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INTERNATIONAL WATER AND SANITATION CENTRE

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Management of Operation and Maintenance
in Rural Drinking Water Supply and Sanitation

Prepared by
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A Resource Training Package

WATER SUPPLY AND SANITATION COLLABORATIVE COUNCIL

WORKING GROUP ON OPERATION AND MAINTENANCE

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International Water and Sanitation Centre
P.O. Box 93190
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The Netherlands

Preface

Operation and Maintenance programmes, according to the approach adopted in this document, are aimed at improving the efficiency of water supply and sanitation resources to achieve the best possible utilization of the existing capacity of the system. Such programmes, despite emphasizing management and operative aspects related to operation, maintenance and rehabilitation, also involve relevant issues related to other areas of expertise. The activities which are normally considered in the formulation of an O&M programme are directed towards the elimination or reduction of the major constraints for the achievement of sustainability and improved efficiency and effectiveness of the water supply and sanitation service. These projects and activities should be organized to be gratefully implemented in accordance with priority requirements and also, in accordance with the financial and technical capacity of the institutions responsible for the provision of water supply and sanitation services.

Operation and maintenance programmes should be considered as a stage of an institutional development process. At this stage efforts should be oriented to the priority areas of the water agencies, to facilitate the implementation of a more comprehensive institutional development process.

This document and the training activities derived from its use are intended for management staff concerned with the challenging tasks of how to organize effective operation and maintenance services in water supply and sanitation programmes.

In addition to the classical management aspects of operation and maintenance, an important concept brought forward in this training document is the participation of communities and of women in operation and maintenance activities, reflecting the present trend in most development sectors to make more efficient use of local human resources for sustainability purposes.

The main approach of this training document is thus to use a participatory methodology, using the input of the course via the facilitator or resource persons, as well as the experience of the participants. The resource training package has been prepared using material and documentation developed by various agencies and institutions, reflecting a global panel of experiences within the sector. It should be used as the source documentation for the assembling of a training package adapted to the requirements of any target population to be addressed. Such an exercise should imply in the characterizing of this target population to be addressed and in the development of additional modules, where required, according to local needs.

Finally, this package has been developed in a process which included a testing exercise in Namibia, and guidance and comments from experts representing selected water and sanitation institutions in developing countries and External Supporting Agencies, members of the Advisory Committee of the operation and Maintenance Working Group of the Water Supply and Sanitation Collaborative Council.

Acknowledgements

This training course package on **Management of Operation and Maintenance in Rural Drinking Water Supply and Sanitation** has been prepared by IRC International Water and Sanitation Centre on the request of the Operation and Maintenance Working Group of the Water Supply and Sanitation Collaborative Council, under terms of reference and financial sponsorship by the World Health Organization.

The modules were developed by François Brikké with the help of Teun Bastemeyer and contributions from Jan Davis, Jo Smet, Phil Evans, Christine van Wijk, Michael Seager, Dick de Jong, Madeleen Wegelin and Jan Teun Visscher. Especial thanks should be given to Mr Hanjörg Drews, from the Department of Water Affairs of Namibia and Dr Harry McPherson, who gave extensive remarks and comments as a result of the testing exercise of the draft version of this package in Namibia. The members of the Advisory Committee of the Operation and Maintenance Working Group should also be thanked for their advice and contributions in reviewing the package, throughout its different phases. Especial thanks should be given to José Hueb of WHO, who provided a continuous and dedicated support to this initiative as well as to Phil Roark of the WASH/USAID project who authorized the use of the WASH Technical Report no. 71 for training purposes. Lay-out was done by Lauren Wolvers.

Special acknowledgement should be made of the generous financial support provided by both the Ministry of Foreign Affairs of Italy and the Swedish International Development Authority (SIDA).

About the resource training package

In general

This resource training package is designed to be a guide for the trainer/facilitator who is going to conduct this course. Its structure is flexible enough to be adapted to local circumstances and needs.

It would have been quite ambitious to deal about Operation and Maintenance (O&M) requirements and implications of all the existing systems coming from all the parts of the world.
However, trends remain the same and this package provides a guideline or methodology which can be used what ever the context and what ever the system.

The module dealing about technical requirements is describing technical requirements and implications of the following systems:

* hand dug well with bucket, rope and pulley
* borehole with handpump
* borehole with electric submersible pump and generator
* gravity piped distribution to standposts
* rainwater harvesting
* chlorination and slow sand filtration
* ventilated improved latrines

This resource training package is however not designed to be a technically oriented manual to be used at operational level, although it gives references to the above systems. Its scope is to include all the elements which a manager could be faced with in his assignment to conceive, plan and implement O&M in rural drinking water supply and sanitation, such as :

* Links between health, water and sanitation
* Analysis of constraints
* Organizational and financial requirements
* Community management
* Human resource development
* Monitoring
* Planning

Finally, this package should be adapted to country situations prior to its use in order to include : country specific case studies; national sector policies; institutional and cultural setting; and technical requirements.

Objectives

The general objective of the course is to contribute to improved management of programmes by enhancing the ability to sustain adequate O&M activities.

The specific objectives are as follow:

* To raise awareness on how to assess O&M needs and constraints at programme level
* To identify strategies to ensure O&M on a sustained basis
* To develop an overview of tools, methods and demonstration relating to key issues in O&M
* To identify O&M requirements for different service options
* To identify roles and actors in O&M
* To develop a management information framework and indicators to monitor O&M
* To develop individual or group action plans

Target group

The target audience for the package is designed to be working level managers including engineers, health and social specialists as well as other specialists involved in the water and sanitation sector.
The ideal number of participants for a course should be 15 to 20 .

The trainer/facilitator

The trainer/facilitator should have sufficient knowledge of the water supply and sanitation sector, since he will be implied in the selection of country specific resource materials.
He should preferably be acquainted with participatory methodologies as this course is not based on the traditional "teacher" type of training methodology.

The trainer/facilitator will find in most cases a set of illustrative overhead sheets which can be used for a presentation, as well as guidelines for group discussions or exercises and supporting material can be used for hand-outs.
All modules include some background information, handy for presentations or hand-outs.
Finally, most of the modules have a list of suggested references for further reading.
The way the facilitator wants to deal with the sequence of modules within each part can be adapted according to local needs and circumstances.

Course duration

The course is designed to have a minimum duration of 80 hours or two week, with possible adaptations according to local circumstances and demand.

Expected output

From experience it became clear that participants benefit the most of a course if they work towards a product. Therefore they are expected to produce an action plan or a strategy paper at the end of the course.

Course structure

The resource training package is designed to be adaptable to all situations and demand, and should be seen as a flexible tool rather than a rigid guide.

The only "strict" requirement is to keep the line of the logic of the training exercise:

1. "Facing O&M" is a thinking process
2. "Knowing more about O&M" is a learning process
3. "Planning for O&M" is a planning process

The first part, "**Facing O&M**", tries to achieve a common understanding of Operation and Maintenance.
It starts with a presentation of the papers on O&M-related issues the participants were requested to write before coming to the course, and/or a general presentation of the water sector of the country. Main issues regarding O&M will be addressed as well as the links between water and sanitation, using presentations or audio visual materials, with guided discussions. Through elements of the **O**bjective **O**riented **P**rogramme **P**lanning (**OOPP**) exercise the key issues affecting operation and maintenance of water supply and sanitation are determined and related to each other. This course does not aim in using the whole O.O.P.P methodology, but only parts of it, especially in analyzing constraints and setting objectives.

The second part, "**Knowing more about O&M**', the most important issues are addressed in detail through lectures and group or individual exercises.
The most recent information from projects, international meetings, etc., is used to give an overview of the current views and approaches concerning the issues. The participants are provided with background materials and a bibliography for further reading.

The third part, "**Planning for O&M**", is used by the participants to develop an action plan or a strategy paper concerning operation and maintenance management in their programme or department.
The results of the first part and the information obtained during the second part are used for this and the participants receive individual support. The papers are presented to fellow participants and course staff to allow each participant to get feed-back on their proposed plans.

The resource training package also provides suggestions for organizing a field visit.

Course methodology

The package uses as much as possible participatory methods, but also includes background information and overhead sheets which could be used for lectures and presentations, as well as individual or group exercises. Further, some videos are proposed in this package.

Another aspect of the package is to provide information advice in the form of supporting material and selected bibliography.

A daily and final evaluation of the course is proposed in this package and forms are provided.

Course outline

The course is composed of 8 modules, each subdivided into a certain number of submodules. Each submodule gives indications on how to organize each session. It is up to the trainer/facilitator to make use of the information made available in this resource training package.

OUTLINE OF COURSE

PART 1 : FACING O&M

MODULE 1: INTRODUCTION
- 1.1 Introduction of course to participants
- 1.2 Presentations

MODULE 2: THE CHALLENGE OF O&M
- 2.1 Concepts and trends
- 2.2 Links between health, water and sanitation

MODULE 3: O&M ISSUES
- 3.1 Analysis of constraints
- 3.2 Identification of strategies

PART 2 : KNOWING MORE ABOUT O&M

MODULE 4: O&M TECHNICAL REQUIREMENTS
- 4.1 A systematic approach, with VIP latrine example
- 4.2 Water supply
- 4.3 Water distribution and treatment

MODULE 5: O&M ORGANIZATIONAL AND FINANCIAL REQUIREMENTS
- 5.1 Actors and roles
- 5.2 Management models
- 5.3 Cost estimation & cost recovery

MODULE 6: TOWARDS SUSTAINABILITY
- 6.1 Community management
- 6.2 Involvement of women
- 6.3 Local financing
- 6.4 Human resource development
- 6.5 Spare parts provision

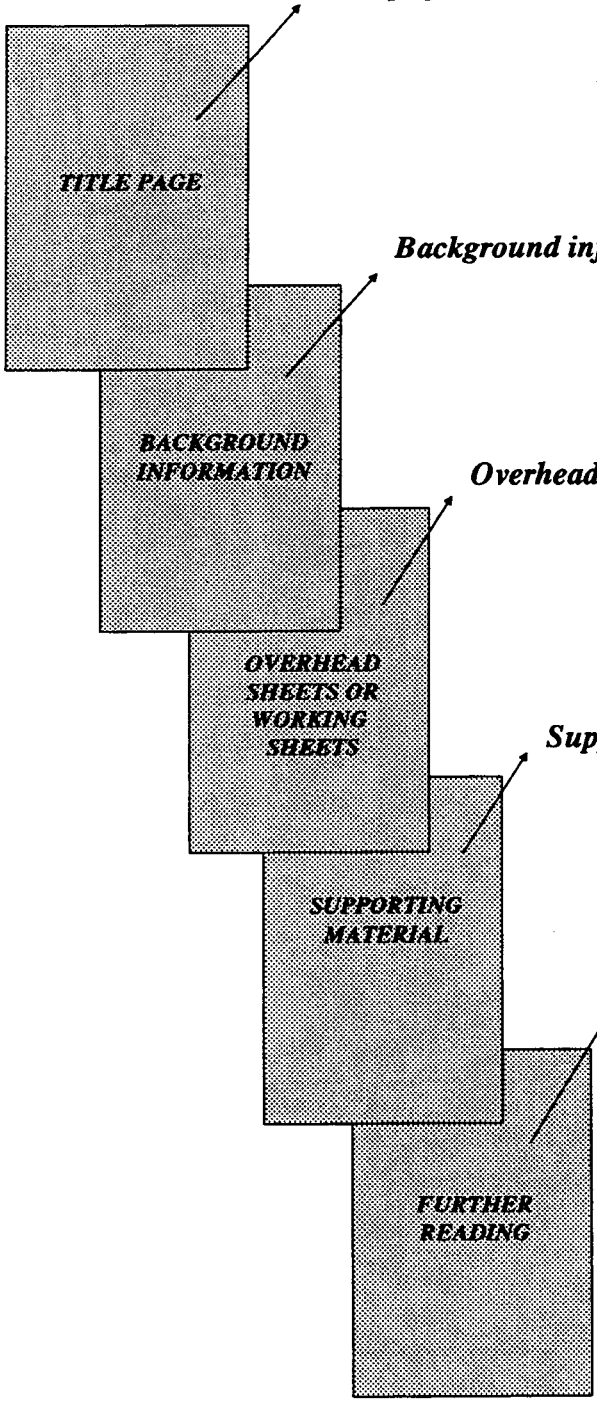
MODULE 7: TOWARDS SOUND MANAGEMENT
- 7.1 Information and communication
- 7.2 Monitoring
- 7.3 Planning

PART 3 : PLANNING FOR O&M

MODULE 8: ACTION PLAN/CONCLUSION
- 8.1 Methodology for planning
- 8.2 Individual assignment
- 8.3 Writing-up and presentations
- 8.4 Evaluation and conclusion

Annex I: Suggestion for field visit

Outline of a Sub-Module



Title page of sub-module with:
- objectives
- outline of sessions
- hand-outs

Background information: suggestions for a lecture/ presentation/discussion
Some aspects of the background information can be used for hand-outs

Overhead-sheets or working sheets: to be used during presentation or group/individual working session if provided

Supporting material: photocopies of documents useful for the presentation of sub-modules and possible hand-outs

For ***Further reading:*** some recent bibliographical references for this sub-module if necessary.

Proposed time-table for training

Week 1	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
09.00 10.45	Administration Introduction 1.1	Links between health, water & sanitation 2.2	Strategies (objective tree) 3.2	Actors and roles 5.1	Community management 6.1
11.00	Presentations 1.2	Constraints (methodology) 3.1	Technical requirements (overview) 4.1	Management models 5.2	Involvement of women 6.2
14.00	Country presentation 1.2	Constraints (problem tree) 3.1	Technical requirements (water supply) 4.2	Cost recovery 5.3	Field trip preparation
15.45 17.15	Concepts & Trends 2.1	Constraints (finalization) 3.1	Technical requirements (other) 4.3	Community Management 6.1	Field trip preparation

Every day short evaluation (10 Min.)

Week 2	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
09.00 10.45	Field trip Follow-up	Information & Communication 7.1	Methodologies for Planning 8.1	Individual assignment (continued) 8.2	Presentations 8.3
11.00	Local Financing 6.3	Monitoring 7.2	Methodology for Planning 8.1	Individual assignment (research) 8.2	Presentations 8.3
14.00	Human Resources Development 6.4	Monitoring 7.2	Individual assignment (problem tree) 8.2	Writing-up 8.3	Evaluation & Conclusion 8.4
15.45 17.15	Spare parts Provision 6.5	Planning 7.3	Individual assignment (objective tree) 8.2	Writing-up 8.3	

Every day short evaluation (10 Min.)

Preliminary preparation

The trainer/facilitator

If the trainer/facilitator is not acquainted with issues or methodologies presented in this package, it would be advised that he gets some kind of training or briefing beforehand. IRC International Water and Sanitation Centre in The Hague, The Netherlands, organizes special briefing programmes on the use of this package, as well as similar courses on management for sustainability.
Another possibility is to involve one local resource person, or a trainer from IRC to backstop the trainer/facilitator locally especially for this first time.

The training institute

The development of local training capacities on O&M is to be seen as an important second objective of this course.
It is therefore proposed that an appropriate training institute is identified, which could repeat the course and consolidate the training skills and capacities on O&M in the given country.

However, a donor or a specific project might want to use this package only once in order to sensitize its staff on the issue of O&M management. In that case, it would be advised to include in the course a representative from another project or from the concerned ministry, who could benefit from this course and then repeat it somewhere else.

Organization

As a certain amount of preparatory work is required, the date of the course should be fixed well in advance to allow all those involved to fit the course into their own work schedule. Course preparation should begin, preferably, six months beforehand.

One of the first tasks is to fix the dates of the course. In setting the dates of the course account has to be taken of :

- public and religious holidays
- important meetings or events that participants are obliged to attend.

Secretarial support greatly facilitates course organization. A well-ordered file containing all information and correspondence about the planning, running and evaluation of the course is essential.
During the course itself it will be necessary to have the support of a secretary to wordprocess work produced by the participants and the facilitator.
A general support person will also be needed for activities such as last minute arrangements, supply of materials and photocopying during the course.

The trainer/facilitator will have to identify with a sector specialist what are the constraints regarding O&M in rural water supply and sanitation in the country.
(S)he will have to adapt the package to his country's needs and requirements, and most of all, identify relevant information which could be used for the course.
As the sending of material requires some time, it would be appropriate that the trainer/facilitator orders the documents and videos which he would like to use, well in advance.

Accommodation

The accommodation should include :

- meeting room large enough for plenary sessions. Make sure that this room is not noisy, has adequate ventilation and light, and that there is sufficient power points to use an overhead projector, a video . Preferably the room should be available 24 hours a day throughout the course

- separate rooms for each of the working group; each group will need a quiet place with a table and chairs. The meeting room may be used to house two or more groups provided it is big enough to allow groups to work without disturbing one another

- foods and drinks - coffee and tea will be required between sessions and arrangements have to be made for breakfast, lunch and dinner.

Participants

The course is designed for professional staff working in water supply and sanitation. The group of course participants should comprise preferably:

- professional staff from various organizational backgrounds, for example project staff, central, regional, provincial and local government staff, donor/international agency staff, non government agency staff;

- professional staff with various educational and professional background, for example administrators, hydrologists, sanitary engineers, economists, environmental health engineers, community mobilizers;

- men and women

Participants should be invited through the appropriate channels. The invitation should include clear statements of the course objectives, structure and duration, the importance of full time attendance, accommodation and transport arrangements and costs/daily subsistence allowance.

Proposed letter to be sent to the participants prior to the course together with a course curriculum:

Proposed letter to be sent to participants prior to the course

Dear participant,

I am pleased to confirm your participation in the "Management op Operation and Maintenance in rural drinking water and sanitation" course, which will be held .....

A presentation will be done by each participant on the first day of the course.

The purpose of this exercise is to inform briefly the course staff and the other participants about **your** experience in the field of drinking water supply and sanitation.

The length of the presentation **should not exceed 5 min.**

For your information, contents of one typed written page represent about a 5 minutes presentation.

You may wish however to bring with you documents related to your project (charts, plans, evaluation reports, ...).
These documents will not be presented during this presentation but they can be distributed to the staff and the participants as information material.

Indeed, one aspect of the course is to exchange information and experiences between participants coming from different regions, districts or departments. Furthermore these documents can be used as reference materials for your final presentation at the end of the course.

Outline of a presentation

- Overview of job description
- Overview of experience in the water and sanitation sector
- Overview of expectations regarding this course.

Looking forward to meeting you, ...

Resource persons

One or two persons experience in the field of water and sanitation sector should be invited as specified in the course.

Their main task is to share their knowledge and provide practical information, examples and suggestions. In the invitation letter, their role should be clearly stated.

They should be invited well in advance of the course to increase the chance of their acceptance. They should be provided with the course modules, preferably two months in advance.

If recourse persons are not available, the trainer/facilitator might choose the option of a field visit or a video.

Teaching aids, equipment and stationary

All teaching aids, equipment and stationary should be ordered well in advance of the course. This includes:

- a blackboard
- a flip-chart stand and paper
- an overhead projector and a screen
- a video recorder and monitor
- a large board to pin cards on
- a photocopy machine

Stationary:

- it is proposed to give to the participants a binder in order to put in all the documentation;
- cards of different colour which can be made of big pieces of hard paper;
- note pads, pencils, erasers, adhesive tape, pins.

Certificate

A certificate may be prepared to hand out to all participants at the closing ceremony.

Field visit

Suggestions are given in Annex 1.

Availability of resource materials

In certain developing countries, it is quite difficult to have access to the relevant information or to get the support of resource persons.
When ordering or obtaining this package, a special request can be made to IRC or WHO who could provide additional material. However, for your convenience, information about most of the cited materials can be obtained from the following addresses, according to their references:

GTZ
Division 414 (water)
Postfach 5180
D-6236 Eschborn
Federal Republic of Germany

IDRC
Communications Division
P.O. Box 8500
Ottawa K1G 3H9
Canada

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Corso Unità d'Italia 125
10127 Turin
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P.O. Box 93190
2509 AD The Hague
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1818 H Street N.W.
Washington D.C. 20433
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Room 1002
1611 North Kent Street
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1211 Geneva 27
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How to get the video-film "People and Solutions", proposed in this package.

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PART 1: FACING O&M

MODULE 1

INTRODUCTION

OUTLINE OF COURSE

PART 1 : FACING O&M

MODULE 1: INTRODUCTION
- 1.1 Introduction of course to participants
- 1.2 Presentations

MODULE 2: THE CHALLENGE OF O&M
- 2.1 Concepts and trends
- 2.2 Links between health, water and sanitation

MODULE 3: O&M ISSUES
- 3.1 Analysis of constraints
- 3.2 Identification of strategies

PART 2 : KNOWING MORE ABOUT O&M

MODULE 4: O&M TECHNICAL REQUIREMENTS
- 4.1 A systematic approach, with VIP latrine example
- 4.2 Water supply
- 4.3 Water distribution and treatment

MODULE 5: O&M ORGANIZATIONAL AND FINANCIAL REQUIREMENTS
- 5.1 Actors and roles
- 5.2 Management models
- 5.3 Cost estimation & cost recovery

MODULE 6: TOWARDS SUSTAINABILITY
- 6.1 Community management
- 6.2 Involvement of women
- 6.3 Local financing
- 6.4 Human resource development
- 6.5 Spare parts provision

MODULE 7: TOWARDS SOUND MANAGEMENT
- 7.1 Information and communication
- 7.2 Monitoring
- 7.3 Planning

PART 3 : PLANNING FOR O&M

MODULE 8: ACTION PLAN/CONCLUSION
- 8.1 Methodology for planning
- 8.2 Individual assignment
- 8.3 Writing-up and presentations
- 8.4 Evaluation and conclusion

1.1 INTRODUCTION OF COURSE TO PARTICIPANTS

Description of session

OBJECTIVES

- To reach a common understanding of course objectives and to obtain an overview of the profile of the participants.

OUTLINE OF SESSION

• After administration procedures done (registration, etc..) a brief welcome will be followed by a rapid round of participants	30 min
• In plenary session presentation of objectives and outline of course plus points of clarification	1 h
	1 h 30 min

HAND - OUTS

- General outline of resource training package

MATERIAL NEEDED

- Overhead projector
- Copies of overhead sheets

Background information

1. Introduction

There is a widespread evidence that though Operation and Maintenance (O&M) is recognized as one of the major constraints for the water sector development, little progress has been made in this field during the past decade.

Sustainability of water and sanitation systems through proper and effective O&M has been recognized by national governments and external support agencies (ESA) as a priority activity in order to safeguard infrastructure investments.

In 1988, in order to focus attention on this issue, WHO assisted by IRC held a one day informal working session in The Hague with ESA representatives. A working group was established with the objective of improving the performance of O&M which held its first meeting in Geneva in June 1990.
Key issues were identified as:

* Inadequate data on O&M
* Insufficient and inefficient use of funds
* Poor management of water supply facilities
* Inappropriate system design
* Low profile of O&M
* Inadequate policies, legal framework and overlapping responsibilities
* Political interference

It was also felt that the link between O&M and water quality surveillance had to be strengthened.
The working group during this Geneva meeting proposed that the following activities be implemented at global and national levels to improve O&M performance: (Overhead sheet No. 2)

* Enhance profile of O&M
* Improve management
* Develop data collection and monitoring system
* Formulate policy and coordination

Subsequently, the working group has asked IRC to produce this resource training package aiming to contribute to management improvement of O&M in rural drinking water supply and sanitation.

2. Purpose and objectives

The purpose of this package is to provide a guide for O&M courses to be held at regional and national levels, in different countries. It is intended to give hands-on material for conducting a course, adapted to local situations and make use of local resource persons.

The general objective of the course is to contribute to improved management of programmes by enhancing the understanding of participants concerning sustainable water supply and sanitation programme and increasing their ability to sustain adequate O&M activities.

The specific objectives are as follow: (Overhead sheet no. 3)

* To acquire skills and knowledge to assess O&M needs and constraints at programme level
* To identify strategies to ensure O&M on a sustained basis
* To develop an overview of tools, methods and demonstration relating to key issues in O&M
* To identify O&M requirements for different service options
* To identify roles and actors in O&M
* To develop a management information framework and indicators to monitor O&M
* To help individual participants to prepare an action plan.

3. General overview of training and its methodology

(Overhead sheet 1)

The whole course is designed to be lasting 80 hours, about 2 weeks, with possibly adaptations according to local circumstances and demand. It uses a participatory methodology, using participants own experience and problems in the context of each issue concerned.
The training is divided into three parts.

The first part, "**Facing O&M**", is oriented towards achieving a common understanding of Operation and Maintenance. It starts with a presentation of the papers the participants were requested to write before coming to the course, and/or a general presentation of the water sector of the country and its objectives for the coming years. Main issues regarding O&M will be addressed as well as the links between water and sanitation, using presentations or audio visual materials, with guided discussions.
Through the **O**bjective **O**riented **P**rogramme **P**lanning (**OOPP**) exercise the key issues affecting operation and maintenance of water supply and sanitation are determined and related to each other. The methodology for developing a framework for putting up strategies to address these issues are then dealt with.

The second part, "**Knowing more about O&M**', provides a summary of the most important issues through lectures and group or individual exercises.
The most recent information from projects, international meetings, etc., is used to give an overview of the current views and approaches concerning the issues. The participants are provided with background materials and a bibliography for further reading.

The third part, "**Planning for O&M**", is used by the participants to develop an action plan for the strategy of attaining a proper operation and maintenance management in their programme or department. The results of the first part and the information obtained during the second part are used for this and the participants receive individual support. The plans are presented to fellow participants and course staff in order to allow each participant to get feed-back on their proposed plans (see overhead
sheet no. 4).

Every day will be concluded by asking the participants to fill out an evaluation form on the day's sessions. At the end of the course, participants are asked to fill out a more extensive form to get a view on how they value the course as a whole.

Overhead sheet 1

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Overhead sheet 2

Results O&M Working Group June (1990)

Priority Issues (Results)

ENHANCE PROFILE O&M

MANAGEMENT IMPROVEMENT

DATA COLLECTION AND MONITORING
SYSTEM DEVELOPMENT

POLICY FORMULATION
COLLABORATION AND COORDINATION

Overhead sheet 3

General Objective:

TO CONTRIBUTE TO IMPROVED MANAGEMENT OF PROGRAMMES BY ENHANCING THE UNDERSTANDING OF PARTICIPANTS CONCERNING SUSTAINABLE WATER SUPPLY AND SANITATION PROGRAMMES AND INCREASING THEIR ABILITY TO SUSTAIN ADEQUATE OPERATION AND MAINTENANCE ACTIVITIES

Specific Objectives:

> To raise awareness on how to assess O&M needs and constraints at programme level.

> To identify strategies to ensure operation and maintenance on a sustained basis.

> To develop an overview of tools, methods and demonstration relating to key issues in O&M.

> To identify O&M requirements for different service options.

> To identify roles and actors in O&M.

> To develop a management information framework and indicators to monitor O&M.

> To develop individual or group action plans

Overhead sheet 4

Output of the Course

FORMAT FOR ACTION PLAN

Name :
Date :
Job description :
Title of project :

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1. Background information of project

2. Target groups

3. Objectives

4. Expected results

5. Start and completion dates

6. Operational working relationships

7. Work plan for the coming six months

ANNEXES

Problem/objective tree
References
Resources needed

1.2 PRESENTATIONS

Description of session

OBJECTIVES

- To enable the participants to present their work, reasons to follow the course, and specific interest regarding the project and O&M.
- To allow the facilitator or a resource person to present the water and sanitation situation of the country concerned, as well as the actual or future official policy regarding O&M in rural drinking water supply and sanitation.

OUTLINE OF SESSIONS: (2 sessions)

(can be adapted to local circumstances)

Session 1:

- Brief presentations of the participants regarding their work and the way they deal with O&M. — 1 h 45

Session 2:

- Presentation of the general water and sanitation sector in the country especially regarding O&M (lecture done by facilitator or resource person) — 1 h 30

HAND - OUTS

- each participant gives a summary (maximum one page) describing the main points dealt with in his presentation
- one hand - out presenting the official position regarding O&M in the country, prepared either by the facilitator or the resource person

MATERIALS NEEDED

- overhead projector if requested by participants or resource person.
- any other equipment as requested by resource person.

Background Information

1. Presentations of participants

A brief presentation will be done by each participant on the first day of the course. They therefore have to be warned in advance about this exercise. A format is given in the introductory part of this package.

The purpose of this exercise is to inform briefly the course staff and the other participants about the experience of each participant in the field of water supply and sanitation as well as on O&M.

It is suggested to limit the presentations to about 5 minutes.
The participants if they wish can bring along other material only to be distributed.
Indeed, one aspect of the course is to exchange information and experiences between participants coming from different regions, districts or departments.

2. Country presentation

To be done either by the course facilitator or by one or several resource person.
This presentation should include:

* an overview of the water and sanitation sector within the country

* an overview of present and future policies regarding O&M

* time for points of clarification.

This presentation can be the opportunity to get a common understanding of what are the problems in the sector; what are the future prospects regarding the Ministry or local NGOs.
This session can be an excellent tool to disseminate general information in the sector as well.

The resource persons could be representatives from the Ministry, but also from a donor or an NGO.

If the session is felt as being too long, same additional information could be forwarded to the participants on how to have access to resource material in the country (libraries, institutions, ministries, NGOs or other special centers).