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A WORKSHOP FOR THE NATIONAL WATER SUPPLY AND DRAINAGE BOARD OF SRI LANKA JUNE 6 - 10, 1983

WASH FIELD REPORT NO. 94

AUGUST 1983

Prepared for:
USAID Mission to the Democratic Socialist Republic of Sri Lanka
Order of Technical Direction No. 138

WATER AND SANITATION
FOR HEALTH PROJECT

COORDINATION AND
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1611 N. Kent Street, Room 1002
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Telephone: (703) 243-8200
Telex No. WUI 64552
Cable Address WASHAID

August 8, 1983

Ms. Sarah J. Littlefield, Director
USAID Mission
Colombo, Sri Lanka

Attention: Mr. Robert Chamberlain

Dear Ms. Littlefield:

On behalf of the WASH Project I am pleased to provide you with 40 (forty) copies of a report on a Workshop for the National Water Supply and Drainage Board of Sri Lanka, June 6-10, 1983.

This is the final report by Daniel Edwards and is based on his trip to Sri Lanka from May 25 to June 11, 1983.

This assistance is the result of a request by the Mission on January 27, 1983. The work was undertaken by the WASH Project on February 22, 1983 by means of Order of Technical Direction No. 138, authorized by the USAID Office of Health in Washington.

If you have any questions or comments regarding the findings or recommendations contained in this report we will be happy to discuss them.

Sincerely,

David Donaldson
Acting Director
WASH Project

cc. Mr. Victor W.R. Wehman, Jr., P.E., R.S.
AID WASH Project Manager
S&T/H/WS

DBW:cdej

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Prepared by:

Daniel B. Edwards

August 1983

Water and Sanitation for Health Project
Contract No. AID/DSPE-C-0080, Project No. 931-1176
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TABLE OF CONTENTS

Chapter Page

Chapter Page

Appendices

TERMS USED

NWSDB	National Water Supply and Drainage Board.
Chairman	Chief Officer of NWSDB.
GM	General Manager; second in command of the NWSDB, reports to the Chairman.
DGM (Sr)	Deputy General Manager (Senior); third in command in NWSDB.
AGM (O&M)	Associate General Manager for Operations and Maintenance; chief technical officer in the O&M branch.
RM	Regional Operations Manager (O&M); in charge of all activities at the regional level relating to the operation and maintenance of water plants and distribution systems.
ARM	Assistant Regional Manager (there is an ARM for maintenance and an ARM for operations).
OIC	Officer in Charge, responsible for the operation of a water treatment plant.
Scheme	Water supply system consisting of water source, treatment system, and distribution network; also used to denote a system, an idea, or a plan of action.
Stores	Warehousing process as well as supplies, spare parts, etc.
Tender	An offer to bid in the procurement process.
Technical Officer	Technician, paraprofessional; i.e. a non-engineer carrying out technical work and including OICs, technical assistants, and engineering assistants.
Cadre	Staffing pattern, Staffing Request
Lakh	100,000 Rupees or $4,348.

Note: US$1.00 = 23 Rupees

EXECUTIVE SUMMARY

A five-day problem-solving and team-building workshop designed to improve management in operations and maintenance was held for 25 top and mid-level managers of the National Water Supply and Drainage Board (NWSDB) of Sri Lanka June 6-10, 1983. The problem oriented workshop activities consisted of team building between central and regional staff in operations and maintenance and centered on eight specific problem areas which were identified through interviews with 32 staff members and the analysis of a written needs assessment instrument.

Detailed discussions, specific recommendations, and action plans were developed for specific problem areas. These problem areas were the following:

- Job Descriptions: Job descriptions are not available for most positions on the Board. Uniform job descriptions by category are not used to hire or orient employees or hold them accountable for duties. Two consequences are inconsistent standards of performance and difficulty in supervision.

- Staff Selection: Staff are often selected without consistent experience and skills criteria to do the job. People are promoted without the requisite skills. Managers who supervise these employees feel they are not sufficiently consulted in this process. A related problem exists in staff rotation; a written, consistent policy for assignment and rotation does not exist. The consequence is some staff are rotated frequently (in order to remove a problem) and some staff who need to be assigned to positions commensurate with program needs and their own skills are not.

- Decision Making and Delegation: Managers are unsure of which decisions they can and cannot make. Often decisions which could be made at lower levels are pushed up the system or taken at levels higher than necessary. Delegation practices are not operationally common.

- Communications: It is often difficult for managers to locate the information they need to do a job. Information is widely dispersed and not used for proper decision making. Examples include lack of record keeping on preventive maintenance and breakdowns, unavailability of water quality data, unavailability of detailed information on distribution systems, lack of construction drawings for older plants, and lack of water production statistics because of broken meters.

- Reorganizational Issues: The recent decision to separate operations and maintenance from construction as a responsibility of one regional manager and to do away with the range management system (several regions were under one range manager), has resulted in confusion at the field level. Roles need to be further sorted out with respect to which Board officer is responsible in a number of areas, how resources and facilities are shared, and who represents the Board to the public.

- Supplies and Spare Parts Logistics: There is a need to develop planning, ordering, and distribution systems for supplies and spare parts to ensure that plants operate continuously and do not shut down because of lack of supplies or spare parts.

- Maintenance Management: Systems need to be developed for preventive and routine maintenance and repair. The development of a pilot system in one region has produced encouraging results. This system needs to be expanded, and training should be done in all regions. The problems which this may cause need to be identified and addressed.

- Community Relations and Participation: The Board needs to examine its community relations and the current procedures for involving the consumer in its activities. Ways need to be identified to better involve the community and to communicate to staff their responsibilities in the community relations/participation area.

Workshop Outcomes

The workshop outcomes were achieved by involving all participants in a series of team-building and small group problem-solving exercises which required that detailed recommendations and agreements were made and presented for full group consideration and adoption. Very specific follow-up action plans were developed for all agreements and recommendations. These action plans will be carried out under a series of task forces which operate under the supervision of senior NWSDB officials. The following outcomes are significant:

- Team Building: Forty-nine separate items were agreed upon between the central office managers and regional staff to improve understanding, change procedures, and clarify roles and expectations.

- Job Descriptions: Eleven job descriptions were produced in first draft form and 23 additional job descriptions were identified for follow-up work.

- Staff Selection: A system was agreed upon for determining staff needs, and selection procedures were developed which involve regional representation. A staff rotation policy was developed and recommended.

- Decision Making: A decision making matrix was developed detailing which decisions should be made at the various levels and how responsibilities should be delegated.

- Communications and Information System: A detailed plan was developed for the storage, retrieval, and dissemination of information relating to operations and maintenance.

- Issues of Reorganization: Roles, responsibilities, and division of resources in the field between operations and maintenance and construction were clarified and written into a detailed action follow-up plan.

- Maintenance Management: The pilot tested maintenance management system developed for one region was communicated, modified, and adopted for extension into all regions. Detailed reporting forms and a communications flow chart were developed.

- Supplies and Spare Logistics: Fifteen separate procedures were specified to improve the flow of supplies and spare parts.

- o Community Relations/Participation: Nine recommendations were made to clarify responsibilities and take action to improve public involvement. Four recommendations were adopted to improve community relations and awareness.

In addition to the work-specific outcomes, the workshop also contributed to future USAID activities in two significant ways:

- o Future USAID Project: The workshop provided a great deal of data which will assist an institutional development project. The workshop data were used to complete a project identification document produced after the workshop.

- o Model Testing: This second test of the team-building problem-solving workshop firmly establishes that this is a useful and viable approach to project development.

Workshop Evaluation

The participants rated the workshop very highly in the written survey conducted at the end of the workshop. Overall goal attainment rated an 8.6 on a ten-point scale. The most positive comments related to the workshop's participative nature and the equal involvement of everyone and equal treatment of their ideas. The most significant negative comments (of which there were only three statements among the 25 participants) related to the fact that three of the facilitators were either associated with the Board or employed by the Board.

Recommendations

Follow-up by the Board: In oder to ensure that this workshop completes its intended mission, the leadership of the Board will need to hold the action task forces accountable for results. It is suggested that a follow-up conference be held in six months. It is also recommended that problem-solving workshops be carried out on a regional and office basis in the future by the training department after a model is developed by the department.

Follow-up by USAID: It is recommended that the USAID Mission continue the positive results of this workshop by developing both a short and long range approach to continued institutional development. The short range program should include an immediate action program (detailed in Chapter 6) to follow up on areas of important need. The long range program should comprise a complete institutional development project.

ACKNOWLEDGEMENTS

The success of this workshop was due to the efforts and contributions of many people. The workshop would not have been requested nor as well received had not the ground been previously prepared by top policy makers of the management and members of the Board of NWSDB. For these efforts due credit should be given to Mr. P.H.P. Fernando (Senior Assistant Secretary, Ministry of Local Government, Housing and Construction), Mr. N.P. Peiris (Chairman, NWSDB), and Mr. D.E.F. Jayasuriya (Deputy General Manager-Senior-NWSDB).

A great deal of work was done to lay the foundation for the work accomplished in this consultancy. For this Mr. D. Konchady, WHO Advisor to NWSDB, should be thanked. Very special thanks should be given to Mr. Skanda de Saram, WHO consultant for O&M, for his daily support in arranging field visits, providing key insights to workshop preparations and tireless support to the consultants, as well as serving an important role in carrying out the workshop as a facilitator.

The prime promoter of the workshop from USAID was Dr. John H. Austin of the AID Office of Health in Washington who promoted the idea, prepared the action plan, and conceptualized the workshop as a first step in developing a long-term USAID strategy for institutional development for NWSDB. Indispensable and efficient support for the workshop was provided by Eric Loken (Energy & Environmental Project Officer, USAID, Colombo).

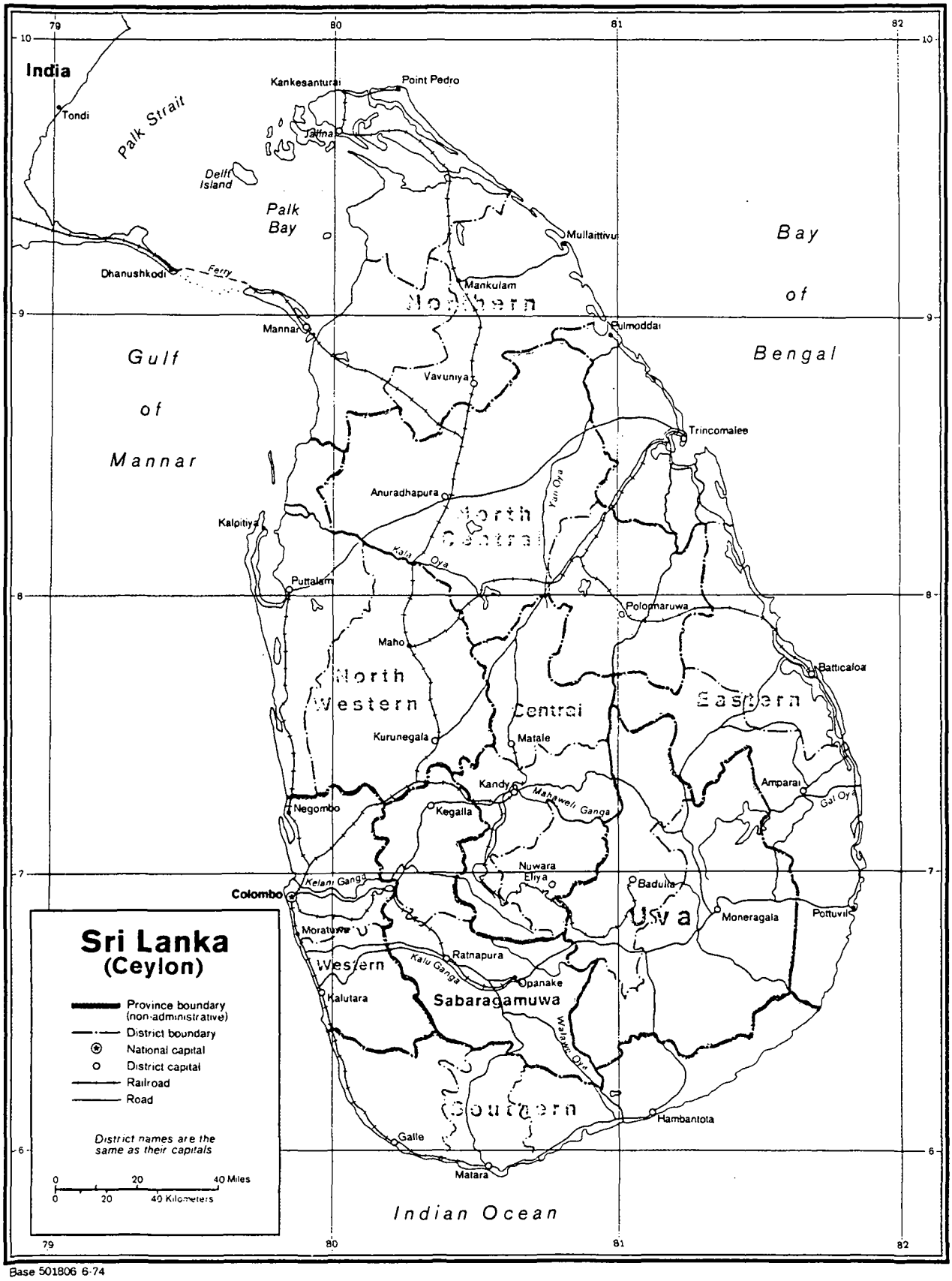
The following people ably served as tireless workers facilitating the workshop and producing the written products:

Facilitators

1. Dayan Konchady - WHO advisor
2. Elmore M. Perera - Sri Lanka Institute of Development Administration
3. S. Nagaratnam - Acting AGM Special Projects, NWSDB
4. Skanda de Saram - Mechanical Engineer, WHO

Logistics

1. B.L.C. de Silva - NWSDB
2. L.G. Kulasekere - SLIDA



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Chapter 1

BACKGROUND

1.1 Order of Technical Direction Number 138

The request for technical assistance to the National Water Supply and Drainage Board (NWSDB) of Sri Lanka was issued to the WASH contractor on February 22, 1983. The nature of the technical assistance requested was to: a) determine problem areas in the management of the operation and maintenance function, b) to provide a problem-solving workshop with the top and mid-level staff of key agencies to address these problems, and c) provide a plan for action and follow-up within the context of the workshop. An additional objective was the provision of data from the workshop activity which would serve as a basis for developing a future USAID/NWSDB institutional development project. Another part of the OTD requested a review of financial activities in the sector. These activities are not within the scope of the report.

1.2 Events Leading to the Request for Technical Assistance

The National Water Supply and Drainage Board (NWSDB) was constituted in 1975, incorporating the personnel of the erstwhile Department of Water Supply Drainage, who opted to serve in the NWSDB. In the process, there was an exodus of senior staff limiting the institutional capacity of the Board.

In 1979 the World Health Organisation instituted a project entitled, Institutional Support to the NWSDB. This project was staffed with a senior engineer, a manager, a design engineer, a mechanical engineer (maintenance specialist), and a trainer. The WHO group worked closely with other donors (international and bilateral) who were financing capital development efforts.

In 1980, USAID assisted the NWSDB and the Government of Sri Lanka (GSL) with the development of a Water Decade Plan for Sri Lanka. This plan addressed all aspects of the potable water and sanitation needs of the country including the institutional development.

Before and after the Decade Plan was prepared, WHO provided a series of consultants who examined the various aspects of institutional development (including training and maintenance management) and made recommendations.

In collaboration with this WHO effort, USAID Provided expertise in human resource development and, working closely with the NWSDB and WHO, developed a work plan for implementation in 1983. This work plan specified a team-building workshop for the NWSDB personnel directly and indirectly concerned with operations and maintenance (O&M). This report describes the process of development and implementation of this workshop.

Chapter 2

WORKSHOP PREPARATION AND PLANNING

2.1 Preparation Strategy

The workshop was developed using the following six steps:

- Data collection (using a survey instrument and interviews)
- Data analysis
- Problem identification
- Problem selection
- Workshop design
- Workshop preparation (logistics, staff orientation, handouts)

At each step in the process top NWSDB management was consulted to guide and enforce the process.

2.2 Data Collection

Background information on the current status of NWSDB was provided in Washington through briefing, and a review of the documents such as the WHO Decade Plan for Sri Lanka, a Study of Operations and Maintenance Activities for one region of NWSDB (November 1982), and other publications. A written needs assessment instrument was developed and distributed to persons selected to attend the workshop. These data were used to focus interview questions and indicate needs for future training. A detailed interview format was designed in advance and modified after discussions in-country with NWSDB and USAID personnel.

2.2.1 Needs Assessment Results

Most of the 25 workshop participants completed the needs assessment survey instrument (see Appendix C) to define which managerial areas were important to NWSDB decision makers in carrying out their work. The survey indicated as well which areas needed further training assistance in order of priority. These results are presented as follows:

A. Areas of Importance to Carry Out Work (Ranked 1-5)

Central Office Staff	Field Staff
1. Personal Needs	Disturbance Handler
2. Liaison	Entrepreneur
3. Group Leader	Group leader
4. Information	Liaison
5. Entrepreneur	Information

B. Areas Needing Further Training (Ranked 1-5)

Central Office Staff	Field Staff
1. Entrepreneur	Entrepreneur
2. Group Leader	Personal Needs
3. Information	Disturbance Handler
4. Personal Needs	Group Leader
5. Figurehead	Spokesman

Definitions:

Personal Needs: Time management, time to be alone, reflect, think, and get organized to do work.

Liaison: Making contact with other groups, coordinating.

Group Leader: Acting as a supervisor of others.

Information: Obtaining and disseminating information to carry out work.

Entrepreneur: Developing new ideas, inventing, and making changes in the organization.

Disturbance handler: coping with conflicts, work pressures, and sudden changes.

Figurehead: Public speaking, attending civic meetings.

Spokesman: Public relations, community and consumer relations.

2.2.2 Needs Assessment Analysis

The personal interviews held with participants reinforced the data which indicated that managers had felt a need for management and supervisory training. The needs assessment gives some focus on just what management and supervisor capabilities are needed and require further development. Most central office staff felt the items included in the personal category were the most important. This was verified by their statements of a typical day consisting of going from meeting to meeting, and when not meeting, trying frantically to respond to a crisis passed from above. The need for time management training is strongly indicated. This should include setting priorities for work and planning daily activities. Field staff evidently have more time for personal planning and reflection but feel a need to improve their time management skills as well.

Liaison is important in the conduct of business at the central office with its many departments and divisions. Field staff evidently have minimal problems here with a much more limited organization to contend with.

Group leader capabilities appear to be uniformly important and needed by both groups. The skills needed for group leader should be included in one of the early workshops for this management group. These include the supervisory

skills of delegation, work planning, coaching, motivating employees, leadership, and communication skills. Almost all staff interviewed stressed the difficulty in obtaining and transmitting information. This serious organizational deficiency is important to both groups.

There is a great felt need on the part of both groups to develop their entrepreneurial capabilities. This is also reflected in interview comments, when participants indicated their frustration with the lack of opportunity to provide input to the Board's day-to-day management decisions. This indicated the overall need for training in participatory management techniques such as the use of task forces, delegation training, and situational leadership particularly by top management.

Field staff feel that the handling of disturbance category activities is an important part of their job and that they need assistance with it. This area lends itself to training in conflict management techniques and negotiation skills. Central office staff do not even mention this category.

Although central office staff feel that figurehead activities do crop up and they need training to handle these occasions, they also feel it is not an important need. Field staff do not include this item at all. The interviews indicate that most staff feel this type of activity should only be handled by very senior management personnel. Likewise, central staff feel that the category of spokesman is for very senior level personnel. However, field personnel feel training in this area would be useful in their dealings with local authorities. For this need, training in public speaking and presentation would be very useful.

Although this needs assessment was done quickly, it does give some insights into management and supervisory training needs of middle managers and supervisors of the NWSDB. A more detailed needs assessment should be conducted before any training of this type is designed.

2.3 Data Analysis: Interview Process and Results

All 25 persons attending the workshop (in addition to 4 others who did not) were interviewed using the interview questions listed in Appendix D. The interviews were conducted for approximately 45 minutes each, with two interviewers (one recording, one discussing). The interviewees were advised that the interviews were confidential. A wealth of information was provided during this process and the results are provided in summary form below, organized by topic area.

2.3.1 Performance and Staffing

Staff Selection:

- Higher standards for entry needed; people are moved up frequently without the proper skills to do the job.
- Hiring of staff seldom includes consultation with future supervisor; hiring decisions often made due to "outside" pressures.

- Board does not adequately screen recruits from existing technical schools.

Performance Standards:

- Specific written quality standards for work are lacking.
- The system tolerates work slow-down to increase overtime; this happens often in repairing breakdowns.
- Board should consider enlarging the duties of certain technical officers to give them more responsibility and make jobs more interesting.
- Common attitude of technical officers to keep their knowledge to themselves (not train others). Consequently, on-the-job training is not very effective.

Staff Skills:

- Skill training is needed at all levels of O&M, particularly practical skills: chlorination training, mechanical repairing and maintenance skills, pump operation.
- Management and supervisory skills are often lacking for planning work, getting the most out of workers, communicating with workers, delegating, coaching and holding people accountable for tasks.

Staff Motivation and Incentives:

- Poor pay, lack of housing, and frustration with poor logistical support in supplying vehicles, tools, and other supplies serve to promote low morale and lack of responsibility.
- Many workers do not work up to capacity because they are not rewarded for good work nor helped constructively if they perform.
- Career potential with the Board is not clear. Overall conditions and attitude do not encourage young technical officers to want to stay with the Board. People leave if given the opportunity.
- Punishment is often used as a means to correct behavior rather than "problem solving".
- Positive feedback for a job well done is rare.

Staff Placement:

- General need to put the right people in the right jobs. Sometimes larger schemes have junior people and smaller schemes senior people; need to classify schemes for skill and experience requirements and make the necessary changes.

- o General over-staffing of less skilled laborers, understaffing in areas requiring more skills such as maintenance and repair. Scarcity of skilled mechanics overall.

- o Rotations are often done for non-technical reasons (political pressures, favors, etc.). Rotation is too frequent, and people feel insecure about beng able to stay in one place.

2.3.2 Roles

- o Roles at most levels are not clear.

- o Board has no clearly communicated organizational objectives.

- o Employees do not see that Board has a focus and how each of them fits into it.

- o Board commissioned a consulting firm to prepare job descriptions, but these were not shared around Board and are not being used.

- o Relationship of RM, ARM, Chemist, OIC and TA is not clear. Just who makes what decisions?

- o Board needs to carry out needs assessment so it can plan training needs. With this, must prepare job descriptions to clarify roles, responsibilities, who delegated to whom, etc., and set standards of performances.

- o The different responsibilities between mechanical, electrical and civil engineer are not clear.

2.3.3 Decision Making and Delegation

- o In general, decisions are made at higher level than necessary; decision making should be transferred to lowest level possible.

- o Responsibility is often assigned but no authority to carry out tasks.

- o Board is run in a crisis management mode; needs long and short term planning.

- o Board management does not make adequate use of the resources at the mid-management level in decision making, planning, etc.

- o The climate at the Board is such that mid-level management will try to transfer decisions up in the system. Taking a risk is dangerous.

- o Head Office does not seek and weigh facts and data when making decisions or judging performance. More give and take needed to explore all sides of an issue.

- o Petty cash fund for OIC should be increased to more than 100 rupee per purchase.

- o Management does little about coordinating activities among groups.
- o Need to delegate authority to maintain minimum stores at scheme sites.
- o Training should include management skills in how to delegate.
- o Too many decisions are influenced by political meddling.
- o Often chain of command not followed from top down (i.e. by-passing RM).

2.3.4 Communication and Coordination

- o Board has instituted monthly meetings.
  - Problems discussed
  - Some information exchanged
  - Information on what the Board is planning, what other groups are doing, etc., is not shared enough.
  - Little follow-up and action results from meetings.
  - Information from field often ignored by head office.
- o Reports and facts supplied by field have little effect on decision-making process.
- o Where there is good communication it is because of individuals.
- o Current reporting requirements set up by Board are ineffective and hinder communications.
- o New maintenance management systems being tried in Galle should be expanded to the entire country as soon as possible. Other regional people should be informed and taught how to use it.
- o If training is given, there is no feedback to training center on quality of training or changes needed in training.
- o Not clear on what reports are required and when needed between TA's and OIC, OIC to RM, RM to Central Office.
- o Field personnel feel central office does not read reports. They get little if any feedback and reports are just filed. In general, instructions from central office are unclear and there is no follow-up.
- o Communications between the central workshop and schemes is inadequate.
- o Need to improve systems and accountability between central office and field in:
  - Supplies
  - Accounting
  - Communications
  - Reporting

- There is a need for more team work between central office and field.
- Training needs of individuals need to be assessed through task analysis and observation. Questionnaires are inadequate.
- Schemes need to obtain copies of design and "as-built" drawings and specifications.

2.3.5 Conflict Areas

Existing areas of conflict and tension involve the following sets of relationships:

- Stores vs. shop: needs for timely equipment and supplies.
- Supply vs. field: need for better planning and more responsiveness in supplies; e.g., chlorine.
- RM for O&M vs. Construction Manager: recent organizational change has not specified who represents the region for what activity. Who gets the vehicle, office space, secretarial, etc.
- Regional management vs. Local authorities: local authorities do not pay up, do not maintain their schemes but the Board is expected to be accountable for their production of safe water.

2.3.6 Organizational Change

What impact has the recent separation of O&M and construction activities in the regions had on the Board's services to the public?

- It has allowed more attention to be paid to the schemes and should allow better O&M service to be provided.
- Regional people were not consulted for their advice and suggestions before the change was announced, thus mistakes were made that could have been avoided.
- Allocations of regional resources (e.g. people, equipment) has not been settled. Roles of the two regional managers are not entirely clear.

What other organizational changes or policies should receive high priority in the Board's short and long term planning process?

- Policy on maintaining minimal inventories of supplies and spare parts.
- Inability of regional officers to obtain funds due them from local authorities they are serving.
- Policy and implementation plan on tariffs on water used from standposts.

- Changing management and planning procedures so that mid-level management personnel have an input to the process.

- Establish job descriptions and performance standards for each job in the Boards.

- Establish minimum standards for knowledge, skill, and experience for recruitment into each post.

- Establish a management plan and allocate resources to the handpump program recently entrusted to the Board.

- Establish quality standards for supplies and chemicals and enforce these standards.

- Establish and implement a data bank and retrieval system so that information is readily available to staff.

- Develop and implement emergency and master plans for scheme.

- Develop a systematic approach to the transfer of personnel within regions or departments and between regions or departments.

- Develop and implement a public relations program.

- Develop clear roles and responsibilities for Board employees in their work with local authorities.

2.3.7 Operational Problems

What are some of the major operational problems affecting the efficiency and effectiveness of the services provided to the consumers?

- Limited transport available.

- Limitations of workshop at central office to keep up with work.

- Need to equip regional workshops quickly.

- Difficulties in obtaining supplies, chemicals, and spare parts.

- Lack of control in procurement so that a wide variety of equipment is purchased, making it difficult to maintain adequate inventories of spare parts.

- Inefficiencies in procurement because of different procedures for different sections of Board (e.g. projects, O&M, design).

- Lack of sufficient spares and supplies in initial tender of new plant equipment.

- Inadequate preventive maintenance and repair keeping of records.

- o Lack of skill training for technical officers.
- o Lack of management and supervisory training for mid-level managers.
- o Limited petty cash allotments to various levels.
- o Inability to run bacteriological samples at regional labs.
- o Below standard chemicals or inadequate supplies make quality control of water difficult or impossible.

2.3.8 Workshop Outcomes

What should we try to accomplish at the workshop?

- o Improve interaction and ability to work as a team among staff of the Board.
- o Give each participant the opportunity to understand one anothers' problems and the constraints under which each must work.
- o Begin the steps in clarifying roles of each Board employee.
- o Develop procedures for delegating authority.
- o Develop techniques for open discussion among Board staff.
- o Reach agreement among workshop participants and Board management that action plans developed at the workshop will be implemented and that this workshop will have vigorous follow-up.

2.4 Data Analysis: Problem Statements

The above interview data were analyzed for frequency and patttern in the interview process. From this problem areas were identified and selected for the workshop process. The criteria for selection consisted of a) frequency of interview statement; b) feasibility of problem solution by workshop group process; and c) problems which were within the current resources of NWSDB to solve. Problems which would require a long range program in technical assistance or training were not selected, nor were problems requiring large amounts of capital investment. Once the problems to be treated in the workshop were selected, the proposed problems and the workshop design were reviewed by the Chairman of NWSDB and the Senior Associate General Manager (AGM--Sr.). The selected problem statements are detailed below.

2.4.1 Problem Statement: Job Description

People are oriented to their duties based upon individual and unsystematic criteria. There are written job descriptions for some jobs at some offices and some schemes but not for most of them. Uniform job descriptions by category are not yet officially written down. The consequence is confusion and difficulty in getting people to carry out duties which are not specified.

2.4.2 Problem Statement: Staff Selection

Staff are often selected who do not have the proper background to do the job or learn it. Over time, they move up in the system without the requisite skills. Hiring of staff and related decisions seldom include consultation with those who will later supervise them.

There are frequent rotations to different schemes or areas within the Board for various reasons which causes difficulty. At the same time, some staff need to be transferred in order to match the required skills with operational needs.

2.4.3 Problem Statement: Decision Making and Delegation

Managers are unsure of which decisions they can and cannot make. Often decisions which could be made at lower levels are not. Some feel decisions are either pushed up the chain of command or made at the top when they could be delegated. Sometimes outside forces get involved in decisions and are not resisted in the best interests of the Board mission.

2.4.4 Problem Statement: Communications-Information

It is often difficult to get information needed to do a job. Information is widely dispersed in the Board. Management information is not available. For example:

- Records for preventive maintenance are not routinely kept.
- Water quality test information may not influence chemical dosage in treatment.
- Records on scheme distribution systems are not always available.
- Meters are not functional. Therefore, statistics on water production are not available for management decisions.

2.4.5 Problem Statement: Reorganizational Issues

Recently O&M functions were separated from construction functions so that the Board could provide more efficient and effective service for their consumers. Regional and central office staff feel that this organizational change was a

constructive one, but that improvement could be made in several areas. They need to know, for instance who carries out which activity and how resources are allocated.

2.4.6 Problem Statement: Supplies and Spares Logistics

The ability of the Board to provide effective and efficient service so that the public has an ample quantity and a safe quality of water is in part dependent on adequate supplies and spares to keep equipment operating and on chemicals for treatment. Recent experience in the Board indicates that some changes might be in order to improve the flow of supplies, chemicals, and spares to where they are needed.

2.4.7 Problem Statement: Maintenance Management Systems

If the Board is to provide efficient and effective service to its public, it must maintain its equipment in good working order. Not only must equipment which is used frequently be kept in good order, but stand-by equipment must be ready to use. The preventive maintenance programs of the Board are in need of improvement.

2.4.8 Problem Statement: Community Relations and Participation

Since the major purpose of the Board is to supply its consumers with an adequate supply of potable water, it behooves the Board to be concerned about the image it creates. Also, it is important that the community be involved in the decisions made about their water supply since they are the ones paying for the water service. As the Board expands its service into the handpump area, there will have to be a greater need for its employees to have community participation skills.

2.5 Workshop Design Elements

The above information was analyzed and organized into a workshop design. It was structured to allow maximum participation in the solution of the selected problem areas (the detailed process is described below in Chapter 3). A set of workshop goals was defined at the level of expected outcomes. A list of workshop norms* was written, and a schedule was developed. These items were reproduced and inserted in the workshop handout packet for distribution at the workshop. These design elements follow.

2.5.1 Workshop Goals

o To review present status of NWSDB as seen by senior management personnel.

*Norms were defined as the expectations for individual and group behavior in order to get the work done.

- To review present hopes and expectations of senior management personnel.
- To explore major problem areas as identified by senior management personnel.
- To introduce and implement various techniques for analyzing problems and synthesizing solutions.
- To develop alternative solutions to the above problems.
- To develop recommendations, set priorities, and lay out action plans for NWSDB.
- To provide opportunity for team building within NWSDB senior management.

2.5.2 Workshop Norms

It was evident from the interviews and other information that the success of the workshop would depend upon the participant's willingness to adopt some new roles, alter their modes of interaction from the business-as-usual processes, and try out new ways to solve problems. Consequently, the following expectations were suggestions to guide participant behavior. Each participant would be expected to:

- Participate in all activities by their attendance and active communication with their fellow participants.
- Leave behind their NWSDB titles and consider one another as equals in pursuing the workshop goals.
- Consider this time spent together as time out from their daily work concerns and problems.
- Draw upon experience in his/her position but not interact at the workshop in this position.
- Consider this time together as a means of seeking new ways of communicating, analyzing, and synthesizing data; of exploring ideas and new approaches to solutions that will aid NWSDB to accomplish its goals.
- Create an atmosphere of openness in which ideas can be shared; foster creativity; clarify misunderstandings and misconceptions; and seek solutions that will move NWSDB ahead.
- Contribute toward the development of solutions and recommendations, setting priorities and laying out of action plans based upon the discussions taking place at the workshop.

2.5.3 Workshop Schedule

Monday, June 6, 1983

8:30 am.	Opening ceremony
9:30 am.	Workshop goals Workshop expectations for participants The communication theme: expanding information The results of the needs assessment and interviews
10:30 am.	Break
10:40 am.	The problems selected for the workshop Assignments to problem solving groups The schedule of activities for the workshop
12:30 pm.	Lunch
1:30 pm.	Central office/Field expectations, and inter-group exercise and negotiation
3:00 pm.	Break (15 minutes)
4:30 pm.	End

Tuesday, June 7, 1983

8:30 am.	Central office/field expectations - Continued
10:30 am.	Break
12:30 pm.	Lunch
1:30 pm.	Problem-solving groups: - Job descriptions - Staff selection - Decision making and delegation - Communications and information
4:30 pm.	End

Wednesday, June 8, 1983

8:30 am.	Presentation of problem-solving groups and discussions
10:30 am.	Break
12:30 pm.	Lunch

1:30 pm. Problem-solving groups:
- Dealing with re-organizational issues
- Supplies and spares logistics
- Maintenance management systems
- Community relations and participation

4:30 pm. End

Thursday, June 9, 1983

8:30 am. Presentation of problem-solving groups and discussions

10:30 am. Break

12:30 pm. Lunch

1:30 pm. Action-follow-up planning

4:30 pm. End

Friday, June 10, 1983

8:30 am. Follow-up action plan agreements

10:30 am. Break

10:45 am. Workshop evaluation

11:30 am. Closing comments

12:30 pm. End

Chapter 3

THE WORKSHOP PROCESS

3.1 Organization

The workshop was designed as a four and one-half day problem-solving exercise. The staff consisted of two workshop leader/facilitators, four small group facilitators cum resource people, two full-time typists/clerks, and two logistics coordinators. The workshop was held in a facility with a conference room large enough to allow the group to sit in a circle or square, to use flip charts, and to post written newsprint around the room for ready reference. Three additional smaller rooms were available for use when the group worked in small problem-solving groups of seven or eight.

3.2 The Participants

The participants consisted of all eight regional managers from operations and maintenance (representing all of the management which supervises water production throughout the country), the four chief engineers and the head of the O&M division in the central office (AGM, O&M) which support and oversee the regional operations and maintenance, three technical officers involved with daily plant operations and maintenance in the field, and representatives from the central office divisions which interact in direct ways with the field: training (2); the chief chemist, stores and supplies (1); workshop (1); and design (1). In sum, the participants were the core of middle and top level management which could define and solve problems relating to operations and maintenance. There were two key actors which would have enhanced the proceedings had they been in attendance for the entire workshop: the number one and number two top excutives of the agency (the Chairman and the General Manager). The Deputy General Manager Senior (third from the top), however, was in attendance and an active member of the group. (For a detailed list of participants and their job titles, see Appendix B.)

3.3 Description of the Process

The process can be divided into four overall phases:

I - Start-up and information sharing
II - A full-group problem-solving exercise
III - Small group problem solving
IV - Action planning

3.3.1 Information Sharing - Phase I

Phase I took the first half-day of the workshop. It consisted of the opening ceremony, making clear what the goals, norms, expectations and procedures were to be, and clearing the agenda with the participants. It is important in a workshop of this nature to broaden the base of common information so that all actors work from a pool of common knowledge. An essential ingredient of both

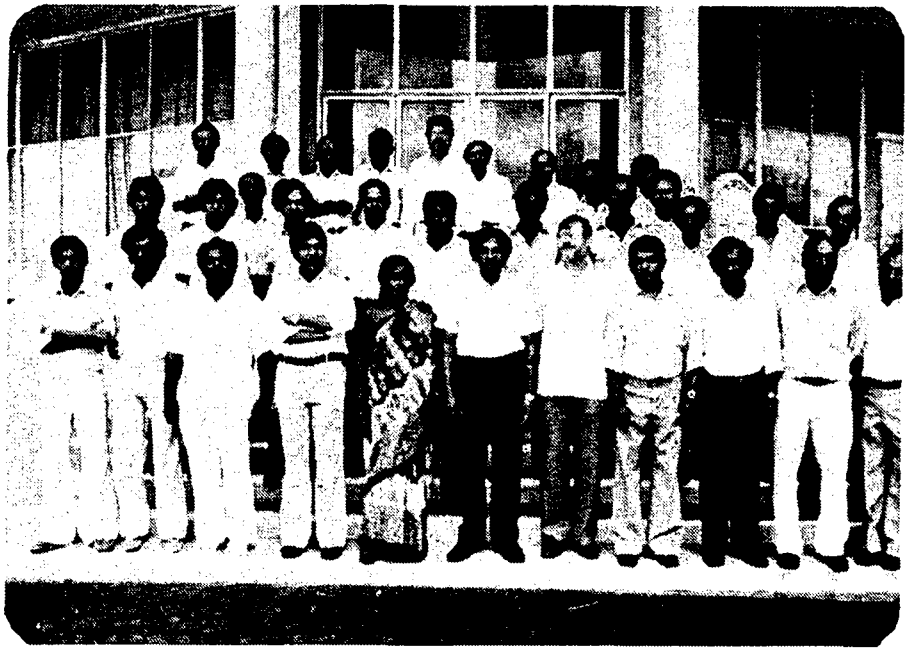
the team building and the problem solving is to "get all of the cards out on the table". Therefore, the first substantive activity of the workshop was to present to the participants a composite picture of all of the information which had been collected in individual interviews and through the needs assessment instrument. This process "sets up" an atmosphere of openness, frankness, and problem solving. Since the information is presented by a neutral outsider, it is not attached to any one individual or faction. This was done on the first morning of the workshop. All of the interview data were summarized in written form and handed out. It was then presented and explained by the lead trainers. Following this process, the problem statements which would serve as the focus of the workshop were distributed, read and explained. The problem statements were checked for accuracy. In addition, the group was asked if the problems selected were the most important issues which the group could reasonably work with, given the available time. They agreed that they were. The participants were then asked to select the two problems they wanted to work on individually and to assign themselves to two problem-solving groups. In order to ensure a proper distribution they were asked to give their first, second, and third priorities for each set of problem areas (four problems per set). The facilitators were thus able to organize the problem-solving groups, giving everyone his/her first choice one time and the second choice the other time.

3.3.2 Full Group Problem-Solving Exercise - Phase II

The above-described morning activities were followed by a six hour exercise given in two parts (on days one and two). In order to deal with a number of problems which can be categorized as poor communication and uncertainty about roles, the exercise was designed to involve the full group in an expectations-negotation process. It consisted of dividing the central office management into one group and all of the field staff into another. Each group (before dividing) was given the goals of the exercise and the rationale with a set of instructions. The goals were:

- To clarify what specific expectations the central office staff have of the field staff and vice versa.
- To negotiate areas of difference into positive agreements and action plans for follow-up.
- To provide opportunity for team building.

Each group was instructed to list those things they expected of the other group which they were not doing at present. They were to appoint a reporter and two negotiators to represent their group. After the lists were generated by each group separately, they were read to the full group and clarified. Each group then discussed the other's list (again in separate groups) deciding whether they agreed, disagreed, or wished to propose a modification to the expectation. They then sent two representatives to discuss and negotiate each expectation in front of the full group. This discussions was carried out in an arrangement called a "fishbowl with open chair". The fishbowl is a circle within a circle consisting of the four negotiators, one facilitator, and an



WORKSHOP PARTICIPANTS AND FACILITATORS

open chair which could be used by any member of the observing group if they wished to take part in the discussion. The rule for the open chair was that anyone could use it but they had to make their comments and return to the observation group, leaving space for others to use the chair. This fishbowl device allowed participation and served to focus discussion so that all the items could be discussed within the allowable time. Once this device was demonstrated, it was used in subsequent exercises for reports from work groups. As the fishbowl group reached agreement on each item of expectation, the facilitator required the group to agree upon the follow-up action necessary to implement the agreement. These action items were recorded (along with the agreements) and later typed and given to each participant (see Item 1 in Field Report Supplement for the agreements and action items which were made in this session).

This exercise achieved its objectives exceedingly well. Additionally, it served to open the workshop with an interactive, problem-centered and participative process. Both field and central office staff were able to air differences and then work towards positive results.

3.3.3 The Problem-Solving Groups - Phase III

The next phase of the workshop could be considered the main thrust of the problem solving in the workshop. Eight separate problem areas were addressed in two full working days. Four problems were first dealt with in round one; then another four were addressed in round two. The process followed a systematic program. Each problem was assigned to a small group. The small group was required to follow the instruction sheet which accompanied each problem statement (see Items 2 through 9 of Field Report Supplement). The groups were each assigned to work with a facilitator and given approximately three and one half hours to complete the task of working with the problem; detailing recommendations and/or programs or policies to solve the problem. Each group was instructed to appoint a spokesman and to organize a presentation of its findings in a visual on flipcharts.

Subsequent to this activity each problem area was first dealt with in the full group through a summary presentation by the spokesman. The recommendations were then discussed in the fishbowl by one representative from each of the other three groups and two representatives from the presenting group. The fishbowl discussion was facilitated by a trainer. The objective of the fishbowl discussion was to come to concensus on the recommendations or proposed solutions by accepting the recommendations, modifying them, or rejecting them. Once the recommendations reached a resolution, they were considered to be accepted as the recommendation of the full group. Given the time limitations of the workshop, each problem was allowed one hour of presentation and discussion. While time extension was occasionally necessary when a problem area was particularly essential and warranted more time, some problem discussions used less than their alloted time. After the first round a second round of four problems was similarly dealt with. In the second round, new groups were formed according to the group sign-up procedure previously described.

3.3.4 Action Planning - Phase IV

Aproximately six hours of the workshop were dedicated to action planning and reporting on the action plans during the last day and a half of the workshop. The group was given the instruction to develop a follow-up plan from each separate recommendation or set of recommendations, detailing what should be done, who should be responsible for accomplishing the task, and when the task should be accomplished. Each action plan (representing a problem area) was to be carried out under the guidance of a task force which would meet regularly. The task force was responsible to a senior official of NWSDB. (For the action plans produced by this process see Items 2 through 9 fo Field Report Supplement). The original problem solving groups for each problem area were reconvened with their facilitators and given this task. This was also done in two rounds. At the end of this work process, all of the action plans were handed in to be typed and circulated on the last morning of the workshop, when they would be reviewed by the full workshop body and adopted as the workshop outcomes and report.

On the final morning of the workshop, each participant had a completed typed workshop report to review, which consisted of a) a set of problem statements; b) a set of recommendations which had been reviewed and accepted by concensus; and c) an action plan which assigned responsibilities for follow-up for each problem area. That same morning the action plans were reviewed and discussed. Discussion centered on feasibility, clarity, and acceptability of the action plans. At this session, all top decision makers in the agency were present to hear the final recommendations and comment, if necessary, on the final workshop outcomes.

Chapter 4

WORKSHOP OUTCOMES AND RESULTS

4.1 Overview

The workshop was an extremely productive event. The workshop outcomes are discussed below in three overall areas: a) the problems dealt with in the NWSDB at the workshop, b) the outcomes related to future USAID activities and projects, and c) the testing of a workshop model which can be replicated for future project development within the water sector. In general, the workshop produced 42 separate team-building agreements between the central office and field staff personnel involved in operations and maintenance. These agreements relate to improved team function, understandings for specific procedures, and communications. In addition, eight major problem areas were dealt with in great detail. These problem areas range from very specific technical operations and maintenance systems improvements to overall management and policy areas such as staff selection, reorganizational issues and public and community relations. In all problem and team-building areas, each agreement or recommendation was assigned a follow-up action plan and individuals were assigned specific follow-up responsibilities working with a follow-up task force. For a detailed description of outcomes see supplement to this report.

4.2 NWSDB Specific Outcomes Achieved at the Workshop

These outcomes relate to the eight problem areas and the team-building goals.

4.2.1 Central Office/Regional Operations (Item 1, see Field Report Supplement)

Outcomes: The regional staff detailed 17 separate items which they wanted the central office staff to respond to. The central office staff reviewed these requests and (with modifications and clarifications) agreed to them. Follow-up actions were detailed and agreed upon for all 17 items. These items of agreement were characterized by more involvement of regional staff in important areas affecting their work such as including of regional staff in tendering and contract award procedures, waterworks design and staff selection; quicker response from the central office in provision of supplies and equipment repair; improved information dessimination to the field through both better information systems and separate meetings with top agency staff for the O&M staff. Agreements were made to increase the decision making authority of regional staff regarding local purchases, and billing and collection.

The Central Office detailed 25 separate items for field staff response. The regional staff reviewed these items and (with modifications and clarifications) agreed to them. Follow-up actions were detailed and agreed upon for all 25 items. These agreement areas were characterized as improved reporting procedures, improved communications, improved cost control, improved monitoring of water quality control, detailing training needs, better planning and more timely requests for supplies and materials, improved maintenance of plants, and improved staff relations.

4.2.2 Problem Area Outcomes: Job Descriptions (Item 1, Field Report Supplement)

Eleven job descriptions were produced in first draft form and an action follow-up plan was produced to draft 23 additional job descriptions and see them through official adoption by the Board.

4.2.3. Problem Area Outcomes: Staff Selection (Item 3, Field Report Supplement)

A system was developed for determining staffing needs on an annual basis. Staff selection procedures were agreed upon which included the relevant regional representation on the selection committee. A plan and policy for staff rotation was developed. Follow-up action plans were made for all of the above.

4.2.4 Problem Area Outcomes: Decision Making (Item 4, Field Report Supplement)

A decision making plan was developed detailing which decisions should be made, who should make them and who should be consulted. The areas of decision making included technical decisions for O&M, supplies and stores, financial, administration, transport, public relations and emergencies. A follow-up action plan was developed to implement this recommended decision making system.

4.2.5 Problem Area Outcomes: Communications and Information Flow (Item 5, Field Report Supplement)

A detailed plan was developed for the storage, retrieval, and dissemination of information relating to O&M within the Board. The plan detailed what information should be kept, where it should be stored, and who was responsible for generating and maintaining it. The plan detailed responsibilities in the following areas: investigations, designs, personnel records, O&M reporting, Board meetings and plans, cross regional information, field-central office communications, and training. A task force was set up to implement the follow-up activities in this problem area.

4.2.6 Problem Area Outcomes: Reorganizational Issues (Item 6, Field Report Supplement)

Roles and responsibilities were defined at the regional level between the O&M staff and the construction staff. The following areas were dealt with: regional policy, regional organization, staffing, shared facilities (infrastructure), and transportation. An action plan was developed to implement the above agreements.

4.2.7 Problem Area Outcomes: Maintenance Management Systems (Item 7, Field Report Supplement)

A list of recommendations and a complete set of forms and procedures (with a flow diagram) for preventive and routine maintenance was developed. This system was based upon work previously piloted in one region. Two task forces were set up to oversee the installation of the maintenance procedures in all regions.

4.2.8 Problem Area Outcomes: Supplies and Spares Logistics (Item 8, Field Report Supplement)

Fifteen separate items were detailed as recommendations to improve procedures for providing supplies and spares. These items ranged from the recommended minimum supplies to keep at the plant level to a system for tracking the ordering and distribution system from the central stores to the regional offices. A task force was set up to oversee the implementation of the agreed upon recommendations.

4.2.9 Problem Area Outcomes: Community Relations and Participation (Item 9, Field Report Supplement)

Nine separate items were specified as community/Board participation activities with the responsibilities of Board employees and community members outlined. These items dealt with community handpump programs, public standposts, water distribution, and residual chlorine testing. Four recommendations were made to improve community relations including responsibilities for establishing communication, health education, water conservation, cost consciousness, and benefit awareness. A task force was set up to oversee these recommendations and develop program details to implement them.

4.3 Workshop Outcomes Related to Future USAID Activities with NWSDB

The workshop produced a great deal of useful information which served to frame possible future project activities between the USAID Mission and NWSDB. By conducting in-depth interviews with a representative cross-section of O&M and agency leadership, the workshop team was able to gather a great deal of data and document problem areas for follow-up investigation. The reception of the workshop by the Board staff and the highly enthusiastic participation of all concerned served to demonstrated the receptivity of the Board to training activities in relation to institution building and, more importantly, to demonstrate that the staff of NWSDB are very capable of defining and solving their own problems, given the proper vehicle and support for doing so. A majority of the participants stated informally and in the evaluations that this was the first structured opportunity they had been given to work actively as a team on specific problems which affect their work. This demonstration of team strength is a very positive indicator that NWSDB would be able to benefit from an institutional development project. The USAID Mission has already begun the project identification process and produced a PID using data gathered in this workshop.

4.4 Workshop Outcomes Related to Model Testing

This workshop was the second test of the team-building problem-solving model process. The first was conducted in Thailand by the same team. In the Sri Lanka workshop more attention was given to needs assessment and workshop planning with positive results (all workshop participants were identified and interviewed in depth in Sri Lanka as contrasted with about 50 percent in Thailand). This workshop was one day longer than the one in Thailand which allowed for a great deal more attention to action planning and follow-up. The addition of follow-up task forces also enhanced the opportunity for positive change following the workshop.

By now it should be clear that using the model described in this report serves multiple purposes and is an effective way to address both organizational development, and specific technical work issues and set the stage for future project development. The model is replicable and highly useful and has been successful to date.

Chapter 5

EVALUATION

5.1 Overall Results

The participants evaluated the workshop very highly with an overall goal achievement rate of 8.6 cm on a 1 to 10 scale. All participants completed the evaluation questionnaire anonymously. The participants all responded to the question "What have been the most positive things about the workshop?" Only three had negative comments. More than half stated in one form or other that the most positive things about the workshop were that "...everyone was allowed to participate as equals" and "...those carrying out the work and dealing with the problems were those solving them." When asked what one thing stood out as important to him/her in the workshop, an overwhelming majority stated that team work and team building demonstrate that people can solve problems. A detailed list of comments and ratings follows.

5.2 Specific Evaluation Results Summarized

What have been the most positive things about the workshop?

- Everyone allowed to participate, everyone given an equal change and a hearing (9 respondents)
- Those carrying out the work and dealing with the problems were the ones solving them (5 respondents)
- The team work in the workshop and team building (5 respondents)
- The problem-solving focus of the workshop (4 respondents)
- I learned a lot without knowing I was learning (2 respondents)
- Making everyone aware of the problems and knowing what others were doing (2 respondents)

What have been the most negative things about the workshop?

- Time was too short sometimes, wanted more time to deal with the problems, wanted to deal with more problems (3 respondents)
- All the facilitators should have been selected outside of the Board (2 respondents)

What one thing stands out as important to you in this workshop?

- Team work, team building (8 respondents)
- Sharing problems with others (5 respondents)

- Negotiated agreements between the field and the central office (3 respondents)
- Management problem-solving skills (3 respondents)
- Sharing problems with others, listening to others (2 respondents)

Goal Achievement by Problem Area (Scale of 1-10)

	Number	Average
o Job descriptions	24	7.8
o Staff selection	24	6.3
o Decision making & delegation	23	8.0
o Communication & information	23	6.9
o Reorganizational issues	23	7.3
o Supplies & spares logistics	24	7.9
o Maintenance management systems	24	8.5
o Community relations & participation	23	6.8
o Central/regional negotiations	24	8.2

What comments do you have about the way the workshop was planned and organized?

- 95 percent - "Very well planned and organized"
- 5 percent - "Need more advance notice, more time, better food"

How well do you feel the overall goals of the workshop have been achieved?

- 8.6 (Scale of 1-10)

What specific things should be done as follow-up to this workshop?

- Hold another workshop in a few months to get us together and see if the action plans are being completed.
- Inform senior staff about the positive results and enlist their support in making sure the workshop plans are carried out.
- Each task force should submit a report every three months on progress and circulate it to the rest of the group.

Chapter 6

CONCLUSIONS AND RECOMMENDATIONS

6.1 Recommendations

The following recommendations include both workshop-specific follow-up actions for the Board and the broader framework of institutional development activities which the USAID Mission should consider for future projects. The former are derived from evaluation comments by participants and the workshop consultants. The data for the latter are based upon both the information collected in the interviews and the demonstrated behavior of participants during the workshop.

6.2 Recommendations for Follow-up Action by the Board

In order to continue the momentum and enthusiasm generated by the workshop and build upon the results the Board should consider the following actions:

- The top leadership of the Board should request that the action task forces send in periodic reports of their activities to be reviewed, discussed, and commented upon at the monthly O&M full staff meetings.

- A follow-up workshop should be convened in November 1983 to review the results of the agreements made at this workshop, modify them as necessary, and continue the problem-solving process into new areas of need. This process should use outside consultants.

- The training department should be given consultant assistance to develop and pilot test a problem-solving and team-building model which could be used to work with the regional staff and the different central office departments which were not able to participate in this workshop. This should be a part of an on-going team-building effort within the Board which is carried out as a regular function of the training department.

6.3 Recommendations for an Immediate Action Program by USAID

While it is evident that a longer term institutional development project should be carefully developed and carried out over a number of years within the Board (and USAID may be ideally suited to carry out this activity), it is important not to lose momentum and build upon the good will and enthusiasm started in this workshop. Therefore, it is recommended that an immediate action program be developed for the short run. The interview and needs assessment data indicate that the following areas could be undertaken immediately by short term consultant assistance:

- A maintenance management program with workshops in job aids, meter repair, and chlorination maintenance.

- Team building and an organization development program consultation over several months for top management.

- The development of a stores and supplies management system.

- The development of a series of management training workshops with a practical program tailored to the needs of regional, plant, and office managers. This should cover skill areas such as delegation, unit work planning, employee motivation, managerial communication skills, performance review, and problem solving.

6.4 Recommendations for a Long Range Institution Development Project

A longer-range institution development project should continue the above activities and build in the institutional capability for NWSDB to become a financially self sustaining institution with the organizational capability to solve problems. The following areas should be considered in the development of a project paper:

- Tariff structures need to be studied and restructured.

- A financial planning capability needs to be strengthened within the Board.

- A corporate planning and operational planning capability needs to be developed.

- The training function needs to be developed to provide practical, hands-on training for technical skills, as well as training programs for management and supervision. Syllabi and methods need development, as well as equipment for training. Training of local instructors in a series of practical skill areas needs to be developed as well.

- A small village water supplies program needs expansion.

- A comprehensive program needs to be developed for water quality control.

- A manpower planning capability needs to be developed.

- Comprehensive management training needs to be developed and carried out on an on-going basis for both new managers, for career advancement, and for existing managers.

- There were no data to indicate that engineering design and feasibility planning for low cost plants and construction supervision training were needed, but these areas should be investigated.

- A management information system needs to be developed.

- Procurement and supplies and stores systems need strengthening.

6.5 Conclusions

This workshop was felt to be highly successful by both the participants and the leadership of NWSDB. It has been demonstrated that if participative management techniques are used to include employees in defining and solving the problems which affect them in their work, they will respond with skill, enthusiasm, and good ideas. These efforts need to be continued and followed up by both the Board and USAID. A minimum of 200 separate specific recommendations/action items were generated in this workshop. This is ample demonstration that the NWSDB is capable of generating institutional development actions given the appropriate structure and opportunity. The basis has been established for improvement in operations and maintenance activities in NWSDB as well as for future immediate and long range projects developed by NWSDB and USAID.

APPENDIX A

ITINERARY

*Bangkok to Colombo, Sri Lanka	May 25, 1983
Colombo to Galle, Sri Lanka	May 26, 1983
Galle to Ratamalana (Colombo)	May 29, 1983
Ratamalana to Colombo	June 5, 1983
Colombo to Bangkok	June 11, 1983

*Prior assignment under OTD 137 in Bangkok

APPENDIX B

- Workshop Participants
- Persons Interviewed and Contacted
- Work Group Assignments

PARTICIPANTS

1.	Mr. R.H.P. Fernando	Senior Assistant Secretary - Ministry of Local Government, Housing and Construction.
2.	Mr. D.E.F. Jayasuriya	Deputy General Manager (Senior) N.W.S. & D.B.
3.	Mr. V. Paramewaran	Assistant General Manager (Operations & Maintenance) N.W.S. & D.B.
4.	Mr. H.D.R.A. Pathirana	Chief Mechanical Engineer (Operations & Maintenance)
5.	Mr. W.A. Karunaratne	Acting Chief Engineer (Operations & Maintenance)
6.	Mr. P. Dharmabalan	Acting Chief Engineer (Operations & Maintenance)
7.	Mr. S.K.H. Perera	Acting Chief Engineer (Research & Training)
8.	Mr. P. Abhayagoonawardena	Civil Engineer (Research & Training)
9.	Mr. S.K. Wijetunga	Mechnical Engineer N.W.S. & D.B.
10.	Mrs. S. Sivabalasunderam	Chief Chemist N.W.S. & D.B.
11.	Mr. S.H.P.G. Karunaratne	Manager (Operations & Maintenance) Kandy
12.	Mr. N.E.M.S. Gunasekera	Manager (Operations & Maintenance) Galle
13.	Mr. K.M.S.A. Bandara	Manager (Operations & Maintenance) Anuradhapura
14.	Mr. N. Sridharan	Manager (Operations & Maintenance) Ratnapura
15.	Mr. P. Rajasemman	Manager (Operations & Maintenance) Western Region
16.	Mr. S. Yoganathan	Manager (Operations & Maintenance) Jaffna
17.	Mr. J.A. Kulatilaka	Manager (Operations & Maintenance) Bandarawela
18.	Mr. A. Segarajasingham	Manager (Operations & Maintenance) Batticaloa
19.	Mr. B.S. Chinniah	Engineering Assistant - Jaffna
20.	Mr. H.B. Kariyawasam	Engineering Assistant - (Research & Training)
21.	Mr. S.A. Ariyadasa	Engineering Assistant - (Supplies)
22.	Mr. K.N.P. Silva	Engineering Assistant - Spl. Grades - Officer In Charge - Negombo

23.	Mr. Samarawickrama	Engineering Assistant - Officer In Charge - Diyatalawa
24.	Mr. D.N.J. Ferdinando	Engineer, Design
25.	Mr. Sunil de Silva	Mechanical Engineer, Workshop
26.	Mr. W. Tillakumara	ARM Galle (ME)

FACILITATORS

Elmore M. Perera - Sri Lanka Institute of Development Administration.

S. Nagaratnam - Acting AGM Special Projects, N.W.S. & D.B.

Dayan Konchady - Sanitary Engineer, WHO.

Skanda de Saram - Mechanical Engineer, WHO.

Eric Loken, Energy and Environmental Project Officer, USAID.

LOGISTIC COORDINATORS

B.L.C. de Silva, N.W.S. & D.B.

L.G. Kulasekere, SLIDA.

CONSULTANTS

Dan Edwards - WASH Project, AID, Washington D.C., USA.

John H. Austin - AID, Washington D.C., USA.

SUPPORT STAFF

1.	Mrs. L. Aserappa	Typist
2.	Miss S. de Silva	Typist
3.	Mr. G.H. Tilkaratne	Photo Copier Operator
4.	Mr. G.R. Fernando	Asst. Photo Copier Operator
5.	Mr. M. Ariyadasa	Driver
6.	Mr. K.A.D. Niriella	Driver

WORKSHOP ON IMPROVING MANAGEMENT AND OPERATION
N W S D B - COLOMBO

WORKSHOP SERIES 1.

Job Descriptions:

1. P. Abhayagoonawardhena
2. J.A. Kulatilaka
3. H.D.R.A. Pathirana
4. P. Rajasimman
5. A. Segarajasinghan
6. W. Tilakumara

Facilitator: Skanda de Saram

Staff Selection:

1. Sunil de Silva.
2. D.E.F. Jayasuriya
3. H.I. Kariyawasam
4. S. Samarawickrama
5. S.K. Wijetunga
6. S. Yogananthan

Facilitator: S. Nagaratnam

Decision Making and Delegation:

1. K.M.S.A. Bandara
2. P. Dharmablan
3. W.A. Karunaratne
4. S.H.P.G. Karunaratne
5. V. Parameswaran
6. S.K.H. Perera
7. N. Sridharan

Facilitator: Dayan Konchady

Communications and Information:

1. S.A. Ariyadasa
2. B.S. Chinniah
3. D.N.J. Ferdinando
4. N.E.M.S. Gunasekera
5. K.N.P. Silva
6. J. Sivabalasunderam

Facilitator: Elmore M. Perera

WORKSHOP ON IMPROVING MANAGEMENT AND OPERATION
N W S D B - COLOMBO

WORKGROUP SERIES 2

Reorganizational Issues:

1. S.A. Ariyadasa
2. D.N.S. Ferdinando
3. S.H.P.G. Karunaratne
4. W.A. Karunaratne
5. S.K.H. Perera
6. A. Segarajasinghan

Facilitator: Dayan Konchady

Supplies and Spares Logistics:

1. N.E.M.S. Gunasekera
2. H.I. Kariyawasam
3. V. Paraneswaran
4. H.D.R.A. Pathirana
5. K.N. P. Silva
6. W. Tilakumara

Facilitator: S.Nagaratnam

Maintenance Management Systems:

1. K.M.S.A. Bandara
2. B.S. Chinniah
3. P. Dharmablan
4. S.Samarawickrama
5. Sunil de Silva
6. S.K. Wijetunga
7. S. Yoganathan

Facilitator: Skanda de Saram

Community Relations and Participation:

1. P. Abhayagoonawardhena
2. D.E.F. Jayasuriya
3. J.A. Kulatilaka
4. P. Rajasimman
5. J. Sivabalasunderam
6. N. Sridharan

Facilitator: Elmore Perera

APPENDIX C

NEEDS ASSESSMENT INSTRUMENT

AND

DATA ANALYSIS

May 1983

NATIONAL WATER SUPPLY AND DRAINAGE BOARD

TRAINING SECTION

NEEDS ASSESSMENT - SUPERVISORY PERSONNEL

This form is based on a detailed study of Supervisors. The results of the study showed that there were ten major roles that Supervisors had to play in the course of their jobs. In order to assist us in the planning of your training, we would like you to examine these supervisory roles and see how far your job uses the skills involved. The following roles (add more if you need to) are a good basis to identify where you feel the need to further extend your skill.

Using the following scale, please mark the appropriate places.

Level of Importance	Development Required
A. Very important to my job	3 Need to develop my ability to perform this role
B. A normal part of my job	2 Experienced at playing this role, but need to keep up to date with current approaches
C. A minor part of my job	1 No need to spend more time at present to further develop my ability to play this role

To what extent does my job demand that I take on the following roles?

	Level of Importance	Development required
1. Figurehead - Ceremonial duties such as giving awards or public speaking and representing organisations at civic occasions		
2. Group Leader - being the person accountable for managing a group of people to resolve problems and agree on lines of action.		
3. Liaison - making contact with other groups on behalf of your own group to resolve problems and get work done.		
4. Information - acquisition and dissemination of information both in own group and throughout the organisation .		
5. Spokesman - representing the organisation to the "outside world" in proclaiming its message through public relations, or similar activities.		
6. Entrepreneur - engaging in activity to develop new ideas, innovate and make changes that are designed to develop the organisation from its present operation to a new form .		
7. Resource Allocator - deciding who gets what work, rewards, budgets and other resources.		
8. Disturbance Handler - responding to, withstanding and coping with unexpected changes, conflicts and pressures in the work situation.		
9. Negotiator - bargaining as an integral part of getting the job done, whether it be with staff, colleagues or people outside the organisation.		
10. Personal - being by oneself to think, write, compute, plan or do other work which demands individual managerial skill.		
11. _____		

NEEDS ASSESSMENT RESULTS

RANK	RANKING BY					
	CENTRAL		FIELD		COMBINED	
	IMPORTANT	NEED	IMPORTANT	NEED	IMPORTANT	NEED
1	Personal	Entrepreneur	Disturb.Hand.	Entrepreneur	Liason	Entrepreneur
2	Liason	Group Leader	Entrepreneur	Personal	Entrepreneur	Personal
3	Group Leader	Information	Group Leader	Disturb.Hand.	Group Leader	Group Leader
4	Information	Personal	Liason	Group Leader	Personal	Information
5	Entrepreneur	Figure-Head	Information	Spokesman	Information	Spokesman

SUMMARY

Needs Assessment - Supervisory Personnel
Regional Water Supply and Drainage Board
Sri Lanka

QUESTION	Central Office						Regional						Total					
	Importance			Development			Importance			Development			Importance			Development		
	A	B	C	3	2	1	A	B	C	3	2	1	A	B	C	3	2	1
1. Figurehead	1	3	7	3	2	6		2	5	1	1	5	1	5	12	4	3	11
2. Group Leader	4	6	1	3	7	1	4	3		3	4		8	9	1	6	11	1
3. Liason	5	6		1	9	1	4	3		2	5		9	9		3	13	1
4. Information	3	6	1	3	7	1	3	4		2	4	1	7	10	1	5	11	2
5. Spokesman	1	4	6	2	6	3	1	2	4	3	2	2	2	6	10	5	8	5
6. Entrepreneur	4	5	2	7	3	1	5	1	1	5	2		9	6	3	13	4	1
7. Resource Allocator	1	3	7	2	6	3	1	3	3	2	3	2	2	6	10	4	9	5
8. Disturbance Handler		4	7		3	6	6	1	2	4	1	2	4	3	10	5	6	8
9. Negotiator	3	6	2	2	6	3	2	4	1	2	5		5	8	5	4	9	5
10. Personal	6	4	1	3	5	3	2	4	1	4	3		8	7	3	7	7	4

APPENDIX D

INTERVIEW FORMAT

QUESTIONS - Format

NAME:

POSITION:

LENGTH OF TIME WITH THE BOARD:

1. Performance: What are people doeing well that you work with - (under you) - what could they do to improve?

2. Role : What are the areas of responsibility assigned to you that you are clear about (are sure you are expected to do)? What areas are you unsure about? What makes your job different from those above you? below?

3. Staffing: Do you have enough staff to get the job done? How are they trained and selected?

4. Decision Making: Think of the last time a decision was made affecting your work here. Who made it, How? In general how are decisions made in the Board as it affects you (i.e. do people on top do it alone,; include others?).

5. Communications: How do you get information from below, above? How do you pass it on above, below?

6. Delegation: Do those above you delegate the means to carry out work (i.e. funds,procurement,tools etc.), when was the last time you gave some of the things you are in charge of over to a subordinate to do?

7. Conflict Management: How do managers and supervisors deal with differences and conflict in the Board? How did a manager deal with the last conflict you can recall?

8. Organizational Change: What changes have taken place in the last year? What changes should take place now?

   If you could make anything better in the way the Board does its business, what would you do? How would you do it?

9. Suggestions for Workshop: Explain the Workshop

What is the best we can hope to accomplish in the Workshop?

What would you like us to do?

APPENDIX E

EVALUATION FORM

WORKSHOP ON IMPROVING MANAGEMENT
AND OPERATION
NATIONAL WATER SUPPLY AND DRAINAGE BOARD
JUNE 6-10, 1983

WORKSHOP EVALUATION

1. What have been the most positive things about the workshop?

2. What have been the most negative?

3. What one thing stands out as important to you in this workshop?

4. What things have you learned?

5. Please note the following exercise and scale of 1 - 10 for successfully meeting the workshop goals. Please make any comments that you wish.

   1 - Did not meet the goal

   5 - OK

   10 - Met goal very well

Contd. Page ....?

Circle the number of your choice

A. Job descriptions	1	2	3	4	5	6	7	8	9	10
B. Staff Selection	1	2	3	4	5	6	7	8	9	10
C. Decision making and delegation	1	2	3	4	5	6	7	8	9	10
D. Communication and information	1	2	3	4	5	6	7	8	9	10
E. Reorganizational issues	1	2	3	4	5	6	7	8	9	10
F. Supplies and spares logistics	1	2	3	4	5	6	7	8	9	10
G. Maintenance management systems	1	2	3	4	5	6	7	8	9	10
H. Community relations and participation	1	2	3	4	5	6	7	8	9	10
I. Central/Regional and Regional/ Central Negotiations	1	2	3	4	5	6	7	8	9	10

6. What comments do you have about the way the workshop was planned and organized?

7. What can be done in the future to improve a workshop like this?

Contd. Page 3

8. How well do you feel the overall goals of the workshop have been achieved?

   1 2 3 4 5 6 7 8 9 10

   Comments:

9. In addition to the action plans developed in the workshop, what specific things should be done as Follow-up to the workshop?

10. What will you do personally to apply the things you learned in the workshop to your daily work?

APPENDIX F

WORKSHOP ANNOUNCEMENT

AND

SCHEDULE

OPERATION AND MAINTENANCE PROBLEM SOLVING

WORKSHOP

FOR

THE NATIONAL WATER SUPPLY AND DRAINAGE BOARD

June 6-10, 1983
Bandaranaike Memorial International
Conference Hall,
Colombo,
SRI LANKA.

PURPOSE

This Workshop is just the beginning of a process which if continued and applied after the Workshop will develop management skills for mid and upper-level personnel in the National Water Supply and Drainage Board. This Workshop will be composed of those persons most likely to be responsible for decision making and follow-up in improving operations and maintenance in the Board.

This Workshop will allow the participants to utilize various techniques used in experiential learning to analyse certain problems identified by Workshop participants themselves. Alternative solutions to these problems will be developed by those participating. The procedures used in the Workshop will be those used in team building and action planning. This will give the participant the opportunity to learn about and practise techniques that are expected to be a part of their everyday work.

OVERALL TRAINING APPROACH

The experiential learning or participant centred approach to be used in this Workshop is one widely used by management training institutions. The basic premise is that experience and learning are closely linked. Thus during the Workshop, learning takes place not only on a cognitive level but also through integrative and highly experiential activities. This process emphasizes the acquisition of practical skills and knowledge needed by managers in the day to day operation of their work. This will take place in the process of working on real problems experienced by managers.

The trainers assisting with the Workshop will assist the participants in this process and provide appropriate instructions based upon their experience working with similar groups in water supply in other countries. +

+ The model to be used in this Workshop has been on recent work by Dan Edwards, and John Austin in work with organisations similar to the NWS&DB in Thailand, Indonesia and Guyana.

Each of the activities in the Workshop is designed so that each participant will be actively involved in the problem solving process. This means that the responsibility for results depends upon the participant's effort. The trainer is responsible for creating and implementing a thoughtful, systematic training design, based on experiential learning principles, and for creating the conditions for an appropriate learning environment. Participants are responsible for actively taking advantage of the design to maximize their learning and to achieve the Workshop results.

In order for the trainers to obtain a realistic appraisal of what the potential participants see as their needs, a "Needs Assessment" instrument will be administered by the Consultants and individual interviews will be conducted.

The results of this needs assessment will be shared with all participants on the first day of the Workshop. These results will also be used to develop the points of emphasis in thie Workshop.

PREPARATION FOR WORKSHOP

To further ready yourself for the Workshop, in addition to the above, you might ask yourself the following questions for those problems and roles pertinant to your job.

1. a) What are your employees doing that they should not be doing ?

   b) When you correct your employees for doing things wrong, what specific things do you ask them to avoid ? How do you reward employees when they do a good job ?

2. What specific things can be done to improve the way NWS&DB conducts its operation and maintenance activities on all levels (Field and Central office) ?

WORKSHOP SCHEDULE

The proposed Workshop schedule is given below :

Details of the conduct of the Workshop will be given to participants on the first session of the Workshop on Monday, June 6.

The basic approach to be used in the four work Sessions is as follows :

1. Basic data will be presented for each problem to be analyzed.

2. A set of directions will be given to each subgroup (composed of 5 or 6 people) as to the procedures to be used in the analysts of the problem.

3. The subgroup will develop one or more alternative solutions to the problem and record this on a summary sheet. The solution will include a proposed "Action Plan" fpr resolving the problem.

4. Each subgroup will select reporters for discussing the subgroup's findings before the entire group. In this group, agreements will be made and people will be assigned responsibilities.

On Thursday evening each group will assist in combining their individual report into a combined workshop report, for discussion on Friday morning.

WORKSHOP OUTCOMES

The following outcomes are expected to be achieved during this Workshop :

1. Introduce and implement various teambuilding techniques in analyzing problems and synthesizing solutions to problems.

2. Utilizing the above techniques, develop alternative solutions to NWS&DB problems, both in the immediate future and for

WORSHOP SCHEDULE

Monday, June 6, 1983

Time	Activity
8:30 A.M.	Open Ceremony
9:30 A.M.	o **Workshop Goals**
	o Workshop Expectations for Participants
	o The Communication Theme: Expanding Information
10:30 A.M.	BREAK
10:50 A.M.	o The Results of the Needs Assessment and Interviews
	o The Problems Selected for the Workshop
	o Assignments to Problem Solving Groups
	o The Schedule of Activities for the Workshop
12:30 P.M	LUNCH
1:30 P.M.	Central Office/Field Expectations, an Inter-group Exercise and Negotiation.
3:00 P.M.	(BREAK 15 Minutes)
4:30 P.M.	END

Tuesday, June 7, 1983

Time	Activity
8:30 A.M.	Relations and Roles Between Offices and and Functions: An Analysis of Pressures and Issues.
10:30 A.M.	BREAK
12:30 P.M.	LUNCH
1:30 P.M.	Problem Solving Groups: 1. Job Descriptions 2. Staff Selection 3. Decision making and Delegation 4. Communications and Information
4:30 P.M.	END

Wednesday, June 8, 1983

Time	Activity
8:30 A.M.	Presentation of Problem Solving Groups and Discussions.
10:30 A.M.	BREAK
12:30 P.M.	LUNCH
1:30 P.M.	Problem Solving Groups:
	5. Dealing with re-organizational issues
	6. Supplies and spares logistics
	7. Maintenance management systems
	8. Community Relations and participation.
4:30 P.M.	END

Thursday, June 9, 1983

Time	Activity
8:30 A.M.	Presentation of problem solving groups and discussions
10:30 A.M.	BREAK
12:30 P.M.	LUNCH
1:30 P.M.	Action-Follow-up Planning
4:30 P.M.	END

Friday, June 10, 1983

Time	Activity
8:30 A.M.	Follow-up/Action Plan Agreements
10:30 A.M.	BREAK
10:45 A.M.	Workshop Evaluation
11:30 A.M.	Closing Comments
12:30 P.M.	END


WASH