tenancy status;
- death of an actual share holder; and
- holding offices in more than one watercourse command.

### 12.4.2 Restructuring the Executive Bodies of Watercourse Level WUAs among Five Sub-systems

The comparative look at the restructuring process of watercourse level WUAs shows that the sub-system level WUOs took thoughtful actions to redesign and restructure the lower tier organization.



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In the 1st phase, a total of 615 office bearers comprising of the WUAs belonging to 121 watercourses existed. Here, the WUA members were not allotted titles in the executive body. The 2nd phase shows an addition of 95 office bearers. In this phase, they were given titles. Titles of positions were President, Vice President, General Secretary, Treasurer, Information Secretary and Joint Secretary. In some cases, one or two advisors were also selected into the WUA executive body. Currently, the selected number of office bearers amounts to 710 in total.

In the 2nd phase, three types of changes were made; in the majority of instances, the new office bearers were added into the executive bodies, in others, subtracted. A significant number of office bearers were also replaced. The reasons for these changes will be described in later sections.

### 12.4.3 Restructuring the Executive Bodies of Watercourse Level WUAs in Sub-system 1

The number of office bearers in Sub-system 1, in the 1st phase, ranged from 5 to 7. This number was less than 5 in only a few exceptions. The number of office bearers in the 2nd phase generally ranged from 5 to 6 in Sub-system 1. There was not even a single watercourse in which the number of office bearers was less than five. In one watercourse, the number of office bearers amounted to 9.

Three types of changes were made in the selection of office bearers during the formalization process (1st phase): addition, subtraction and replacement. Approximately 50 percent of the WUAs added new office bearers to their executive bodies. The number of new additions varies from 1 to 3. Overall, there was an addition of 12 new office bearers in the executive bodies of Sub-system 1's WUA. Office bearers were subtracted from 15 percent of the Water Users Associations. Replacements occurred in 47 percent of the watercourses of Sub-system 1. The number of replaced office bearers ranged from 1 to 3 among the watercourses of Sub-system 1.

### 12.4.4 Restructuring the Executive Bodies of Watercourse Level WUAs in Sub-system 2

The number of office bearers in Sub-system 2 generally ranged from 5 to 7 in the 1st phase, with a significant number of watercourses where this figure was less than 5. In three watercourses particularly, WUA bodies comprised of only one member each because the entire watercourse command belongs to one farmer. The number of office bearers in the 2nd phase generally ranged above 5 in Sub-system 2. Contrary to Sub-system 1, there was not even a single watercourse in which the number of office bearers was more than seven.

Also, in Sub-system 2, three types of changes were made in the selection of office bearers during the formalization process (2nd phase); addition, subtraction and replacement. Approximately 26 percent of the WUAs added new office bearers to their executive bodies. In 57 percent of the outlets, the number of office bearers was reduced. Office bearers were replaced in 48 percent of the watercourses. Overall, there was a net addition of only 2 new office bearers in WUA executive bodies in Sub-system 2. The number of

newly-added office bearers vary from 1 to 3. The number of office bearers subtracted, per watercourse, ranged from 1 to 2. The number of replaced office bearers also ranged from 1 to 3.

### 12.4.5 Restructuring the Executive Bodies of Watercourse Level WUAs in Sub-system 3

The number of office bearers in Sub-system 3 generally ranged from 5 to 7 in the 1st phase, with few watercourses where this number was less than 5. In three watercourses, WUA executive bodies comprised of only three members each. The number of office bearers in the 2nd phase also ranged from 5 to 7 in this Sub-system. Contrary to Sub-system 1, there was not even a single watercourse in which the number of office bearers was more than seven.

Unlike Sub-systems 1 and 2, only two types of changes were made in the selection of office bearers during the formalization process (2nd phase) in Sub-system 3; addition and replacement. Approximately 30 percent of the WUAs added new office bearers to their executive bodies. There was not even a single instance of office bearers being subtracted from the executive bodies from this sub-system. The office bearers were replaced in 41 percent of the watercourses. Overall, there was a net addition of 15 new office bearers in WUA executive bodies in sub-system 3. The number of new additions varied from 1 to 3. The number of replaced office bearers ranged from 1 to 2.

### 12.4.6 Restructuring the Executive Bodies of Watercourse Level WUAs in Sub-system 4

The number of office bearers in Sub-system 4 was generally 5 in the 1st phase. There were only three watercourses in which the number of office bearers was 3, 7 and 9, respectively. The number of office bearers in the 2nd phase generally ranged from 5 to 7 in Sub-system 4. There were two watercourses in which the number of office bearers were more than 7.

In Sub-system 4, only one change was made in the selection of office bearers during the formalization process (2nd phase); an addition. Subtraction and replacements, however, were not made in this Sub-system. Approximately 73 percent of the WUAs added new office bearers to their executive bodies. There was not even a single instance of subtraction, or replacement, of the office bearers from the executive bodies of this Sub-system. Overall, there was a net addition of 23 new office bearers in the WUA executive bodies of Sub-system 4. The number of newly-added office bearers vary from 1 to 4.

### 12.4.7 Restructuring the Executive Bodies of Watercourse Level WUAs in Sub-system 5

The number of office bearers in Sub-system 5 ranged from 2 to 7 in the 1st phase. The number of office bearers generally ranged from 5 to 7 in Sub-system 5 in the 2nd phase. In Sub-system 5 there was not even a single watercourse where the number of office bearers was more than 7.

In this sub-system, three types of changes were made in the selection of office bearers during the formalization process (2nd phase); office bearers were added, subtracted and replaced. However, instances of subtraction were not very significant in the Sub-system. Approximately 77 percent of WUAs added new office bearers to their executive bodies. There was only a single instance of subtraction of office bearers. The replacement of office bearers from the executive bodies was made in 15 percent of the watercourses from this sub-system. Overall, there was a net addition of 47 new office bearers in WUA executive bodies of Sub-system 5. The number of newly-added office bearers per watercourse varies from 1 to 4. The number of replaced office bearers, per watercourse, varies from 1 to 3 in Sub-system 5.

### 12.4.8 Comparative Look at the Initiative Influencing the Restructuring Watercourse Level WUA Executive Bodies.

The discussion presented in the preceding sections indicates that the all the five WUOs took initiative to design and restructure their watercourse level associations (WUAs).

The office bearers were added, subtracted and replaced in the WUAs. There are many variations and differences in the number of office bearers that were changed. The variations in changing the organizational structures of their lower tier organizations to make them lively and dynamic, can be a useful indicator of evaluation. Apparently, all the changes made are due to positive reasons, and undeniably, that can contribute to organizational development. Sub-systems where there have been a lower number of changes, or where changes are non-existent, does not necessarily mean that they are weaker WUAs. Rather, they might already have selected effective leadership in the earlier phase, and did not feel the need to change the office bearers. Thus, the number of changes among the WUOs cannot be a good indicator for comparative performance, since all the changes in restructuring the WUAs were for positive reasons. Therefore, the WUOs have been provided on equal rating of 5 for taking initiatives to redesign their organizational structures.

**Table 55. Status of Office Bearers Before and After Formalization Within the WUOs**

| Name of WUO | No. of OBs, 1st phase | No. of OBs, 2nd phase | Change in No of Office Bearers | | | Scoring |
|---|---|---|---|---|---|---|
| | | | Addition | Subtraction | Replaced OBs | |
| WUO 1 | 127 | 139 | 16 | 4 | 15 | 5 |
| WUO 2 | 111 | 109 | 11 | 13 | 22 | 5 |
| WUO 3 | 145 | 160 | 15 | 0 | 15 | 5 |
| WUO 4 | 79 | 102 | 23 | 0 | 0 | 5 |
| WUO 5 | 153 | 200 | 49 | 2 | 7 | 5 |
| **Total** | **615** | **710** | **114** | **19** | **59** | |

### 12.4.9 Overall Status of Restructuring Watercourse Level WUAs (Additions)

The analysis shows that in the 2nd phase, there was not even a single addition of office bearers in 50 percent of the outlets. In 18 percent of the outlets, at least 1 new office bearer was added to the executive body. Similarly, in 24 percent of the outlets, 2 office bearers were added to executive bodies. In the 2nd phase, there were some outlets where 3 to 4 new office bearers were added.

### 12.4.10 Overall Status of Restructuring Watercourse Level WUAs (Replacements)

Overall, there was no instance of replaced office bearers in 69 percent of the outlets. In 17 percent of the outlets, one office bearer, per watercourse, was replaced with the previous one. In 11 percent of the outlets, the number of replaced office bearers was 2. There were a few outlets in which the number of replaced office bearers, per watercourse, was 3 to 4. Figure 7 represents the status of replaced office bearers during the formalization process.

### 12.4.11 Addition of Joint Secretaries in the Executive Bodies of Subsystem Level WUOs

Initially, the sub-system level WUOs selected five-member executive bodies, comprising of President, Vice President, General Secretary, Information Secretary and Treasurer. Later, the WUOs felt the need to add joint secretaries in their executive bodies. Of the 5, 3 added this office to their executive bodies. Initiatives in this direction are described below:

The WUO of **Sub-system 1** added a joint secretary as a new office in the executive body of the organization. In the meeting organized by the WUO on March 1, 1997, the president first proposed the name of Mian Rizwan. He however, did not accept this office. A participant then suggested the name of Nazar Khan. This name was then unanimously endorsed by all the participants.

The WUOs of **Sub-systems 2 and 3** have not added joint secretaries to their executive bodies yet. Interviews with respective WUO leaders betokens that they did not feel the need for this addition.

In **Sub-system 4,** in the WUO meeting of March, 23, 1997 the issue raised was that of the absence of the president or general secretary, of whom one has to anchor the periodic WUO meeting. The need to select a joint secretary was then felt. The unanimous decision was that Fiaz Ahmad (Information Secretary) should also be given the additional responsibility of the joint secretary. He accepted this responsibility. The reason farmers gave him two offices is that he is considered the most dedicated office bearer of the WUO of Sub-system 4.

The WUO of **Sub-system 5** added a joint secretary as a new office in the executive body of the organization. In the meeting organized by the WUO on February 15, 1997 the name of Naeem Akhtar was proposed by a participant. This name was then unanimously endorsed by all the participants.

**Table 56. Status of Addition of Joint Secretaries in Sub-system Level WUOs.**

| Name of the WUO | Joint Secretary Added | Scoring | Rating Criteria |
|---|---|---|---|
| WUO 1 | ✓ | 5 | 0, for not adding Joint Secretaries 5, for adding . |
| WUO 2 | x | 0 | |
| WUO 3 | x | 0 | |
| WUO 4 | ✓ | 5 | |
| WUO 5 | ✓ | 5 | |
| WUO 4-R | x | 0 | |

## 12.5 Formation of Sub-committees

Formation of sub-committees, as a part of organizational structure, under each WUO, to delegate specific responsibilities is also a good parameter of comparative performance. The status of WUO formation is summarized in Table 56.

A few examples of the formation of sub-committees are described below:

In the meeting organized by the WUO of Sub-system 1, held on March 1 1997, 4 persons were nominated to assist the secretary of information to convey the time and venue of the monthly meetings, and to convey the decisions of the meeting to common farmers. Each of 4 persons will be responsible for 5 to 7 watercourses. The information secretary will inform these 4 persons and they will then inform farmers along their respective cluster of watercourses.

The WUO of Sub-system 1 held a meeting on March 1, 1997 in the village Bilas Pur. The meeting was attended by the majority of the Sub-system 1's watercourse representatives. All the participants of the meeting unanimously selected 5-member accountability committee.

The function of this committee would be to keep an eye on the affairs of the WUO with special monitoring of the attitudes of the office bearers to ensure that they do not indulge in personal gains. In Sub-system 4, in the meeting of March 23, 1997, a two-member committee was also formed by the WUO, comprising Khair Muhammad (Treasurer of the WUO) and Fiaze (secretary of information) to maintain the discipline and evaluate whether a members were absent due to genuine reasons or not.

In the same meeting of March 23, 1997 the WUOs of Sub-system 4 nominated 3 persons to assist the secretary of information with conveying the decisions to watercourse representatives and common farmers, especially about monthly meetings. There are a total of 15 watercourses in Sub-system 3. Each of 3 persons will be responsible for conveying the times and venues of meetings. The information secretary will inform these 3 persons and they will then inform farmers along their respective clusters of watercourses.

## 12.6 Number of Contacts with Government Department through Individual and Group Meetings

The pre-takeover performance comparative has been assessed by WUO contacts with government departments. These can be measured by:

Giving absolute weight to WUO executive body meetings with department staff, e.g., the score will be 1 for 1 meeting.

The members of the executive body have been visiting government offices collectively and individually to solve their problems. The staff of the Provincial Irrigation Department (PID), Punjab Agriculture Department (PAD), On-Farm Water Management (OFWM), Pakistan Agriculture Storage Corporation (PASCO) and the Agricultural Development

Bank of Pakistan, Water and Power Development Authority (WAPDA) and the district management. Among these departments, the interaction between WUO staff and the Lining Wing of the PID was very frequent due to lots of problems related to improvement works. Table 57.

**Table 57. Status of the Sub-committees formed by WUOs.**

| Name of the WUO | No. of Sub-committees formed Yes/No | Objective of the Sub-committees | Number of instances each committee met, or whether it met when assigned a single task. | Scoring | Total Scoring |
|---|---|---|---|---|---|
| WUO 1 | 3 | 1. Committee to tackle no confidence move | Once--Single-task | 5 | 7 |
| | | 2. Sub-committee for Information | Non-functional | 1 | |
| | | 3. Accountable Committee | Non-functional | 1 | |
| WUO 2 | 1 | Sub-committee for Information | Non-functional | 1 | 1 |
| WUO 3 | 2 | 1. Committee for establishing WUO office | 3 times | 5 | 6 |
| | | 2. Committee for recovering imposed funds form defaulters | Non-functional | 1 | |
| WUO 4 | 2 | 1. Discipline Committee | Non-functional | 1 | 6 |
| | | 2. Sub-Committee for Information | 8 times | 5 | |
| WUO 5 | 2 | 1. Committee for establishing WUO office | Twice | 5 | 10 |
| | | 2. Committee for recovering imposed funds form defaulters | Once | 5 | |
| WUO 4-R | 5 | 1. Committee for the identification of maintenance deficiencies | Once--single task | 5 | 25 |
| | | 2. Committee for the evaluation of the maintenance work | Twice | 5 | |
| | | 3. Committee for oath ceremony | Once | 5 | |
| | | 4. Lining Committee | Twice | 5 | |
| | | 5. Office Committee | 5 times | 5 | |

The number of contacts in the period under investigation is given in the Table 58.

**Table 58. Number of Collective Meetings with Department Staff.**

| Name of the WUOs | No of executive body meetings with department staff | Rating |
|---|---|---|
| WUO 1 | 0 | 0 |
| WUO 2 | 0 | 0 |
| WUO 3 | 8 | 8 |
| WUO 4 | 5 | 5 |
| WUO 5 | 10 | 10 |
| WUF 4-R | 6 | 0 |

The table indicates that WUOs 1 and 2 did not show any initiative when arranging meetings with government staff. The reasons for the lack of interest are different in each sub-system. In Sub-system 1 the main reason is the. remoteness of the sub-system from the main towns, coupled with the relatively immobile farmer leaders. In sub-system 2 the chief reason is the disinterest of the main executive body leaders.

## 12.7 Number of Contacts with Government Department Individually and Meetings with WUO Office Bearers

The members of the executive body have also been visiting government offices individually, and collectively to solve their problems. The target organizations were the same as for collective meetings; PID, PAD , OFWM, PASCO, ADBP, WAPDA and the district management. Again, among these departments, the interaction between WUO staff and the Lining Wing was very frequent for the same reason stated in the preceding paragraph. The number of individual contacts in the period under investigation is given in the Table 59.

**Table 59. Number of Collective Meetings with the Department Staff.**

| Name of the WUO | Status of contacts | Names and No. of office bearers involved in contacting agency staff | Rating |
|---|---|---|---|
| WUO 1 | Frequent | V. President (1) | 1 |
| WUO 2 | Frequent | General Secretary (1) | 1 |
| WUO 3 | Frequent | President, V. President, G. Secretary, Treasurer (4) | 4 |
| WUO 4 | Frequent | President, Joint Sec. (2) | 2 |
| WUO 5 | Frequent | President, V. President Joint Secretary, Sec (4) | 4 |
| WUO 4-R | Frequent | President, V. President, G. Sec., Sec. Inf., Treasurer (5) | 5 |

The table indicates that in some WUOs only one member of the executive body is actively participating in handing the affairs of the water users. This situation suggests that some WUOs have practically become defunct. Overall, each sub-system level WUO has different problems with the active functioning of a WUO leaders. This paragraph presents the individual evaluations of the office bearers.

In Sub-system 1 the president has no contacts at the grass-root level. The General Secretary is in the employ of the Health Department. Therefore, he cannot afford much time for the organizational affairs.

In Sub-system 2, four office bearers excluding the General Secretary, do not participate in the organizational activities due to personality clashes with the Sub-system's General Secretary, who is also the president of the WUF.

In Sub-system 3, the WUO president, also the Information Secretary of the WUF, behaves in a way that his leadership is questioned being a rival of the WUF. His opinions vary in favour of the Sub-systems interests rather than common interests.

In Sub-system 4, all the organizational activities are controlled by the Information Secretary. The General Secretary of this sub-system is considered a strange duck by the majority of the water users, because his origins are not similar to theirs. The president of

this sub-system is a physically weak and aged person who is unable to perform the main duties.

In Sub-system 5, the WUO president is motivated by vain glory and base motives. The General Secretary of this sub-system is a defaulter of nonpayment to Government Banks. Consequently, he has absconded and is out of the picture now.

This is the inbred functioning of the key WUO leaders. The impacts of non-involvement of key office bearers will be discussed at any other suitable occasion elsewhere in this report.

### 12.8 Number of Contacts with Private Organizations by the WUO Executive Body

The members of the executive body have also, collectively and personally, been meeting collective personal of the private organizations, dealing with agricultural chemicals, for advice on problems related to plant protection,. The target organizations were: FMC, CIBA, AGRIVO, Jafer Brothers, etc.. The number of collective contacts in the period under investigation is given in the Table 60.

**Table 60. No. of Contacts with Private Organizations by the WUO Executive Body**

| Name of the WUO | No of executive body meetings with private organizations | Scoring |
|---|---|---|
| WUO 1 | 0 | 0 |
| WUO 2 | 0 | 0 |
| WUO 3 | 7 | 7 |
| WUO 4 | 4 | 4 |
| WUO 5 | 20 | 20 |
| WUO 4-R | 6 | 6 |

### 12.9 Number of Contacts with Private Organizations by the WUO Executive Body

The members of the executive body have also, collectively and personally, been meeting private organizations, dealing with agricultural chemicals for advice on insecticides/pesticides problems. The target organizations were the same described in the foregoing paragraph: FMC, CIBA, AGRIVO, Jafer Brothers, etc.. The number of collective contacts in the period under investigation is given in the Table 61.

**Table 61. Number of Contacts with Private Organizations by the WUO Executive Body**

| Name of the WUO | No of individual meetings with private organizations | Scoring |
|---|---|---|
| WUO 1 | 2 | 2 |
| WUO 2 | 15 | 15 |
| WUO 3 | 2 | 2 |
| WUO 4 | 3 | 3 |
| WUO 5 | 4 | 4 |
| WUO 4-R | 6 | 6 |

### 12.10 Record Management by WUOs

After the formation of the distributary level WUF and sub-system level WUOs, immediate attention to organizational record keeping was lacking. The main reason was

that until July 1997, the WUO offices were not established. The WUO of Sub-system 4 took an initiative in this direction by establishing its office . This was the first of the sub-system level WUO offices. The initiative of the other five organizations in this direction was very poor. The WUO-4 started periodic meetings and maintained records in the office. The status of the establishment of offices is given in Table 62.

**Table 62. Status of the Establishment of WUO Offices.**

| Name of the WUO | Status of the office | Date of establishing office | Delay in estab. of office (months)* | Relative Rating | Scoring |
|---|---|---|---|---|---|
| WUO 1 | Formal | 29-7-98 | 17 | Extended Delay | 5 |
| WUO 2 | Formal | 20-8-98 | 18 | Extended Delay | 5 |
| WUO 3 | Formal | 30-7-98 | 17 | Extended Delay | 5 |
| WUO 4 | Formal | 25-12-96 | 0 | On schedule | 15 |
| WUO 5 | Formal | 20-4-98 | 14 | Extended Delay | 5 |
| WUO 4-R | Formal | 29-11-97 | 9 | Less Delayed | 10 |

* delay in establishment of the office is measured from the reference date of 5-3-97, the date of the creation of the WUF.

Later, all the WUOs started maintaining their records. The scale of the record keeping, however, varies greatly among the WUOs. Table 63 gives the detail of the record keeping in the WUO pre-take over period.

**Table 63. Status of WUO Record Keeping.**

| Name of the Activity | Name of the WUOs | | | | | |
|---|---|---|---|---|---|---|
| | WUO1 | WUO2 | WUO 3 | WUO 4 | WUO 5 | WUF 4-R |
| Proceedings register | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Ledger | | | | ✓ | | ✓ |
| Cash book | | | | ✓ | | ✓ |
| Note book for documentation of important events | | | | ✓ | | ✓ |
| Register for keeping member applications | | | | ✓ | | ✓ |
| Receipts and Bills record | | | | ✓ | | ✓ |
| Monthly progress report | | | | ✓ | | ✓ |
| File for letters sent | | | | ✓ | | ✓ |
| File for letters received | | | | ✓ | | ✓ |
| Dispatching progress report to WUF and IIMI | | | | ✓ | | ✓ |
| Comments Book | | | | ✓ | | ✓ |
| **Total Rating** | **1** | **1** | **1** | **11** | **1** | **11** |

The comparative look at the performance of the WUO in the management of records shows that the WUO of Sub-system 4 has performed best. The factors favouring best performance are the active facilitation by the respective SO, coupled with the presence of an energetic and enthusiastic WUO leader in this sub-system. In other sub-systems, WUO leaders were relatively listless, and therefore, the initiatives taken by WUO leaders were far less than the WUOs of Sub-system 4.

## 12.11 Management Functions.

The WUOs took initiatives to settle some organizational problems. Such issues were not pervasive in each subsystem. There were examples where such issues were settled by the WUOs. Two examples are quoted here.

*1) Settling no confidence move*

A share holder from Sub-system 1 related to watercourse No.1 moved a no confidence move against a member of the general assembly. He obtained the signatures from some share holders on stamped paper against that member, in order to prove his majority. He produced this list before the body of the WUOs. On March 4, 1997 the WUOs called a meeting to settle this motion. The common water users were also invited. This meeting was also attended by 9 members of the WUO of Sub-system 1. In this meeting, the mover of the motion was asked to show the majority to prove a no confidence motion through the "show of hand". But he failed to show the majority in the meeting; rather, the majority of the participants voted against the mover. Consequently , the no confidence move was rejected by the majority of the participants. This showed that the list of signatures provided by him was fictitious. The motive behind this motion was a personality clash between two shareholder.

*2) Delegation of irrigation management affairs*

The farmers of the tail section of the disrtibutary were consistently deprived of their water turn due to the disorganization of the rotation system. The WUO Executive Body of Sub-system 3 appointed Abdul Majeed (a school teacher) to contact the president of the Water Users' Federation to issue a special *wara* during the third preference of the distributary. Abdul Majeed and Muhammad Akram (a farmer from the tail end) went to the president of the WUF and requested him to contact then XEN to issue a special inflow through the distributary. The WUF president contacted the XEN telephonically and told him that some farmers had consistently missed their water turn because the rotation system was kept haphazardly. At the request of the WUF president, the XEN ordered the issuance of water into the distributary for three consecutive days. The tail end farmers were very satisfied with the WUFs achievement.

# CHAPTER 13

# PERFORMANCE IN MAINTENANCE ACTIVITIES

## 13.1 Maintenance as Performance Indicators

Operations and maintenance (O&M) activities are two main elements of system management because of the evident element of organized behavior. The extent of maintenance resources, and its volume, mobilized (mentioned elsewhere in the report), as well as the quality of maintenance work, is a useful indicator for maintenance works undertaken. In this chapter, the comparative performance of the WUOs, in relation to maintenance activities, has been assessed.

While giving the comparative performance of the farmer-managed and agency-managed irrigation systems, Mehreen Hosian (1993) argues that proper maintenance is a useful indicator with which to measure performance. This chapter evaluates the performance of WUO maintenance activities. This chapter draws heavily from two IIMI-Pakistan research reports, i.e., Numbers R-44 and R-57 (Waheed-uz-Zaman, et. al, 1998) and may be read in this report.

## 13.2. Objectives of Maintenance

The Water Users Federation (WUF) of the Hakra 4-R Distributary undertook a five-day maintenance campaign with technical assistance from IIMI-Pakistan, from January 18 to 22, 1998. The main objectives of the campaign were:

- To repair the damaged banks, berms and service road;
- To put to test WUF credibility among lower tier organizations; and
- To ascertain the extent the WUF could mobilize resources for distributary maintenance.

## 13.3. Extent of Maintenance Activities

The Hakra 4-R Distributary WUF comprises five sub-system level water users organizations (WUOs), each of which participated separately in each day of the maintenance campaign. A total of 794 farmers, their leaders, and 120 tractors, mostly with rear-mounted-scrapers from all five subsystems, indulged in the activity. The sub-system-wise participation of workforce and machinery is given below (See Table 64).

**Table 64. Participation of Farmers and Tractors**

| Item | SS 5 | SS1 | SS4 | SS 2 | SS 3 | Total |
|---|---|---|---|---|---|---|
| Watercourse | 33 | 23 | 15 | 23 | 27 | 123 |
| Participating farmers | 260 | 95 | 117 | 107 | 215 | 794 |
| Tractors | 42 | 10 | 11 | 19 | 38 | 120 |

Maintenance efforts were concentrated in the head reach ranging from RD 0+000 to 46+000, normally more prone to breaches. A total of 93 damaged points, related to banks, berms and the service road, were repaired. The dominant reason for not undertaking maintenance operations in the remaining reaches is because these are either currently being lined, or repair contracts have been awarded through PID. The detailed evaluation of this maintenance campaign is presented in the following sections.

### 13. 4 Maintenance Evaluation Committee

The WUF formed a six-member Evaluation Committee, comprising a watercourse representative from Sub-system 3, Mr. Anwar, as chairman, and five social organizers as members, to assess the performance of each WUO separately. Mr. Anwar had attended maintenance operations on each day to evaluate the work. The participation of IIMI social organizers served a similar purpose.

### 13.5 Indicators for Evaluation

**Indicators for the evaluation of maintenance activities:**

1. Participation by ordinary farmers;
2. Participation by WUA Presidents;
3. Participation by other WUA office bearers;
4. Participation of the machinery (tractors);
5. Discipline during the execution of work;
6. Volume of the work; and
7. Quality of the work;

### 13.6 Definitions of the Indicators

#### 13.6.1. Participation by Ordinary Farmers

*Definition*

This is defined as the attendance with respect to the total number of water users in the subsystem:

- The rating band will be from 1 to 20; and
- Participating sub-systems from distant locations were given extra points ranging from 1 to 3.

#### 13.6.2 Participation by WUA Presidents

*Definition*

This is defined as the attendance by presidents of the watercourse level WUAs with respect to the total WUA presidents in the sub-system.

### 13.6.3 Participation by Other WUA Office Bearers

**Definition**

This is defined as the attendance of all office bearers, excluding presidents of watercourse level WUAs.in the sub-system.

### 13.6.4 Participation of Machinery (Tractors)

*Definition*

Similar to that of the number of participating tractors per watercourse.

### 13.6.5 Discipline During the Execution of Work

*Definition*

Discipline in implementing maintenance activities is defined using three criteria:

- Time observance;
- Effectiveness of supervision; and
- Farmers' compliance to supervisors.

### 13.6.6 Quality of the Work

*Definition*

Compactness and the degree of finished earth work.

### 13.6.7 Volume of the Work

*Definition*

Earthwork completed in cubic feet and the number of stretches repaired.

## 13.7 Rating and Scoring

**Participation by Ordinary Farmers**

Ratings of:

- Low
- Medium
- High

Based on relative evaluation, scoring will be from 1 to12.

Participating sub-systems from distant locations were given extra points ranging from 1 to 3.

**Participation by WUA Presidents**

Based on relative evaluation, scoring will be from 1 to 10.

- Low
- Medium
- High

**Participation by other WUA Office Bearers**

Based on relative rating, scoring will be from 1 to 5.

- Low
- Medium
- High

**Participation of Machinery (tractors)**

Based on relative evaluation, scoring will be from 1 to 15.

- Low
- Medium
- High

**Discipline During the Execution of Work**

Based on evaluation and rating, scoring will be:

- Low
- Medium
- High

A score value of 1 to 8 for each of the following parameters:

- Time observance;
- Effectiveness of supervision; and
- Farmers' compliance to supervisors.

**Quality of the Work**

| Giving the relative weight as: | scoring will be |
|---|---|
| • Low | 6; |

- Medium 12; and
- High 18.

**Volume of the Work**

Giving the relative weight as:

- Low 6;
- Medium 12; and
- High 18.

## 13.8 Implementation and Participation in Maintenance Activities

### 13.8.1 WUO 1

**Reach RD 0+00 to 10+000, Sub-system 1 (Day 2-JAN 19, 1998)**

Farmers assembled directly at Head Ghulab Ali (RD 0+00), the starting point, where the chief guest, Extra Assistant Commissioner, Haroonabad, Mr. Asher Raza, accompanied by the WUF President and IIMI Field Team Leader, inaugurated the day's maintenance activities by removing silt from the distributary bed, by about 11:00 hours. Prior to the inaugural ribbon's formal cutting ceremony, Mian Wahid and Mansoor Shah, the WUF President and the SS 1 WUO General Secretary, respectively, highlighted the benefit of collective action. WUF organizational structure and water-related problems, such as the modification of outlets confronting the Hakra 4-R Distributary water users, was also discussed. A total of 95 farmers participated in the second day's operations.

### 13.8.2 WUO 2

**Reach RD 15+000 to 31+000, Sub-system 2 (Day 4, JAN 21, 1998)**

Repair and maintenance operations at Sub-system 2 included:

- the repair and raising of both banks in selected stretches;
- the repair of a breach point and livestock entry points;
- the repair of the service road; and
- berm cutting.

In addition to site supervision by the WUF President and the IIMI Field Team Leader, the PID SDO and sub-engineer also inspected work. They expressed little satisfaction, criticizing most of the work. A total of 16 points were repaired on this day.

### 13.8.3 WUO 3

**Reach RD 31+000 to 46+000, Sub-system 3 (Day 5-Jan 22, 1998)**

The tractor-trolley procession, led by Mian Wahid and Sufi Iqbal, the WUF President and Secretary of Information, respectively, reached the maintenance site at about 11:00 hours. Ch. Abdul Ghafoor, Chairman of the Federal PM Inspection Team and Member of the National Assembly, inaugurated the maintenance campaign by cutting the inaugural ribbon and removing silt from the distributary bed.

In his inaugural address, the chief guest voiced his strong opposition to the PIDA during the formative days of the participatory movement, expressing his belief that government agencies could not solve the farmers' problems as effectively as WUOs could. Agency staff, he said, is not accountable to farmers, while federation representatives would always remain responsible and accountable to farmers. Furthermore, he said that when a farmer leader became involved in any offense, he would immediately be discredited, while on the other hand, agency staff remained accountable to nobody.

He also assured participants that he would pursue the issue of restructuring the Hakra 4-R WUF responsibilities with the Chief Minister and the Irrigation Minister, Punjab.

Mian Wahid and Sufi Iqbal highlighted the benefits of collective action, the WUF organizational structure and water-related problems confronting water users. The WUF President also tackled the negative role that PID staff played in defaming the WUF unfairly.

A total of 215 farmers with 38 tractors participated in the fifth day's maintenance operations.

### 13.8.4 WUO 4

**Reach RD 10+000 to 15+000, Sub-system 4 (Day 3-Jan 20, 1998)**

RD 5+000 at 1A Minor was the meeting point for farmers of Sub-system 1, where their tractor-trolley maintenance procession, headed by Mian Muhammad Khan Sukhaira and Mr. Fiaz, the WUO President and the Secretary of Information, respectively, set off for the maintenance site at 12:00 hours. Some participants wore clothing items bearing the WUO's logo, and most were dancing to the accompaniment of a drum beater upon arrival at the maintenance site.

The inaugural ceremony took place the moment the procession reached RD 12+600. In his inaugural speech, the Assistant Commissioner, Haroonabad, Mr. Shafi-uz-Zaman, strongly advised farmers to remain united, encouraging the WUF's undertaking of the maintenance campaign, especially as it was devoid of support from the PID.

Mian Wahid, Muhammad Asghar and Fiaz Ahmed, President, General Secretary and Secretary of Information, respectively, addressed farmers about the WUF's performance, the benefits of collective action, the WUF organizational structure and water-related problems confronting the water users of the Hakra 4-R Distributary.
A total of 117 farmers turned up at the inaugural site.

### 13.8.5 WUO 5

**Reach RD 31+000 to 46+000, Sub-system 5 (Day 1-Jan 18, 1998)**

Sub-system 5's farmers gathered near the main vegetable market outside Haroonabad, commencing a tractor-trolley procession headed by Mian Wahid and Sufi Iqbal, WUF President and Secretary of Information, respectively, at about 10:45, and reaching the maintenance site at about 12:30 hours. Mr. Imtiaz Ali Lalika, Member of the Provincial Assembly, inaugurated the campaign at RD 46+000 by removing silt from the distributary bed.

Prior to this, Mian Wahid, Sufi Iqbal and IIMI Field Team Leaders addressed the farmers, highlighting benefits of collective action, the WUF organizational structure and water-related problems confronting the Hakra 4-R Distributary water users. The chief guest promised to pursue the issue of restructuring responsibilities with the Chief Minister. A total of 260 farmers participated in this first day of the maintenance campaign.

Participant details from all five sub-systems are given in Table 64.

## 13.9 The Participation of Water Users in the Maintenance Campaign

Table 65 indicates the performance of the WUOs to mobilize manpower. The WUOs of Sub-systems 2 and 3 rated relatively higher. The reasons for high participation were the personal interests of the WUF president, who is also the General Secretary of the sub-system level WUO. In Sub-system 3, the reason was the door-to-door contact of the sub-system level WUO members for this campaign. The performance of sub-system WUOs was mediocre, and Sub-system 1 remained at the bottom of the ladder. The reason for low participation from Sub-system 1 is the lean personal contact between WUO leaders and lower tier organizations.

**Table 65. Participation Ratings of Water Users in the Maintenance Campaign.**

| Name of the WUO | Total Water Users | Total Participants | Percent of Participation | Relative Rating | Scoring* |
|---|---|---|---|---|---|
| WUO 1 | 697 | 95 | 14 | Low | 7.6 |
| WUO 2 | 315 | 107 | 34 | High | 17.6 |
| WUO 3 | 860 | 215 | 25 | High | 13 |
| WUO 4 | 628 | 117 | 19 | Medium | 8.6 |
| WUO 5 | 929 | 260 | 28 | Medium | 14.3 |
| WUO 4-R | 3429 | 794 | 24 | High | 18 |

* The WUF Evaluation Committee provided scoring up to the fraction, therefore, it is retained as such.

### 13.10 Participation of WUA Presidents in the Maintenance Campaign

Table 66 indicates the performance of the WUOs to mobilize lower tier leadership. The WUOs of Sub-systems 3 and 4 rated relatively higher. The reasons for high participation of the presidents are that there is no apparent bifurcation in the leadership. The performance of Sub-system 5's WUO was mediocre, and Sub-systems 1 and 2 remained at the bottom. The reason for Sub-system 1's low participation is because of the lean personal contact between WUO leaders and lower tier organizations. Personality clashes divided the leadership in Sub-system 2.

**Table 66. Participation Rating for WUA Presidents.**

| Name of the WUO | Total Presidents | No of Presidents participated | Percent of Participation | Relative Rating | Scoring |
|---|---|---|---|---|---|
| WUO 1 | **23** | **10** | **43** | **Low** | **5** |
| WUO 2 | **23** | **8** | **34** | **Low** | **4** |
| WUO 3 | **27** | **24** | **89** | **High** | **9** |
| WUO 4 | **15** | **14** | **93** | **High** | **10** |
| WUO 5 | 33 | 23 | 70 | Medium | 7 |
| WUO 4-R | 121 | | 66 | Medium | 7 |

### 13.11 Participation of Other Office Bearers

Table 67 shows the performance of the WUOs to mobilize office bearers, excluding the presidents among the WUOs. The participation of other office bearers from WUOs of Sub-systems 3, 4 and 5 were relatively higher. The reasons for the high participation of the other office bearers is that there is no apparent bifurcation in the leadership in these three sub-systems. Sub-systems 1 and 2 remained at the bottom once more. The reason for low participation is described in the preceding sections.

**Table 67. Participation Ratings for Other Office Bearers and Those from Ordinary WUs.**

| Name of the WUO | Total other office bearers | Number of participants from other office bearers | Percent of participation | Relative rating | Scoring (1-10) |
|---|---|---|---|---|---|
| WUO SS 1 | **116** | **8** | **7** | **Very Low** | **1** |
| WUO SS 2 | **86** | **9** | **10** | **Very Low** | **1** |
| WUO SS 3 | **133** | **81** | **61** | **High** | **7** |
| WUO SS 4 | **87** | **51** | **59** | **High** | **6** |
| WUO SS 5 | 167 | 103 | 62 | High | 7 |
| WUF 4-R | 589 | 252 | 43 | Medium | 5 |

## 13.12 Participation of Tractors in the Maintenance Campaign

Table 68 betokens the WUO performance to mobilize tractors. The participation of the tractors from the WUOs of Sub-systems 2, 3, and 5 were relatively much higher. The reasons for the high participation of tractors are that the water users in these sub-systems are relatively well-off, and own more tractors, as well as their personal effective requests to members for tractor participation. Sub-system 1 performed consistently low in all parameters of participation, for the same reasons described earlier. Sub-system 2's rating is relatively high, and Sub-system 1's is the lowest.

The reason is that there is no apparent bifurcation in the leadership. Sub-system 5's performance was mediocre, and Sub-systems 1 and 2 remained the lowest. The reason for Sub-system 1's low performance is lean personal contact between WUO leaders and lower tier organizations. Sub-system 2's leadership is divided on personality clashes.

**Table 68. Participation Ratings for Tractors in the Maintenance Campaign.**

| Name of the WUO | Total WCs | Total tractors participated | Percent of tractors w.r.t W/C population | Relative rating | Scoring (1-15) |
|---|---|---|---|---|---|
| WUO 1 | 23 | 10 | 43 | Very Low | 5 |
| WUO 2 | 23 | 19 | 82 | High | 9 |
| WUO 3 | 27 | 38 | 140 | Very High | 14 |
| WUO 4 | 15 | 11 | 73 | High | 8 |
| WUO 5 | 33 | 42 | 127 | Very High | 13 |
| WUO 4-R | 123 | 120 | 97 | High | 10 |

## 13.13 Discipline During the Execution of Work

The maintenance Evaluation Committee also examined the discipline observed during the maintenance operation. They used three criteria to assess discipline, i.e., punctuality, effectiveness of the supervisors, and farmers' compliance to supervisors. The rating is presented in Table 70. The WUOs of Sub-systems 2 and 3 maintained high levels of discipline because participants did not leave the maintenance sites until they were asked to do so. Sub-systems 1 and 4's performances were mediocre. Sub-system 5 was the most undisciplined. WUO leaders could not control anybody. The apparent reason was that the large unmanageable number (260) of participants.

**Table 69. Discipline Ratings Observed during the Maintenance Campaign.**

| Name of the WUO | Punctuality | Effectiveness of the supervisors | Farmers' compliance to supervisors | Total score | Relative rating |
|---|---|---|---|---|---|
| WUO 1 | 4 | 2 | 2 | 8 | Medium |
| WUO 2 | 6 | 6 | 6 | 18 | High |
| WUO 3 | 7 | 5 | 5 | 17 | High |
| WUO 4 | 4 | 2 | 3 | 9 | Medium |
| WUO 5 | 3 | 0 | 1 | 4 | Low |
| WUF 4-R | 5 | 3 | 3 | 11 | |

### 13.14 Quality of Maintenance Work

The maintenance Evaluation Committee also assessed the quality of the maintenance work undertaken. They used two criteria to assess the quality of work, i.e., the compactness and degree of finishing. The rating presented in Table 69 shows that the WUOs of Sub-systems 1, 2, 3, and 4 produced higher levels of quality work, mainly because of the close supervision of the farmer leaders. Sub-system 5 remained in the middle because of the disorganized gathering of participants

**Table 70. Ratings for the Quality of Maintenance Work.**
*(Rating done by WUF Maintenance Evaluation Committee)*

| Name of the WUO | Relative Rating | Scoring |
|---|---|---|
| WUO 1 | High | 14 |
| WUO 2 | High | 18 |
| WUO 3 | High | 17 |
| WUO 4 | High | 14 |
| WUO 5 | Medium | 10 |
| WUO 4-R | High | 15 |

### 13.15 Volume of Maintenance Work

The Maintenance Evaluation Committee also assessed the volume of maintenance work undertaken by each WUO (Annex 1). As for criteria to assess the quality of work, two criteria were used to assess the volume of work, i.e., the number of stretches repaired and the volume of earthwork in cubic feet. The rating presented in Table 71 shows that the WUOs of Sub-system 1, 2, 3, and 4 produced a huge volume of work, mainly because of the close supervision of the farmer leaders. Sub-system 5's performance was mediocre because of the disorganized gathering of participants.

**Table 71. Ratings for the Volume of Maintenance Work.**

| Name of the WUO | Number of stretches repaired | Relative rating | Scoring |
|---|---|---|---|
| WUO SS 1 | 25 | High | 14 |
| WUO SS 2 | 21 | High | 18 |
| WUO SS 3 | 39 | High | 17 |
| WUO SS 4 | 7 | High | 14 |
| WUO SS 5 | 1 | Medium | 10 |
| WUF 4-R | 93 | High | 15 |

### 13.16 Prizes and Awards

The Evaluation Committee intends to use this rating for its internal evaluation, therefore, results was not announced, *per se*. In order to sustain encouragement, however, the committee awarded one prize to each sub-system for its most strong point of participation.

WUO 5: high participation of farmers and tractors;
WUO 1: interest in maintenance activities, as it is commonly believed that headenders are disinterested in maintenance activities at the distributary level;
WUO 4: well-organized maintenance procession;
WUO 2: high quality of work at sites; and
WUO 3: high volume of work.

# CHAPTER 14

# EFFORTS TO INDUCE EQUITY OF IRRIGATION WATER

## 14.1 Definition

After the formation of the WUF, the Water Users Federation of the Hakra 4-R Distributary sent a letter to the Secretary of Irrigation, Punjab Province, highlighting the farming communities' objectives and problems. A main objective described was to ensure equitable water distribution, the basic criterion for creating the WUF, and its sustainability. The objective of the Hakra 4-R Distributary Water Users Federation is to ensure that their due share is received from the Hakra Branch Canal, as well as regulating the equitable water distribution to each sub-system level WUO and among all the watercourse level Water Users Associations. Equity is taken here in its simplest meaning, "fairness", and may be defined *as the proportionate distribution of available quantum of irrigation water along the system and among the water users.*

This is also an important indicator to assess the performance of the WUOs. Their ability to improve water distribution along the distributary has been assessed by recording the measures taken by the WUOs. The WUOs took many steps to ensure equity. The following sections provide only anecdotal evidence from the field regarding the measures taken by WUOs, and their impact on the equity of water distribution.

## 14.2 Measures Taken by the WUOs to Ensure Water Equity

### 14.2.1 Elimination of seasonal pipes

After the formation of the WUOs, the seasonal pipes under the "Reclamation and Grow More" program have been completely eliminated. The survey conducted in August 1998, on the impacts of social interventions on water disputes, shows that there was not even a single case of seasonal pipes being installed, as opposed to, on average, five instances/year in the pre-WUO period. In the sub-system WUO meeting a farmer from the tail end of the distributary complained about short water supplies. In response, the WUF General Secretary took an initiative by announcing that he would not install seasonal pipes in the future. Following the General Secretary's bold step, two other WUO members also made public announcements that they would not install pipes either, so that the tail of the distributary should not suffer. The names of the WUO leaders who chose to refrain from installing the seasonal pipes are as follows (Table 72):

**Table 72. WUF Members Preferring not to Install Seasonal Pipes in Future.**

| S.No | Name of the WUO leader | Sub-system | Designation |
|---|---|---|---|
| 1 | Ch. Muhammad Amin | Sub-system 5 | WUF General Secretary |
| 2 | Naeem Akhtar | Sub-system 5 | WUO Joint Secretary |
| 3 | Javaid Gujjar | Sub-system 5 | WUO |

There were two instances when farmers from the tail end approached the WUO General Secretary to report the installation of unauthorized pipes. The General Secretary accompanied the farmers and removed the pipes from the sites.

### 14.2.2 Preventing outlet tampering

The survey on pre-WUO conditions of outlet alteration shows that there were a total of 163 alterations for 61 outlets during the last ten years. The average alteration interval varies between 3 to 5 years among the altered outlets. The survey revealed that during **all of 1997**, after the formation of WUOs, there was only one case of outlet alteration. The reason was that farmers were determined not to pay the special charges to agency staff after the formation of WUOs.

### 14.2.3 Measures to control water theft

The WUOs took many initiatives to prevent water theft. The following examples illustrate individual, and collective, efforts by WUO leaders to reduce water theft after the formation of WUOs.

- During 1997, about 50 farmers contacted the WUF General Secretary to complain about water theft, through illegal pipes by the farmers of the initial section of the 1-R Minor. The General Secretary himself led the procession and removed all five pipes installed for the purpose of stealing water. Among these water stealers, an influential farmer and neighbor of the General Secretary was not spared, and the pipe he installed was also removed.

- In the closing ceremony of the flow measurement training courses, chaired by the Executive Engineer of the Hakra Branch Canal, the WUF General Secretary pointed out, in the presence of over 132 farmer leaders, the over-sized outlets that were drawing unusually high discharges. He offered the XEN assistance from WUF leadership to reduce the sizes of these outlets.

- A group of about 40 farmers from the tail of Minor 1-R met the WUF President and General Secretary to complain about water theft through pipes. In this context, they highlighted a case of water theft (a pipe installed at the head of the minor), and also denounced WUF office bearers if water theft continued. They even blamed the WUF for supporting water stealers. WUF leaders clarified their position by explaining that they are helping farmers by reducing water theft. Later, the WUF leaders called the SDO, Lining, and the Sub-engineer, Distribution, to their office. In the presence of the farmers WUF leaders asked them to remove the pipe from the site. In the meantime, the WUF President also talked to the XEN, Hakra Division, and apprised them of the situation regarding water theft. As a result of this interaction, the Executive Engineer requested the WUF president to arrange a joint inspection of Minor 1-R to check the cases of water theft.

- During the month of April 1998, Outlets # 16, 17, 17-A and 17-B were tampered with by water users from *Chaks* # 60/4-R and 62/4-R. Tail end farmers informed WUF leaders about this. The WUF president challenged those farmers who had tampered with the outlets, and the department staff. Not a single case was registered against them. The WUF president, however, admonished the farmers responsible for tampering and decided that in the future, the WUF itself would file cases against the culprits. At the request of the WUF president, these outlets were repaired.

- A few days after the decision described in the preceding paragraph, farmers tampered with all four watercourses yet again. The WUF Executive Body called a meeting for presidents of the respective watercourses at its office. They were asked to submit a report on the outlet tampering, in eight days' time, identifying those responsible for tampering. They submitted their reports within the prescribed period. Reports reflected the active_consent of Irrigation Department staff for three of the outlets in an attempt to defame the WUF, and the culprit for the remaining outlet was a farmer. Later, cases was registered against them, and WUF leaders did not help to liberate them from this case.

### 14.2.4 Efforts to feed the tail of the distributary

- Over 50 farmers from the tail section of Sub-system 5 contacted the WUO president to protest against the short water supply. They also pointed out a lining fault between RD 0+00 and RD 6+00, which had reduced the inflow through the head regulator. The WUO president led the farmer-procession to CBC's (contractor's) office. The project manager listened to the compliant, promising that the problem would be rectified.

- Once the WUO president inspected the tail of Sub-system 5 and met with some farmers to familiarize himself with the water supply conditions. Later, he telephoned the IIMI office to inform staff about the short water supply at the tail. He also requested the WUF to arrange a meeting to discuss this condition.

- The WUF president, using his personal transport, visited the tail of the Hakra 4-R Distributary to inspect the water supply condition, and went to surrounding villages in the tail area to listen to farmers' water-related problems, encouraging farmers to contact him for solutions to their problems.

### 14.2.5 Supporting genuine water demands

- The WUF Information Secretary, who resides along a tail watercourse in *Chak* 69/4-R, informed the WUF that a parcel of his land in the watercourse command is relatively higher and that canal water reached this land quite easily. He requested the WUF to install a PTO-pipe for a two-day period in order to irrigate that segment of land. The WUF leaders sought the consent of other tail-end farmers in the WUF meeting. Resultantly, the Information

Secretary installed a pipe for the period requested. ***The main office bearers' request to the WUF for an irrigation supply displays the members' confidence in their organization, and also indicates that the powers entrusted to them are not being abused to meet selfish ends.***

### 14.2.6 Correction of faulty outlets

The WUOs played an important role in correcting the faulty outlets to maintain equity of water distribution. The WUOs undertook formal, and informal, efforts to correct faulty outlets.

- A group of farmers from Sub-system 3 complained that some outlets of the sub-system drew unusually high discharges (e.g. Outlet No. 87640/R), and others, relatively much less. A ten-member committee was formed to identify the faulty outlets. The committee's report identified all the sub-system's defective outlets. On the basis of this report, Sub-system 3's WUO recommended to the Irrigation Department that the outlets be rectified, which it did. Particularly, Outlet No. 87640/R was adjusted according to its due share.

- Outlet No. 19 was drawing little water due to a design fault. The president of the watercourse association submitted an application indicating the fault of the outlets. In response to this application, the WUF president personally contacted the department staff, and at his request, the outlet was corrected.

- Once 1998, the PID Sub-engineer reduced the size of an outlet linked to *Chak* 58/4-R of Sub-system 5. Nearly 15 people contacted Sub-system 5's WUO president to request that the outlet be brought to its original size. The WUO president met the Sub-engineer and conveyed the request of the farmers, and the outlet was restored to its original size.

### 14.2.7 Issuance of water in the rotational closure

- The farmers along the distributary's tail section were consistently being deprived of their water turn due to the disorganization of the rotational system. Sub-system 3's WUO Executive Body appointed Abdul Majeed, a school teacher, to contact the WUF president to issue a special *wara* during the third preference of the distributary. Abdul Majeed and Muhammad Akram (a farmer from the tail end) requested the WUF president to contact the XEN to issue a special inflow to the distributary. The WUF president contacted the XEN telephonically, informing him that some farmers had consistently missed their water turn because the rotation system was haphazardly maintained. At the request of the WUF president, the XEN ordered the issuance of the water into the distributary for three consecutive days. The tail end farmers were very happy about the WUF's achievement. Besides, many farmers have been contacting different members of the WUF executive body to request additional water rotations. The detail is as follows:

- The WUF General Secretary reported that a total of 50 farmers have requested additional water during the rotational closure over the last year. These farmers were mostly from the tail end of the distributary. The General Secretary approached the Executive Engineer to convey the farmers' request. There were two occasions when the General Secretary's requests for additional water were entertained.

### 14.2.8 Introduction of regulation at the transfer points

- During the month of August 1997, these areas received high rainfall. The farmers from the tail of Minor 1-R contacted the PID to inform them that they did not need water, and requested that the distributary be closed. The tail end farmers of the Hakra 4-R Distributary, however, were in need of water, and asked the WUF leaders to provide that water to the tail section. In view of the "demand" along the Hakra 4-R Distributary and "no demand" along Minor 1-R, the WUF president requested PID officials to place *karries in Minor 1-R's head regulator. The WUO leaders placed karries* in the head regulator in the presence of the tail farmers to feed the tail of the Hakra 4-R Distributary for three days. This was the first time that regulation, using *karries*, was effected at this structure. The tail end farmers were very happy with this arrangement.

- In the WUF meeting held in November 1997, Sub-system 4's WUO members submitted an application to the WUF indicating the scarcity of water at the tail end, and demanded more water. Based on their network of information, they also mentioned that there was no need for water at the tail of the main distributary. They suggested that regulation could be effected at drop structure RD 25+200 to feed Sub-system 4's upstream head regulator. The WUF accepted the request and decided that the *karries* should be placed in the drop structure. Following the WUF's decision, the regulation of *karries* was a first at this structure.

### 14.2.9 Adjustment of *warabandi* cases at the WUF's recommendation

- Since its formation, not many cases have been referred to the WUF. There was only one such case from Sub-system 4 related to adjusting the CCA between two farmers. The case was referred for the WUF's recommendation to adjust the *warabandi.*

### 14.2.10 Monitoring daily water levels at strategic locations

- The flow measurement training aimed at imparting the necessary training to leaders of each of the five water users organizations, so that they can monitor the water supply received from the Hakra Branch Canal themselves, as well as regulate the distribution of their water supply to each WUA.

1. 95 Percent of the farmer leaders were able to measure water levels with a staff gauge and convert these readings into a discharge using the discharge table accurately.

2. The farmers express that after gaining flow measurement knowledge, they have more confidence to interact with the Irrigation Department staff, especially on the issues related to water supplies.

After this training, the farmers started recording daily staff gauges regularly. The locations monitored by the farmers each day are (Table 73):

**Table 73. Location Monitored by WUO for Water Supply Data.**

| S. No | Location | Monitored by | Comments |
|---|---|---|---|
| 1 | RD 46+100 | WUA member | |
| 2 | Tail 4-R Disty | Hamid Bajwa, WUF member | Monitored WM at RD |
| 3 | Tail 1-RA Minor | WUO member | |

### 14.2.11 Repairing and monitoring potential breach points

- During the last week of July 1998, the distributary was breached in the tail reach, which Irrigation Department staff could not control. The water had been seeping through the breach for two consecutive days. Later, Sub-system 3's WUO contacted the staff of the China Beijing Company (CBC), the distributary's lining contractors, requesting them to provide an excavator to repair the breach. The CBC staff filled the breach at the request of the WUO.

  1) Improved interaction among different tiers of the organization for water supplies;
  2) Effective negotiations with department staff for the improvement of rotational irrigation system;
  3) Monitoring potential breach points of diversion channels during improvement works; and
  4) Repair and maintenance of weak points to improve the water supplies.

# CHAPTER 15

# CONFLICT MANAGEMENT

## 15.1 General

One of the chief benefits of collective action to the water users is the timely and efficient resolution of disputes. Disputes related to land and water are ingrained into the irrigated-agriculture environment of Pakistan. These two areas are the most sensitive areas where disputes occur. A Punjabi proverb translates literally into:

*" woman, money and land are causes of agonies"*

Among these three disputes the land disputes are very common and are inextricably linked with the water disputes. These disputes usually result in long litigation, waste of money and sometimes even result in slaying and killing of parties involved. The ability to resolve disputes locally is a valuable indicator of WUO performance, because settling them without the involvement of legal authorities is very cost-effective and time saving.

The long term effects of the WUF's ultimate objective is to improve agriculture productivity. Improved equity and changed cropping patterns can only be assessed after responsibilities have been transferred to the WUF. However, the pre-take-over is already witnessing the WUOs in action, as short term impacts, like that of resolving disputes relating to land and water, organizational and family are being achieved.

## 15.2 Rating Criteria

The ability to settle disputes can be gauged by using four main parameters of dispute resolution.

- *Occurrence of disputes*: Number of disputes among the WUOs.
- *Disputes referred to WUOs*: Ratio of disputes referred to WUO and police or to the court of the Executive Engineer will show the water users' confidence in the organization.
- *Disputes referred to WUOs but unresolved/resolved*: This will show the adjudication power of the leaders.
- *Acceptability of the decisions by the parties*: This will show the water users' degree of confidence in the WUOs.

## 15.3 Scoring

The comparative performance of the WUOs in dispute resolution will be evaluated using the following criteria for performance rating:

The performance rating of WUOs is done by assigning a relative weight to each element.

- The rating will be "0" if the dispute is referred to the police.
- The rating will be "5" if the dispute is referred to the WUOs and remained unresolved.
- The rating will be "10" if the dispute is referred to the WUOs and is resolved.

The water users organization did not form any special permanent committee or appointed an adjudicator to resolve the disputes. The disputes in different sub-systems occurred varying degrees, and approach and strategy to resolve these disputes also differs among the sub-systems. The WUOs, primarily, were supposed to address the land and water disputes only. They have, however, proved so effective that the farming community started referring family, political and social disputes to the WUOs.

Several examples, where the Hakra 4-R Distributary WUF successfully resolved disputes, are narrated here.

These outcomes epitomize the WUF's ability to settle disputes locally. The traditional judicial system is highly time-consuming and bothersome. In contrast, this ends in harmony and unanimity, which could result in further conflicts and enmities otherwise.

### 15.4 Resolution of Irrigation and Land related Disputes

### WUO-3

In order to feed his upstream outlet, a farmer from Watercourse 105-R blocked the distributary with tree branches at RD 107 on August 5, 1997, when the distributary was at low flow. A downstream farmer, noticing the reduced water supply, sent his two boys to remove the blockage. The farmer guilty of the offense came across the boys thus disposed, and started beating them, snatching their bicycle in the process.

The dispute was referred to the WUF, and a total of 47 farmers formed the *panchayat* called at the WUF president's residence. After hearing both parties, the president declared the offender guilty of blocking the distributary, beating the children and snatching their bicycle. At one stage it seemed the *panchayat* would need to be adjourned due to the stubborn behavior of the offending party. The offender passed the sarcastic remarks about the aggrieved party. Anwar Khan, president from a watercourse level association, stood up and intervened by snubbing the offender and brought the *panchayat's* presence to his attention.

In compliance with the WUF's decision, and in the presence of the *panchayat*, he apologized to the aggrieved farmer. The WUF has also proposed a fine of Rs 5,000 for similar offenses in future.

**WUO-4**

Another dispute in the XEN court, which remained unresolved for over six months, has been settled by the WUO:

A head reach shareholder from Sub-system 4 solicited an additional water turn from the PID, which another farmer claimed was actually his right. The case remained unresolved for several months, and was eventually referred to the WUO. The WUO executive body requested each litigant to provide two adjudicators of their choice, as well as a written statement binding them to comply with the jury's decision. Both parties provided two adjudicators nominating Muhammad Khan, the president of the WUOs as the chairman of the adjudication committee. The chairman was given the authority to take decisions after hearing. The jury, after hearing the case, decided that the water turn in question belonged to a third person, and not to either of the litigants. Accordingly, the water turn was allotted to the third person, and accepted by the disputing farmers.

**WUO-5**

Besides the water disputes, the WUO leaders were approached to settle non-water disputes. For example:

There was a breach in the diversion channel near Chak number 64/4-R. The CBC staff (a contractor company for Distributary Lining) filed a case of "deliberate cut" against two farmers. The CBC staff captured the farmers and handed over them to the police. The farmers of the village approached the WUF to settle the dispute. The WUF president and the General Secretary invited both parties to the WUF office. They asked farmers to provide an explanation about the allegation, in the presence of CBC staff. Both farmers were found innocent. The President and the General Secretary, then went to the police station to favor the farmers and the case was abandoned at their request.

A watercourse from the tail section of the distributary was dismantled in connection with lining work. The CBC staff approved the installation of a temporary pipe to irrigate the watercourse command. The CBC staff, however, did not officially provide the pipe for this installation. A farmer purchased a pipe at his personal expense to install it at the head of the watercourse. The other shareholders of this watercourse did not contribute towards the cost of this pipe. The farmer who purchased this pipe insisted on contributions from others, and threatened not to install the pipe if they did not contribute. This resulted in a dispute, which was referred to the WUF General Secretary. Both parties (contributor and non-contributors) were asked to appear at the WUF office. The General Secretary tried to settle this issue by requesting non-contributors to contribute towards cost of the pipe. After a long debate they still did not agree. At last, the General Secretary paid their shares from his own pocket. This worked effectively to end the dispute. Those who had not contributed felt guilty and returned the money to the General Secretary. Thus, the dispute was peacefully settled.



Next >>

In Sub-system 3, a cut was made in a watercourse in the tail cluster, which resulted in a big breach. The farmers whose lands were affected by this breach closed the outlet in protest, until the culprits were identified and punished. This watercourse also feeds the drinking water pond of the nearby village. The closure of the watercourse resulted in complete depletion water in the drinking water pond. A group of farmers wanted to feed the drinking pond by opening the outlet, but the other group did not agree. The first group took this case to the WUF. Both parties were called to the WUF office. The WUF talked to both parties and the dispute was settled agreeing on reopening of the outlet.

Two farmers of *Chak* Number 64/4-R disputed straightening ridges on their lands. The case was referred to the Information Secretary of the WUF. He summoned the *patwari* in the village and both parties involved. At his request, the *patwari* settled the dispute by demarcating their ridges.

In Sub-system 4, Muhammad Ismaeel, a farmer, disputed the watercourse filling time, along with other share holders. The share holder of the watercourse provided him 15 minutes to fill the watercourse at his turn. But, he thought he had 20 minutes as he was paying Rs. 1500 and Rs. 2000 for the extra 5 minutes to the patwari and sub-engineer, respectively. The other share holders moved a court stay order, for which they paid Rs. 5000. Ismaeel still insists on getting five minutes extra. He has now referred this dispute to the WUF. The president of the WUF has appointed two adjudicators from the same sub-system to resolve this conflict. These adjudicators are also WUF members. They will now settle this dispute.

During the lining work of Minor 1R-A, a dispute between the lining staff and farmers arose. As a result, two farmers produced a court stay order ordering that lining work be stopped. On February 18, 1998, the lining staff approached the WUO Secretary of Information of Sub-system 4, to reconcile themselves with these farmers. The Secretary of Information met both groups and requested them to avoid creating hindrances to the lining work. His request resulted in the withdrawal of the stay order, and lining work along this minor continued.

## 15.5 Organizational Disputes resolved by the WUOs

- During the formalization process of the watercourse level WUAs at *Chak* No.69/4-R, a serious controversy about the selection of office bearers erupted. This *chak* is along Sub-system 3, of which the Information Secretary is a member. The opposing faction had links with the WUF General Secretary, who is a member of Sub-system 5. The Information Secretary requested the General Secretary to contact those farmers to seek a resolution to the controversy. The General Secretary contacted the opposing faction, his friends, requesting their cooperation. Upon this request, the WUA was amicably formalized.

- At the initial formation phase, a faction of the water users from *Chak* 57/4-R opposed the formation of a WUA along one of its watercourse. They did not sign up as WUA members. In general, they opposed the implementation of project activities. During

the WUA formalization phase (2nd phase), the General Secretary encouraged and motivated them to become WUA members. This faction now also uses the services of the WUF General Secretary to solve their problems.

### 15.6 Family Disputes Resolved by the WUOs

In Sub-system 5, a farmer from chak number **54/4-R** wanted to marry his son, but the girl's family, who lived in another village, demanded a very high **dowry.** The boy's family was not in agreement, which caused tension between these two families. The dispute was referred to Rashid Gill, a member of the WUF, who himself went to the parents of the girl, accompanied by the boy's father. Both parties settled the issue in the presence of Rashid Gill. The girl's family agreed on a small dowry.

> On January 1, 1997, a farmer from Sub-system 4 contacted the Secretary of Information, informing that he had had some differences with his wife who had gone to her parents' home in a fit of anger. At one stage, their misunderstanding and alienation went to an extent that threatened their union, as reported by the Information Secretary. As her parents reside along Sub-system 1, the farmer requested that the Secretary of Information ask the WUF Vice President, also resident along Sub-system 1, to mediate. The Secretary of Information wrote a letter to the WUF Vice President on WUO letter headed paper, requesting help to return the farmer's wife. The WUF Vice President met the farmer's wife's parents, and the result was that they returned her to her husband.

Besides these, five minor quarrelling disputes from Chak Number 54-/R were referred to Rashid Gill. All five cases were amicably resolved by him. None of these cases were referred to the police.

### 15.7 Summary on the Status of Disputes

All the disputes emerged from Sub-systems 3, 4 and 5. No disputes were reported from the Sub-system 1 and 2. The examples of dispute resolution indicate that WUOs handle a variety of disputes. Broadly speaking, covers irrigation, land, improvement works, organizational and family-related disputes. Mainly disputes occur among farmers. However, there have been cases when disputes arose between farmers and department staff. The disputes were referred to the WUF apex body as well as the sub-system level WUOs and some individual WUF members. All the disputes referred were settled by the WUOs, except one for which a decision is still awaited. While resolving disputes, the WUOs created formal bodies and procedures and norms to resolve the disputes, such as the formation of a *punchyat* and establishing adjudication committees. Disputes were also settled through WUO executive bodies, and in some cases, using the influence of positions and titles. A summary on the status of dispute resolution by the WUOs is given in Table 74. ***Due to the complexity of the information on disputes, the WUOs are not provided with relative ratings and scorings.***

**Table 74. Summary on the Status of Dispute Resolution**

| Name of the WUO | Nature of the Dispute | Parties Involved | Referred to | Status | Salient feature of resolution |
|---|---|---|---|---|---|
| WUO-1 | 0 | 0 | 0 | 0 | |
| WUO-2 | 0 | 0 | 0 | 0 | |
| WUO-3 | Water theft | Farmers-Farmers | WUF | Settled | Formation of *punchayat* - 40 farmers attended |
| | Alignment of ridges | Farmers-Farmers | WUO | Settled | Settled through WUO Leaders and Patwari |
| | Selection of WUA office bearers | Farmers-Farmers | WUO | Settled | Settled through WUO General Secretary |
| WUO-4 | Infringe on water turn | Farmers-Farmers | WUO | Settled | Settled through five-member adjudication committee |
| | Route of Minor for Lining | Farmers-department staff | WUO | Settled | Settled by WUO leaders beside stay-order from the court |
| | Infringe on water turn | Farmers-Farmers | WUF | Pending | Two-member Committee Formed |
| | Marriage dispute | Farmers-Farmers | WUO | Settled | Settled through representatives of two WUOs (1 and 4) |
| WUO-5 | Water theft | Farmers-department staff | WUO | Settled | Settled by WUO executive body members |
| | Contribution for pipe for installation of temporary outlet | Farmers-Farmers | WUF | Settled | Settled by WUF-Executive body |
| | Selection of WUA office bearers | Farmers-Farmers | WUO | Settled | Settled through WUO General Secretary |
| | Marriage dispute | Farmers-Farmers | WUF Member | Settled | Settled through WUF Member |

The preceding discussion shows the status of types, extents, modes and management of community conflicts under the WUOs.

***Types***: The disputes submitted to WUOs for arbitration by the water users can broadly be classified into five broader types: irrigation, improvement works, land, organizational and family. More specifically, they cover the disputes between upstream and downstream farmers on the theft of distributary water, infringed water turns, minor's lining route, alignment of ridges, contribution of irrigation related funds, selection of office bearers at watercourse level and between wife and husband.

***Extents***: There was a large variation in the extents of occurrence. No dispute was referred from the W UOs of Sub-systems 1 and 2. All the disputes were referred from the WUOs of Sub-systems 3, 4 and 5.

***Modes***: Inter-member disputes were frequent among the WUAs. There were, however, cases when the disputes were between the members of two different WUAs, and among the farmers and department staff.

***Management:*** Of the 12 disputes referred to the WUOs, 11 were settled successfully under the management of WUOs, and one decision is still pending. Among these, 8 were referred to the sub-system level WUOs and 4 to the apex body (distributary level WUF). The disputes were settled through the formation of a *panchayat*, creating arbitration committees comprising of 2-5 members, and collectively and individually by the members of executive bodies of the WUOs.

# CHAPTER 16

## FINAL PERFORMANCE RATING

In this chapter all the indicators and their related parameters are listed in the sequential order in which they occurred in the preceding chapters. The parameters under each indicator and their corresponding score values are picked up from the tables of previous chapters.

This is important to note here that scoring is done using relative performance criteria, instead of using any reference criteria. For example, the participation in all the WUO meetings may be higher in absolute terms, but relatively speaking, some are regarded with low, some medium and high ratings.

Also to note is that the acronym "NA" in the boxes of the table stands for "**Not Applicable**" either, for non-availability of information or because the information and data have not been quantified due to the complexity of the information. For the activities that were under sub-system WUO but were facilitated by the WUF, the accumulative average of scoring of WUOs provides the performance rating of WUO-4R. Table 75.

**Table 75. Summary of WUO Performance Indicators and their Related Parameters with Corresponding Values of Relative Scoring.**

| S. No | Indicators/ Parameters | WUO-1 | WUO-2 | WUO-3 | WUO-4 | WUO-5 | WUO 4R |
|---|---|---|---|---|---|---|---|
| A | **Regularity** | | | | | | |
| 1 | Average absolute spread from the mean interval among meetings | 3 | 3 | 3 | 3 | 3 | 3 |
| 2 | Duration of meetings; deviations from planned times | 1 | 2 | 2 | 1 | 2 | 2 |
| 3 | Observance of timings | NA | NA | NA | NA | NA | NA |
| 4 | Follow-up of agenda items | 25 | 10 | 30 | 70 | 20 | 13 |
| B | **Frequency of Meetings** | | | | | | |
| 5 | Average interval between the meetings | 2 | 1 | 2 | 3 | 2 | 3 |
| C | **Participation in Meetings** | | | | | | |
| 6 | Attendance by members and invited non-members. | 1 | 1 | 2 | 3 | 3 | 2 |
| 7 | Participation by ordinary farmers | 2 | 1 | 2 | 1 | 3 | 3 |
| 8 | Participation in terms of active involvement in discussions during the meetings | 3 | 1 | 2 | 3 | 2 | 3 |
| 9 | Participation by the quality of discussion content | N/A | N/A | N/A | N/A | N/A | N/A |
| 10 | **Number of deadbeats** | 1 | 1 | 1 | 2 | 3 | 3 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **D** | **Enactment and Adherence to WUO Rules and Regulations** | | | | | | |
| 11 | Number of elements of those rules enacted | 6 | 5 | 4 | 7 | 7 | 13 |
| 12 | Enacting rules within the prescribed time frame | N/A | N/A | N/A | N/A | N/A | N/A |
| 13 | Degree of adherence to rules | 35 | 18 | 17 | 9 | 12 | 11 |
| **E** | **Decision-making** | | | | | | |
| 14 | The number of decisions taken by the WUOs | 6 | 4 | 10 | 23 | 14 | 36 |
| 15 | The degree of consensus on the decisions among WUO members | N/A | N/A | N/A | N/A | N/A | N/A |
| 16 | Subsequent action taken on decisions | 7 | 4 | 11 | 64 | 14 | 96 |
| **F** | **Punitive measures** | | | | | | |
| 17 | Number of elements of punitive rules formulated | 2 | 2 | 2 | 2 | 5 | 5 |
| 18 | Number of instances members were penalized | 2 | 1 | 0 | 1 | 1 | 5 |
| 19 | Number of the members who complied with punitive actions | 2 | 1 | 0 | 1 | 1 | 5 |
| **G** | **Resource Mobilization** | | | | | | |
| | **1. Mobilization of Funds** | | | | | | |
| | ***a) Mobilization of General Funds*** | | | | | | |
| 20 | Percent of contributors (members) | 2 | 2 | 3 | 2 | 3 | 2 |
| 21 | Average amount contributed per member | 2 | 1 | 3 | 3 | 2 | 2 |
| | ***b) Mobilization of Contingency Funds*** | | | | | | |
| 22 | Percent of contributors (members) | 1 | 1 | 1 | 3 | 2 | 1 |
| 23 | Average amount contributed per member | 3 | 3 | 3 | 3 | 3 | 3 |
| | ***2. Mobilization of Manpower*** | | | | | | |
| 24 | Participation of common water users in the maintenance campaign | 1 | 3 | 2 | 1 | 3 | 2 |
| | ***3. Mobilization of Tools*** | | | | | | |
| | a). Mobilization of Machinery | | | | | | |
| 25 | Participation of tractors for the maintenance campaign | 1 | 2 | 3 | 2 | 3 | 2 |
| | ***b). Mobilization of Equipment*** | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 26 | Mobilization of spades in the maintenance campaign | 3 | 3 | 2 | 1 | 1 | 2 |
| 27 | Number of cultivators mobilized in the maintenance campaign | 2 | 3 | 3 | 1 | 1 | 2 |
| 28 | Mobilization of trolleys in the maintenance campaign | 1 | 2 | 3 | 2 | 3 | 2 |
| 29 | Mobilization of front-mounted scrapers in the maintenance campaign | 1 | 3 | 3 | 1 | 1 | 2 |
| 30 | Mobilization of rear-mounted scrapers in the maintenance campaign | 1 | 3 | 3 | 3 | 3 | 2 |
| 31 | Participation of volunteer transport in flow measurement activities | 1 | 3 | 3 | 2 | 3 | 2 |
| | ***4. Mobilization of Knowledge*** | | | | | | |
| 32 | Lectures delivered by WUO leaders | 1 | 1 | 3 | 1 | 2 | N/A |
| | 5. Mobilization of Networking | | | | | | |
| **H** | **Organizational Development Activities** | | | | | | |
| 33 | Nomination of WUO member for the WUF executive body | 5 | 5 | 5 | 5 | 5 | 3 |
| 34 | Restructuring of watercourse level WUAs | 5 | 5 | 5 | 5 | 5 | |
| 35 | Addition of joint secretaries in the executive bodies of sub-system level WUOs | 5 | 0 | 0 | 5 | 5 | 0 |
| 36 | Formation of sub-committees | 7 | 1 | 6 | 6 | 10 | 25 |
| 37 | Number of collective meetings with ID staff | 0 | 0 | 8 | 5 | 10 | 6 |
| 38 | Number of individual meetings with ID staff | 1 | 1 | 4 | 2 | 4 | 5 |
| 39 | Number of contacts with private organizations by the executive body of the WUOs | 0 | 0 | 7 | 4 | 20 | 6 |
| 40 | Number of contacts with private organizations through individual meetings | 2 | 15 | 2 | 3 | 4 | 6 |
| | ***Record Keeping*** | | | | | | |
| 42 | Proceedings register | 1 | 1 | 1 | 1 | 1 | 1 |
| 43 | Ledger | 0 | 0 | 0 | 1 | 0 | 1 |
| 44 | Cash book | 0 | 0 | 0 | 1 | 0 | 1 |
| 45 | Notebook to document important events | 0 | 0 | 0 | 1 | 0 | 1 |
| 46 | Register for membership applications | 0 | 0 | 0 | 1 | 0 | 1 |
| 47 | Receipts and bills record | 0 | 0 | 0 | 1 | 0 | 1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 48 | File for letters sent | 0 | 0 | 0 | 1 | 0 | 1 |
| 49 | File for letters received | 0 | 0 | 0 | 1 | 0 | 1 |
| 50 | Monthly progress report | 0 | 0 | 0 | 1 | 0 | 1 |
| 51 | Comments book | 0 | 0 | 0 | 1 | 0 | 1 |
| 52 | Dispatch of progress report and comments book to the WUF and IIMI | 0 | 0 | 0 | 1 | | 1 |
| 53 | Management functions | NA | NA | NA | NA | NA | NA |
| I | **Maintenance Activities** | | | | | | |
| 54 | Participation of water users (WUF's maintenance committee rating) | 8 | 18 | 13 | 9 | 14 | 18 |
| 55 | Participation by WUA presidents | 5 | 4 | 9 | 10 | 7 | 7 |
| 56 | Participation by other office bearers | 1 | 1 | 7 | 6 | 7 | 5 |
| 57 | Participation of tractors (WUF's maintenance committee rating) | 5 | 9 | 14 | 8 | 13 | 10 |
| 58 | Discipline in the execution of work | 8 | 18 | 17 | 9 | 4 | 11 |
| 59 | Quality of work | 14 | 18 | 17 | 14 | 10 | 15 |
| 60 | Volume of work | 14 | 18 | 17 | 14 | 10 | 15 |
| J 61) | **Ensuring Equitable Water Distribution** | NA | NA | NA | NA | NA | NA |
| K 62) | **Resolution of Disputes** | NA | NA | NA | NA | NA | NA |
| | Total Rating | 204 | 204 | 260 | 349 | 256 | 379 |

# CHAPTER 17

## CONCLUSIONS AND RECOMMENDATIONS

The performance assessment of the water users' organizations (WUOs) as volunteer organizations at the WUO pilot projects is vital to Pakistan, given the country's initiative to introduce a legal framework to ratify these WUOs as legal entities. The chief aim of this research was to develop normative indicators to assess WUOs' performance as volunteer organizations. The second objective was to delineate the potential activities for which the performance of an organization can be assessed. The third objective was to test the defined performance indicators in the local environment; and consequently, to assess the pre-takeover performance of pilot WUOs along the Hakra 4-R Distributary. This research has been successful in achieving these objectives.

Researchers in the field of irrigation management agree that a universal yardstick to measure the performance of a user-managed system does not exist. Every system has some special features and requires system-specific indicators for performance assessment. Therefore, to meet the first and third objectives of this research effort, the following 11 indicators were developed, defined and successfully tested in a local environment using a quantitative approach.

- Regularity of the WUO meetings
- Frequency of WUO meetings
- Participation in the WUO meetings
- Adherence to WUO rules
- Decision-making
- Punitive measures
- Resource mobilization
- Organizational development activities
- Performance in maintenance activities
- Efforts to induce equity in irrigation water
- Conflict Management

The report has also pursued defining 62 socio-organizational parameters related to these indicators that have made it possible to examine the pilot project at the Hakra 4-R Distributary through the performance assessment of WUOs. Furthermore, there is some room for improvement as to what might constitute more suitable and additional parameters of various performance indicators. The report has evaluated the performance of six WUOs. Of the six, five are sub-system level WUOs, which form the apex body of the 121 watercourse level associations (WUAs). Three WUOs are almost equal in size. Of the other two, one is relatively bigger and the other, relatively smaller, and each comprises between 15 and 33 WUAs. The WUF, which is the federated body of these five sub-system level WUOs, is also evaluated as the sixth WUO. Most of the indicators and its related parameters were applicable to both WUO tiers (all six WUOs). These indicators are of paramount importance for the organizational viability of the WUOs. Some

activities, which were very massive and are attributive to the impact of performance, such as the maintenance campaign, were an amalgamation of the lower tier organizations. In such cases, the cumulative rating of the sub-system level WUOs has been considered as WUF performance.

The research has found a marked difference in the performance of WUOs when tested using these indicators. The study determined a close relationship among the indicators of regularity, frequency and participation. Similarly, a relation among the indicators of adherence to WUO rules, decision-making and punitive measures, also exists. Furthermore, activities under organizational development, resource mobilization, maintenance activities and ensuring equitable water distribution are interrelated.

Besides these strides in performance, the WUOs are evolving into a state of atrophy for which other reasons exist. Organizational atrophy varies from one WUO to another.

**WUO-1:** The two main leaders of the WUO have distanced themselves from ordinary farmers. One lacks all necessary social skills to penetrate the community. The other is an employee of a basic health unit and cannot spare time for organizational activities.

**WUO-2:** The president of this WUO has been/is an accredited local body leader. At the sub-system level WUO, he represents a significant number of watercourses and is a member of a *biradari*. But, he has completely secluded himself from the organizational affairs of the WUO and WUF. The reason for his isolation is fundamentally an embedded personality clash with the WUO general secretary, who is also the president of the distributary level WUF. This personality clash is a result of the benefits that WUF office bearers (both political and material, i.e., the local bodies selection of the president and the information secretary as the members of the district council, and their trip abroad) avail as federation members. Lower tier organizational leaders do not have access to these benefits. This has created a sense of competition for positions in the WUOs, and this might characterize the scene of organizational structure in the foreseeable future.

**WUO-3:** One main office bearer of this WUO has confined himself to sub-system level interests. His formal representation in the distributary WUF, and his biased affiliation with sub-system WUO affairs has caused both tiers to become interest-conflicting personalities.

**WUO-4:** Participation in the meetings, social cohesion ability to undertake management decisions by the organization is very high. But the organization is most of the time is lead by one person (joint Secretary). This is because of the promotion of friendship by IIMI SO. The information-cum-joint secretary of this WUO leads and controls all organizational matters. Besides, there are lot of willing workers who want to participate in organizational activities. But the streaky friendship of SO toward a one office bearers turned the performance of this WUO as a one-man performance. This office bearers is a school teacher. Some of the other office bearers are trying to give him a hard time by filing complaints to the government for his absence from the school. These complaints covers the days when he was discharging organization duties at the cost of school duties. The lesson learned is that SOs should remain impartial towards the WUOs members.

Moreover, the two main leaders from this sub-system, the WUO president and information secretary, after WUF, representing this WUO, are withered, infirm and old. Their physical inability mismatches their WUO positions.

**WUO-5:** One main office bearer of this WUO is motivated by publicity and vainglory. This observation is based on the assessment of his behavior at occasions when leaders were required to speak publicly, and his reaction when his photograph was not published in some project documents. While this report was being finalized, he went to the UK for six months, leaving the WUO orphaned. Another main office bearer is a defaulter of government loans and is now absconding. For over eight months he has not been able to participate in WUO activities publicly, and cannot do so until government repayment is settled.

**WUO-4-R:** The WUF 4-R is, by nature, an oligarchy. Of the five office bearers, two actively participate in all activities. Predominantly, the president and the general secretary control affairs. They have close contacts at the grassroots level. The information secretary's role has been noted earlier. The other two office bearers, although they attend meetings, rarely participate in discussions. This proves the water user's ability to select right person for the right positions.

The overall contributing factor to this atrophy is that with all the organizational activities, the role of the IIMI Social Organizational Field Team has been that of cartographers rather than catalysts.

The expectation is that WUO performance can improve if by-laws support for the replacement of the deadbeats in its executive body. The IIMI social organizers should remain present to play the roles of catalysts to improve the performance of the WUOs. The need is to facilitate water users not to elect such deadbeats in future, considering their present performance.

The WUOs took initiatives to redesign WUA organizational structures. The reason was because formalization of these associations was a legal need. The leaders, however, did not take any steps to replace these deadbeats in the WUO executive bodies. Had there been WUO by-laws permitting the replacement of non-functional office bearers from executive bodies, organizational functioning modalities would have been very different.

The analysis shows that likeness in performance parameters among the WUOs is rare. The differences are, however, great, both of degree and kind. In some areas of performance such as dispute resolution, the WUO performances are strikingly different. The following examples illustrate this.

The water users submitted their disputes to different WUOs for arbitration. After confirming the admissibility, some WUOs constituted formal juries to establish jurisdictional powers. For example, an unsettled dispute in the court of the Executive Engineer was referred to the WUO. The WUO formed an arbitration committee. The committee required that parties involved should sign an undertaking preventing them from

appealing to the court of law against the decision of the arbitration committee. This exhibits the effectiveness of the WUO when handing disputes, and it also demonstrates the degree of confidence that members have in their organization.

Another illustration is that of the WUO-4 managing conflicts related to irrigation, improvement work, family, etc.. However, there are two WUOs (1&2) that have not submitted a dispute to them yet, it is quite possible that no dispute has emerged among the members of these WUOs. If emerged but were not referred to, due the socio-cultural behavior, circumstances, magnitude of disputes and the degree of trust that members have on their organization.

The resolutions of major water disputes referred to the WUOs through the formation of a *punchayat,* and subsequent acceptance of the decision by the parties involved, shows the effectiveness of *punchayat* decisions. This also betokens that the old norms, customs and traditions are still valid, and a need to return to the tradition-bound institution for brisk, cost-effective and efficient conflict management still exists.

Overall, the performance of the WUOs is not very encouraging in organizational specific indicators such as frequency, regularity, participation in WUO meetings, adherence to WUO rules, decision-making and punitive measures. Relatively speaking, however, the grade of the performance of the six WUOs varies from unsatisfactory to good. The reasons for the lack of performance in the organizational specific indicators, for example, no initiatives to develop a code of conduct, etc. are because there are no incentives, what the WUOs lack capacity for.

The WUO performance in socio-technical-related aspects was, however, notable. The WUOs made a hauling success when mobilizing manpower and tools, i.e., 796 farmers and 120 tractors for the five-day maintenance campaign undertaken on a self-help basis during the 1997-98 annual canal closure. The mobilization of resources related to knowledge, funds and networking was also commendable. The initiative to design the organizational structure, such as the formation of sub-committees with specific responsibilities, was very good. The steps taken to improve the equity were also noteworthy.

After critically reviewing the performance using these indicators, and with regard to the second objective (delineation of activities) of this research effort, the following activities are proposed for the WUOs. The proposed activities, if undertaken, would, it is hoped, help WUOs to remain functional, and deadbeats moving.

- Developing by-laws as a number one priority to address sensitive organizational issues, such as no confidence moves, resignations, etc..

- Replacing non-functional main office bearers to keep the executive bodies dynamic and alive.

- Increasing liaison between WUO leaders and the grassroots through street-corner meetings to build a sense of being "among them".

- Improving the communication network with the ordinary members through letters to convey upper-forum decisions.

- Introducing the concept of equal and compulsory fund contributions to systemize resource mobilization in fund raising.

- Maintaining offices for each WUO to entertain ordinary farmers on a daily basis.

- Allocating compulsory office attendance for WUO executive body members to listen to the problems of the farmers.

- Organizing capacity building training to reinforce flow measurement, irrigation practices, financial, organizational and resource mobilization aspects.

- Training selected WUO members to develop discharge rating so that self-reliance in flow monitoring can be achieved.

- Regular monitoring of strategic control points to maintain transparency and to build trust among the WUOs .

- Revising discharge tables for all the transfer points of the distributary system to ensure equity, with technical assistance from IIMI-Pakistan.

- Introducing a system-wide extension of the Bed-and-Furrow technique for the cotton crop.

- Convening meetings at the village level to listen to problems related to improvement works.

- Arranging farmer department staff meetings to address and prioritize issues related to improvement works.

- And finally, revising the Joint Management Agreement Document in view of functioning for one-and–a-half years as a voluntary organization.

Though this report is the results of four sources of information, i.e., 1) process documentation; 2) opinion surveys; 3) organizational records; and 4) field measurements, the chief source of information was, however, process documentation. While evaluating these performance indices, the authors were confronted with many gaps in the information required. These inconsistencies and gaps were not due to negligence on the part of the field team, but a slight on how the niceties of process documentation can be used to refine the final stages of report writing. Inadequate record keeping restricted the depth of

analysis in this report, and, in view of the second objective (delineation of activities), a very strict standard of documentation is recommended.

Apart from recording the physical attendance and the topics discussed, there is a need to maintain records of each participant's speech. The negative and positive aspects of the speeches may be perceived. Speakers' statements should be analyzed on the same day of the speech. In order to maintain this standard of documentation, the use of electronic devices is recommended.

Similarly, to record other events, for example, of disputes, the information related to the origin, history and who the dispute was referred to, is already being recorded. But, certain important details are not being documented, like the degree of acceptance of the parties involved after the conflict has been resolved. Other matters that need to be recorded include whether tensions and prejudices among offenders and the aggrieved were lessened, and whether the on-ground situation had changed. This level of documentation can be maintained by involving farmers in record keeping. The hope is that these standards of process documentation would be helpful to refine social organization processes.

Another strategy that should be promoted is making use of educated members and office bearers, such as schoolteachers, in the process documentation.

This research report evaluates the performance of WUOs in its pre-takeover period. The hope is that it will be of considerable interest to many researchers. The concept of indicators and its related parameters in this report is not static. Rather, it is dynamic and applicable at all tiers of organization, with wider applicability in the context of WUOs. The standards of documentation already recommended, if followed, will help to easily assess and compare these indicators. Thus, another performance assessment after transferring the responsibilities should be carried out, which, it is hoped, will be of supreme interest to the researchers. This post-takeover performance should be closely connected with the indicators proposed in this research report.

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**Detail of Earthwork Undertaken by different WUOs during the Maintenance Operation in the Annual Closure of 1997-98. (Source: Waheed-uz-Zaman, 1998)**

## Earthwork completed on the second day, WUO 1.

| Location (RD) | Size / length of stretch repaired (Ft) | Type of work | Remarks |
|---|---|---|---|
| 6000/L | 12*2*3 | Earth filling | Berm repair |
| 6000/L | 10*2*3 | Earth filling | Berm repair |
| 6000/L | 7*2*3 | Earth filling | Berm repair |
| 6000/L | 5*2*3 | Earth filling | Berm repair |
| 6431/L | 12*2*3 | Earth filling | Berm repair |
| 6800/L | 12*2*3 | Earth filling | Berm repair |
| 7000/L | 8*2*3 | Earth filling | Berm repair |
| 7800/L | 5*3*3 | Earth filling | Berm repair |
| 7900/L | 4*3*3 | Earth filling | Berm repair |
| 8000/L | 3*3*3 | Earth filling | Berm repair |
| 8000/L | 8*2*3 | Earth filling | Berm repair |
| 8000/L | 10*2*3 | Earth filling | Berm repair |
| 8100/L | 10*2*3 | Earth filling | Berm repair |
| 8100/L | 8*2*3 | Earth filling | Berm repair |
| 4500/R | 125*7*0.33 | Earth filling | Breach point repair |
| 5000/R | 150*7*0.50 | Earth filling | Bank strengthening |
| 6000/R | 300*7*0.25 | Earth filling | Bank strengthening |
| 4000/R (D/S) | 2000 Rft. | Berm cutting | Right berm |
| 4162/L | 15*5*2 | Earth filling | Bank repair |
| 4200/L | 2*2*2 | Earth filling | Bank repair |
| 4280/L | 5*3*3 | Earth filling | Bank repair |
| 4350/R | 4*2*2 | Earth filling | Bank repair |
| 4500/R | 7*5*2 | Earth filling | Bank repair |
| 4800/L | 4*1*2 | Earth filling | Bank repair |
| 4900/L | 5*2*2 | Earth filling | Bank repair |

**Annex 2**

**Earthwork completed on the fourth day, WUO 2.**

| Location (RD) | Size / length of stretch repaired (Ft) | Type of work | Remarks |
|---|---|---|---|
| 13200/R | 70*2*7 | Earth filling | Breach point repair |
| 16290/R | 20*2*5 | Earth filling | Breach point repair |
| 17000/L | 100*1*120 | Earth filling | Service road repair |
| 17100/L | 25*3*4 | Earth filling | Berm repair |
| 17200/L | 3*3*3 | Earth filling | Berm repair |
| 17500/L | 4*3*3 | Earth filling | Berm repair |
| 17500/R | 4*2*3 | Earth filling | Berm repair |
| 17800/L | 12*3*3 | Earth filling | Berm repair |
| 18100/R | 4*3*3 | Earth filling | Berm repair |
| 18100/L (D/S) | 4*2*4 | Earth filling | Berm repair |
| 18100/L (D/S) | 7*3*3 | Earth filling | Berm repair |
| 18100/L (D/S) | 6*2*3 | Earth filling | Berm repair |
| 18100/L (D/S) | 6*2*3 | Earth filling | Berm repair |
| 18100/L (D/S) | 70*3*3 | Earth filling | Breach point repair |
| 18100/L (D/S) | 5*2*3 | Earth filling | Berm repair |
| 18100/L (D/S) | 4*2*3 | Earth filling | Berm repair |
| 18100/L | 3*3*3 | Earth filling | Berm repair |
| 21000/R | 30*6*4 | Earth filling | Berm repair |
| 21000/L | 12*4*3 | Earth filling | Berm repair |
| 31000/R | 20*3*2 | Earth filling | Berm repair |
| 31000/R | 40*4*0.50 | Earth filling | Bank strengthening |

## Reach RD 31+000 to 46+000, Sub-system 3 (Day 5, JAN 22, 1998)

## Earthwork Completed on the Fifth Day, Sub-system 3.

| Location (RD) | Size / length of stretch repaired (Ft) | Type of work | Remarks |
|---|---|---|---|
| 25000/R | 5*4*3 | Earth filling | Bank strengthening |
| 25000/R | 20*2*4 | Earth filling | Bank strengthening |
| 25000/R | 20*5*2 | Earth filling | Bank strengthening |
| 25000/R | 8*6*1.75 | Earth filling | Bank strengthening |
| 25000/R | 20*5*1.5 | Earth filling | Bank strengthening |
| 25000/R | 20*1*3 | Earth filling | Bank strengthening |
| 25000/R | 10*5*1.5 | Earth filling | Bank strengthening |
| 25000/R | 75*1*0.50 | Earth filling | Bank strengthening |
| 25000/R | 10*2*3 | Earth filling | Bank strengthening |
| 25000/R | 8*2*1 | Earth filling | Berm repair |
| 25000/L | 15*3*1.5 | Earth filling | Berm repair |
| 25000/L | 15*7*0.33 | Earth filling | Service road repair |
| 25000/L | 15*3*2 | Earth filling | Berm repair |
| 25000/L | 7*7*0.33 | Earth filling | Service road repair |
| 25000/L | 8*2*2 | Earth filling | Berm repair |
| 25000/L | 5*6*0.33 | Earth filling | Service road repair |
| 25000/L | 18*1*1 | Earth filling | Berm repair |
| 25000/L | 58*2*2 | Earth filling | Bank strengthening |
| 25000/L | 58*6*0.58 | Earth filling | Service road repair |
| 25000/L | 10*10*0.33 | Earth filling | Service road repair |
| 25000/L | 20*3*0.50 | Earth filling | Service road repair |
| 28270/L (D/S bridge) | 50*3*1.5 | Earth filling | Service road repair |
| 28270/L (D/S bridge) | 50*5*0.50 | Earth filling | Service Road repair |
| 28270/L (D/S bridge) | 50*2*2 | Earth filling | Service road repair |

| | | | |
|---|---|---|---|
| 28270/L (U/S bridge) | 115*4*1.25 | Earth filling | Service road repair |
| 28270/L (U/S bridge) | 115*6*0.50 | Earth filling | Service road repair |
| 28270/L (U/S bridge) | 100*2*2 | Earth filling | Service road repair |
| 28270/R (U/S bridge) | 15*3*3 | Earth filling | Bank strengthening |
| 28270/R (U/S bridge) | 15*5*4 | Earth filling | Bank strengthening |
| 28270/R (U/S bridge) | 15*10*1 | Earth filling | Bank strengthening |
| (U/S Bridge) | 25*5*2 | Earth filling | Bank strengthening |
| (U/S Bridge) | 30*3*1 | Earth filling | Bank strengthening |
| (U/S Bridge) | 10*3*3 | Earth filling | Bank strengthening |
| (U/S Bridge) | 10*6*0.75 | Earth filling | Bank strengthening |
| 32000/R | 200*4*1.5 | Earth filling | Bank strengthening |
| 32000/R | 50*4*0.50 | Earth filling | Bank strengthening |
| 33500/R (U/S Ghat) | 20*5*2 | Earth filling | Bank strengthening |
| (D/S Ghat) | 100*3*2 | Earth filling | Bank strengthening |
| (D/S Ghat) | 100*3*0.25 | Earth filling | Bank strengthening |

## Earthwork Completed on the Third Day, WUO 4.

| Location (RD) | Size / length of stretch repaired (Ft) | Type of work | Remarks |
|---|---|---|---|
| 12000/R | 120*2*5 | Earth filling | Breach point repair |
| 12900/L | 5*2*3 | Earth filling | Bank strengthening |
| 13000/L | 5*6*3 | Earth filling | Bank strengthening |
| 13000/L | 6*6*3 | Earth filling | Bank strengthening |
| 14000/L | 5*3*3 | Earth filling | Bank strengthening |
| 14000/L | 3*3*3 | Earth filling | Bank strengthening |
| 14000/L | 3*3*3 | Earth filling | Bank strengthening |

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