

**COLLABORATIVE INSTITUTIONAL DEVELOPMENT PROGRAM OF  
THE MINISTRY OF IRRIGATION (MOI), SUDAN  
AND  
THE INTERNATIONAL IRRIGATION MANAGEMENT INSTITUTE (IIMI),  
SRI LANKA**

**VOLUME II**

**INSTRUCTIONAL MATERIALS USED  
DURING THE WORKSHOPS ON**

**IRRIGATION MANAGEMENT:  
DELIVERY OF TNA RESULTS,  
STRATEGIC PLANNING AND HUMAN RESOURCES DEVELOPMENT**

Wad Medani, Sudan, 25 - 30 September 1993

David Constable,  
P S Rao  
and  
Zenete Peixoto Franca

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*International Irrigation Management Institute, Colombo  
October 1993*

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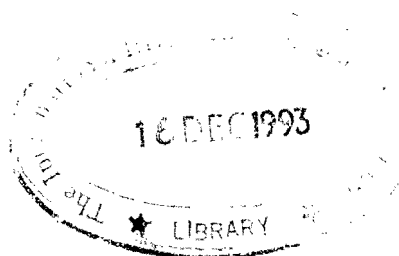
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**INSTRUCTIONAL MATERIALS USED DURING THE WORKSHOPS  
FOR THE TOP MANAGERS AND SENIOR OFFICIALS AT MOI**

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# **WORKSHOPS ON IRRIGATION MANAGEMENT: DELIVERY OF TNA RESULTS, STRATEGIC PLANNING AND HUMAN RESOURCES DEVELOPMENT**

25 - 30 September, 1993

## **GENERAL PLAN**

### **I     INTRODUCTION**

MOI and IIMI initiated a new collaborative program focussing on institutional development for the Ministry of Irrigation and Water Resources (MOI) as part of a comparative study of three countries, Malaysia, Bangladesh and Sudan. Two activities were planned to be conducted in 1993. They were the Assessment of Training Needs and Organizational Constraints Assessment (TNA) and workshops on Irrigation Management for the top managers and senior officials of MOI.

The first activity TNA, which was composed of a series of eight workshops, was conducted from 7 - 18 August in Wad Medani, and involved 1,35 MOI staff, including managers, researchers and prospective trainers.

The second activity will involve workshops on Irrigation Management for the top managers and senior officials of MOI. This is the subject of this plan.

### **II    GENERAL OBJECTIVES**

The workshops promoted by MOI and IIMI aim to present the results of the Training Needs and Organizational Constraints Assessment (TNA), and introduce the Strategic Planning and Human Resources Development related to irrigation management to the top managers and senior officials of the Ministry of Irrigation in Sudan.

The major objectives of the workshops are:

1.     Deliver the results of training needs and organizational constraints assessment (TNA)
2.     Raise the awareness of national participants to major trends and issues in water resources management in general, and in the irrigation sub-sector in particular.
3.     Demonstrate to the chief executive and his senior policy-makers the effectiveness of Corporate Planning as a management tool to develop the agency's objectives in harmony with national planning policies, and to manage the change process.
4.     Demonstrate the vital role of Human Resource Development Planning in these endeavors.

5. Introduce these concepts to a group of senior and middle managers, to develop a critical mass of professionals and managers in the agency who will facilitate the adoption of these concepts throughout the agency.
6. Exercise Action Plans to facilitate implementation of activities which aim to operationalize the concepts discussed during the workshops.

### III PARTICIPANTS

The workshops will have 20 participants for each session. They are the MOI top managers, their assistants and senior engineers who participated in the TNA exercise last August. They will attend the events in the following way.

- |                                |  |
|--------------------------------|--|
| 1st group: 25 - 27 September : | Under Secretary and Directors  |
| 2nd group: 28 - 29 September:  | Chief Engineers, Division Engineers, Resident Engineers, Assistant Director of Finance |
| 3rd group: 30 September:       | Under Secretary and Directors and some from the second group.                          |

### IV TENTATIVE SCHEDULE

The sessions will be conducted from 8:00 to 14:30 for the five days and from 8:30 to 13:30 for the last day of the exercise.

### V STRATEGY, METHODS AND TECHNIQUES

The strategy of the workshops was designed to facilitate discussion of staff skills and MOI constraints with the view of exercising Strategic Planning and Human Resources Development for the organization.

This strategy incorporates a series of methods and techniques which promote opportunities for individual and group exercises.

Among others, the following techniques will be used to facilitate the participants' interaction and learning.

1. Case study
2. Trip around the table
3. Brainstorming
4. Group discussion (small and large groups)
5. Integrated panels
6. Nominal group technique

### VI INSTRUCTIONAL MATERIAL

The following instructional materials will be used during this program: transparencies, video, texts (hand-outs), exercise sheets, flipcharts, etc. Bibliography will also be provided to the participants for later readings and studies.

## VII RESOURCE PERSONS

The following resource will participate in this program:

- (a) Prof. David Constable - Strategic Planning Specialist, IIMI Consultant
- (b) Dr P S Rao, Senior Irrigation Management Specialist, IIMI Consultant
- (c) Dr M S Shafique, Head, IIMI-Sudan
- (d) Mr Charles Abernethy, Senior Technical Adviser, IIMI
- (e) Dr Zenete Peixoto Franca, Training Specialist, IIMI

## VIII EVALUATION STRATEGIES

Process and Program Evaluation: Since these workshops will be mostly developed through group process and individual methods, the participants will be invited to evaluate the process of learning, interaction, practicing planning, skills, etc. which will take place during the events. They also will assess the organization, planning, implementation including methods, techniques, trainer's performance, instructional materials, etc. used during the program. The group will be invited to give oral feedback also to evaluate the activities as well.

## IX CONTENTS OF THE WORKSHOPS

- 1. MOI: TNA and organizational constraints
- 2. Global issues in irrigation management
- 3. Irrigation management - National perspectives
- 4. Planning and management processes - Corporate planning concepts
- 5. Management process - Role of Leader/Manager
- 6. Agency role - Key issues (Mission Statement)
- 7. Translating mission into action-setting objectives
- 8. Performance categories, measures and standards
- 9. Human Resources Development Plan - Strategic context
- 10. Concepts in Human Resources Development.

## X EXPECTED OUTCOMES

**WORKSHOP TO DELIVER TNA RESULTS**  
**25 - 30 SEPTEMBER 1993, SUDAN**  
OUTLINE OF THE WORKSHOPS SCHEDULE

TIME	DAY I	TIME	DAY II	TIME	DAY III
8:00- 8:30	Welcome by MOI & IIMI	8:00- 9:30	Planning & management	8:00- 9:30	Performance categories,
8:30- 9:30	INTRODUCTION - Interactive		processes - Corporate		and standards
	exercise		planning concepts		
	- Program and				
	objectives				
9:30-10:00	Sudanese breakfast	9:30-10:00	Sudanese breakfast	9:30-10:00	Sudanese breakfast
10:00-11:30	Video show and presentation	10:00-11:30	Management process - Role of	10:00-10:45	Performance categories,
	of TNA results & discussion	10:00-11:30	Leaders/Managers		measures, ... (contd..)
11:30-11:40	Refreshments	11:30-11:40	Refreshments	10:45-11:30	HRD Plan - Strategic context
11:40-13:00	Global issues in irrigation	11:40-13:00	Agency Role - Key issues	11:30-11:40	Refreshments
	management		(Mission statement)	11:40-13:00	Concepts in HRD planning
13:00-13:10	Refreshments	13:00-13:10	Refreshments	13:00-13:10	Refreshments
13:10-14:30	Irrigation management	13:10-14:30	Translating mission into	13:10-14:30	Summary, review, workshop
	- National Perspectives		action - Setting objectives		evaluation and closure.
<b>DAY I</b>		<b>DAY II</b>		<b>FINAL DAY</b>	
8:00- 8:30	Welcome by MOI & IIMI	8:00- 9:30	Development of division and	8:30- 9:30	Action plans: discussion and
8:30- 9:30	INTRODUCTION - Interactive		branch objectives		exercise
	exercise		Performance categories,		
	- Program and		measures and standards		
	objectives				
9:30-10:00	Sudanese breakfast	9:30-10:00	Sudanese breakfast	9:30-10:00	Breakfast
10:00-11:30	Global issues in irrigation	10:00-10:45	Performance ... (contd..)	10:30-12:00	Action plans: working group
	management	10:45-11:30	HRD Planning - concepts		and presentation of results
11:30-11:40	Refreshments	11:30-11:40	Refreshments		
11:40-13:00	Planning & management process	11:40-13:00	Development of HRD Plan		
	- Corporate planning concepts				
13:00-13:10	Refreshments	13:00-13:10	Refreshments	12:00-12:15	Refreshments
13:10-14:30	Agency mission and objectives	13:10-14:30	Synthesis and conclusions,	12:15-13:30	Wrap-up meeting and next
	Management process - Role		workshop evaluation and		steps of the MOI/IIMI
	of managers		closure.		program & GOOD BYE!



# NATIONAL WORKSHOP ON IRRIGATION MANAGEMENT

## LECTURE NO.: 1

### CONTEXT OF WORKSHOP GLOBAL ISSUES IN IRRIGATION DEVELOPMENT

#### 1. Historical Development of Irrigation

- ♦ Irrigated agriculture has been traditionally viewed by Governments as a means of:
  - meeting food and fibre needs of increasing populations.
  - increasing rural incomes and stabilizing rural populations.

#### SLIDE L1 - 1

- ♦ By mid 1980's the irrigated area in the world had passed 250 million hectares.
- ♦ 1900 - 1950 area expanded from 40 million to 80 million hectares.
- ♦ In last 30 years there has been a three-fold increase.
- ♦ Rate of development has slowed down since mid 1980's.
- ♦ Currently more than 80% of water use is for irrigation.

#### 2. Government Intervention

- ♦ In most countries significant Government intervention has been required to facilitate this development by:

- making available land and water resources in extent and location required.
- marshalling large amounts of investment capital.

SLIDE L1 - 2

- ♦ Shows average annual lending for irrigation by international lending agencies.
- ♦ To this must be added investments by National Governments.
- ♦ Note rate of investment in mid 1980's in real terms had fallen to one-third level of the 1970's.

SLIDE L1 - 3

Some of the reasons for this decline were:

- ♦ Expansion into new areas is reaching the point of diminishing returns, i.e.: there are limits to readily available and suitable land and further development of water resources is more costly (the most economical developments have been done first).
- ♦ Competing demands for additional water, (urban & industrial)
- ♦ Concerns about the environmental effects of clearing new land for agricultural development.
- ♦ Evidence of low levels of productivity or poor standards of maintenance of existing schemes which reduces capacity for projects to service the capital debt, or provide a flow of benefits to maintain the facilities at effective operational standards.
- ♦ The emergence of social and health problems related to development projects in some areas.

SLIDE LI - 4

3. World Population Growth

- ♦ World Population has passed 5,000 million.
- ♦ Will reach 8,000 million by year 2025.

Demographic Trends - Urbanization

- ♦ By year 2000, there will be 22 metropolises with populations greater than 10 million (18 of them in Asia, Africa and Latin America).
- ♦ By year 2025, 60% (5,000 million people) of world population will be living in cities and urban communities.
- ♦ Consequential increased demands for urban and industrial water supply and sanitation.
- ♦ Potential for further pollution and degradation of available water supplies.

4. Dilemma for World Community

- ♦ How to provide adequate food and water for increasing populations without creating long term environmental degradation, which would further diminish available resources.
- ♦ Against this background World Heads of Government met at the UN Conference on Environment and Development (UNCED) in Rio de Janeiro in June, 1992.

5. Outcomes from UNCED

- ♦ Future strategy development will be guided by philosophies expounded in Agenda 21 - Chapter 18.
- ♦ Acknowledgment that the availability of clean, useable water will be limiting in most countries.

- ♦ Development and Environmental sustainability are in-separably linked.
- ♦ That the alleviation of poverty and provision of adequate food are priority objectives.
- ♦ Necessary skills, technology and resources must be shared.

**SLIDE L1 - 5**

6. Agenda 21 - Priority Thrusts (7)

- ♦ Integrated W.R. Development:
  - institutional strengthening, improved national Policy formulation.
  - increase in public awareness and political commitment.
  - changes in legal, administrative and institutional processes.
  - increased training and development of human resources.
- ♦ Improved Water Resources Assessment:
  - both surface and groundwater.
- ♦ Protection of Water Quality and Eco-systems:
  - prevention of future pollution.
  - abatement of existing pollution where feasible.
- ♦ Drinking Water Supply and Sanitation:
  - currently one-third of people in developing countries lack minimum standards of W.S. and sanitation.
  - need to involve local communities in decision making and management.
- ♦ Water and Sustainable Urban Development:
  - water supply, waste water and pollution control.
- ♦ Water for Sustainable Food Production and Rural Development:
  - major challenge to increase efficiency of water use and increase food production.

- ♦ Impacts of Climate Change:
  - research to overcome current uncertainty of climatic change.

## 7. Economic Development Institute / World Bank Analysis

Central guiding principles to address Water Sector issues:

- ♦ Water management - comprehensive, inter-sectoral approach:
  - integrating policy, institutional, economic, financial, technical, environmental and social dimensions.
  - to plan, develop and operate water systems in a sustainable manner.
- ♦ Capacity building required:
  - institutions and people who influence programs for efficient management of water sector.
  - create an enabling environment, with appropriate policy and legal frameworks.
- ♦ Human Resources Development:
  - creating awareness of issues and approaches for resolution.
  - developing a critical mass of informed people.

SLIDE L1 - 6
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## 8. Capacity Building

Required at four levels:

- ♦ Sector Level
  - National Assessment
  - Planning / Policy Development / Water Law
- ♦ Institution Level
  - Integrated Resources Management
  - Strategy and Program Co-ordination
- ♦ Organization (Agency Level)
  - development of integrated policy/planning/management processes.

- marshalling collective skills of staff in achievement of the organization's objectives
- ♦ Individual Level
  - enhance skills and work satisfaction of individuals in facilitating achievement of the organizations objectives.

This workshop is directed to Levels 3 and 4

## 9. Previous Relevant International Initiatives

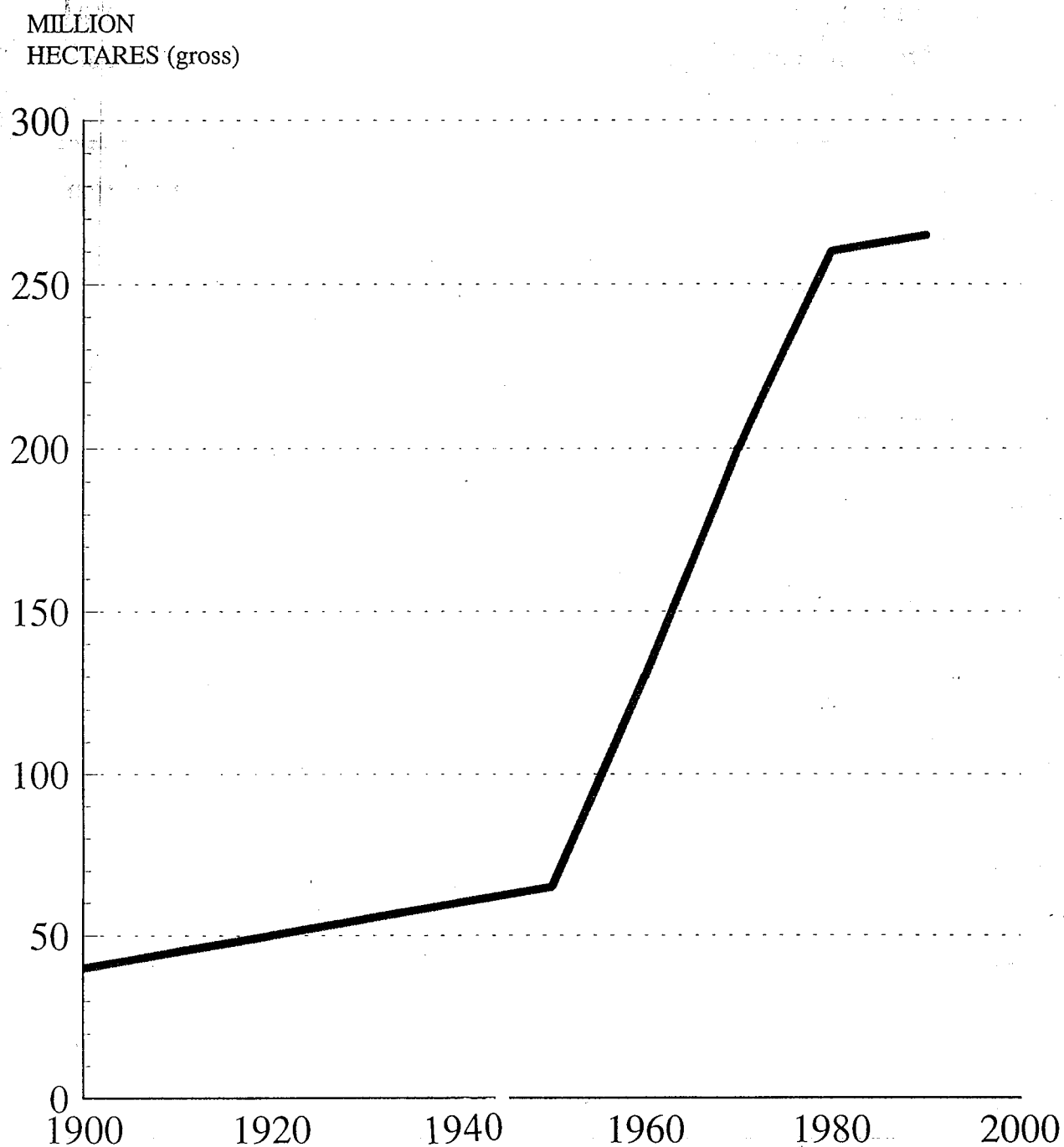
- (a) Economic Development Institute / World Bank. Two initiatives in recent years have resulted in the publication of two companion documents dealing with guidelines for developing national strategies for improving irrigation management. These are:-
  - ♦ World Bank Technical Paper No. 99  
"Planning the Management, Operation and Maintenance of Irrigation and Drainage Systems"
    - A Guide for the preparation of Strategies and Manuals"
    - Prepared in conjunction with the International Commission on Irrigation and Drainage.
  - ♦ Economic Development Institute of the World Bank / United States Agency for International Development "Public Sector Irrigation Training - Guidelines for Preparing Strategies and Programs.

The syllabus material for this workshop has been drawn from the guideline documents, and the workshop program has been designed to apply and extend these concepts at the National level.

## (b) International Irrigation Management Institute

The syllabus material has also drawn heavily on the experience of the International Irrigation Management Institute in the development of irrigation management training programs in collaboration with the Department of Irrigation and Drainage, Malaysia; the Bangladesh Agricultural Development Corporation, and the Ministry of Irrigation, The Sudan.

FIGURE 1: WORLD IRRIGATED AREA 1900 - 1985



Source: Lester R Brown. The Changing World Food Prospect: The Nineties and Beyond. Worldwatch Paper No. 85 Washington, DC: Worldwatch Institute. October (1988). p.24

**Table 1. Average annual lending and assistance for irrigation by the World Bank, Regional International Banks, and Bilateral Aid Agencies.**

Year	Lending and assistance for irrigation		
	World Bank	Other Development Agencies (millions of US\$)	Total (millions of US\$)
1974-76	1,093	165	1,258
1977-79	1,191	289	1,480
1980-82	989	419	1,408
1983-85	811	368	1,179
1986-87	589	283	872 <sup>1</sup>

Source: World Bank, Regional International Banks, and Bilateral Aid Agencies

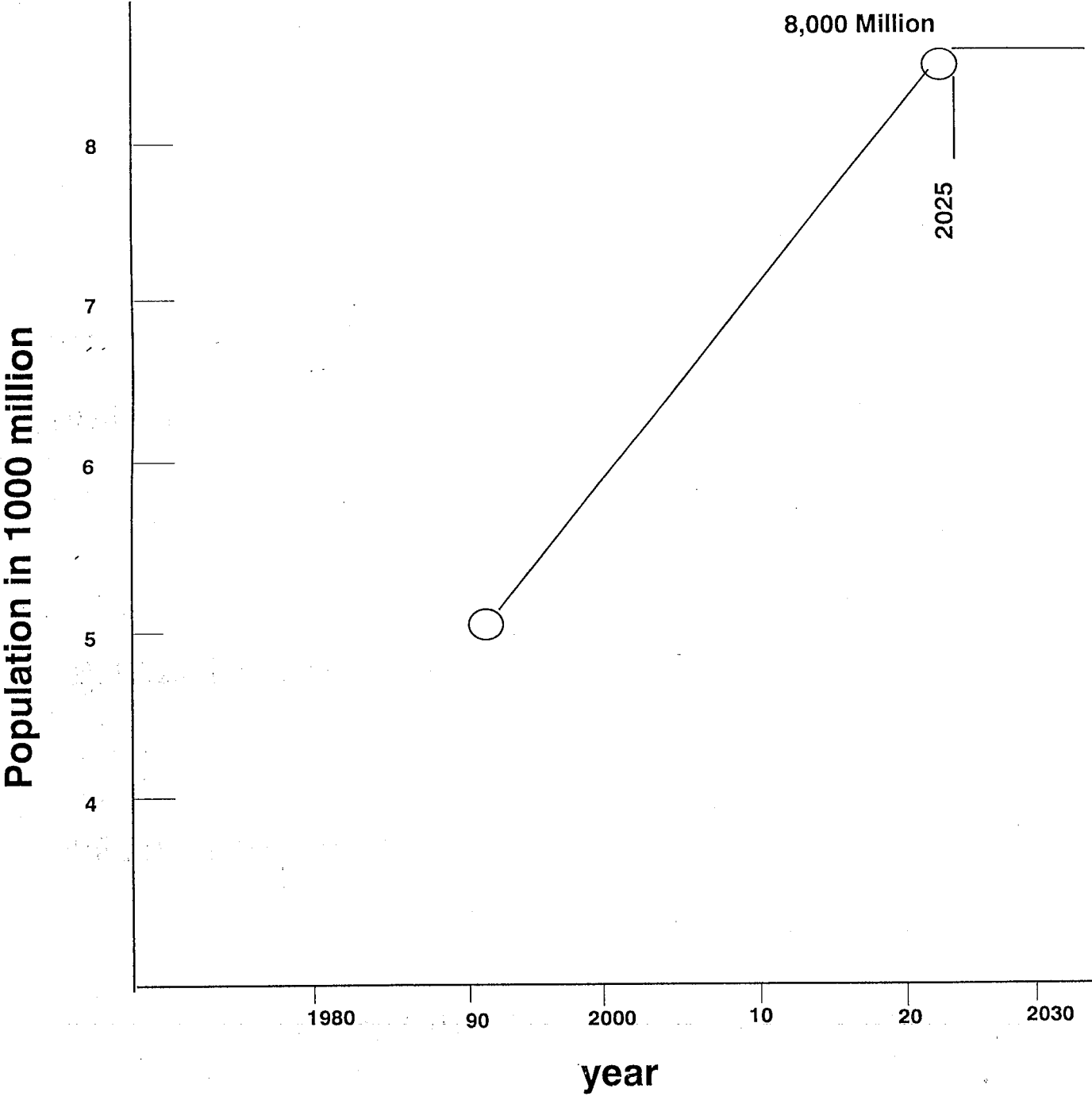
<sup>1</sup> When adjusted for inflation, this nominal level of annual investment in 1986-87 drops to US\$ 495 million, which is approximately one-third the peak level of lending and assistance, \$1,480 million, in the late 1970's.



## **POSSIBLE REASONS FOR DECLINING INVESTMENT IN IRRIGATION**

1. Scope for expansion limited
  - Point of diminishing returns
2. Competition for water
3. Environmental concerns - land clearing
4. Poor performance of existing schemes
5. Social and health problems

# WORLD POPULATION GROWTH



## **UNCED 93 - AGENDA 21**

### **7 PRIORITY THRUSTS**

1. Integrated w.r. development
2. Improved w.r. assessment
3. Protection of water quality & eco-systems
4. Drinking water supply & sanitation
5. Water & sustainable urban development
6. Water for sustainable food production & rural development
7. Impacts of climate change

## **CAPACITY BUILDING**

### **1. SECTOR LEVEL**

- National assessment policy/planning

### **2. INSTITUTION LEVEL**

- Integrated resources management
- Strategy and program coordination

### **3. ORGANIZATION LEVEL**

- Integrated Policy/ planning/ management processes
- Marshalling collective skills of staff

### **4. INDIVIDUAL LEVEL**

- Enhance skills and work satisfaction
- Facilitate achievement of organizations objectives

# NATIONAL WORKSHOP ON IRRIGATION MANAGEMENT

## LECTURE NO.: 2

### IRRIGATION MANAGEMENT NATIONAL PERSPECTIVES

#### " The Challenges for Irrigation Managers "

#### 1. Continued Productivity of Irrigated Agriculture

##### SLIDE L2 -1

- Will be a key determinant in maintaining food and fibre production.
  - world food needs
  - increasing rural incomes

#### 2. Future Management Issues

- Development of irrigated agriculture represents a very substantial intervention in land and water resources and has required, in most countries, major Government involvement and investment.
  - in most countries more than 80% of water use is for irrigation

##### SLIDE L2 -2

- Not all the interventions have produced all of the anticipated benefits.
- Some outcomes of past development have been undesirable.
- There is some commonality of issues in most countries:
  - irrigation cannot be managed in isolation and must be managed as an integral element in the hydrologic cycle and in harmony with other economic, social and natural resources issues.

### 3. Concept of Sustainability

#### SLIDE L2-3

- Discuss definition

#### SLIDE L2-4

- ♦ Sustainability in Irrigated Agriculture Production System, involves 3 elements conjointly:
  - the physical resources of land and water and associated ecosystems.
  - the farming systems (and farmers)
  - the infrastructure forming the irrigation supply and drainage systems and the relevant management institutions.

### 4. Accountabilities in the Water Sector

#### SLIDE L2-5

Two aspects to Accountability:

- ♦ Legal responsibility.
- ♦ Political and Social responsibility.
- ♦ Latter aspect not always easily judged - a public sector organisation needs to adopt special measures to discharge this obligation.

(Note: This issue is an important element of the Corporate Planning Process to be discussed in next lecture).

#### SLIDE L2-6

- ♦ Water users and Beneficiaries are accountable to the community as a whole for the way in which they use resources.
- ♦ In an irrigation system they are accountable to fellow-users to comply with the system rules.
- ♦ The institutions are accountable:
  - to Government for the efficient and effective exercise of the functions and powers delegated to them.

- To consumers for meeting the "level of service" obligations.

(Note: Many Irrigation Departments do not acknowledge a distinction between "Government" and "Department" in this context, in that they see their role purely as implementing Government policy. In an effective governmental process, the Department must exercise a policy evaluation and formulation role, as well as an administrative one).

4. Preconditions for Discharge of Accountability at Institution Level

- ♦ An effective Policy framework.
- ♦ Clear and precise definition of functions and objectives.
- ♦ Clear "action space" i.e. minimum of overlapping or divided functional responsibilities.
  - leads to the requirement for "integrated management" - aggregate as many mutually dependent activities as possible under a single management and co-ordinate the remaining ones.
- ♦ Access to and control of adequate resources.

5. Features of the Water Resources systems to be managed

SLIDE L2-7

The functions and associated activities which need to be managed in a typical river basin include:

<u>Function</u>	<u>Activities</u>
1. Resource Development & Conservation	<ul style="list-style-type: none"> <li>- Headworks management</li> <li>- catchment protection</li> <li>- recreation, multi-use management.</li> </ul>
2. Conveyance	<ul style="list-style-type: none"> <li>- river management, navigation</li> <li>- control of abstractions</li> <li>- management for instream requirements</li> <li>- flood protection.</li> </ul>
3. Irrigation Supply	<ul style="list-style-type: none"> <li>- Primary system</li> <li>- Tertiary or farm system.</li> </ul>
4. Drainage-Surface and/or sub-surface Groundwater Management	<ul style="list-style-type: none"> <li>- interception</li> <li>- collection</li> <li>- disposal</li> </ul>
5. Quality Control of Receiving Waters	<ul style="list-style-type: none"> <li>- establishment, regulation and monitoring of standards, surface and groundwater.</li> </ul>
6. <u>Planning and Management Linkages</u>	

(Note: The following discussion represents a summary of these issues, which are more completely set out in the World Bank/ICID Publication Technical Paper No. 99 "Planning the Management, Operation and Maintenance of Irrigation and Drainage Systems".

If copies of this document are not available within the Agency, workshop participants should be issued with photo-copies of the Introduction-Section B).

SLIDE L2-8

- ♦ The dynamic interactions which might influence the development of the planning and management objectives for an individual irrigation agency are depicted.



- ♦ Note that there are four key areas of interface with its "externalities".
  - with Minister / Government
  - other Government Agencies, e.g. Economic Planning, other Resource Management Agencies, other Sector agencies.
  - water users/farmers
  - community.
- ♦ Response to Minister/Government, requiring the Agency to
  - develop plans and programs in accordance with the Government's policy objectives
  - be accountable to Government for their effective implementation and management.
- ♦ Critical importance of "Level of Service" specification
  - a basis for design (and re-design) of the canal system
  - a focus for development of the project management objectives and measures for performance evaluation.
  - information to farmers of their entitlement to supply of water
  - a basis for continual review and improvement of canal operation.

## 7. Objectives for Irrigation System Management

SLIDE L2-9

Primary Objectives for system managers:

- ♦ To operate the system to deliver services to farmers in accordance with the Level of Service (L.O.S.) obligations.
- ♦ To maintain the system infrastructure in perpetuity to satisfactory operational standards.
- ♦ To manage the system at minimum achievable costs.
- ♦ Financial Management implications
  - sustainable management will require the development of asset management strategies aimed at preventing loss of service capability
  - identification of relevant cash flow requirement and impacts of under provision on Service Life.

♦ Financial Linkages

SLIDE L2-10

- ♦ The majority of existing Irrigation Departments could be classified as Financially Dependent Agencies.
  - case (b)
- ♦ There will be increasing pressures on Governments to push agencies to be more financially independent.
  - case (a)
- ♦ For case (b) agencies, the relationship between the cost of the service and the capacity or willingness to pay that cost is often obscure.
- ♦ In case (a) that relationship is more sharply focussed.
- ♦ However, the adoption of a business-like or "commercial" approach to management of system assets and service delivery (giving value for money) is equally important for both.

8. Water Assignment and Entitlements

- ♦ Assignments of water are generally defined as allocations from the River Basin resources sanctioned by Governments for use within a specific project area.
- ♦ The cumulative assignments within a river system provide the basis for developing the river regulation and storage release rules.
- ♦ Within a particular project area, the Project Water Assignment forms the basis of determining the entitlements to water of individual water users.
- ♦ In most maturing systems, these "rights" acquire value over time and will need to be specified.
- ♦ As efficiency of operation improves and competing demands for available water emerge, mechanisms will need to be developed to provide for:

- increases in existing individual entitlements
- supply to additional project lands
- a combination of the above
- transfer of rights to alternative uses

## 9. Summary of Issues for Future Management

- ♦ Each of the developmental activities depicted in Slide L2-7 may have outcomes which can have short and / or long term effects on both water and land resources.
- ♦ Policy options and strategies for irrigation from the perspective of water resources management, need to be considered conjointly with issues associated with sustainable land management and agriculture production systems.
- ♦ The progress towards self-sufficiency in staple food crops may result in the transition, at varying rates of progress in different countries, from subsistence farming economies to market driven economies.

### Two Major Questions for an Irrigation Agency.

- ♦ What impact will the shift to integrated water resources management policies have on the role and functions of this agency?
- ♦ What are the likely changes in agricultural production in the short to medium term say (5 - 20 years) requiring appropriate policy changes in the agency?

The exploration of these issues might be assisted by considering the following questions:

1. What are the relative roles of Government, Government Institutions (including the irrigation agency) and the private sector (including farmers) for irrigation and drainage for agriculture?
2. Are existing Water Laws and / or Proclamations and Regulations appropriate as far as specifying and protecting individual entitlements to the water supply service, and in defining the accountability of institutions?

3. How do Government, their Institutions and Farmers interact at the strategy planning and operational level?
  4. By what processes should the defined "levels of service" be determined and specified?
  5. Are the existing "levels of service" to be provided to users of the system clearly defined and capable of being met?
  6. Will improved or changed "levels of service" be required to meet the demands of irrigated agriculture in the future?
  7. Can these re-defined "levels of service" be provided by improving existing operational performance?
  8. Is additional investment required in modernizing systems or improving existing services?
  9. How should the costs of re-development and on-going operation and maintenance costs to provide these "levels of service" be identified and recovered or shared?
  10. Are the existing Management Information Systems appropriate to provide a basis for management decisions in the short and longer term?
10. Introduction to Exercise No. 1 (Vol. I, Annex D1-5, page 43 to 47)

Notes:

- The objective of this exercise is to focus the attention of the policy makers on National Priorities and to identify those issues which are relevant to the Agency and which should be addressed by Agency policies and programs, either exclusively by the Agency in conjunction with other relevant agencies, either public or private.

Exercise no. 2 will ask participants to briefly analyze and review existing Agency policies in comparison with their findings in Exercises No. 1.

- ♦ These general issues should serve as a guide to consideration of the specific issues for the agency.
- ♦ Additional resource material could include:
  - World Bank Sector policy reviews
  - Government Planning forecasts and statements of development objectives
  - Agency forward plans
- ♦ The list of Strategic Concerns extracted from ISRAN Annual Technical Report - 1988 (Table 5) might be useful additional resource material.
- ♦ In the formulation of Working Groups careful consideration should be given to the role of the Chief Executive.  
In some cases, the C.E. might be prepared and willing to participate in Working Group discussions as a equal member.  
However, on balance, the preferable situation is that he might serve as a Resource Person, so that he is not put in the position of dominating Group Discussions (or defending the status quo).

## FOOD PRODUCTION

Up to 1980's - as a global approximation:

Food Production = population growth (approx.)

Increases from:

1. Expansion of land under cultivation
2. Crop intensification
3. Yield improvements

## ROLE OF IRRIGATION

By 1980	55% of total grain production
2000	65%      "      "      "
2025	irrigated areas will contribute 80% of incremental food output (over 1990 levels).

## FUTURE MANAGEMENT ISSUES

- Some commonality across national boundaries despite differing social and economic systems
- Limits to available land and water resources
- Competition for water
- Environmental concerns/land degradation/diminished productivity



NEED TO DEVELOP  
"SUSTAINABLE" PRODUCTION  
SYSTEMS.

# SUSTAINABILITY

"A system of resource utilization and management to meet the needs of the current generation in a manner which will ensure that those resources will be able to meet the continuing needs of future generations"



# SUSTAINABILITY OF PRODUCTION SYSTEMS

Three elements to be considered conjointly:

1. Physical land/water systems and associated eco-systems
  - in relevant political, social and economic contexts
2. The farming systems, which use land and water for irrigated agricultural production
3. The infrastructure forming the irrigation and drainage systems
  - and the relevant management institutions.

# ACCOUNTABILITY OF ORGANIZATIONS

What is accountability?

Two aspects:

- Legal responsibility

- Liability associated with performance of functions

- Political and social responsibility

- Effectiveness of the organization in meeting the expectations of:

- Government

- Farmers/Community

# ACCOUNTABILITY IN WATER SECTOR

## Government

Formulation of:  
National  
objectives  
policies

Legislation for:  
allocation and  
control of  
resources:  
- Financial  
- Water

Delegation of  
functions  
- Powers and  
duties

## Institutions

Formulation of:  
institutional  
objectives and  
policies

Control water  
allocation

Exercise  
delegated  
functions of  
institutions  
planning  
design  
construction  
operation  
maintenance  
supply services

## Water Users/ Beneficiaries

Use water and  
land  
productivity

Obey laws

⇐ Make  
demands  
⇒ Pay fees  
for services

# IDEALIZED IRRIGATION SUPPLY SYSTEM

## MANAGEMENT

### FUNCTION

### ACTIVITY

1	RESOURCE DEVELOPMENT	HEADWORKS CATCHMENT PROTECTION RECREATION MULTIPLE USES
2	CONVEYANCE	RIVER MANAGEMENT CONTROL OF ABSTRACTIONS IN STREAM REQUIREMENTS
3	IRRIGATION SUPPLY	DISTRIBUTION (A) PRIMARY CANALS (2) TERTIARY/FARM
4	DRAINAGE	INTERCEPTION COLLECTION DISPOSAL
5	QUALITY CONTROL	ESTABLISHMENT OF CRITERIA SURFACE AND GROUNDWATER EFFLUENT DISCHARGE-CONTROL AND REGULATION MONITORING

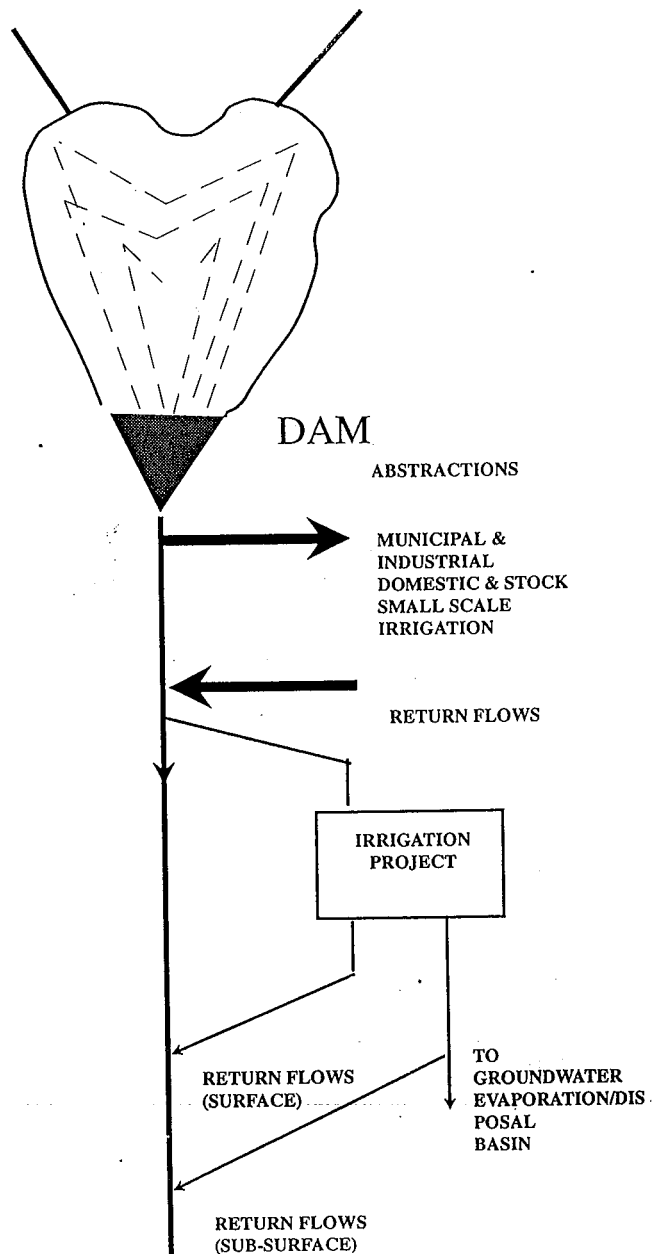


Figure 1: Sustainable Development & Management: Management Linkages

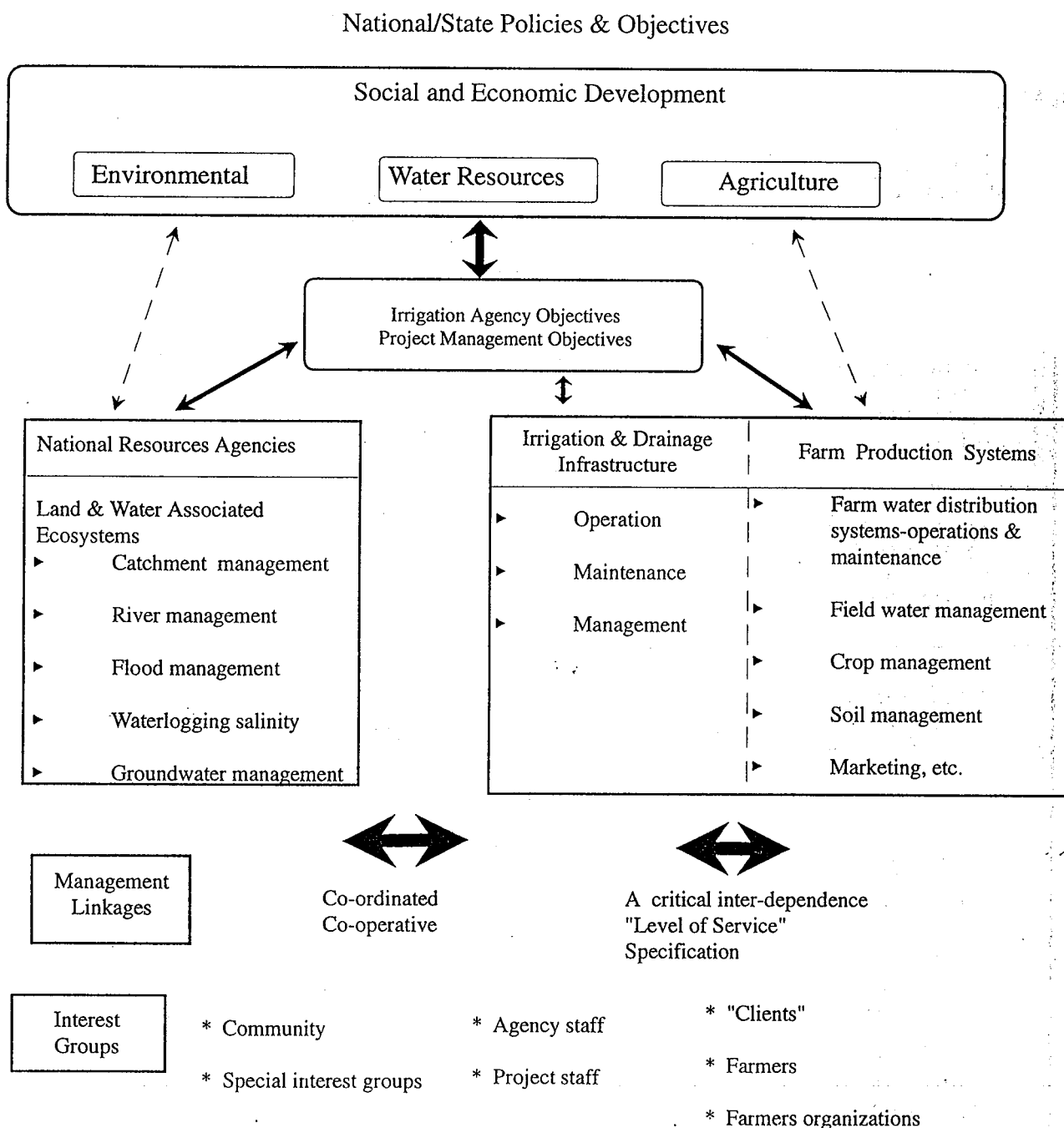
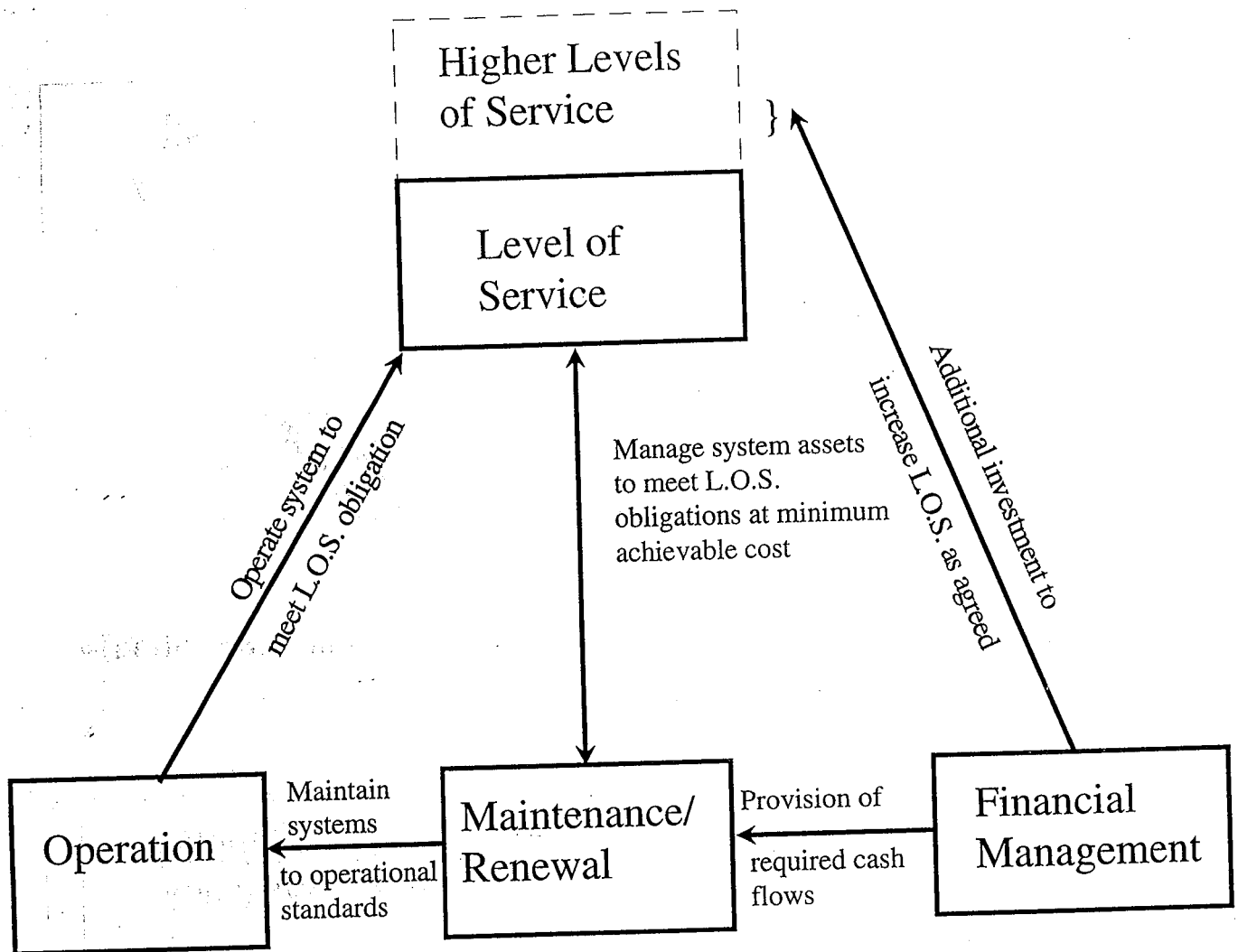


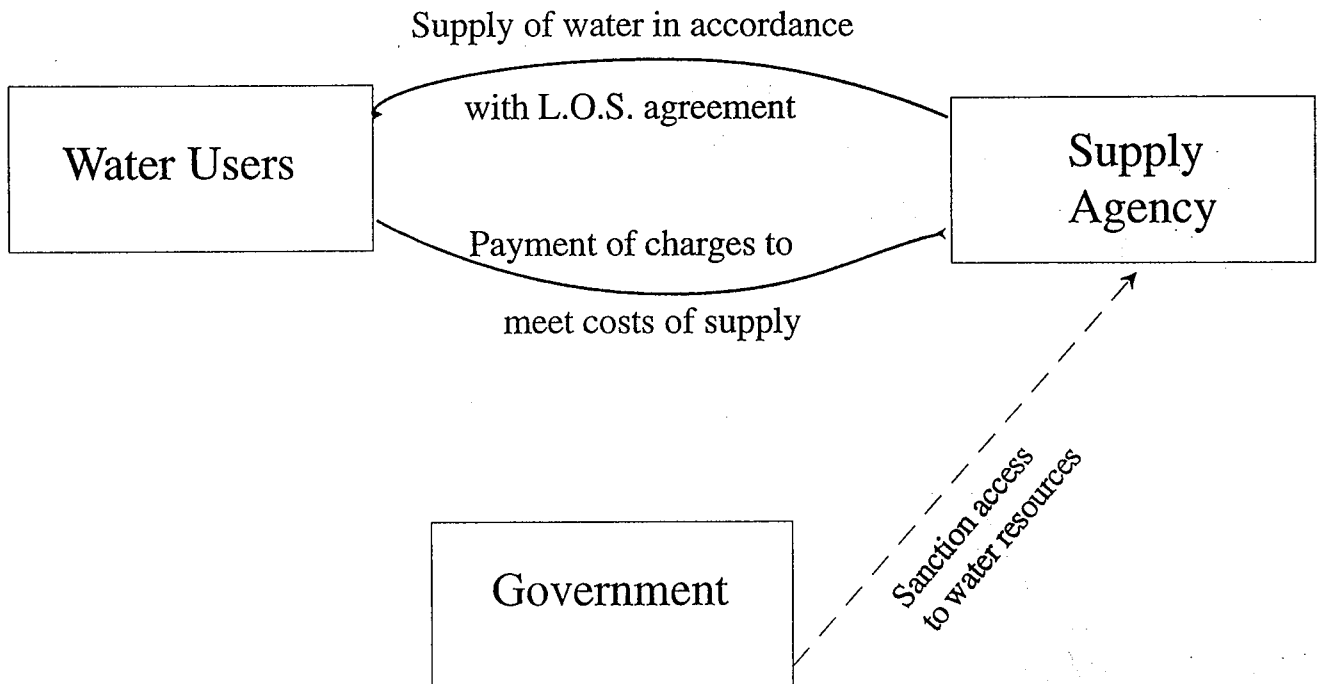
Figure 2: System Management Objectives



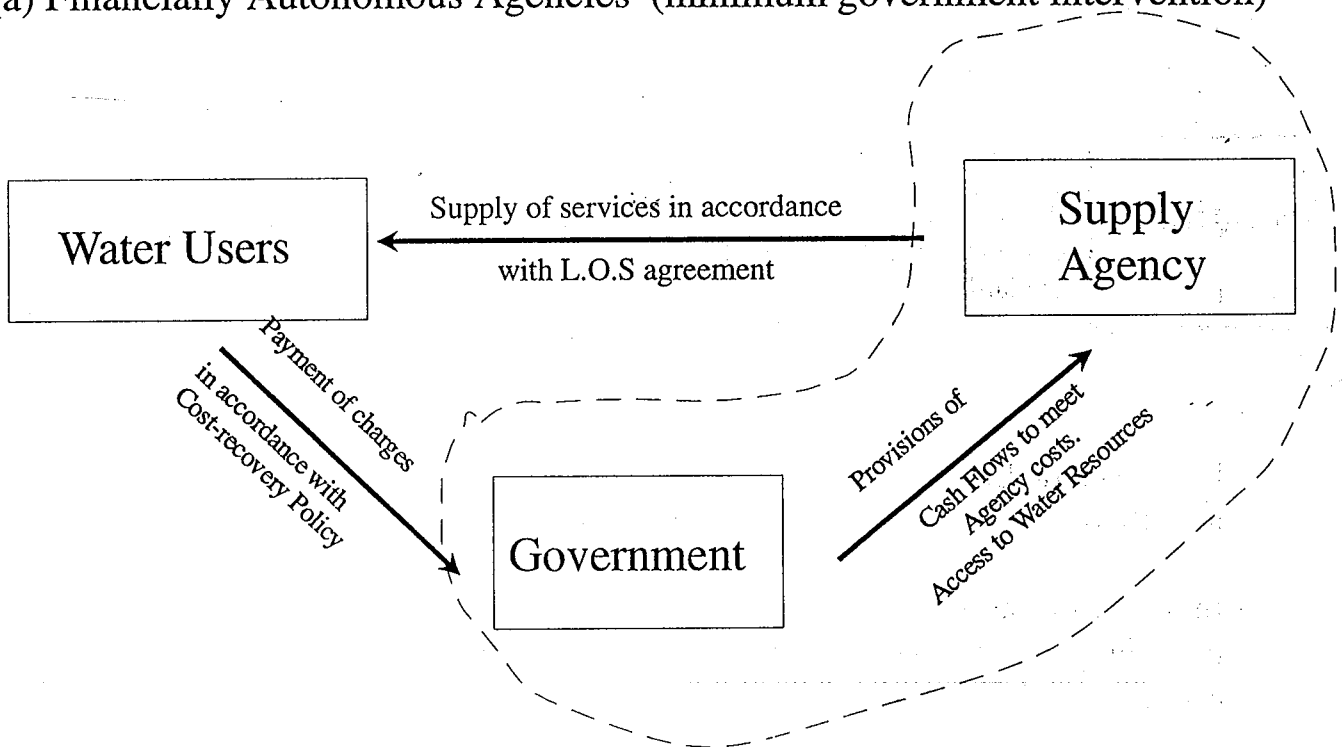
Notes:

1. For a specific Level of Service (L.O.S) there will be an associated identifiable cost.
2. In poorly managed systems, improvements in L.O.S. can be achieved by improving management processes and control (often by some additional costs and by re-ordering financial priorities).
3. In well-managed systems, substantial increase in L.O.S. will generally require significant additional investment.

Figure 3



(a) Financially Autonomous Agencies (minimum government intervention)



(b) Financially Dependent Agencies (maximum overnment intervention)

# NATIONAL WORKSHOP ON IRRIGATION MANAGEMENT

## LECTURE NO.: 3

### PLANNING & MANAGEMENT PROCESSES

#### "Managing an Organization"

Notes: This Session comprises 3 elements

1. A short general discussion on organizational management which:
    - defines the nature of the "irrigation business"
    - introduces the organization chart for this Agency
    - outlines the simple concept of the management process
  2. Exercise No.: 2 - which sets out to explore the extent to which the Agency's policies are in harmony with National policies
  3. A continuation of the lecture which introduces the concepts of Corporate Planning
- ♦ The lecture should also be seen as setting the stage for Lecture No.: 4 - Role of Leaders / Managers.

#### 1. Organizational Management

? Why do we need an organization.

Participants might be asked to respond to this question: Some Answers:

- ♦ There are many different tasks involved in managing an irrigation system - from headworks to farms
- ♦ Many different disciplines and skills are involved
- ♦ There is a geographical spread of activities - requiring a number of people to be involved, even for common tasks

SLIDE L3 - 1

Points ♦ An organization is not an end in itself



- ♦ A common criticism of some public sector organizations is that they do exist for themselves:
  - concerned with inputs and internal process, rather than focussing on outcomes
  - because they are funded from central Treasuries, they lack a commercial approach to costs and the value of money
  - the annuality of the Budget allocation process encourages inefficiencies in the use of funds
- ♦ Is Irrigation supply a "business" ?

Participants might be asked to address this question.

#### SLIDE L3 - 2

#### Tests for irrigation supply as a business

- ♦ Assets - what is current replacement value of the Agency's assets?
  - what is service life (some assets have a very long life - in excess of 100 years)
- ♦ Who are Owners/Shareholders
  - Government
  - Farmers
  - Community
- ♦ Product?
  - Water, Water delivery service
  - Input to agricultural production
  - ? Value of irrigated agriculture production
- ♦ Manufacture/Retailer
  - supply bulk water
  - manage distribution systems
- ♦ Resources used
  - financial, material, human
- ♦ On this analysis an irrigation undertaking can be regarded as a very large business, and although there are some special features of this as a public sector activity, many business concepts and practices are applicable.

In summary, an organization comprises a large number of people, generally in groups, who have to be organized and managed to achieve the purpose for which the organization has been established.

## 2. Organizational Structure

An organization chart (or organogram) depicts the lines of responsibility and the functional relationships within the organization.

## SLIDE L3 - 3

Some of the factors which influence the shape of a chart are displayed.

- ♦ The enabling legislation (or charter, decree) will define the nature of the governing body e.g. Department with a Director-General; a Commission or Corporation.
- ♦ The need to provide a focus for major responsibilities for achievement of specific objectives may dictate the disposition of functions and staffing.
- ♦ The important point to make is that each organization is unique. Even two organizations with similar functions will not have the same characteristics because of the unique situation, size, client base, social and cultural influences, management style and organizational ethos.

### 3. Organization Chart for this Agency

- ♦ The chart for the Agency should be available and briefly explained, preferably by one of the course participants.

### 4. The Management Function

- ♦ People in an agency need to be organized and managed.
- ? The Group could be asked to identify the Key aspects of the management function in an organization.

## SLIDE L3 - 4

- ♦ Managing workers and work activities at the field or action level is the most obvious.
- ♦ The other two are not always clearly identified but are also critical for success.
- ♦ The overall management of the business, setting the direction, policies and plans, and determining and controlling the budget outlays are fundamental to discharging the accountability obligations of the organization. This is clearly the responsibility of the Chief Executive, shared to some extent with Senior policy workers.
- ♦ Managing the managers; the "middle managers" are those in the organization who:
  - translate policies and strategies into action plans
  - allocate and co-ordinate resources
  - provide "feedback", analysis and evaluation to senior managers and policy makers.

## SLIDE L3 - 3

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  - translate policies and strategies into action plans
  - allocate and co-ordinate resources
  - provide "feedback", analysis and evaluation to senior managers and policy makers.

- ◆ ? Who is "Management".
  - includes all persons in the organization who are officially invested with authority for directing the work of others e.g.
    - Board of Directors
    - Chief Executive
    - Department Heads
    - Supervisors, Foremen
- ◆ "Management" is a vital activity for any organization and is a separate activity to the exercise of professional, disciplinary or technical skills.
  - this aspect will be explored further in Lecture 4 and the associated exercises.

## 5. Constraints to Effective Performance

People in every organization suffer from "constraints".

- ◆ A "constraint" can be defined as factors which individually or collectively prevent people in organizations from achieving the highest levels of performance.

Note: Participants should be asked to nominate the most serious constraints they perceive in their organization. Brief mention only - the discussion could be endless!

- ◆ Minimising the effects of constraints is clearly an important part of management.

### SLIDE L3 - 5

- ◆ Discuss "Real" and "Apparent" examples from those nominated by participants.
- ◆ Positive management action is required in either case:  
 Quote the "Managers Prayer":  
 "Give me the courage to change those things which can be and ought to be changed;  
 Give me the strength to endure those things which can't be changed;  
 Grant me the wisdom to distinguish between the two".
- ◆ The management process within the organization must provide a systematic process to identify those constraints which can be removed or minimized, and for planned and co-ordinated action to overcome them.
- ◆ Only rarely does improved performance of an organization result from one flash of brilliance
  - overall improvement comes about through a large number of successive small improvements.

## 6. The Planning and Management Process

- ♦ The basic concepts of what constitutes an effective management process are relatively clear and simple.
  - common sense applied in a logical sequential manner
- ♦ There are many "sciences" and methodologies which have been published since organizations have been studied.
- ♦ Remember that the management theories have been developed from studies of successful organizations and successful managers.
- ♦ Given that every organization is unique, methodologies cannot be translated from one to the other without adaptation, and the management literature should be read with that in mind.
- ♦ The best management process for any organization is the one that produces the best result.

### SLIDE L3 - 6

- ♦ Describes the essential steps
  - Determine objectives - what do we want to achieve?
  - Plan and Implement activities to achieve those objectives.
  - Monitor and evaluate progress - identify gaps in performance and measures to minimise constraints.
  - Review and adjust programs and activities in the light of that evaluation.

Break for Exercise no. 2

**"Review of Agency Programmes in National Context".** (See vol. I, Annex E1-3, page, 52 to 54.

## 7. Nature of the Irrigation Business to be Managed

- ♦ Assets are costly, and some have very long service lives.
- ♦ It provides an essential input (water delivery) to farmers engaged in irrigated agriculture, involving a high degree of day-to-day interaction between farmers and system operators.
- ♦ Irrigation is planned to be long-term (sustainable).
- ♦ The development of land and water resources involves a major intervention in the hydrologic cycle, with potential for environmental effects within and outside the project lands.
- ♦ There will be increasing pressures to increase the efficiency of water use and to minimise the costs of operation.

## 8. Special Requirements for Management Systems

SLIDE L3 - 7

Given the special features of irrigation systems, effective management systems will need the following characteristics:

- ♦ Long term in outlook.
- ♦ Interactive - with special attention to under disciplinary co-ordination and formal mechanisms for farmer / water user involvement in policy and operational decisions.
- ♦ Dynamic - with capacity to respond to changes in its external operating environment.

## 9. Concepts and Techniques of Corporate Planning

- Notes:
- ♦ Corporate Planning is the name given to particular planning and management techniques to assist organizations in developing strategies for the longer term, particularly in dynamic operating environments, in which there is less certainty about longer term outcomes.
  - ♦ The process aims to keep the organization strategically positioned in successive planning cycles to maximise its performance in changing circumstances.

- While it was originally developed for corporations in the private sector, the concepts and techniques have been further developed for use in public sector organizations. The Government of Victoria, Australia is one which is known to have published material, following a special consultancy by management consultants and Government Policy Makers. A copy of that document is part of the resource material available with this training module.

### Definitions

SLIDE L3 - 8

SLIDE L3 - 9

### Functions

- ♦ A listing of Activities or Responsibilities
- ♦ Note that it is only a listing of empowerments, there is no indication of priority or extent of activity required.

### Vision

- ♦ A statement generally prepared by the Chief Executive and Senior Officers, which portrays their future characteristics and attributes desired for the organization.

### Mission

- ♦ A concise statement which sets out the essential purpose of the organization.

### Objective

- ♦ A statement reflecting values or desired outcomes related to a vision of the future.
- indicating what is to be achieved by carrying out a function.
- ♦ Objectives are hierarchical in order, broad in scope at the highest level of management, specific and detailed at the action level.

### Goal

- ♦ The ultimate end point perceived for an objective.

### Target

- ♦ A nominated position along the path to the goal.

### Strategy

- ♦ A line of action and key priorities established to achieve an agreed objective.

### Plans, Programs, Budgets

- ♦ A set of detailed activities to be implemented in accordance with the agreed strategy
- ♦ The budget sets out the financial implications of the activities.

### Corporate Planning

- ♦ An integrated and systematic approach to the management and co-ordination of the total range of activities for an agency.

## 10. The Corporate Planning Process

### SLIDE L3 - 10

- ♦ An integrated and systematic approach to the management and co-ordination of the total range of activities for an agency. It points the agency to the future by requiring it to:
  - Review its purpose, clarify or re-define its role if required by changes to its operating environment
  - Note that re-defining the purpose does not necessarily involve a change in functions carried out - only a shift in priorities and focus
  - On the other hand a change in functions for the agency will almost certainly require a re-assessment of its essential purpose.
- ♦ Assess where it is now.
  - An internal analysis of activities to determine how the agency is currently using its resources, e.g. the funds and staff resources devoted to particular activities, and an assessment of relative levels of performance and capability - the strengths and weaknesses of the agency.
- ♦ Decide where it ought to be in response to Government requirements and "client" needs.
  - ? Who are the clients.
    - Government
    - Farmers, Water Users
    - Other Government Agencies with whom the agency must collaborate
    - Public
- ♦ Establish how and when it should get there
  - The development of Key objectives
- ♦ Monitor and evaluate its progress



## SLIDE L3 - 11

The process is facilitated by addressing three basic questions:

- Where are we now?
- Where do we want to be?
- How do we get there?

## SLIDE L3 - 12

The process is demonstrated on the flow chart:

- ♦ Note that
  - Case Study No. 1 is part of the process of the external environmental assessment
  - Case Study No. 2 is part of the internal assessment process
- ♦ Each key objective determined by the Senior Policy Makers requires the identification of Key result areas, i.e. activities which most significantly affect the level of overall performance in the particular area under review.
- ♦ The process provides for a "top-down" approach to priority/direction setting and a "bottom-up" approach to devising detailed strategies and activities.
  - responsible managers prepare proposals for programs and activities to achieve the objectives and goals established by Senior Management
  - it is an interactive process, sometimes requiring a number options to be evaluated before the final programs are agreed.

## SLIDE L3 - 13

- ♦ Summarises the essential features as listed.
- ♦ Determination of "clients" is an important element.
  - refer back to the external interfaces to be managed

## SLIDE L2 - 8

## SLIDE L3 - 14

11. Advantages of Corporate Planning

- ♦ Designing the future - the process recognizes that the air of certainty about long term plans, which existed up to the 1980's, is no longer valid.

- ♦ The team approach uses the talents and develops the capacity of middle and junior level managers, and leaves time for senior managers for policy evaluation and formulation.

## 12. Corporate Planning as a Management Framework

### SLIDE L3 - 15

- ♦ The Corporate Planning process provides an effective framework for improving overall agency performance.
- ♦ Performance is evaluated by results achieved against explicit objectives and targets.
- ♦ The targets should be challenging but achievable.
- ♦ Improved performance comes about by addressing the "performance gap"
  - diagnostic analysis to identify the constraints and reasons for underachievement ( negative feedback).
  - identification of measures to minimise constraints or remedy deficiencies (positive application of negative feedback).
  - How can we do it better?

## 13. Outcomes from the Integrated Planning/Management Process

### SLIDE L3 - 16

- ♦ The process results in the formulation of set of management plans, which set the direction for the agency for the short to medium term, say 3 - 5 years, updated generally on an annual basis.
- ♦ A typical set of management plans might comprise the following:
  - Development Plan - Outlining:
    - (1) new services to be provided
    - (2) new facilities, programs or activities
    - (3) major modernization or augmentation of existing facilities
    - (4) services to be developed to Water User groups or landholders
    - (5) services to be diminished or discontinued

- Plan for Operations and Maintenance
  - (1) a permanent set of documents and instructions, work procedures, programs and schedules - see World Bank Technical Paper No. 99
- Research and Development
  - (1) operations research
  - (2) materials research
  - (3) new or improved technology
- Management Support Plan
  - (1) development and review of organizational structure
  - (2) development of management information systems
  - (3) technical and administrative support
  - (4) size, type and location of accommodation to meet perceived needs
- Human Resources Plan
  - (1) categories and levels of resources to carry out specific tasks
  - (2) new skills required, or existing skills no longer required, to address future activities
  - (3) training needs analysis based on programs in the three plans above, outlining:
    - ♦ regular or routine ongoing training programs, e.g. induction, skills training, management training
    - ♦ special programs to meet specific needs
- Financial Plan
  - (1) expressing the extent of the organization's agreed programs in monetary terms
  - (2) indicating sources of funds and cost recovery policies and targets

# MANAGING AN ORGANIZATION

Why do we need an "Organization"?

An Organization is not an end in itself

- It is established to achieve some objective or purpose
- It is established to conduct a business

Irrigation supply - A business?

## **IRRIGATION SUPPLY - A BUSINESS**

1. It has assets
2. Has owners/shareholders
3. Sells products
4. Can be a manufacturer and/or retailer
5. Uses resources
6. Spends (and collects) money

# ORGANIZATION STRUCTURE

## SOME CONSIDERATIONS WHICH SHAPE A STRUCTURE OR CHART

1. Enabling legislation
2. Functions to be performed
3. Objectives and priorities
4. Number of staff
5. Geographic dispersion
  - Activities
  - Staff
6. Management style of senior management
7. Management capacity of individual managers

# **THE MANAGEMENT FUNCTION**

## **THREE ASPECTS:**

1. The economic function
  - Managing the business
2. Managing the managers
3. Managing workers and work activities

## MINIMIZING CONSTRAINTS

Constraints may be:

**REAL:** Unchangeable in short term e.g.  
government directives budget limits

**APPARENT:** Changeable by appropriate  
management action - staff  
skills/attitudes

### *POSITIVE MANAGEMENT APPROACH REQUIRED IN EITHER CASE*

**REAL**



**Maximize  
performance  
within limits  
constraints**

**APPARENT**



**Planned &  
coordinated action  
targeted to  
overcome  
constraints**



# **MANAGEMENT - A SIMPLE PROCESS**

## **COMMON SENSE APPLIED IN A LOGICAL SEQUENTIAL MANNER**

1. Identify clear policies and objectives
2. Plan and implement activities to achieve those objectives
3. Monitor and evaluate progress - identify performance gaps
4. Review and adjust programs and activities.

## **DESIRABLE ATTRIBUTES OF MANAGEMENT AGENCIES**

MANAGEMENT SYSTEMS NEED TO BE:

### **■ Long Term in Outlook**

- well developed strategic planning procedures

### **■ INTERACTIVE-INTERDISCIPLINARY COORDINATION**

- formal mechanisms for farmer/water user involvement

### **■ DYNAMIC**

- capacity to respond to changes in the external environment

# **DEFINITIONS/FUNCTIONS, OBJECTIVES AND MISSION**

## **FUNCTIONS:**

Listing of activities or responsibilities

## **VISION**

A statement which portrays future attributes desired for the organization

## **MISSION STATEMENT**

A concise short statement which sets out the essential purpose of the organization

## **OBJECTIVE**

Specifies the desired outcome from performing a function.

## **DEFINITIONS. (cont.)**

### **GOAL**

The ultimate end point perceived for an objective

### **TARGET**

A nominated position along the path to the goal

### **STRATEGY**

Line of action and key priorities established to achieve an agreed objective

### **PLANS, PROGRAMS, BUDGETS:**

A set of detailed activities to be implemented in accordance with the agreed strategy.

# CORPORATE PLANNING

## A PROCESS

An integrated and systematic approach to the management and co-ordination of the total range of activities for an agency.

## IT POINTS TO THE FUTURE BY REQUIRING THE AGENCY TO

- Review its purpose
- Assess where it is now
- Decide where it ought to be in response to government requirements and client needs
- Establish how and when it should get there
- Monitor and evaluate its progress

# CORPORATE PLANNING

## THE 3 CLASSIC QUESTIONS

### 1. WHERE ARE WE NOW?

#### AN ANALYSIS OF:

- The current & forecast external environment in which the organizational will be operating
- Its existing strengths & weaknesses

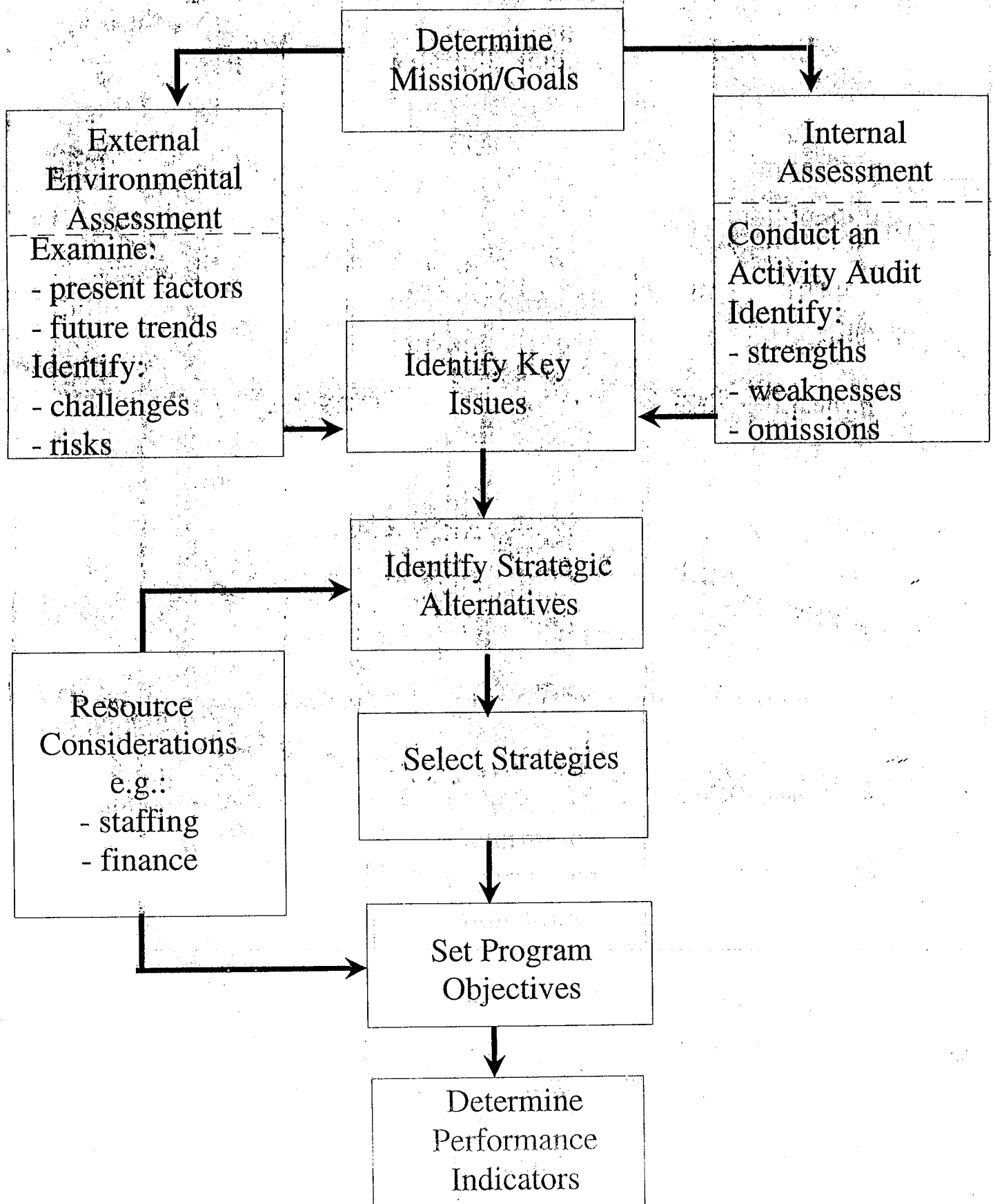
### 2. WHERE DO WE WANT TO BE?

- Identification of realistic, achievable but challenging objectives with time based targets.

### 3. HOW DO WE GET THERE?

- Formulation of Strategies, Programs and Activities Directed towards Achieving the Agreed Objectives

# CORPORATE PLANNING



## **ESSENTIAL FEATURES OF PLANNING**

Planning is a process of:

- thinking, analysis & decision

Which determines:

Who are clients of the "business"?

What are we trying to achieve?

What resources do we have?

- strengths
- weaknesses

What are the challenges and constraints in our management environment?

What is the action plan that results from the analysis?



## **ADVANTAGES OF CORPORATE PLANNING**

Greater purpose and direction for the whole agency

- it designs the future, and invents ways of bringing that future about.

Sharing of common goals by the various component units

- develops a "team" approach to management

It creates an agency sensitive to the external environment

Identification of strategies to react to that environment

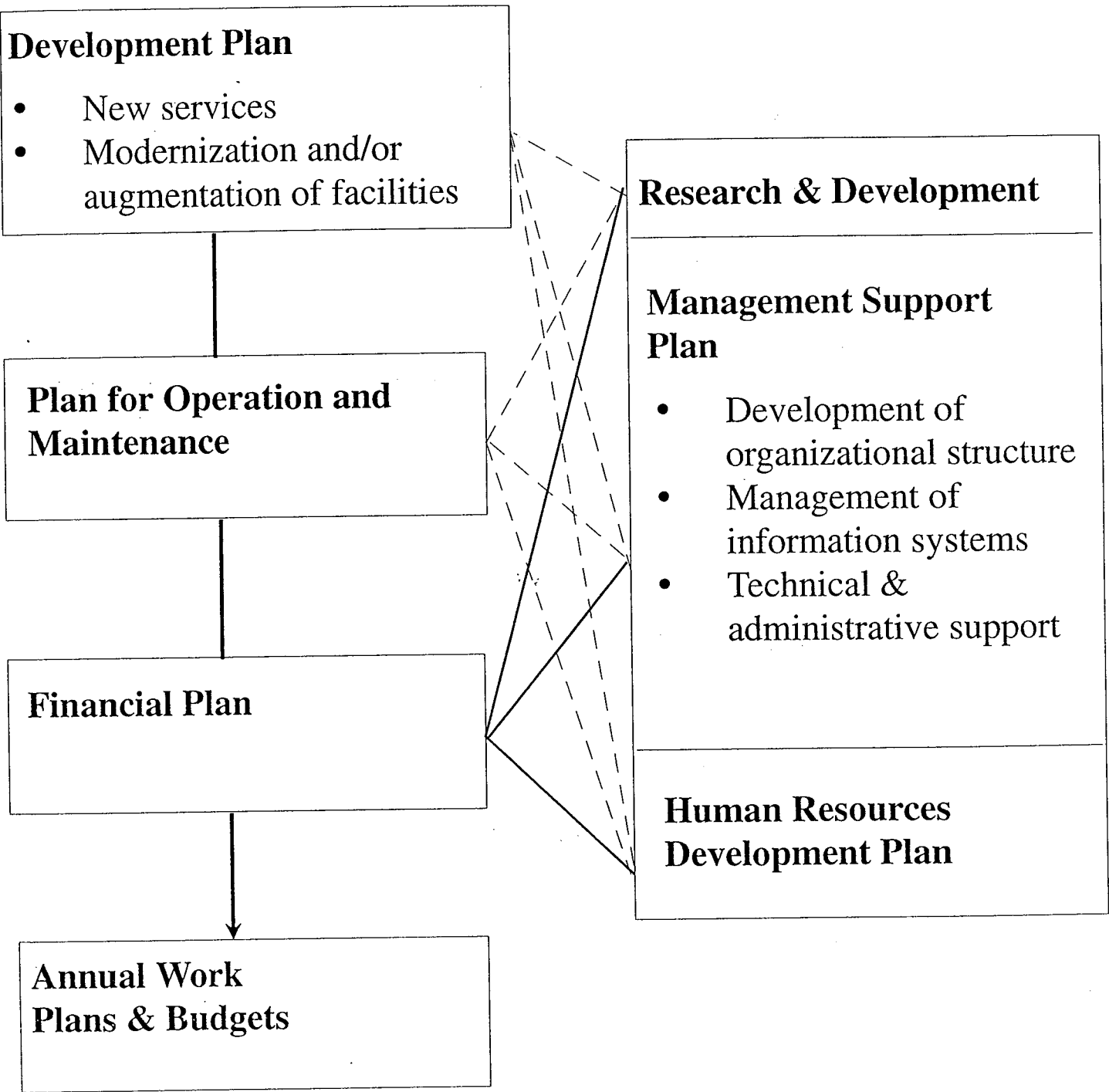
Provides a step by step process towards the future

## **IMPROVED AGENCY PERFORMANCE**

Corporate planning process provides a framework for performance improvement.

1. Performance is evaluated by results achieved against explicit objectives and targets
2. Improved performance comes about by addressing the "performance gap"
  - Diagnostic analysis to identify constraints or reasons for under achieve (negative feedback)
  - Identification of measures to minimize constraints (positive application of negative feedback)

Figure 4: Outcomes from Strategic Planning Process



# NATIONAL WORKSHOP IRRIGATION MANAGEMENT TRAINING

## LECTURE NO.: 4

### MANAGEMENT PROCESS ROLE OF LEADERS / MANAGERS

#### Notes:

1. This Session is intended to raise the awareness of the role of the Chief Executive and his senior policy makers in issues of leadership and management of the organization.
2. While critical self-analysis is an attribute which effective managers should embrace as part of their own personal development, the issues may need to be approached with some sensitivity, if participants have not previously participated in such sessions.
3. This session obviously can only serve as an introduction to the subject. It would be hoped that, with the raising of their interest in the issues, the participants would initiate action to arrange for follow-up activities.
4. Resource material for these lectures includes:-
  - ♦ EDI Training Material: Principles and Practices of Management (285/013 CN 849, 850 May 1980).
5. Consideration might be given to break-up the lecture period by interposing two exercises as indicated. (Exercise no. 3)

## 1. Managing an Organization - Aspects of Management

### SLIDE L3-1

- ♦ In Lecture L3 it was established that for complex undertakings, such as managing an irrigation system, many people with different skills are needed in the management organizations. Those people need to be organized and managed if their individual skills are to be used effectively in a collective sense in helping to achieve the purpose of the organization.

### SLIDE L3-4

- ♦ It was also established that there are three specific aspects to "management".
  1. The Economic Function
  2. Managing the Managers
  3. Managing Workers and Work Activities

## 2. The Need for Leadership

- ♦ The responsibility for the overall performance of the organization ultimately rests with the Chief Executive, and this responsibility is shared to a certain extent with the Senior policy makers

### SLIDE L4-1

- ♦ They need to make three fundamental decisions
  1. What to do?
  2. How and when to do it?
  3. Who will do it?
- ♦ What to do:
  - the objectives to be achieved by the organization
  - the relevant economic, technical and financial decisions in carrying out the organization's functions in order to achieve the objectives.
  - these decisions can only be made by the senior executives

- ♦ How to do it: - almost all of the necessary activities to implement those decisions will be carried out by others in the organization.
- ♦ Who will do it: - the Chief Executive can only get things done by the efforts of others.  
- the staff must not only be managed and organized, they must be provided with leadership.

### 3. Requirements of Leadership

#### SLIDE L4-2

- ♦ The ultimate genius of Leadership is not in personal achievement, but in being able to unleash the talents of others:
  - to have a vision of what the enterprise could be.
  - inspire trust so that staff share the vision, and commit themselves into making the vision a reality.
  - inspire staff to participate in creative teamwork.
- ♦ Within the framework of the decisions on organizational objectives, the overall performance of the organization as a whole will require:
  - developing the managerial capacity of individual managers.
  - improving internal management and control processes.

### 4. Management Functions at the Senior Executive Level

#### SLIDE L4-3

- ♦ Planning: - analysing trends, developing objectives and policies, economic and financial analysis.  
- identifying change.
- ♦ Organization and Staffing: - organization charts  
- functional charts, position descriptions, performance standards.  
- job evaluation.  
- staffing recruitment.

- ♦ Direction and Leadership:
  - delegation
  - motivation and training
  - group dynamics
  - morale, job satisfaction, discipline
  - productivity
  
- ♦ Co-ordination:
  - communication (up, down, across)
  - integration of activities
    - within the organization
    - within departments
    - between departments
    - between Head Office and Field
    - with other agencies, community
  
- ♦ Controls:
  - performance criteria
  - schedules and time tables, check points
  - performance appraisal
  - remedial action
  - audits and reports

BREAK FOR EXERCISE NO. 1 - LEADERSHIP ISSUES
--

5. Management Functions at Middle Management and Supervisory Levels

- ♦ Leadership is required to be exercised at all management levels, however, with a slightly different emphasis in each case.
  
- ♦ Middle Managers need to lead in developing strategies to achieve the organization's objectives:
  - it would be counter productive if these managers ignored these objectives and tried to lead their units in other directions.

SLIDE L4-4
------------

- ♦ Middle Management Functions  
Executives at this level develop the detailed strategies and plan the tactics to achieve the organization's primary objectives; including:
  - setting of supporting (secondary) objectives and targets.
  - developing detailed strategies and programs

- determining and allocating overall resources required
- co-ordinating and controlling programs
- determining performance indicators
- developing staff

SLIDE - L4-5

- ♦ Supervisory Level Functions  
Supervisors plan and supervise the detailed activities and individual actions for each element of a program, including:
  - work layout, individual assignments
  - detailed and specific schedules, resources and timing
  - monitor progress, identify remedial action required
  - adjust schedules and resources to complete assignments
  - training and developing staff
- ♦ Note: Managers at all levels have an important role in developing and training their staff.  
Refer again to Slides L3, L4, L5.

## 6. The Importance of Organization Structure

SLIDE L4-6

- ♦ A sound organization structure makes possible effective overall management because it creates the pattern that determines the accountability, relationship and performance of all members of "management".
- ♦ However, without a clear statement of the organization's basic (or primary) objectives it is very difficult to:
  - design a sound structure
  - develop adequate criteria to measure the achievement of results; and
  - evaluate the effectiveness of management performance
- ♦ While the Chief Executive remains accountable for the achievement of the overall objectives of the organization, it is desirable to "personalise", as far as possible the accountability for each of the basic objectives of the organization to a single senior executive, by uniting the associated critical activities within the one management unit.



**SLIDE L4-7**

- ♦ The structure as a whole should be designed to facilitate the achievement of the established objectives and to encourage:
  - direct, clear-cut lines of authority, accountability, responsibility
  - smooth work flow and natural integration of all administrative activities
  - optimum performance by each of the functional groups (avoiding overlaps and gaps of responsibility)
  - ease of communication and co-ordination - up, down, across
  - periodic performance appraisal of the work of each functional group, and
  - high morale and job satisfaction for every person in the organization.

**Note:** It could be suggested to Workshop Participants that they might undertake a review of the organization structure following the work on establishing the mission and objectives later in the program.

**BREAK FOR EXERCISE NO.3.**

See Vol. I, Annex F1, page 58.

# **LEADERSHIP**

## **Leaders Make 3 Fundamental Decisions**

1. What to do?
2. How and when will it be done?
3. Who will do it?

## **REQUIREMENTS OF A LEADER**

The ultimate genius of Leadership is not in personal achievement, but in being able to unleash the talents of others.

### **A Leader Must**

- Have a vision for the enterprise
- Inspire staff to share the vision
- Inspire staff to creative teamwork.

## MANAGEMENT FUNCTIONS AT SENIOR EXECUTIVE LEVEL

- Planning - trends, objectives, policies, economic and financial analysis
- Organization and Staffing
- Direction and Leadership
- Co-ordination/Communication
- Controlling

## **MIDDLE MANAGEMENT FUNCTIONS**

- Developing supporting objectives and targets
- Developing strategies and programs
- Allocation of resources
- Co-ordinate and control programs
- Assess performance
- Staff development and training

## **SUPERVISORS MANAGEMENT FUNCTIONS**

- Determine work layout, individual assignments
- Detailed schedules, resources and timing
- Monitor progress - identify remedial action
- Adjust schedules and resources
- Training and developing staff

## **THE IMPORTANCE OF ORGANIZATIONAL STRUCTURE**

- Good structure is essential
  - creates pattern for accountability relations and performance
- Good structure needs clear organizational objectives
- Need to "Personalize" Accountability for basic Objectives
  - uniting critical activities within the one management unit.

## **ORGANIZATIONAL STRUCTURE**

Design to facilitate:

- Clear lines of authority, accountability, responsibility
- Smooth work flow and natural integration of administration activities
- Optimum performance by functional groups (no overlaps - no gaps)
- Periodic performance appraisal of the work of each fundamental group
- High morale and work satisfaction of staff



# NATIONAL WORKSHOP

## IRRIGATION MANAGEMENT TRAINING

### LECTURE NO.: 5

#### MANAGEMENT PROCESSES

Translating the Mission into Action  
Development of Agency Objectives  
and Strategies

SLIDE 5-1

#### 1. Definitions and Levels of Objectives

- ♦ All objectives relate in some way to a vision about the future - reflecting values or desired outcomes, so understanding the needs, demands and expectations of stakeholders is an important element in the objective-setting process.
- ♦ There are generally three orders or levels of objectives:
  - objectives of purpose (mission and broad objectives at the organizational level).
  - objectives of strategy (strategic objective).
  - objectives of tactic (operational objectives).
- ♦ The objectives of purpose:
  - will initially be drawn from the agency mandate or charter
  - are broadly stated and expressed in terms suitable for the present, but reflecting very long-term ideals and purposes.
  - once stated for an agency, these broad objectives might be relatively unchanged for several years.
- ♦ Objectives of Strategy:
  - at any particular stage of development there will be a set of specific issues and priorities which need to be addressed in the short to medium term
  - these issues arise from the agency's interaction in its operating environment.

Note: that in times of rapid change, this analysis may cause some redefinition also of the mission and broad objectives.

- these objectives will generally be formulated at the functional or Divisional / Branch Level.

- ♦ Objectives of Tactic:
  - in delivering its services within a strategic framework, an agency develops a set of programs, and devises operational objectives for the short term.
  - in the corporate planning process, the need to alter or amend the programs and activities may occur on an annual basis.

SLIDE 5-2

## 2. Hierarchical Nature of Objectives

- ♦ The objectives are hierarchical in nature, broad in scope at the top level, more detailed and specific at the operational level.
- ♦ They are mutually compatible and supportive - the detailed objectives be drawn from the top level broadly stated organizational objectives.
- ♦ Objective setting in an iterative process, objectives of purpose and strategy being set by Senior Management, operational objectives set in response by operational managers - a top-down /bottom-up process.

SLIDE 5-3

## 3. Development of Strategies

SLIDE L3-12

- ♦ Each strategic objective will have a number of associated key issues, which need to be explored in developing the final strategy and relevant programs and activities.
- ♦ There may be a number of alternative scenarios which need to be explored as part of an effective framework for analysis. This requires time and effort by participants, but offers some advantages:
  - exposes new sets of possibilities and contingencies
  - challenges conventional thinking
  - raises a range of possibilities for the future, and opportunities for the agency to influence events.

- Participation is a fundamental principle of corporate planning, involving firstly relevant agency staff, and often, staff from other agencies, client (e.g. farmer) representatives.
- There is a variety of techniques which can be used to assist participation
  - conferences, surveys, task forces, working groups.

#### 4. Performance Measures

- The development of an objective requires a nomination of expected outcomes, expressed as goals, targets, milestones, etc.
- The strategies and activities formulated to achieve an objective result in actions, which will be monitored or measured.
- The use of performance measures is a way to ensure that appropriate and purposeful action does result.

Performance Measurement will be the subject of Lecture no. 6

5. Introduction of exercise 4 - Step 1 and Step 2 to the Top Managers - First Group.  
Title: Agency Role in the Future - The Mission and Vision. See Vol. I, Annex G1-5, page 64 to 68.
6. Introduction of exercise 4 - Step 3 to the Chief Engineers, Divisional Engineers, etc. - Second Group.  
Title: Interpreting the Mission of MOI. See Vol. I, Annex G1-5, page 64 to 68.
7. Introduction of exercise 5. Title: Development of MOI Objectives. See Vol. I, Annex H1-2, page 75 & 76.
8. Introduction of exercise 6 to the Chief Engineers, Divisional Engineers, etc. - Second Group. Title: Development of Strategies. See Vol. I, Annex I1, page 82.

## **LEVELS OF OBJECTIVES**

All objectives relate to a vision of the future, reflecting desired outcomes.

Three levels:

- Objectives of purpose
  - drawn from agency charter
- Objectives of strategy
  - derived from environmental analysis
- Objectives of tactic
  - short term operational objectives

## NATURE OF OBJECTIVES

- HIERARCHICAL
  - broad in scope at top level
  - detailed and specific at the action level
- MUTUALLY COMPATIBLE AND SUPPORTIVE
- OBJECTIVE SETTING PROCESS
  - an iterative top-down/bottom-up process

## **DEVELOPMENT OF STRATEGIES**

- Each strategic objectives will have a number of associated key issues
- Possibility of alternative scenarios
- Participation the key principle
  - conferences, workshops
  - surveys
  - task forces
  - working groups
- Performance measures

# **NATIONAL WORKSHOP**

## **IRRIGATION MANAGEMENT TRAINING**

### **LECTURE NO. 6:**

### **PERFORMANCE ASSESSMENT**

#### **1. INTRODUCTION**

Performance assessment is an essential element in the determination of the degree of achievement of the objectives set in the strategic and operational planning stages.

Performance assessment of the institutions, organizations, and agencies deals with the quality of the management conditions established, or are available, and the management processes that occur continuously in the organizations as they carry out their functions to conduct their business and serve their essential purposes. In this case, the Ministry of Irrigation and its directorates, etc. constitute the institutions and agencies, whose performance is of interest.

Performance of the irrigation systems based on the outputs delivered and impacts generated also needs to be evaluated with reference to the objectives and targets set for the systems at the planning stage and during the operations.

Performance of the institutions and agencies is a critical determinant (or casual factor) of the performance of the irrigation system.

Performance assessment of institutions is the subject of this lecture and the exercises:

#### **2. PERFORMANCE CATEGORIES**

Performance category is a set of related skills, procedures, and capabilities which define a particular area of institutional function or performance. A performance category describes a generalization or pattern of performance which can be observed or verified through research. For purposes of institutional assessment, a performance category is a major area of enquiry such as the following:

- a) Organizational autonomy
- b) Leadership
- c) Management and administration
- d) Commercial orientation
- e) Consumer orientation
- f) Technical capability

- g) Developing and maintaining staff
- h) Organizational culture
- i) Interactions with key external institutions.

### 3. DESCRIPTION OF PERFORMANCE CATEGORIES

#### **Organizational autonomy**

Degree of freedom and independence to conduct its affairs and meet its responsibilities with minimum interference and controls by other entities. Power to make decisions on important matters: budget, revenues, hiring levels, pay and incentives, control of personnel, institutional policies.

#### **Leadership**

The ability to inspire others to understand the institution's mission, to commit themselves towards that mission, and to work towards its fulfillment. It goes well beyond proficiency in management skills. An institution needs effective leadership at many different levels to perform its functions in a competent manner.

Effective leaders serve as positive role models and set an example, motivate managers and staff, help transform the institution by making it active, energetic and visionary, and by making the sum of the parts greater than the whole.

#### **Management and Administration**

Management is organizing people and resources to accomplish the work of the institution. Effective management is demonstrated by the capacity to get the most out of the resources available (human and other) in a deliberate or planned manner. Good managers have a clear sense of goals and priorities; they know who to rely on to get a job done and how to delegate to them the means to do it; they are aware of operational details; they monitor the work and follow-up consistently. An effective management climate is characterized by teamwork, cooperation, and good communication among the staff.

The counterpart to management skills is the existence and use of key administrative systems. These are the policies and procedures which regulate and guide the actions of management. The mature organization has designed or evolved effective sub-systems such as personnel, budget, accounting, financial management, commercial procurement, and management information systems.

#### **Commercial orientation**

Commercial orientation is the degree to which actions in an institution are driven by cost effectiveness and operating efficiency. This orientation can be viewed at both policy and operational levels, and both levels are important.



Commercial orientation is important at policy level, even if significant revenues are routinely derived through subsidies. Subsidies, if any, should be identified and tied to specific areas for which the controlling authority has taken a political decision to subsidize, rather than provide a blanket subsidy.

Operationally, everyday activities are guided by quality standards and by constant attention to cost factors and achieving the best value for money spent.

### **Consumer orientation**

Consumer orientation is organizing and directing the services of the institutions towards the consumers or the end-users. People who staff an effective institution in the sector see serving consumers as their primary function. All work, all programs, all innovations are directed towards greater efficiency, effectiveness, and equity in service to the consumer. Staff at every level are aware of this consumer orientation and see it as governing positively their important daily operational decisions and actions.

Effective institutions have workable means wherein consumers can interact with them. These may include emergency outlets or 'hot lines' when there are crises, clearly identified places where disputes about bills or service can be arbitrated, ways that interested consumers can make suggestions to influence overall policy, and so on. Where consumerism is not present, appropriate, practically acceptable means are employed to attain an effective level of consumer protection in the institution.

### **Technical capability**

Technical capability is the measure of the institution's competence in conducting the technical work required to carry out the responsibilities of the institution. Most of this technical work is performed directly by skilled, qualified employees, but outside specialists (like contractors) whose work is supervised by the institution's staff may be used where appropriate.

### **Developing and maintaining staff**

Developing and maintaining staff include those activities toward recruiting staff, providing skills to do the jobs and grow professionally, and providing adequate job satisfaction and wages and benefits to retain competent personnel.

Effective institutions develop and maintain their personnel. This includes both formal training programs and informal training that occurs through on-the-job training, apprenticeships, and job rotation. In addition to a regular process of skills transfer, effective institutions maintain staff through providing sufficient incentives, compensation, employee benefits, and promotion opportunities so that there is a minimum of unwanted turnover. Institutions that develop and maintain staff feel that people are their most important asset. There is a constant emphasis on learning.

## **Organizational culture**

Organizational culture is the set of values and norms which inform and guide everyday actions. The culture forms a pattern of shared beliefs and assumptions which translate into behavior which can be observed.

An organization's culture is conveyed in a number of intended and unintended ways. Although often unstated, cultural beliefs, behaviors, and assumptions serve as a powerful means for defining and justifying organizational operations either in positive or negative ways.

Another factor in organizational culture is how the institution has dealt with change or crisis. When a major change has been introduced (new technology, organizational restructuring, or new leadership), people are often required to alter the way they operate. It is important to know how the organization has responded to new systems or personnel. Does it realign its forces positively to support innovation? or, is it highly resistant to change? The answer is an indication of the overall organizational health.

The organization with a positive culture has a clear sense of mission and identity. People take pride in belonging to the group and a sense of history of the organization which is passed on from old to new employees.

## **Interactions with key external institutions**

The institution's capacity to influence positively and strategically those institutions which affect its financial, political, and legal ability to perform is the essential characteristics of this category.

Many entities in the external environment affect the performance of an agency or organization. These include the political (parent ministry and legislative bodies), financial (lending sources, and budget/finance ministry), and regulatory entities (state/provincial government agencies), which have an influence over operations. An effective organization has the ability to influence and adapt to these external entities to achieve its goals. This is accomplished by anticipating activities which might affect the institution and establishing strategies to deal with them.

## **4. PERFORMANCE INDICATORS**

Performance indicators are a set of specific measurable behaviors or procedures related to a performance category which, when analyzed together indicate the degree to which competence standards are met in the performance category. The performance indicators need to be determined on the basis of observations of successful performance of currently operating institutions. Examples of performance indicators are provided in the accompanying exercise.

## REFERENCE

1. Water and Sanitation for Health (WASH) Project:  
Guidelines for Institutional Assessment - Water and Waste water Institutions.  
WASH Technical Report No. 37, Feb. 1988.
2. Managing Institutional Development Projects:  
Water and Sanitation Sector. WASH Technical Report No. 49, May 1988.

## APPENDIX

### Excerpts from

#### Guidelines for Institutional Assessment: Water and Wastewater Institutions

### Chapter 4

#### PERFORMANCE CATEGORIES

##### A. Definition and Use of Performance Categories

As indicated in Chapter 1, a performance category is a set of related skills, procedures, and capabilities which define a particular area of institutional function or performance. These have been grouped together for purposes of analysis. For example, "commercial orientation" includes cost effectiveness, operating efficiency, financial planning, quality standards relating to cost, monitoring and accounting systems, and staff awareness and commitment to commercial goals.

A performance category describes related skills, procedures, and capabilities which can be observed or verified through field research. In the assessment process, a performance category is a major area of inquiry: data are gathered and analyzed to form a generalization about organizational performance in the area. The results are compared against an agreed upon standard. In this document, the standards are called "indicators of high performance."

##### B. How the Categories Were Determined

Field research was conducted in two institutions selected to represent examples of outstanding performance in the sector. The institutions were selected after reviewing approximately twenty possible sites nominated by well recognized experts in the field. The institutions represent situations where donors and lending agencies normally operate so that the categories would provide lessons learned in overcoming the normal barriers to development by the institutions under study. In addition, an effort was made to select both urban and rural agencies involved in both water and wastewater with a development history and demonstrated excellence in a full range of organizational and technical areas.

One institution selected was a very large state water and wastewater institution in Southern Brazil (SANEPAR) comprising both urban and rural systems. SANEPAR was formed and developed into an outstanding institution in a short period (fifteen years). This was accomplished within the context of a setting typical of development situations (political turnover, rising prices, the need to rapidly address growing urban expansion, inheriting old municipal systems with untrained staff, and related problems). The other example selected was in Malaysia: the water supply agency for Penang. This institution does not provide wastewater services but meets all the other criteria. It is a very old system which was started during colonial days and continues into the present. It serves the entire island which has a mixture of rural and urban populations.

The field research methodology followed the basic tenets of social field research.<sup>2</sup> No prior hypothesis was made on the outcome: the researchers followed a plan of inquiry which focused primarily on the question: "What are the factors, ingredients, and causes of success in this institution?" The answers emerged from the results of the inquiries.

Research techniques included reviewing written documents (published output measures), interviews, and observation. Two teams, consisting of two individuals each, conducted research at the two sites at approximately the same time period with no cross-communication between teams about the data during the field work. After two weeks of field research, these data were analyzed for patterns by each team separately. Performance areas were defined and measures of performance were recorded.

At the end of the field research the two teams met to compare their data and to determine a single set of performance categories. Although the institutions under study were in very different cultural and economic settings (Malaysia and Brazil), there was a striking unanimity of opinion on the reasons for successful performance by the two institutions. Even though the institutions had very different histories and were organized in completely different ways, each performed with highly successful results. The performance categories below were derived from this analysis.

#### C. How to Use the Performance Categories and Worksheets

The performance categories and indicators listed in Section E below represent a set of competency standards for success. Each performance category is defined with a generalized statement which characterizes the category and states why it is a key area of institutional performance. The definition is followed by examples of key indicators for high performance. The indicators are followed by a worksheet which consists of examples of typical questions and guidance for gathering the data which relate to the category. (The worksheets are not included in this excerpt.)

The research process requires that sufficient information be gathered to justify the performance rating for each indicator listed. When sufficient data are gathered, the team should analyze them and rank the performance indicators under each category as high, medium, or low. Justifying evidence should be listed under each indicator in the final presentation of the analysis.

Although each indicator is provided with a rating scale in this document (from low to high), it is assumed that team members will organize data and supporting evidence informally on note pads, and not be limited by the wording or scale given on the performance indicator pages. Supporting material must be collected in a fluid, non-rated manner, and later analyzed and ranked as patterns become evident.

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<sup>2</sup>

For a detailed explanation of this methodology, refer to L. Schatzman and A. Strauss, Field Research, Strategies for a Natural Sociology. Englewood Cliffs, N.J.: Prentice-Hall, 1973.

After each performance category is researched, an overall analysis should be made within and among categories using a procedure which is explained in Chapter 5.

D. Team Approach to Gathering Data in Performance Categories

In order to manage the process of gathering information in nine separate categories, it is suggested that all team members gather information in all categories during the first round of interviews using the general guidelines for interviewing described in Chapter 2, Section C (Methods for Data Collection). Institutional information tends to be crosscutting in nature and many individuals within an institution will have information in a number of areas. After initial information gathering, the team can assess where the information gaps are and assign specific follow-up data-gathering tasks within the areas of technical background of team members. Decisions about who should interview whom during the first round of information gathering is an internal team matter. It is suggested that the background of team members be taken into account where useful in order to establish credibility and relationships with different divisions of the institution.

E. Performance Categories

The performance categories to be assessed are listed below. Each performance category is presented in a separate section which includes a definition, performance indicators, and worksheets.

1. Organizational autonomy
2. Leadership
3. Management and administration
4. Commercial orientation
5. Consumer orientation
6. Technical capability
7. Developing and maintaining staff
8. Organizational culture
9. Interactions with key external institutions

## ORGANIZATIONAL AUTONOMY

### DEFINITION

Organizational autonomy is the institution's degree of independence from the national government or other governmental or regulatory bodies. While not unrestrained, this independence must exist to the extent that the institution is able to conduct its affairs and meet its responsibilities in an effective manner with minimum interference and controls by other entities.

Effective organizational autonomy is characterized by the power to make decisions about the following important matters: budget, revenues, hiring levels, pay and incentives, control of personnel, institutional policies, planning and construction of projects, and organizational goals.

An adequate level of autonomy is a prerequisite to the success of institutions in this sector.

### INDICATORS OF HIGH PERFORMANCE

1. Sets own organizational policies and goals and changes them as necessary to provide guidance and direction in achieving the objectives of the institution.

Very Low	Medium	Very High
----------	--------	-----------

2. Develops strategies to achieve organizational goals

Very Low	Medium	Very High
----------	--------	-----------

3. Conducts such studies as may be necessary and carries out long-term planning to meet the expected demands on the institution; approves and acts on such studies and plans, including the construction of recommended facilities.

Very Low	Medium	Very High
----------	--------	-----------

4. Prepares annual capital and operating budgets consonant with needs and available revenues; is successful in obtaining approval for the budgets.

Very Low	Medium	Very High
----------	--------	-----------

5. Establishes and implements levels of tariffs and service charges sufficient to meet costs.

Very Low	Medium	Very High
----------	--------	-----------

6. Maintains control over all revenues generated and collected.

Very Low	Medium	Very High
----------	--------	-----------

7. Establishes and maintains staffing levels sufficient to meet needs.

Very Low	Medium	Very High
----------	--------	-----------

8. Employs, discharges, disciplines, and promotes personnel within established and approved guidelines adequate to institutional needs.

Very Low	Medium	Very High
----------	--------	-----------

9. Establishes levels of employee compensation, including salaries and benefits, sufficient to attract and retain capable staff.

Very Low	Medium	Very High
----------	--------	-----------

10. Determines own organizational structure including roles and responsibilities of major divisions.

Very Low	Medium	Very High
----------	--------	-----------



## LEADERSHIP

### DEFINITION

Leadership is the ability to inspire others to understand the institution's mission, to commit themselves to that mission, and to work toward its fulfillment. It goes well beyond proficiency in management skills. In order to perform its functions in a competent manner, an institution in any sector needs to have effective leadership at many different levels.

Effective leaders serve as positive role models. They provide motivation for managers and staff to perform their functions in often difficult and sometimes apparently unrewarding contexts. Effective leaders help transform the institution by making it active, energetic, and visionary and by making the sum of the parts greater than the whole. In effective institutions, such leadership does not reside only with the top manager. Elements of it can be seen at various levels of the organization, from the foreman level to the general manager level, although these elements may differ slightly from level to level.

The indicators below are generally written from the perspective of a generic leader who can be at any level of the organization.

### INDICATORS OF HIGH PERFORMANCE

1. Provides clear sense of mission; articulates mission; involves people with the mission so they get a sense of ownership of mission; gets people excited about the mission, believing in it.

Very Low	Medium	Very High
----------	--------	-----------

2. Serves as a positive role model (e.g., honest, hard working, balances people-needs with organizational needs, believes in hard work, is enthusiastic).

Very Low	Medium	Very High
----------	--------	-----------

3. Has a sufficient level of operational knowledge to inspire trust.

Very Low	Medium	Very High
----------	--------	-----------

4. Works hard and works overtime as required; gets out in the field or visits other offices; is visible to the rank and file.

Very Low	Medium	Very High
----------	--------	-----------

5. Demonstrates competence, is visibly interested in work.

Very Low	Medium	Very High
----------	--------	-----------

6. Is oriented toward producing results which move work toward meeting goals.

Very Low	Medium	Very High
----------	--------	-----------

7. Identifies clear performance standards and is strict but fair; gives positive and negative feedback where due; disciplines where necessary based on performance.

Very Low	Medium	Very High
----------	--------	-----------

8. Listens as well as instructs.

Very Low	Medium	Very High
----------	--------	-----------

9. Is active, has "we can do it" attitude; assertively makes decisions, moves things.

Very Low	Medium	Very High
----------	--------	-----------

10. Maintains sense of balance between future vision and everyday operational matters ("keeping nose to the grindstone and eyes to the hills").

Very Low	Medium	Very High
----------	--------	-----------

11. Demonstrates personal integrity (i.e., does not claim false overtime, take money, or cut corners for personal gain); instills sense of integrity in others.

Very Low	Medium	Very High
----------	--------	-----------

12. Shows sense of dynamism and energy in everyday contact with others.

Very Low

Medium

Very High

13. Sets positive problem-solving environment (i.e., creates a sense that uncovering problems is desirable and that creative approaches to their solution are effective).

Very Low

Medium

Very High

14. Continuously guides technical staff on need to ensure that levels of technology used by the institution are those which are most suitable in terms of simplicity of operation and maintenance; monitors activities in this regard.

Very Low

Medium

Very High

## MANAGEMENT AND ADMINISTRATION

### DEFINITION

Management is organizing people and resources to accomplish the work of the institution. Effective management is demonstrated by the capacity to get the most out of the resources available (human and other) in a deliberate or planned manner. Good managers have a clear sense of goals and priorities; they know who to rely on to get a job done and how to delegate to them the means to do it. Effective managers are aware of operational details; they monitor the work and follow-up consistently. An effective management climate is characterized by teamwork, cooperation and good communication among the staff.

The counterpart to management skills is the existence and use of key administrative systems. These are the policies and procedures which regulate and guide the actions of management. The mature organization has designed or evolved effective sub-systems such as personnel, budget, accounting, financial management, commercial procurement, and management information systems.

### INDICATORS OF HIGH PERFORMANCE

#### Management Skills and Capabilities

1. Managers have a clear sense of their own and others' roles and responsibilities. They communicate roles and expectations clearly to others and involve them in the process of defining their roles and responsibilities.

Very Low	Medium	Very High
----------	--------	-----------

2. The mission of the organization is clear and understood by all managers.

Very Low	Medium	Very High
----------	--------	-----------

3. When asked, staff are able to describe clearly their responsibilities.

Very Low	Medium	Very High
----------	--------	-----------

4. Managers know how to plan and delegate to get work tasks accomplished (tasks are allocated to the right people). Work planning is done with staff involvement. People have a free hand to get work done and are supported in doing it.

Very Low	Medium	Very High
----------	--------	-----------

5. Managers regularly set goals with staff and have a sense of priorities. Goals are limited and realistic and mesh with organizational mission and priorities.

Very Low	Medium	Very High
----------	--------	-----------

6. Departmental/organizational objectives are clear and understood at many levels.

Very Low	Medium	Very High
----------	--------	-----------

7. People are held accountable for getting work done.

Very Low	Medium	Very High
----------	--------	-----------

8. Follow-through on task assignments is done consistently...

Very Low	Medium	Very High
----------	--------	-----------

9. There is good communication within and among all levels; information is shared openly.

Very Low	Medium	Very High
----------	--------	-----------

10. Managers set and use performance indicators (standards) to evaluate work performance. They are understood at appropriate levels.

Very Low	Medium	Very High
----------	--------	-----------

11. Management maintains a climate of teamwork and cooperation among the staff.

Very Low	Medium	Very High
----------	--------	-----------

12. Communication flows freely within and among departments at all levels.

Very Low	Medium	Very High
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13. Managers at all levels use and are well informed about the administrative systems.

Very Low	Medium	Very High
----------	--------	-----------

Management Administrative Systems

14. Administrative systems for the following functions have been developed and are regularly used. (Note: rate each system for effectiveness.)

a) Budgeting

Very Low	Medium	Very High
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b) Commercial

Very Low	Medium	Very High
----------	--------	-----------

c) Accounting

Very Low	Medium	Very High
----------	--------	-----------

d) Procurement

Very Low	Medium	Very High
----------	--------	-----------

e) Management Information

Very Low	Medium	Very High
----------	--------	-----------

f) Personnel

Very Low	Medium	Very High
----------	--------	-----------

g) Maintenance Management System

Very Low	Medium	Very High
----------	--------	-----------

h) Stores, Supplies, and Inventory Control

Very Low	Medium	Very High
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## COMMERCIAL ORIENTATION

### DEFINITION

Commercial orientation is the degree to which actions in an institution are driven by cost effectiveness and operating efficiency. The performance of an institution's functions should be guided and disciplined by a strategy to achieve financial self-sufficiency at an appropriate stage of growth. This orientation can be viewed at both operational and policy levels, and both levels are important. At the policy level, commercially oriented institutions structure and stage investments, expenditures, and revenues to achieve financial equilibrium annually.

Operationally, everyday activities are guided by quality standards and by constant attention to cost factors. The institution strives to establish a reputation as a financially well run business in the eyes of the financial and outside community in order to obtain financial support for growth and to maximize financial and operating autonomy.

(Note: Commercial orientation may be more readily achievable by water institutions but it is also important for wastewater institutions, even if significant revenues are routinely derived through subsidies.)

### INDICATORS OF HIGH PERFORMANCE

1. Maintains yearly balance between expenditures and revenues. Revenues may be partly drawn from subsidies which are phased out according to a planned schedule.

Very Low	Medium	Very High
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2. Requires economic and financial feasibility for its projects and other institutional activities.

Very Low	Medium	Very High
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3. Staff actions throughout the institution are guided by cost effectiveness as well as quality standards.

Very Low	Medium	Very High
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4. Takes into account cost effectiveness when individuals and groups plan and organize work.

Very Low	Medium	Very High
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5. Monitors expenditures against approved budgets.

Very Low	Medium	Very High
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6. Maintains attitude of consumer orientation throughout the institution and is responsive to client needs and requests.

Very Low	Medium	Very High
----------	--------	-----------

7. Maintains clear, auditable financial records.

Very Low	Medium	Very High
----------	--------	-----------

8. Staff espouses a commercial orientation and thinks of their service function as a business.

Very Low	Medium	Very High
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## CONSUMER ORIENTATION

### DEFINITION

Consumer orientation is organizing and directing the services of the institution towards consumers. People who staff an effective institution in the sector see serving consumers as their primary function. All work, all programs, all innovations are directed toward greater efficiency, effectiveness, and equity in service to the consumer. Staff at every level are aware of this consumer orientation and see it as governing positively their important daily operational decisions and actions.

Effective institutions in the sector have workable means wherein consumers can interact with them. These may include emergency outlets or "hotlines" when there are crises, clearly identified places where disputes about bills or service can be arbitrated, ways that interested consumers can make suggestions in overall policy, and so on. Creative and cost-effective ways are sought to inform and educate the public. Where consumerism is not present, appropriate, politically acceptable means are employed to attain an effective level of consumer protection in the institution.

### INDICATORS OF HIGH PERFORMANCE

1. Staff at every level demonstrate they are oriented toward serving consumers; when observed, their decisions and actions are clearly driven by what is best for the consumer.

Very Low	Medium	Very High
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2. There are identifiable mechanisms for consumers to interact with key areas of the institution over important matters (e.g., emergency hotline, bill disputes, service problems).

Very Low	Medium	Very High
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3. There is clear evidence that the institution responds to complaints, emergencies, and suggestions which consumers make.

Very Low	Medium	Very High
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4. There are identifiable, ongoing, and effective measures to educate consumers about institutional services and requirements.

Very Low	Medium	Very High
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5. The institution makes efforts to invite and evoke an effective level of consumer participation (e.g., consumers bring concerns/complaints to the institutions).

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Very Low Medium Very High

6. There are concerted efforts made to project a positive image of the institution to consumers.

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Very Low Medium Very High

7. The level of complaints from the public is relatively low.

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Very Low Medium Very High

## TECHNICAL CAPABILITY

### DEFINITION

Technical capability is the measure of the institution's competence in conducting the technical work required to carry out the responsibilities of the institution. Most of this technical work is performed directly by skilled, qualified employees, but outside specialists whose work is supervised by the institution's staff may be used where appropriate.

### INDICATORS OF HIGH PERFORMANCE

1. Consistently makes sound technical decisions and effectively serves management by conducting technical studies and planning as requested.

Very Low	Medium	Very High
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2. Ensures effective control of the quality of the end product and all other technical operations.

Very Low	Medium	Very High
----------	--------	-----------

3. Successfully completes projects which meet intended objectives in a timely and economical manner.

Very Low	Medium	Very High
----------	--------	-----------

4. Ensures that technical tasks at all levels are completed properly.

Very Low	Medium	Very High
----------	--------	-----------

5. Develops and maintains staff with adequate technical skills to perform needed services; promotes broader knowledge of aspects of technology beyond the individual's specific area of expertise.

Very Low	Medium	Very High
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6. Uses or adapts technology which is suitable for the specific needs of the institution and avoids temptation to use more exciting--but not appropriate--technologies learned by staff who were trained in other settings.

Very Low	Medium	Very High
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7. Maintains levels of in-house technical skills adequate for routine technical responsibilities and sub-contracts to outside specialists those tasks which are either beyond the institution's own capabilities or necessary to meet peak needs.

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Very Low	Medium	Very High
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8. Conducts practical research and experiments to improve existing uses of technology for local conditions and needs.

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Very Low	Medium	Very High
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9. Technical information is routinely shared among planning, design, and construction units to ensure smooth technical coordination.

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Very Low	Medium	Very High
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10. Technical staff members demonstrate a strong interest in technical learning and keep up with new information in the field.

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Very Low	Medium	Very High
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## DEVELOPING AND MAINTAINING STAFF

### DEFINITION

Developing and maintaining staff include those activities directed toward recruiting staff, providing skills to do the jobs and grow professionally, and providing adequate job satisfaction and wages and benefits to retain competent personnel.

Effective institutions develop and maintain their personnel. This includes both formal training programs and the informal training that occurs through on-the-job training, apprenticeships, and job rotation. In addition to a regular process of skill transfer, effective institutions maintain staff through providing sufficient incentives, compensation, employee benefits, and promotion opportunities so there is a minimum of unwanted turnover. Institutions that develop and maintain staff feel that people are their most important asset. There is a constant emphasis on learning.

### INDICATORS OF HIGH PERFORMANCE

1. Mechanisms exist and are utilized to promote skill transfer.

- a. Organized skill transfer training programs (such as seminars or demonstrations) are designed and used to meet institutional goals.

Very Low	Medium	Very High
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- b. There is an informal process (such as internship) to effectively transfer skills.

Very Low	Medium	Very High
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2. A clear process for determining skill needs exists and is the basis for designing training programs.

Very Low	Medium	Very High
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3. Managers are actively involved in skill transfer and training, as supervisors or through delivery of courses.

Very Low	Medium	Very High
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4. Personnel express an interest in learning new ways of doing things.

Very Low	Medium	Very High
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5. A system exists for developing competent managers and supervisors.

Very Low	Medium	Very High
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6. The institution provides adequate incentives to maintain staff.

- a. Salary levels are adequate to maintain personnel.

Very Low	Medium	Very High
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- b. The institution provides opportunity for social support (e.g., social centers and sports clubs).

Very Low	Medium	Very High
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- c. Employee benefits (pension, vacation time, sick leave, insurance) are an important part of the overall compensation package and together with salaries provide adequate incentives to maintain staff.

Very Low	Medium	Very High
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- d. Employee turnover is at an acceptably low level.

Very Low	Medium	Very High
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7. A clear system exists for hiring qualified personnel and firing or disciplining personnel when necessary.

Very Low	Medium	Very High
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8. Employees demonstrate good morale and openly state that the institution is a good place to work.

Very Low	Medium	Very High
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9. Active systems are in place for providing ongoing formal and informal feedback to personnel about job performance.

Very Low	Medium	Very High
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10. Employees feel involved in and informed about the institution's activities.

Very Low	Medium	Very High
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## ORGANIZATIONAL CULTURE

### DEFINITION

Organizational culture is the set of values and norms which inform and guide everyday actions. The culture forms a pattern of shared beliefs and assumptions which translate into behavior which can be observed.

An organization's culture is conveyed in a number of intended and unintended ways. Although often unstated, cultural beliefs, behaviors, and assumptions serve as a powerful means for defining and justifying organizational operations either in positive or negative ways. This will sometimes be expressed by introductory explanations given by staff with the message "this is what we are about here." It will be unintentionally expressed in the tone of the message (excited, bored, harassed, organized). It will also be expressed unintentionally in the way facilities look. Are they clean, kept up, or in a shambles?

Another factor in corporate culture is how the institution has dealt with change or crisis. When a major change has been introduced (new technology, organizational restructuring, a new billing system, new leadership or influential staff), people are often required to alter the way they operate. It is important to know how the organization has responded to new systems or personnel. Does it refuse to change, pretend to change, change superficially, change only for a short term or in a distorted fashion, or does it realign its forces positively to support innovation? An unhealthy corporate culture will be highly resistant to any change; forces will line up to protect narrow self interests (such as graft or petty bureaucratic authority) at the cost of overall organizational health.

The organization with a positive culture has a clear sense of mission and identity. This is often expressed by a majority of the employees in the form of "legends about the organization" or messages about "who we are." In positive terms, this often takes the form of a sense of pride in belonging to the group and a sense of the history of the organization which is passed on from old to new employees.

### INDICATORS OF HIGH PERFORMANCE

1. An observable team spirit exists among the staff.

Very Low	Medium	Very High
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2. People express a sense of ownership and pride about working that is communicated by such statements as "this is a good place to work."

Very Low	Medium	Very High
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3. Employees are able to articulate the history and legends of the organization in positive ways.

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Very Low	Medium	Very High
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4. Continuity in the organizational culture is maintained (even with staff turnover at high or low organizational levels).

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Very Low	Medium	Very High
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5. Staff place a value on maintaining the physical plant (offices, treatment plants, grounds) of the organization. Facilities look clean, well maintained, and attractive.

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Very Low	Medium	Very High
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6. Power and status are defined as something the entire organization shares in varying degrees, especially the status associated with doing a good job.

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Very Low	Medium	Very High
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7. Sub-groups and alliances within the organization serve as a positive means of informal communication and a rallying point in the organization during periods of crisis or to support healthy change.

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Very Low	Medium	Very High
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## INTERACTIONS WITH KEY EXTERNAL INSTITUTIONS

### DEFINITION

The institution's capacity to influence positively and strategically those institutions which affect its financial, political, and legal ability to perform is the essential characteristic of this category.

Many entities in the external environment affect the performance of a water/wastewater institution. These include the political (parent ministry and legislative bodies), financial (lending sources and budget/finance ministry), and regulatory entities (municipal government, state government, health ministry) which have an influence over operations. An effective organization has the ability to influence and adapt to these external entities to achieve its goals. This is accomplished by anticipating activities which might affect the institution and establishing strategies to deal with them.

### INDICATORS OF HIGH PERFORMANCE

1. Top management stays well informed about external policy, financial, and regulatory issues and actions.

Very Low	Medium	Very High
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2. Management maintains direct contact with the key individuals in all important external entities.

Very Low	Medium	Very High
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3. Specific strategies are formulated to influence policies, legislation, and other activities to obtain necessary approvals and resources.

Very Low	Medium	Very High
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4. Programs are developed to influence the public in support of institutional goals.

Very Low	Medium	Very High
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5. Management adapts creatively to obstacles (e.g., supplements inadequate salaries with other kinds of incentives).

Very Low	Medium	Very High
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# **NATIONAL WORKSHOP**

## **IRRIGATION MANAGEMENT TRAINING**

### **LECTURE NO. 7:**

#### **HUMAN RESOURCE IN THE ORGANIZATION**

#### **I. INTRODUCTION**

Human Resource is thought to be the most important asset within the organization, however, it seems to be neglected by its management. To overcome this weakness, the organizations are expected to develop an effective human resources planning systems to get the best possible productivity from their personnel.

Human Resources Planning must respond to the organization's vision, mission, goals and objectives through a careful linkage with its strategic and operational plans.

The Human Resources Planning is a process through which the management of the organizations defines the right amount of people with the necessary skills to work in the right places, at the right time, performing tasks that result in accomplishing the organizations' mission and goals.

There are several processes in the development and implementation of an integrated Human Resources Planning system. Among others, there are:

1. Strategic planning which defines deliberate plans of actions taking into consideration the future of the organization in a systematic way. The definition of the organization's vision, mission, goals, objectives, strategies, and others are part of the strategic planning.
2. Definition of personnel requirements, including the number and kinds of people, job descriptions, etc. to make sure that the organization has people needed for the work to be accomplished along with clear and well defined position descriptions, and work standards.
3. Planning for human resource development (HRD) which includes various programs to guarantee motivation and high performance of the personnel. The HRD is further described below.

## II PLANNING FOR HUMAN RESOURCE DEVELOPMENT (HRD)

Planning for human resources development is the process whereby the organization tries to determine the human resource needs and how to satisfy such needs.

HRD policy is very necessary and recommended as a prerequisite for any organization. It provides guidelines for its management to make appropriate and consistent decisions.

Human resource development (HRD) plan is defined as the blueprint which outlines the organizational approach to providing personnel with appropriate knowledge, attitudes, skills and physical attributes to perform at planned level of outputs.

## III HRD SPECIFIC OBJECTIVES

A publication of the World Bank and the United States Agency for International Development (USAID) entitled "Irrigation Training in the Public Sector : Guidelines" for preparing strategies and programs, (Irrigation, 1989) provided the basis for discussing this issue. This publication emphasizes two specific objectives for systematic training programs. They are -

- ensuring that the management, technical and administrative skills necessary to fulfill its objectives are developed and retained within the department; and
- optimizing the opportunity for personal development and work satisfaction among individual staff members.

In 1987, an ICID meeting in Morocco reached the following conclusions with regard to irrigation water management training programs:

- programs should be developed in line with the organizational objectives based on the assessment of the needs for training;
- they should be comprehensive and systematic to include the needs for management, operating, maintenance and administrative staff;
- initial training of project operating and maintenance staff should be completed before new works are commissioned;
- water users and their associations should be taken into consideration when developing training strategies;
- training programs should be as close to the field as is possible (Irrigation training, 1989).

#### **IV STRATEGIC DECISIONS IN PLANNING FOR TRAINING**

The strategic decisions in planning for training recommended by the above guidelines are described as follows:

- the goals, objectives and targets;
- the corporate mission statement;
- the functions and tasks to be performed by management & staff, consistent with agricultural sector policies and structures;
- the relative priority of tasks, including coordination with other agencies and users;
- the specification of requirements for training;
- the organization and implementation of the training program;
- the budgeting for a training program, periodically to be reviewed; and
- the follow-up monitoring and evaluation of the training program.

##### **Development objective**

To achieve effective management, the relevant management authority of any organization must first develop a clear statement of the mission or purpose of the unit - those functions the organization is to perform, and for which it is to be accountable. Such a statement, sometimes referred to as a "Mission Statement" or "Corporate Plan", should set forth the general philosophy and goals of the organization. It usually provides, as well, general guidance on human and financial resources; physical systems and technology choices; and information systems and performance management.

##### **Functions and tasks performed**

- Agencies, farmers and water users - need to be clear about their own functions and responsibilities and how to relate to the functions and tasks of others.
- Functions and tasks and responsibilities will be defined and set out in job descriptions for managers and members of staff.

##### **Priorities for critical tasks**

- Priorities of tasks involved in irrigated agriculture will change over time. This should be taken into account by HRD sector to design or adjust HRD plan.

### **Training program specification**

- TNA methods and data

### **Organization and implementation of training**

- Supervised on-the-job training
- Formal courses
- Workshops and seminars
- Study tour
- Internship

### **Training facilities**

- Training unit should be created at the department as well as a physical center for research and training.

**Budgeting for a training program** should be a must within organization.

**Follow-up and evaluation of training programs** are considered the fundamental condition to sustain the performance of personnel and the organization.

### **Additional activities should be part of the hrd plan**

- Recruitment/Selection
- Socialization
- Career development
- Individual performance management
- Compensation
- Performance appraisal.

### **Individual performance management**

Individual performance management comprises a set of activities by which an organization identifies expected behavior and provides incentives for that behavior.

- The incentives may be both monetary or non-monetary
- These activities also control disincentives for non-performance

## **V KEY FACTORS FOR SUCCESS OF A PERFORMANCE APPRAISAL OF STAFF**

- Collecting information on actual performance of individual staff, based on the job description;
- Structuring the performance appraisal scheme according to declared mission and objectives of the institution;

- Establishing organizational, group and individual goals and standards appropriately;
- Developing appraisal techniques;
- Training appraisers in user of appraisal techniques adopted;
- Conducting appraisal in two way communication: both the supervisor and the staff must discuss openly and seriously the performance results: Emphasize strengths and weaknesses in a very constructive way;
- Selecting with the respective staff indicators which are easy to identify and observe;
- Establishing strong management commitment. This means producing regular performance appraisal and reports to decide on staff development, promotion and career development, merit awards, etc.
- Ensuring performance appraisal is not confidential and subjective. This exercise should not become just simply or formally, but an activity to reflect on staff real performance and assess ways to help him or her to do better job and increase motivation.

## VI: REFERENCE

Irrigation training in the public sector: guidelines for preparing strategies and programs.  
World Bank and United States Agency for International Development,  
Washington, D.C., 1989.

EDI TECHNICAL MATERIALS

# Irrigation Training in the Public Sector

*Guidelines for Preparing Strategies  
and Programs*

The World Bank  
and  
The United States Agency for International Development

The World Bank  
Washington, D.C.

## Summary

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Using the guidelines presented in this document, senior management of irrigation organizations in developing countries should be able to develop a systematic training approach for managers and all levels of staff which will lead to improved performance of their irrigation systems. This document is not intended as a detailed blueprint: it provides general guidance. This is because conditions and policies in each country are different and often unique. Senior managers of national irrigation organizations are the only people who can make the key decisions necessary to develop a workable training strategy for their country. This document presents a rationale and a framework to guide senior managers as they establish training appropriate to their countries.

The rationale is based on training to achieve performance objectives. Irrigation systems performance cannot be adequately measured by a single parameter. A combination of indices—how little water is wasted, how equitably water is distributed, and how responsive the irrigation service is to farmers' requests and crop needs, and finally the capability of the broader institutional environment—reveal how well a system is operating and whether a high level of performance can be sustained. Strong irrigation organizations with effective means of communication, clear lines of authority, and well-established systems of accountability will enhance system performance in the field beyond gains that can be anticipated from training alone. Through changes in such areas as legislation and inter-institutional relationships, the broader institutional environment must be strengthened to support new development objectives.

A wide range of irrigation training programs exists in many countries. Most of this training is intended to strengthen the technical skills of planning, design, and field staff. Much of it is financed by project loans and is thus restricted to certain staff in those projects.

The ad hoc irrigation training received by relatively large numbers of staff has not been well coordinated within countries. One level of staff may be trained but is unable to apply new information and skills in the field because physical structures are inappropriate, or complementary staff at higher or lower levels do not understand or support the innovations. Very little training has been designed to improve the general management of irrigation operations.

A more systematic and comprehensive approach to training will benefit irrigation departments in two ways. First, they will be able to provide more effective irrigation services in the short run. Second, they will be able to respond more rapidly to the changing conditions surrounding irrigation activities. Department-wide training also gives senior management greater control over the agency.

A systematic training strategy (or human resource development program) has specific objectives:

- To ensure that management, technical, and administrative skills necessary to fulfill the charter and objectives of the organization are developed and retained within the firm or department; and



- To optimize the opportunity for personal development and work satisfaction among individual staff members.

Such programs provide all employees in the enterprise or department with access to appropriate training at crucial times during their service. The training activities are designed to build up the technical and managerial proficiency of the organization, make it more flexible and adaptable, and strengthen the commitment of its staff.

Systematic department-wide training simultaneously improves individual technical skills and prepares senior and middle management to run the department at a much higher level of efficiency and effectiveness. It may also include training to help senior management coordinate the activities of the department with those of related institutions, such as agriculture departments, which frequently share responsibilities in the irrigation sector.

A training needs assessment helps an irrigation department to evaluate the range of staff skills and management capabilities and the gaps between these skill levels and those required to achieve specified management and performance standards, and to determine which managers and staff to train and on what subjects. The steps for conducting such assessments are included in Annex B.

The types of training most suitable to irrigation departments are in-service training (to strengthen capacity in current positions), adjustment training (to help staff develop new skills for either the same or different positions), and project training (to train staff in logical groups). These can be accessed through a wide range of training methods: supervised on-the-job training, formal courses, workshops and seminars, study tours, and internships. Workshops, seminars, and study tours can be particularly productive training devices for senior staff if care is taken in their planning and execution. Training for senior managers is an important means of creating new strengths in old departments and equips them to meet new organizational challenges.

External organizations and training consultants can assist in implementing the procedures outlined in this document, but a continuing commitment of senior management to systematic irrigation training is absolutely essential. A well-defined, systematic training strategy can form a good basis for demonstrating to domestic and external funding agencies the need for support for training and the assurance that additional investments in training will lead to improved performance of irrigated agriculture.

It is suggested that following national reviews of how to improve the operation and maintenance of irrigation systems, national workshops should be held to set the framework for a training strategy for all levels of management and staff.

# Irrigation Development and a Human Resources Development Strategy

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## Accomplishments and Challenges

Public irrigation has contributed increasingly to satisfy national and international needs for food security. From 1964 to 1984, net irrigated areas of Asia, Africa, and South America grew by 40 percent, from 111 to 156 million hectares. This growth has yielded remarkable results. Cereal production in developing countries increased at an average annual rate of 3.4 percent through the 1960s and 1970s, two-thirds of which came from irrigated land. Countries such as Bangladesh and Indonesia have doubled the production of rice, their staple crop, within fifteen years, while India is now a net exporter of wheat. It is difficult to imagine how the world would have avoided a food crisis without these recent gains in food production made possible by irrigation. Irrigation has been the main stimulus to additional grain production in many developing countries.

Under the combined pressures of rapid population growth and economic constraints in many countries, such as India and Thailand, expanded irrigated agriculture has met the increased need for domestic staple products. To finance this expansion, these countries have regularly invested in irrigation over three-fourths of public moneys designated for agricultural development. The World Bank, the Asian Development Bank, the Government of the United States, and the Government of Japan invested at a combined rate of about U.S. \$1.5 billion per year during the 1970s and early 1980s, with much larger investments by the developing countries themselves.

An expansion of this magnitude and duration can be expected to reach a point of diminishing returns. The remarkable benefits of irrigation are now more clearly seen as costly in several ways. The cost of new construction has increased sharply and many of the newer systems are deteriorating faster than expected. These problems are not really new, but during the past two decades irrigation departments have not sufficiently addressed the changing needs of irrigation. Similarly, research programs have not kept up with the needs of irrigated agriculture, and training has rarely been able to link research and world-wide experience with the realities of local operations.

As a result of these factors, it has become much more difficult to attract money for investment in irrigation. Irrigation finance extended by the World Bank, the Asian Development Bank, the United States, and Japan in 1986 fell to barely half that of 1981 in real terms. The necessity to sustain crop productivity and financial returns on often considerable investments has highlighted the need to operate and maintain irrigation schemes in a more effective and efficient manner.

The way to sustained productivity has been shown to depend on two factors: first, the capacity of irrigation organizations to meet the technological challenge of environmental problems, such as the scarcity and cost of developing new sources of water or the increased salinization of irrigated lands; and second, the ability of technical and managerial staff in these organizations to adapt to changing circumstances, such as crop diversification, and to ensure that their irrigation systems continue to be productive. In view of these factors, the effective operation and maintenance of irrigation systems are clearly most important. This in turn must focus attention on the effective management of human resources of each irrigation

department to reach production goals while safeguarding the significant investments these systems represent.

In the coming decade, one of the most important challenges to irrigation organizations will be their ability to use their technical and managerial resources effectively. To this end, irrigation departments must include training as an integral function of their operations and maintenance plans and include comprehensive human resource development as part of their long-term strategic planning.

Some management teams are already beginning to assess management and staff performance as a major factor in irrigation system performance. To help them formulate a systematic approach to training, they are asking some fundamental questions:

- How can training be instrumental in raising production from irrigated land? Who must be trained? In what skills must they be trained? When is the training beneficial?
- What is the relationship between training and the overall performance of irrigation organizations?
- What improves the level of individual performance? To what extent will personnel motivations be affected by changes in the incentive structure, opportunities for career development, and styles of management?
- What kind of training strategies and programs should be formulated for managers and all levels of staff?
- How can you identify training needs?
- How can the institutional environment be made more compatible with attaining the intended development objectives? and
- How can the effectiveness of training programs be assessed?

### Systematic and Department-wide Training

The present widespread interest in irrigation training is a natural consequence of the increased attention given to irrigation management around the world. The need for training and research in irrigation systems was discussed and debated at the first Technical Advisory Committee (TAC) of the Consultative Group on International Agriculture Research in January, 1971. At the 1987 ICID meeting in Morocco, 33 papers on irrigation water management training were presented by 19 countries (Boumedil, 1987) and participants reached five main conclusions during the 1987 ICID meeting with regard to training:

- Programs should be based on an assessment of the needs for training and developed in line with the organizational objectives;
- Programs should comprehensively and systematically enhance the skills needed by management, operating, maintenance, and administrative staff;
- Initial training of project operating and maintenance staff should be completed *before* new works are commissioned;
- Water users and their associations should be taken into consideration when developing training strategies. This may require complementary training programs on their behalf; and
- Training programs should be conducted as close to the field as is possible.

Most irrigation training programs seek to upgrade the technical skills of individuals in the field. While this is useful in many cases, evidence is accumulating that most staff already have the skills needed to carry out their assignments. They may, nevertheless, carry them out poorly, or fail to attempt them at all. Some reasons for these failures are lack of clear supervisory direction, physical conditions that prevent successful execution of the work, lack of commitment at various levels of the department, uncertainty regarding the purpose of the job and opposition from important constituents including farmers.

Relationships within the department have a major impact on the effectiveness of irrigation staff. In many countries, however, field-level staff develop closer, more dependent

relationships with local farmers than with their supervisors in distant central offices. Moreover, a wide range of factors, for example, low salary scales, work against the department orientation of staff.

Few irrigation departments have systematically helped their staff to contribute to the overall effectiveness in meeting the mandate of the department. Those that have done so possess a force of people who are able to project strongly the objectives of the department. The key strategy is to develop staff at all levels who are motivated and able to carry out:

- their own technical jobs;
- the development of subordinate staff;
- activities useful to the internal functioning of the department; and, in some cases,
- collaborative activities with other organizations in the irrigation sector.

Most managers of public irrigation departments recognize the new challenges before them, and are aware that training must go far beyond the periodic upgrading of technical and managerial skills. For example, substantial farmer participation in tertiary irrigation is well accepted in many countries, and senior managers increasingly accept the need for a more direct means of financing operation and maintenance (O&M) activities. Public planners in Brazil and several other countries realize that the management of irrigation by "District" organizations of farmers can be more effective than public sector schemes.

A training strategy that focuses on only one aspect of irrigation cannot lead to system-wide improvements. Comprehensive changes can be achieved through a training strategy that addresses the needs of different categories of managers and staff, as well as those of clients. It will also depend on the rejection of an assumption of individual training as a one time event. In most instances, upgrading skills will require much training, including formal, informal, in-house, and training center experiences. The order in which these training experiences are provided, and the role to be played by management in reinforcing the outcomes, are issues which should be carefully considered by those in designing a training strategy.

To develop a successful training strategy an irrigation department must:

- Determine which irrigation system constraints can be most successfully addressed through training;
- Identify the training needs of specific categories of managers, staff, and users;
- Select and design appropriate training segments and methods for each target group identified;
- Determine the logical sequence of training segments and create an appropriate schedule;
- Decide on the institutional location of the training function and the physical location of the actual training;
- Integrate training into the budget process; and
- Plan for follow-up, monitoring, and evaluation of training investments.

## Training for Whom?

A successful training strategy must have explicit boundaries, the most important of which is careful identification of the people to be trained. In most countries, many organizations and people are active in the irrigated agriculture sector. The most prominent of these are discussed below. They are:

- Irrigation department and project staff with primary responsibility for designing and operating the systems (for example, line irrigation departments and project authorities);
- Staff of other organizations with irrigation-related responsibilities (for example, agriculture departments, public administration, universities).
- Farmers who are responsible for water management at the farm level.

### *Irrigation department staff*

These guidelines propose strategic training choices appropriate for public-sector organizations that have primary responsibility for irrigation. These are departments that finance, plan, design, construct, operate, maintain, rehabilitate, and modernize irrigation systems. Their objective is to increase agricultural production and related benefits. They are not normally involved in agricultural activities such as research or extension, although in some countries they provide such services as input and output marketing and credit.

Irrigation departments<sup>1</sup> usually have large staffs and well-defined bureaucratic structures. Frequently, the structures have evolved over a very long time, giving a permanence greater than that enjoyed by most other government entities. Because of the rather specialized technological content of work of irrigation departments, their staff tend to develop strong internal bonds, but have relatively weak linkages with related departments or with the farmers they serve.

### *Staff from irrigation-related organizations*

Irrigation endeavors are enhanced or diminished by the activities of staff in irrigation-related organizations, such as agriculture departments. In some countries, these staff have responsibility for irrigation at the farm level, and their training needs are quite obvious.

Training programs for staff of agriculture departments, command-area departments, and similar organizations active in the irrigated agriculture sector are numerous and in many cases effective. They may need strengthened capacity in irrigation-related matters. But their obligations and expected output are not the same as those of irrigation departments, and irrigation functions normally comprise a relatively small part of their mandate. Training needs of these organizations should be seriously addressed in the context of their own departments, not the context of the irrigation departments. Such training is not directly addressed in these guidelines. However, to ensure that the objectives, strategies, and programs for training in the related organizations are mutually compatible and supportive, liaison among the involved organizations is essential.

### *Farmers*

Managers seriously interested in upgrading the quality of the work of their department in the irrigation sector may be surprised to find only passing reference in this document to the critical role of farmers and the need to upgrade their performance. A companion report, focusing on training for water users, is envisioned for the future. But as a first step, the focus on requirements of departments for training is appropriate because:

- Irrigation departments clearly have a mandate to provide irrigation services and to recruit and train large numbers of people to that end;
- Departments charged with managing water will be expected to "put their own houses in order" before attempting to upgrade the skills of farmers; and
- Governments directly disburse funds to irrigation departments, not to farmers, and need to know that these disbursements are cost-effective.

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1. Public institutions of irrigation to which these guidelines apply include ministries, departments, agencies, special authorities, *offices*, boards, administrations, projects, and schemes. For simplicity, this report uses the term "department" throughout to refer to all public-sector irrigation institutions.

## Developing a Training Strategy

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### Performance of Irrigation Systems and Agencies

There is no single criterion to describe "good" irrigation. The traditional measure of irrigation efficiency—the percent of irrigation water productively used by the crop—can be an important gauge, but has little relevance under conditions of abundant water resources. These conditions are often present when irrigation supplements rainfall, as in the case of main-season rice.

A second criterion is the agricultural output per unit of water supplied. This is a good measure of the value of water, but variation due to fluctuations in rainfall and varying crop practices reduces its utility as a measure of how well a system works. And because it can be estimated only after harvest, it offers little practical value in guiding day-to-day irrigation decisions.

Most irrigation managers have come to accept a combination of at least the four following measures in assessing how well their systems operate:

- The amount of water wasted from the system (the inverse of irrigation efficiency), because the supply of water is frequently limited and wastage is apparent;
- The effectiveness of irrigation in promoting farmers' objectives (for example, planting earlier, producing higher yields, producing a second crop);
- The degree of equity in water supply throughout the system; and
- The frequency and extent of repair and rehabilitation work required to the system.

Several other criteria often found useful are the following:

- The prevention of uncontrolled flooding;
- The effectiveness of drainage systems;
- The avoidance of salinization;
- The conjunctive use of surface water and groundwater sources;
- The extent of participation of water users in water regulation; and
- The cost of operations in relation to services delivered.

None of these measures is easily quantified under field conditions. Water flow measurement, required for the first two items above, is rarely carried out in a sufficiently reliable manner to be a useful measure of how well systems operate, especially at the secondary or tertiary levels. Assessing how well farmers' objectives are achieved is somewhat subjective and may involve crop yield estimates, which irrigation staff are not normally qualified to make.

Nevertheless, it is important that managers and staff of irrigation departments have performance targets to guide them. On the one hand, these targets should be as specific as possible and should exclude factors over which they have little control, such as crop yield levels. On the other hand, they should be flexible, taking into account variability in climate, soils, crops, and cropping intensity.

One such performance indicator is the degree of equity in distributing water throughout the network. Systems are normally designed to supply roughly the same per-hectare water flows to all units within the command area. Operations staff can be responsible for

achieving this objective, within the limitations imposed by the physical system and water availability. Equity at various bifurcation or offtake points does not necessarily mean accurate and continuous flow measurement; it only means that there is little sustained bias in over- or under-irrigation in different parts of the system.

The success of field efforts to operate at high performance levels can be determined by planning decisions made higher in the department. For example, if there is not enough water to adequately supply an entire system, a decision may be made to deliver all the water to a portion of the area and to rotate the portion receiving water each season. This would improve the equity of water sharing between the seasons, and equity of water distribution within the truncated system would also be easier to achieve.

To operate a system according to performance objectives is quite different from the routine administration of a system. In the latter case, staff largely supervise others, with little intent to intervene in managing water deliveries within the network. This hands-off policy stems from the lack of generally accepted standards of intervention, and because operations staff are generally trained to consider only the hydraulic properties of canal systems—that water will flow as automatically as the system permits.

### Some Performance Issues

Most irrigation managers agree that the systems under their jurisdiction should operate at higher performance levels. They could improve performance by adapting or revising existing water distribution plans, but may not be able to do so for the following reasons:

#### *Physical Factors*

- The canal structures, cross sections, and gradients are not physically as originally designed; consequently the right quantities of water do not flow into or along specified canals;
- Department staff cannot measure or control water flows accurately enough to implement a plan leading to higher performance;
- Variation in water flows is so great and unpredictable that it is impracticable to put any standardized water distribution plan into operation;

#### *Institutional and Human Factors*

- Staff do not have sufficient ability or training to put a plan into operation;
- There are not enough staff to implement effectively a water distribution plan;
- Staff cannot be expected to put a water distribution plan into operation because they are strongly influenced by those few farmers who stand to benefit from disorganized distribution;
- Farmers generally may interfere with operating systems, particularly if they have not been consulted in the design;
- There is so much variability in crops and cropping practices that it is unlikely any plan would serve the interests of enough farmers to justify implementation; and
- Implementing a water distribution plan would inevitably bring department staff into conflict with staff of other organizations.

When present, these factors certainly limit the performance level at which systems can operate. It is unrealistic to train field staff under ideal conditions and then expect them to produce optimal results within systems that are handicapped by several of these factors. Nevertheless, old and partially deteriorated systems sometimes operate at relatively high performance levels despite their generally poor condition.

A strategy for high performance irrigation should not rely exclusively on the efforts of operations staff. The department should orient and strengthen the design staff so that the

systems are designed to be easier to manage and flexible to serve changing requirements. Thus, training that leads to higher performance levels must include the planning and design staff, in addition to operations managers and staff.

Training programs designed only to help staff overcome their technical limitations overlook the institutional constraints that managers, staff, and departments face. For example, low salary scales or frequent transfers are department characteristics untouched by training programs. Similarly, irrigation responsibilities in most countries extend to two or more organizations which may work at cross-purposes. Agriculture and irrigation officers, for instance, sometimes act on quite different assumptions regarding cropping patterns and times of planting. Furthermore, the absence of effective water users groups will inhibit the development and implementation of efficient and equitable water distribution plans.

## The Department Context for Irrigation Performance

Irrigation departments often perform poorly because of internal institutional constraints and weak linkages with other organizations. Improvements in irrigation system performance must begin with the irrigation department itself. Another important aspect is the relationship between the department and water users and approaches to training farmers. These will be the subjects of a future document.

### *The department context*

In countries with extensive irrigated agriculture, irrigation organizations are among the strongest agencies of government. Sometimes, as is the case of Thailand, they enjoy the highest level of patronage and dwarf other departments in their ministry. Their staff may receive higher salaries and other perquisites unknown in other government agencies.

Irrigation departments have often become large bureaucracies with permanent staff stationed at many levels from rural village offices to cabinet posts. Irrigation officers in the field are frequently the most accessible government contact for farmers. In irrigated areas they are usually far more numerous than are agricultural extension or land revenue officers.

Irrigation department staff assignments tend to be fixed in terms of focus and location. Project design staff usually are housed at the headquarters of the department where they plan new systems based on engineering principles and department norms. Operations and maintenance (O&M) staff in the field are responsible for running and repairing systems after construction is completed. There is often little interaction and almost no rotation of staff between these units. Systems designers may make plans without the potentially valuable on-site knowledge of O&M personnel, and O&M decisions may have to be made within the constraints of an inflexible design. Consequently, departments do not usually consider a sufficiently wide range of design or operating options.

### *Department issues*

It is not necessary for these guidelines to list all of the issues with which irrigation departments cope. But it is important to discuss several internal issues that condition and determine staff performance and thus affect irrigation system performance:

- *Inadequate or misleading information.* When the operation of main canals is based upon allowing specified flows at various reaches along the canal, it is important that the measuring systems work well and that the data are recorded and acted upon in a timely way. But frequently these data cannot be relied upon for operational purposes. Similarly, topographic data is rarely complete or accurate enough to permit optimum system layout and design.
- *Conflict with farmers.* The relationship between irrigation departments and farmers is frequently antagonistic. Farmers seek political support to oppose department decisions which were often made without consulting farmers in a meaningful way.



The field officers bear the brunt of this ill will, even though it is usually department policies that are under attack.

- *Conflicts with other organizations.* These often arise, when, for example, an agriculture department recommends a cropping pattern which is inconsistent with the water delivery schedule planned by the irrigation department.
- *Weak control over dispersed staff.* The widely dispersed, poorly paid, and infrequently supervised irrigation officers develop strong relationships with local farmers. This is a potential strength for the department if it values farmers' views and can act on them. But it frequently leads to a situation in which department staff act, at least to a degree, as farmers' agents. This relationship creates a climate in which some farmers may pay extra compensation to department staff, thus destroying the possibility of an equitably implemented water distribution plan.

### *The traditional definition of department performance*

Irrigation departments traditionally have given high priority to technical competence. They place emphasis on solutions that are technically correct and efficient, and can be administered without undue delay or difficulty. These qualities are particularly appropriate where the water is very limited and strong rules govern equitable sharing arrangements.

These priorities have, in turn, shaped the character of the departments themselves. They tend to be somewhat inward-looking, favor strong technological and administrative orientations, and have a straightforward focus on water as an input. Irrigation departments have been comparatively less interested in joint efforts with other departments, new and untried solutions, and the outputs from water use. It is no surprise, therefore, that few irrigation departments have an ongoing research program analogous to that of most agriculture departments.

The administrative character of irrigation departments is perhaps their most significant attribute. It promotes highly centralized decisionmaking and emphasizes implementation of predetermined plans, with little delegation of authority. These departments run almost automatically, with few day-to-day decisions required except during times of crisis or change, when they are made at the highest level. Key staff skills include the ability to pass orders downward, handle papers smoothly, and help the unit function smoothly without the intervention of higher level officials.

Irrigation departments are custodians of a valued public resource—water—which is distributed according to a plan. Their responsibility is not unique; many agricultural banks and extension departments treat credit, seed, fertilizer, and information in much the same way. In general, they view as their mandate the provision of these resources in accordance with governmental programs and rules that usually specify the rates of supply to different locations over a given period of time. Performance is evaluated in terms of how well these requirements are met.

These characteristics have shaped the evolution of departments. They have strengthened those departments with relatively unchanging programs over the years, but have made it more difficult for them to adapt to new conditions.

### *The changing definition of department performance*

Many departments, particularly in East Asia, have come to realize that the main issues which affect the irrigation sector have changed significantly. They have begun to question if the traditional roles and responsibilities of the department and its staff are adequate to meet the present and probable future needs of the sector. Specifically, some irrigation leaders are looking for greater managerial content in training programs and a focus on the needs of water users and the productivity of their farms; issues that are discussed below:

- *Managerial capacity* is obviously present in all departments. In some, however, it is being encouraged as a way of introducing greater flexibility in applying rules. Accordingly, more decisionmaking authority is delegated to lower-level officers. In some cases, the rules themselves have been revised; for example, to accommodate the need for changing target rates of flow for different weeks or locations. This calls for fewer centralized and predetermined rules and greater day-to-day local management.
- *Client orientation* has become the hallmark of the communal irrigation program of the Philippines National Irrigation Administration (NIA), an effort to get farmers to take on much greater responsibilities in operating, repairing, and financing systems under the direct control of NIA. Formal mechanisms for communicating between the department and farmers were required as a first step. Other irrigation departments are finding that a more explicit client orientation helps protect them to some extent from farmer opposition, often supported by local politicians.
- *Focusing on results* means giving attention to the effects of irrigation, not just to the supply of water as an input. Monitoring of cropping patterns, dates of planting, and yield levels are important to this approach, although the irrigation department does not need to do all the monitoring itself. It may make fuller use of data collected by other departments and also help them to collect information in ways which later will be more useful for irrigation purposes.

The changing definition of performance referred to above requires many institutional adjustments in the department itself. Most are relatively small steps in themselves, but require a substantial commitment to change the way the department perceives its role and conducts its business. For example, to achieve greater farmer involvement in operating and financing systems would require new mechanisms for meeting with farmers on a regular and structured basis. More delegated decisions would require some reallocation of responsibility and authority to the field in order to reduce the travel expense and time required to reach an appropriate decision.

It is an oversimplification to characterize all irrigation departments as traditional—*administrative, self-centered, and input-oriented*—and unresponsive to change. However, under present and future circumstances, improved irrigation performance will be more likely for those departments which become increasingly *managerial, client oriented, and focused on results*. In considering these changes, senior department officials need to evaluate the institutional environment of the department—not just its physical systems—and how effectively the department is structured to deal with it.

Today's irrigation environment is more complicated and dynamic than ever before. The political environment is more responsive to the demands farmers make of the department. The economic environment has changed as self-sufficiency in food has largely been reached in some of the most important irrigated countries. Farmers may look to irrigation not so much as an input to raise yields but as a means to shift the cropping season to different months, or to increase the wage rate of daily labor. Unintended harmful effects of irrigation, such as the risk of salinization, must be dealt with rapidly and seriously.

In considering these and other changes, the senior management of an irrigation department seeks to match the new conditions with an appropriate strategy. A central element of the strategy is a systematic approach to staff training. Without it, management's intentions are unlikely to be fulfilled.

## The Need for Systematic Training in Irrigation

Staff training is now universally accepted as an essential element of organizational "management." With respect to irrigation management, Robert Lenton (1988) has proposed the following definition:

"Irrigation management is the process in which individuals set objectives for irrigation systems, establish appropriate conditions, and identify, mobilize and use resources so as to

attain these objectives, while ensuring that these activities are performed without causing adverse effects."

Training for irrigation normally includes pre-service, university-level preparation for technical staff who are then recruited by the department; post-graduate courses on special aspects of irrigation; staff college training; orientation for newly inducted staff; short-term refresher courses; specialized courses; training linked to a specific project or system; on-the-job training; international short-courses; and seminars and conferences either within or outside the country.

A recent department-wide training survey in Sri Lanka found that the number of professional people trained in recent years equaled the total number of professional staff in the department; while training opportunities at the operational or field technician level were equal to about one-third of staff. The survey also found that the training offered by a wide range of institutions, universities, and international organizations was not effectively coordinated, nor was any central record or personnel inventory kept of those who had undergone training. These results are probably similar to what would be found in irrigation departments in many other countries.

The survey revealed that international organizations partially finance a high proportion of the training courses most of which were offered and funded through specific projects. Such short-term, specific training was aimed to improve the effectiveness of design or O&M staff assigned to operate a system, but could not seriously attempt to improve the way the department itself operated. Few of these training activities were related to or supported each other.

## Categories of Training

"Training" encompasses a wide range of planned activities designed to strengthen the performance of managers and staff. Three types of training that would be included in a systematic training plan as proposed by these guidelines, and their relevance to different situations, are presented below. The distinctions among them are rather arbitrary and in some respects they overlap.

### *In-service and maintenance training*

This is intended to maintain staff skills at given levels of proficiency. It may be called short-term, routine, continuing, in-house, or on-the-job training for existing or new staff members. Its objective is to strengthen the technical skills of staff when they join the department or are to be upgraded. In-service training is not usually intended to impart more skills than are required for the positions currently held. It may be used to certify continuing or increased staff proficiency within the same career path.

In-service training is closely linked to the vocational training staff usually receive as part of their pre-service, formal education which qualifies them for employment. At the time employees first join the department, their skills should be assessed and recorded. New employees should then be listed for the particular in-service training activity or activities which address their shortcomings. This procedure may be repeated periodically to keep staff abreast of their fields and closely responsive to the requirements of senior management.

In-service training frequently is seen by staff as a path to promotion. When this happens, it often becomes only a tool for personnel management rather than as a means to improve performance. At worst, in-service training is used temporarily to relieve operating units of unsatisfactory staff.

### *Adjustment or reorientation training*

This may be required following changes in policy or technology when irrigation staff may be called upon to undertake new jobs for which they are not adequately prepared. In the

1970s, the National Irrigation Administration of the Philippines decided that the Water Management Technologists of its Upper Pampanga River Project should advise farmers about agricultural matters. Training was needed in agricultural extension skills. Some irrigation systems in Thailand are now equipped with double-gated outlets. Training was required to use the outlets as designed. Irrigation staff in many countries are increasingly expected to bring farmers into compliance with, or at least acquiescence to, water-related matters. For the success of these and many other examples of change, training must be redefined to bring staff capabilities in line with new departmental objectives. This is adjustment training.

Adjustment training is usually carried out through one or more of three formats:

- *Specialist training* is short term and may be carried out through special courses at local institutions. Regional or international experts may be brought in to supplement local experience, if needed. Study tours are an example of specialist training for adjustment purposes. Superintending engineers from India have gained new perspectives on farmer-managed irrigation through well-prepared visits to other parts of India and to the Philippines and Indonesia.
- *Refresher training* is a course of study in the staff person's field of basic qualification that will introduce new concepts as well as reinforce earlier training. The refresher training should focus on the skills needed to perform the newly designed job properly. Refresher training is usually of relatively short duration and includes some theoretical background.
- *Retraining* is needed when a staff member is moved from one type of job or career stream to another. This frequently happens when there is a significant shift in the mandate of the department, or when certain phases of organizational development are complete. Some irrigation departments have retrained design staff to operate irrigation systems when a permanent slowdown in new construction is anticipated.

*Project and task force training* is a special category of in-service training that is particularly appropriate for pre-commissioning training of staff not yet in place for new projects. Assessments of training needs for new projects differ from the TNA procedures in Annex B, because new projects focus on the whole range of irrigation skills, and not just those skills related to performance requirements. Assessments for new projects must also evaluate the employment pool and the capacity of relevant training institutions to provide the necessary training within the desired time frame. It is usual to distinguish between training for the construction phase and, at a later stage, training for operational and maintenance work.

Unlike adjustment training, which is undertaken concurrently with operational activities, project and task force training should be carried out so that all aspects of the scheme will take shape in accordance with a systematic plan and with necessary staff properly trained in all aspects of the project. The required numbers of staff and their training needs depend on the institutional design of the new scheme. There are generally three alternatives:

- Projects wholly under the irrigation department;
- Projects with the more traditional joint management (government and farmers); and
- Projects intended to be managed by farmers. Project training has to be built into the whole process of project planning.

Task-force training is a form of project training in which the key staff to be involved in an aspect of the project receive training as a team before that aspect of the project begins. Task force training strengthens interaction among the various team members. Management training is an important part of a successful task-force approach and is being tried in some projects, including some under the Department of Irrigation in Nepal. The main problems encountered with task-force training are difficulties for the department in scheduling teams of staff to be available for training at the same time, and in devising new training methodologies based on team participation.

## Purpose of Current Training

### *Training for operations and maintenance*

Most irrigation department training in recent years has been designed to provide the skills and knowledge with which staff (and farmers) can direct or distribute water. These programs have focused on the measurement and control of water flows in operating systems. They have emphasized the use of measuring devices such as double-gated offtakes, monitoring of canal flows, estimation of crop-water requirements, and some of the principles of canal design on which flow measurement is based.

In the last decade these training efforts have been broadened to help field staff assess how well or badly the systems operate. Some training emphasizes rapid appraisals of the system, which include not only water distribution, but also crop productivity, farmer satisfaction, and other factors related to irrigation.

### *Training for planning and design*

In recent years, some attention has been paid to training design staff. This training is intended to upgrade the quality of irrigation planning and design, which in many countries is still excessively time-consuming and costly and frequently results in systems that are difficult to build and operate. Systems built 50 or more years ago are now generally regarded as better designed than those designed more recently.

Staff designing irrigation systems must often depend on remarkably misleading and incomplete information on the topography and other parameters on which their design is based, and they have little experience in relating engineering principles learned in the classroom to real conditions in the field. Due to the unprecedented pace of irrigation development, however, they must turn out designs faster than ever. Training to bring closer awareness of field conditions into the design process would be particularly valuable.

### *General observations*

First, training programs are often *project-specific*. Because they are normally financed by external organizations as part of project loans or grants, the national departments may not have local funds for more general training. Thus, the benefits of training are found largely within the limited projects and do not benefit the department as a whole.

Second, this training usually focuses on the *technology of irrigation*: how to design systems and how to move water through them. There is growing recognition that irrigation technology must also take into account environmental considerations and sociological characteristics such as farmers' behavior. Current training continues to focus mainly on strengthening staff competence in the technical aspects of design and operation.

Third, conventional training focuses on staff in *discrete, hierarchical* levels of a department. The ability of trained staff to put into practice what they have learned is often limited by individuals in positions above or below them, who often remain outside the scope of the training.

Technological training in water management should remain a very important part of the total training strategy, for ultimately the primary benefits of irrigation are closely associated with the physical distribution of water and how well that distribution matches the needs of farmers, crops, and soils. But technological training in the future should be carried out within a broader framework that includes developing the management capacity within irrigation departments and projects. Human resource development programs for most large organizations should also include training in:

- Planning (including corporate and strategic planning, organization planning, and financial planning);

- Assessment of cost/benefits and performance;
- Leadership and management skills; and
- Information management.

## EXERCISE - 1

### National Perspectives - Issues in Irrigation Management (Take three for better reflection technique)

#### DIRECTION

#### A. INDIVIDUAL PREPARATION (10 minutes)

1. Think about the national issues that will have an impact on MOI policies and program in the future.
2. Identify and list three national issues in the attached sheet.

#### B. WORKING IN TEAMS (Small groups) (30 minutes)

3. Form a team of five participants to discuss the individual's lists and write a long list of national issues including your own ideas and views.
4. The team quickly identifies a rapporteur to write down carefully the group's contributions. Keep in mind that the rapporteur should include his/her own contributions too.
5. Identify with your group the three major national issues and write them on the flipchart to report to the whole group.

#### C. REPORT TO THE WHOLE GROUP YOUR THREE MAJOR NATIONAL ISSUES (10 minutes)

## BACKGROUND MATERIAL FOR EXERCISE - 1

### INTRODUCTION

- Participants are asked to reflect on the National issues that will have an impact on Agency Policies and Programs in the future.
- The Development of overall Government Policies, Objectives and Strategies is the outcome of a series of dynamic interactions. Some objectives require long periods for their achievement, e.g. self-sufficiency in food production.
- However, at any particular stage of development there will be a set of specific issues, which need to be addressed in policy development.
- The relative priority and criticality of some issues may change over time. Policies in the water and agriculture sectors can be influenced by international events and pressures, variable climatic conditions (e.g. droughts, floods) as well as by internal political, economic and social changes.

### Resource material

- The groups' discussions may be assisted by consideration of the attached questions and summary.

### Two questions for an irrigation agency

- What impact will the shift to integrated water resources management policies have on the role and functions of this agency?
- What are the likely changes in agricultural production in the short to medium term say (5-20 years) requiring appropriate policy changes in the agency?

The exploration of these issues might be assisted by considering the following questions:

- What are the relative roles of Government, Government Institutions (including the irrigation agency) and the private sector (including farmers) for irrigation and drainage for agriculture?
- Are existing Water Laws and/or Proclamations and Regulations appropriate as far as specifying and protecting individual entitlement to the water supply service, and in defining the accountability of institutions?
- How do government, their institutions and farmers interact at the strategy planning and operational level?



- By what processes should the defined "levels of service" be determined and specified?
- Are the existing "levels of service" to be provided to users of the system clearly defined and capable of being met?
- Will improved or changed "levels of service" be required to meet the demands of irrigated agriculture in the future?
- Can these re-defined "levels of service" be provided by improving existing operational performance?
- Is additional investment required in modernizing systems or improving existing services?
- How should the costs of re-development and on-going operation and maintenance costs to provide these "levels of service" be identified and recovered or shared?
- Are the existing Management Information Systems appropriate to provide a basis for management decisions in the short and longer term?

## STRATEGIC CONCERNS IN THE IRRIGATION SECTOR<sup>1</sup>

### Strategic thinking in the irrigation sector

- Strengthen the analytic capacity of irrigation agencies to:
  - devise sustainable long-term investment strategies
  - appraise investment proposals
  - manage water resources at the basin level
  - plan conjunctive use of ground and surface water
  - monitor natural resource use and devise strategies to protect the resource base to ensure sustained irrigation performance.

### Improved public sector agency performance

- Strengthen the management capability of irrigation agencies, and promote a re-orientation of organization and staff objectives to irrigation system performance
- Establish an increased client and service orientation in irrigation agencies to promote:
  - increased flexibility in operating plans and decisions
  - increased farmer participation in system management
  - establish a basis for the transfer of responsibility for O & M of tertiary systems to farmer organizations.

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<sup>1</sup> (Source: ISPAN : Annual Report - Technical 1988)

### Revenue and economic policy issues

- Cost and recovery policies and strategies
- Develop cost-effective long-term strategies for maintenance and rehabilitation
- Promote more effective policy co-ordination within and between the water and agriculture sectors

### Expanded private sector participation

- Establish conditions for sustainable and effective water user organizations
- Establish mechanisms for effective participation of farmer organizations the management of irrigation schemes, particularly in their operation and maintenance.

### Expand effective irrigated area and improve irrigation system performance

- Modernize existing systems to create the flexibility needed to meet new patterns of water demand associated with crop diversification and the introduction of new technology
- Expand planned conjunctive use of surface water and groundwater
- Expand water supplies to increase the effective irrigated area and the intensity of irrigation by:
  - improved river basin water management
  - improved efficiency and effectiveness of irrigation water use.

A. INDIVIDUAL EXERCISE

**Three national issues**

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3. ....  
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B. TEAM EXERCISE

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C. THREE MAJOR NATIONAL ISSUES ON THE FLIPCHART

**"The worksheet completed by the rapporteur will be collected by the facilitators"**

(Note: Only one worksheet will be collected from each group)

## EXERCISE - 2

### Review of Agency Programs in the National Context

#### Integrated Panel

#### DIRECTIONS

1. Divide the participants into 5 small groups.

Group 1

Group 2

Group 3

Group 4

Group 5

☐☐☐☐☐

2. Each group receives the exercise sheet along with the list of issues for discussion on 4 categories mentioned in the section C of the attached sheet of background material.
3. The first phase: The small group participants discuss and summarize the group's findings on all the issues. However, each participant is expected to record only the summary of the issue (A or B or C or D) assigned to him/her on the top of the page.
4. The second phase: The participants of each group will join their partners from the other groups who have the same letter (A or B or C or D) on the top of the page. Elect a rapporteur. Then, they share their respective summaries from the first phase, discuss it, and then write the final report compiling the groups' ideas on the specific issue.
5. Final phase: The rapporteur of each group is invited to write the summary report on the flipchart and present it to the audience for discussion.

*LET'S USE THE FLIPCHART AS AN  
INSTRUCTIONAL MATERIAL. IT  
SHOULD BE CLEAR, CONCISE AND  
READABLE FROM A DISTANCE.*

*Thank you,*

## BACKGROUND MATERIAL FOR

### EXERCISE - 2

- I. In Exercise no. 1, workshop participants were asked to reflect on the national issues that will have an impact on agency policies and programs in the future.
- II. In Exercise no. 2, participants are asked to compare their findings on the national issues and priorities, with the current range and thrust of existing agency activities.
- III. The participants might consider these issues and record their findings in the following 4 categories:
  - A. New functions or activities which should be performed by the Agency, either exclusively or in co-operation with other agencies (Government or Private).
  - B. Existing functions or activities which should have greater priority and/or resources.
  - C. Existing functions or activities which should have lesser priority and/or resources.
  - D. Existing functions or activities which should be discontinued or transferred to other agencies.

First phase: SUMMARY OF SMALL GROUP'S FINDINGS

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Final phase: SUMMARY REPORT ON THE FLIPCHART

**"The worksheet completed by the rapporteur will be collected by the facilitators"**

(Note: Only one worksheet will be collected from each group)

### EXERCISE 3

#### MANAGERS - LEADERS

#### INTEGRATED PANEL TECHNIQUE

##### A. DIRECTIONS:

1. Divide the participants into 5 small groups of 4 participants.
2. Make sure that each sheet has question number 1 or 2 or 3 or 4 on the top of the page. (5 minutes)
3. The first phase : The four participants discuss and summarize the questions given below. Elicit two contributions from each participant and decide on three major items. The responsibility to write down the group's answers is assigned to the person with the corresponding no. at the top of the page. i.e. the participant with no. 1 will record the responses of question 1. The participant with no. 2 will record the responses for question 2, and so on. (30 minutes)
4. The second phase : The participants will join their partners from the other groups who have the same question number of the page. Then, elect a rapporteur. They share the final responses given by the peers during the first phase. The new partners discuss them and decide on the three most important issues out of the 12. (10 minutes)
5. Final phase: The rapporteur of each group is invited to write the responses on the flipchart and present it to the large group. (15 minutes)

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##### QUESTIONS

Numbers	Questions
1	Qualities or attributes of managers-leaders.
2	Problems which prevent them to be good leaders in irrigation schemes
3	Conditions which are favorable to demonstrate leadership skills in irrigation environment.
4	What are the major functions of managers-leaders in irrigation organizations in your country?

### EXERCISE 3

#### **MANAGERS - LEADERS** (Modified Nominal Group Technique)

##### **Chief Engineers, Divisional Engineers, etc. - Second Group**

- 1st Phase      Each participant will write down three major qualities of managers - leaders individually.
- 2nd Phase      Each one will be invited to say the qualities from his/her own list, one by one, repeating this exercise until we have everyone's list on the flip chart.
- 3rd Phase      Randomly, the facilitator will invite a few authors to explain why they consider the given qualities to be the major ones.
- 4th Phase      Each participant will individually choose and rank the three most important qualities of a managers-leaders out of the long lists written on the flip charts, as results of the above process.



## EXERCISE - 4

### Agency Role in the Future

#### The Vision and Mission (Trip around the table technique)

Step 1 Redefinition of agency role.

Step 2 Vision and Mission Statements  
(Trip around the table technique)

Step 3 Interpreting the Mission

#### DIRECTION

1. Form 4 groups of participants

A



B



C



D



2. Each group will elect a rapporteur.
3. Each group will work on one question assigned below.
4. The groups will have 10 minutes to discuss and answer only one question.
5. The rapporteur will compile the group responses in a sheet of paper (should be a list of about 3 items)
6. In the next step, the rapporteur will begin the 'trip around the able'. He/She will have 3 minutes to visit each table.
7. He/She will present his/her group question and answer to the new table and will collect contributions from the participants to improve his/her list.
8. After visiting the three other tables, he/she goes back to his/her own group, share the contributions collected during the "trip" and make group decision on the five major contributions in 10 minutes.
9. The rapporteur will write these contributions on the flip chart to present it to the audience (5 minutes).

10. Each group will have 3 minutes to present the group's results on the respective questions assigned to them.

11. At the end, the participants will be invited to work in the same groups to:

**20 minutes**

- (a) prepare one statement of VISION for the future of the agency;
- (b) prepare one MISSION statement for MOI
- (c) present both VISION and MISSION statements to the audience.

**20 minutes**

12. To decide (i) which groups (persons and agencies) should the Mission Statement be addressed (for example for the government and Minister, for the other agencies, for staff of MOI, for clients, farmers, consumers, etc.;

(ii) To write on essential brief statement to interpret the Mission to each group;

(iii) To write on the flipchart and present to the audience.

## QUESTIONS FOR STEP 1

- a) What does Government require of us?
  - b) Who are the "clients" or "stakeholders" of our business? What do they expect of us?
  - c) What are the most important functions for the Agency to carry out?
  - d) What are the desirable attributes and characteristics the Agency should aspire to in the execution of its role?
- 

## BACKGROUND MATERIAL

### STEP 2: VISION AND MISSION

- A. VISION STATEMENT outlines and focuses on the ideal end-state you want to create in the future for the Agency. The description of that exciting, ideal end-state is called a vision.

«A vision is not a plan. You might have a vision of what you want to create, but you don't know how to get there. If you know how to get there, it is no longer a vision, but a plan<sup>2</sup>.»

MISSION STATEMENT is a short succinct statement which sets out the essential purpose of the organization. Its purpose is to provide a clear and common understanding of the Agency role within and outside the organization.

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<sup>2</sup> Doyle, Michael, "Quest for Vision". Association Management. Vol. 42, No. 9 (September 1990), pp. 28-33.

EXERCISE - 4

STEP 1

1. GROUP RESPONSES

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2. FIVE MAJOR CONTRIBUTIONS ON THE FLIP CHART.

3. VISION STATEMENT (short statement)

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4. MISSION STATEMENT (short statement of 30-40 words)

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5. INTERPRETATION OF THE MISSION

Write the name of the group addressed and the interpretation of the mission statement to the group.

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## EXERCISE - 5

### Development of MOI Objectives (Take three for better reflection technique)

#### DIRECTION

- A. **INDIVIDUAL PREPARATION** (10 minutes)
1. Think about the objectives by which the MOI will achieve its mission.
  2. Identify and list three major broad objectives in the attached sheet. These objectives can be identified as objectives of purpose.
- B. **WORKING IN TEAMS** (Small groups) (30 minutes)
3. Form a team of five participants to discuss the individual's lists and write a long list of objectives including your own ideas and views.
  4. The team quickly identifies a rapporteur to write down carefully the group's contributions. Keep in mind that the rapporteur should include his/her own contributions too.
  5. Identify with your group the three major objectives and write them on the flipchart to report to the whole group.
- C. **REPORT TO THE WHOLE GROUP YOUR FIVE MAJOR OBJECTIVES FOR MOI** (10 minutes)

A. INDIVIDUAL EXERCISE

**Three major objectives**

1.

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2.

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3.

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B. TEAM EXERCISE

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C. THREE MAJOR NATIONAL ISSUES ON THE FLIPCHART

**"The worksheet completed by the rapporteur will be collected by the facilitators"**  
(Note: Only one worksheet will be collected from each group)

## EXERCISE - 6

### Development of Strategies

(Small group exercise)

#### DIRECTION

(30 minutes)

1. Form groups with participants having similar functions, and elect a rapporteur among them.
2. Each group will select an objective of purpose from the list of broad objectives of exercise 5 for their consideration based on their specific area of work.
3. The groups will discuss and formulate the strategies (strategic objectives) and activities (strategic objectives) by which the selected objectives will be achieved.
4. The rapporteur will present the results of the group exercise on a flip chart followed by discussion.

## EXERCISE - 7

### PERFORMANCE ASSESSMENT (Small Group Exercise)

#### A. DIRECTIONS

(45 minutes)

Each group will consist of five members. The group will select a rapporteur among them to discuss and answer questions. All the four groups will work on the questions on performance categories as presented in the handout.

**Question no. 1.** List in order of priority the first three performance categories which you consider are relevant in the institutional assessment of MOI. Select the categories from the nine that are presented to you.

**Question no. 2.** Suggest any other performance category that you consider is important and that needs to be added to the list of nine presented to you, in order to assist the assessment of MOI.

B. Each of the four groups will work on the performance categories as detailed below to respond the question no. 3:

GROUP A : 1. Organizational autonomy,  
2. Leadership

GROUP B : 3. Management and administration,  
4. Commercial orientation

GROUP C : 5. Consumer orientation  
6. Technical capability

GROUP D : 7. Developing and maintaining staff  
8. Organizational culture  
9. Interactions with key external institutions

**Question no. 3** Each group will select, in order of priority, two performance indicators from the long list of indicators given for each of the allotted performance categories. (See handout) Use the two performance indicators in the assessment of MOI. Use a five point scale for measurement:

-----  
Very low      Low                      Medium                      High                      Very high



Note: Responses of question no. 3 need to be written on the flip chart in the following format:

**Example**

Performance category: Leadership

Performance indicators selected (in order of priority)	Measure
-----	-----
10	Very high
8	High
12	Very high

C. DIRECTIONS: REPORTING AND DISCUSSION

**(45 minutes)**

- (a) Rapporteurs from each of the groups will present the results of their discussions on flip charts.
- (b) There will be a discussion of the subject after all the groups make their presentations.

## EXERCISE - 8

### GUIDELINES FOR DESIGNING A HUMAN RESOURCES DEVELOPMENT (HRD) PLAN

STEP 1: Identify the goal(s) and objectives of HRD programs

#### Example

#### HRD GOAL:

To provide irrigation staff with relevant knowledge; opportunity for the development of positive attitudes and skills; opportunity for the development of leadership qualities in MOI to upgrade and enhance system performance.

#### OBJECTIVES

- (a) To provide management and technical training to the staff as to .....
- (b) To plan and conduct socialization activities as to .....
- (c) .....

NOTE:      *KEEP IN MIND THAT THE HRD PLAN IS DESIGNED TO  
SUPPORT WHAT THE ORGANIZATION IS  
ATTEMPTING TO ACCOMPLISH IN THE FUTURE:  
REMEMBER THE MISSION STATEMENT.*

STEP 2: List the major objectives of your irrigation system.

STEP 3: List the number of your staff to be affected by this plan under each staff category. (This will help you to identify activities on HRD and budget them)

STEP 4: List the number of other partners (agencies and users) who will participate in the HRD plan activities.  
(Estimate number)

# HRD PLAN

STEP 5: Major functions and activities to be performed by management and staff and other "clients"

Example

FUNCTIONS	ACTIVITIES
(a) Development function of your irrigation system	
(b) Operational function	
(c) Maintenance function	
(d) .....	

STEP 6: Define a life-time for this HRD plan (one year? two years? three years?)

STEP 7: List the relative priority of activity and its tasks you plan to implement during the life-time which you have defined)

STEP 8: List the HRD activities which you plan to implement during the life-time of this plan. Then, develop programs to implement them

- FOR
- TRAINING?
  - SOCIALIZATION?
  - CAREER DEVELOPMENT
  - INDIVIDUAL PERFORMANCE MANAGEMENT (SYSTEMATIC? HOW?)
  - COMPENSATION OR INCENTIVES? (DEFINE IF MONETARY OR NON-MONETARY)
  - PERFORMANCE APPRAISAL (DESCRIBE THE PROCESS)

NOTE: *TERMINOLOGY EXPLANATION. WE USE THE TERM ACTIVITIES TO CITE THE NAME OF THE ACTION. AFTER THESE ACTIVITIES ARE ELABORATED AND TRANSLATED INTO ACTIONS (STEP-BY-STEP) TO BE IMPLEMENTED, THEY BECOME PROGRAMS.*

STEP 9: Describe the organization and ways of implementation of each HRD activities defined in step 5.

### Example

(a) IF TRAINING PROGRAM, please describe the following elements:

- Training and Organizational Constraints Assessment (TNA) - both for management and technical aspects of irrigation: Describe TNA plan, including methodology and number of staff involved?)
- Modes of training. (Supervised on-the-job training? Formal courses?, etc.) Graduate programs? Short training? In country? Abroad?, etc.
- Trainers or resource persons
- Training facilities - Follow-up, and
- Evaluation of training programs.

(b) IF INDIVIDUAL PERFORMANCE MANAGEMENT, please list major indicators for your observation along with the staff category performing specific tasks:

(c) etc.

STEP 10: BUDGETING FOR HRD ACTIVITIES

STEP 11 Schedule and identify ways (methodology) to follow-up and evaluate HRD activities described in this plan

STEP 12: List anticipated results of this HRD plan

STEP 13: How will you measure the results/impact of this HRD plan?

## ACTION PLAN FOR TRAINING ACTIVITIES AT YOUR DIVISION OF MOI

GUIDELINES: Your action plans should:

1. Define two major objectives of four training activities
2. Identify the target group you want to reach (cite category, number of participants and brief job responsibilities and criteria for selection)
3. Specify the training strategy you will use (formal short-term training, supervised on-the-job, study tour, etc.)
4. Describe the major contents of the training program (Please consult the TNA results)
5. State two ways you might communicate this plan to your superiors and the target group.
6. Describe your expectations on this program.
7. List two constraints you will confront while implementing this plan and describe how you will overcome them.
8. Define period of time and duration you intend to implement this plan.
9. Define the immediate tasks to be accomplished.
10. Describe the anticipated results of this program.
11. Describe how you will follow it up and evaluate.

## **LIST OF ANNEXURES**

- |       |    |  |
|-------|----|--|
| ANNEX | I  | INVITATION LETTER TO THE PARTICIPANTS  |
|       | II | WORKSHOPS' SCHEDULES<br>AND OBJECTIVES |



**INTERNATIONAL IRRIGATION MANAGEMENT INSTITUTE**

**ANNEX I**

Wad Medani, September 1993

Dear Participant,

Workshop to Deliver the Results of the Training Needs and Organizational Constraints Assessment (TNA)

Welcome to the Workshop for Delivery of Results of TNA, promoted jointly by MOI and IIMI!

It is a great pleasure to have you back again among this group of participants. We believe that this workshop will provide you with the opportunity of making a good start on "Strategic Planning and Human Resources Development" at MOI.

Thank you very much for joining us.

We wish you a very pleasant and productive program.

Best regards,

..... & .....  
MOI and IIMI

## WORKSHOP SCHEDULE

DAY I - SATURDAY, 25 SEPTEMBER 1993

TIME	DESCRIPTION
8:00 - 8:30	Welcome by MOI and IIMI MOI: Dr A M Adam, Mr Kamal Abdu, Prof. B E F El Monshid IIMI: Mr Charles Abernethy & Dr M S Shafique
8:30 - 9:30	Introduction * Program & objectives (D constable) * Interactive exercise (Z Franca)
9:30 - 10:00	Breakfast
10:00 - 10:10	Video show: Needs & constraints
10:10 - 11:30	Plenary discussion
11:30 - 11:40	Refreshments
11:40 - 12:00	Global issues in irrigation management (D Constable)
12:00 - 12:20	Plenary discussion
12:20 - 13:00	Irrigation management - National perspectives (D Constable)
13:00 - 13:10	Refreshments
13:10 - 14:30	Exercise 1: Issues in irrigation management (take three for better reflection technique)
* END OF DAY I *	



## **DAY I - OBJECTIVES**

At the end of the day, the participants will be able to discuss:

- (a) the results of Training Needs and Organizational Constraints Assessment (TNA),
- (b) global issues in the water sector and in irrigation management,
- (c) international initiatives for improving irrigation management and capacity building,
- (d) national perspectives on irrigation management, and
- (e) challenges for irrigation managers and issues for irrigation management in future.

## **MATERIALS**

### **A. Hand outs**

- Welcome letter
- General plan of workshops
- Workshops schedule
- Draft report on TNA
- Lecture materials
  - Global issues in irrigation development
  - Irrigation management: national perspectives
- Worksheet - Identification of national issues (group exercise)

### **B. Transparencies**

### **C. Video presentation.**

## WORKSHOP SCHEDULE

DAY II - SUNDAY, 26 SEPTEMBER 1993

TIME	DESCRIPTION
8:00 - 8:30	Report and discussion on major issues on irrigation management
8:30 - 9:00	Planning and management processes - Corporate planning concepts (D Constable)
9:00 - 9:30	Review of agency programs in national context - Exercise no. 2
9:30 - 10:00	Breakfast
10:00 - 10:30	Corporate planning (contd..)
10:30 - 10:50	Role of managers and leaders (D Constable)
10:50 - 11:50	Role of managers - leaders - Exercise no. 3
11:50 - 12:00	Refreshments
12:00 - 12:20	Management processes - Translating the mission into action (D Constable)
12:20 - 13:20	Agency role in the future - The vision and mission & objectives - Exercise no. 4
13:20 - 14:30	Report and discussion
* END OF DAY II *	

## DAY II - OBJECTIVES

At the end of the day, the participants will be able to :

- (a) discuss the organizational management processes and issues,
- (b) identify corporate/strategic planning concepts,
- (c) describe the roles and qualities of leaders,
- (d) write vision and mission statements for the organization, and
- (e) translate mission into objectives.

## MATERIALS

### A. Hand outs

- Lecture materials:
  - Planning & management processes
  - Management process - Role of Leaders/Managers
  - Management process - Translating mission into action development of agency objectives and strategies
- Worksheets:
  - Review of agency programs in national context
  - Leadership issues
  - Writing and interpreting mission statement
  - Development of agency objectives

### B. Transparencies

## WORKSHOP SCHEDULE

DAY III - MONDAY, 27 SEPTEMBER 1993

TIME	DESCRIPTION
8:00 - 8:30	Discussion on the issues of the exercise 4 - Step 1
8:30 - 9:30	Vision and mission interpretation of MOI mission - Exercise 4 - steps 2 and 3.
9:30 - 10:00	Breakfast
10:00 - 11:15	Development of agency objectives
11:15 - 11:30	Strategic objectives (D Constable)
11:30 - 12:00	Performance ( P S Rao)
12:00 - 13:00	Exercise - Performance
13:00 - 13:15	Refreshments
13:15 - 13:45	Human resources development (Z Franca)
13:45 - 14:30	Summary of the workshops program evaluation and feedback closure.
* END OF DAY III *	

### **DAY III - OBJECTIVES**

At the end of the day, the participants will be able to :

- (a) identify performance categories and indicators for institutional assessment,
- (b) select performance indicators relevant to their organization,
- (c) describe concepts in human resource development planning, and
- (d) discuss an action plan for human resource development in the organization.

### **MATERIALS**

#### **A. Hand outs**

- Lecture materials:
  - Performance assessment
  - Planning for human resource development
- Worksheets:
  - Performance indicators
  - Action plan for human resource development

#### **B. Transparencies**

## WORKSHOP SCHEDULE

DAY I - TUESDAY, 28 SEPTEMBER 1993

TIME	DESCRIPTION
8:00 - 8:30	Welcome by MOI and IIMI
8:30 - 9:00	Presentation of the program and schedule of activities - Interactive exercise (D Constable & Z Franca)
9:00 - 9:10	Video show "Needs and Constraints"
9:10 - 9:30	TNA results (P S Rao)
9:30 - 10:00	Breakfast
10:00 - 10:30	Global issues (D Constable)
10:30 - 11:10	National perspectives: Presentation of the results of the 1st group on major issues in irrigation in Sudan
11:10 - 11:30	Planning & management processes: Corporate planning (D Constable)
11:30 - 12:00	Review of agency role (new functions, etc.)
12:00 - 12:15	Refreshments
12:15 - 12:30	Presentation of individual and group exercises (show results of the 1st group) - Exercise no. 2
12:30 - 13:00	Corporate planning techniques
13:00 - 13:15	Prayer time
13:15 - 13:45	Role of managers - leaders: Presentation (D Constable)
13:45 - 14:30	Management processes: Presentation (D Constable) - Vision & mission
14:30 - 14:50	Interpretation of the mission statement - Step 3 of exercise no. 4.
* END OF DAY I *	

## DAY I - OBJECTIVES

At the end of the day, the participants will be able to discuss:

- (a) global issues in the water sector and in irrigation management,
- (b) international initiatives for improving irrigation management and capacity building,
- (c) the organizational management processes and issues,
- (d) the agency's mission and objectives, and
- (e) describe the role and qualities of leaders.

## MATERIALS

### A. Hand outs

- Welcome letter
- General plan of workshops
- Workshops schedule
- Lecture materials
  - Global issues in irrigation development
  - Planning and management processes
  - Management process: Role of Leaders/Managers
  - Management process: Translating mission into action development of agency objectives and strategies
- Worksheet
  - Review of agency programs in national context
  - Leadership issues
  - Writing and interpreting mission statement
  - Development of agency objectives

### B. Transparencies

## WORKSHOP SCHEDULE

DAY II - WEDNESDAY, 29 SEPTEMBER 1993

TIME	DESCRIPTION
8:00 - 8:45	Translating mission into action - Setting objectives (D Constable)
8:45 - 9:45	Definition of strategic objectives - Exercise no. 6
9:45 - 10:15	Breakfast
10:15 - 10:45	Performance categories and standards (P S Rao)
10:45 - 12:10	Performance categories, measures - Exercise no. 7
12:10 - 12:20	Breakfast
12:20 - 13:15	Human resources development (Z Franca)
13:15 - 13:30	Refreshment
13:30 - 13:50	Human resources development - Exercise no. 8
13:50 - 14:15	Preparation for the presentation of results for the top management (final day)
14:15 - 14:30	Program evaluation and feedback.
* END OF DAY II *	



## DAY II - OBJECTIVES

At the end of the day, the participants will be able to :

- (a) develop objectives for the divisions and branches of the organization,
- (b) identify performance categories and indicators for institutional assessment,
- (c) select performance indicators relevant to their organization,
- (d) describe concepts in human resource development planning, and
- (e) discuss an action plan for human resource development in the organization.

### MATERIALS

#### A. Hand outs

- Lecture materials:
  - Performance assessment
  - Planning for human resource development
- Worksheets:
  - Development of agency objectives
  - Performance indicators
  - Action plan for human resource development

#### B. Transparencies

## WORKSHOP SCHEDULE

FINAL DAY - THURSDAY, 30 SEPTEMBER 1993

TIME	DESCRIPTION
8:30 - 9:30	Presentations of Irrigation Management and management issues by group II to group I.
9:30 - 10:00	Breakfast
10:00 - 11:00	Discussion on the above topics by groups I & II.
11:00 - 12:00	Presentation of action plan (next steps) for MOI-IIMI program (5:00 - 5:30) * Closure and GOODBYE!
12:00 - 12:15	Refreshments
12:15 - 14:00	Wrap-up meeting and discussion of the next steps of the MOI/IIMI program with the First Under Secretary and his senior Under Secretaries.

30 September 1993

## **FINAL DAY**

### **OBJECTIVES**

Discuss major issues on Irrigation Management at MOI management in Sudan.

Define major activities for the next phase of the MOI/IIMI program.

Develop action plans to implement activities.

### **MATERIALS**

Worksheet for action plan.