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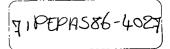
Centre régional ou répolitique occidental. pour la promotion de la planification et des études appliquées en matière d'environnement (PEPAS)

### **REPORT**

# WHO REGIONAL WORKSHOP ON PLANNING AND INFORMATION SYSTEMS FOR RURAL WATER SUPPLY AND SANITATION

PEPAS, Kuala Lumpur 6-10 October 1986

Kuala Lumpur, Malaysia November 1986



### REPORT

## REGIONAL WORKSHOP ON PLANNING AND INFORMATION SYSTEMS FOR RURAL WATER SUPPLY AND SANITATION

convened by the

WESTERN PACIFIC REGIONAL CENTRE
FOR THE PROMOTION OF ENVIRONMENTAL PLANNING
AND APPLIED STUDIES (PEPAS)

PEPAS, Kuala Lumpur, Malaysia

6-10 October 1986

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WHO Western Pacific Regional Centre
for the Promotion of Environmental Planning
and Applied Studies (PEPAS)
P O Box 12550
50782 Kuala Lumpur
Malaysia

November 1986

The views expressed in this report are those of the participants in the workshop and do not necessarily reflect the policies of the Organization.

This report has been prepared by the WHO Western Pacific Regional Centre for the Promotion of Environmental Planning and Applied Studies (PEPAS) for Governments of Member States in the Region and for those who participated in the Regional Workshop on Planning and Information Systems for Rural Water Supply and Sanitation which was held in Kuala Lumpur, Malaysia, from 6 to 10 October 1986.

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### 1. INTRODUCTION

A regional workshop on planning and information systems for rural water supply and sanitation was held at the WHO Western Pacific Regional Centre for the Promotion of Environmental Planning and Applied Studies (PEPAS) on the campus of the University of Agriculture, Malaysia (UPM), Serdang, Selangor, Malaysia, from 6 to 10 October 1986.

The workshop was attended by 18 participants from 14 countries and areas in the WHO Western Pacific Region. Three observers/representatives from the United Nations Environment Programme (UNEP), International Reference Centre for Community Water Supply and Sanitation (IRC) and UPM also attended. A list of the participants, secretariat members, observers/representatives is presented in Annex 1.

### 2. OPENING CEREMONY

Following an introductory speech by Mr S. Unakul, Director of PEPAS, Dr K.M. Patwary, Acting WHO Representative for Brunei Darussalam, Malaysia and Singapore, welcomed the participants and observers/representatives on behalf of Dr H. Nakajima, Director of the Western Pacific Region. The opening address was given by Associate Professor Dr Norani Abdul Samad, Deputy Dean, on behalf of the Dean, Faculty of Science and Environmental Studies, UPM. The full text of their addresses is given in Annex 2.

Following the opening addresses, Mr B. Fisher, Decade Engineer and Operational Officer for the workshop thanked the Deputy Dean for the University's assistance in holding the workshop and introduced the consultants and secretariat. Following this each participant introduced himself/herself individually.

### OBJECTIVES

The objectives of the workshop were to enable participants, at the end of the workshop:

- (a) to familiarize themselves with the use of planning guidelines for incorporating essential components, such as community education and participation, human resources development, institutional development and choice of appropriate technology, into procedures for implementing water and sanitation programmes;
- (b) to foster the development of national water supply and sanitation information systems for monitoring and evaluation of the International Drinking Water Supply and Sanitation Decade (IDWSSD) at the national, regional and global levels;
- (c) to discuss problems in the collection, processing, storage, retrieval, distribution and use of information for evaluation and monitoring in the water and sanitation sector; and
- (d) to review the needs of countries for cooperation with regard to information systems development for the Decade.

### WORKSHOP SESSIONS

The workshop plenary sessions were chaired by Mr B. Fisher. Copies of the individual working papers presented during the workshop are available in the PEPAS library and can be obtained on request. The full workshop agenda is given in Annex 3.

Five sessions of the workshop were devoted to discussing aspects of planning and information systems in small groups. Thus, participants had more opportunity to discuss experiences and problems with other participants from countries of similar size and situation. The arrangements and discussion items in the group discussions are given in Annex 4.

Following the opening ceremony, Mr Fisher discussed the workshop objectives, the proposed agenda and methodology of conducting the sessions. Mr G. Schultzberg, WHO/HQ Sanitary Engineer presented an overview of the booklet entitled "Achieving success in community water supply and sanitation projects". It was developed during a recent bi-regional project of the WHO South-east Asian and Western Pacific Regions carried out by WHO and funded by the United Nations Development Programme.

At the last session on Monday, the participants presented and discussed country reports from the People's Republic of China, Malaysia, Philippines and Laos.

The first of the group sessions (workshop group A) was held to discuss overall planning strategies, and in particular, the potential for improving the participation of the community (particularly the women) in the planning, design, construction, operation and maintenance of rural water supply and sanitation projects. The group sessions gave participants a good opportunity to present their views, and enabled the exchange of experiences between countries with similar circumstances. In general, participants felt that community participation is essential in planning water supply projects. In the final part of the workshop group sessions, participants were asked to note suggestions which could be applied in their countries.

In the first session of the second day, the participants presented and discussed country reports from Marshall Islands, Mariana Islands, Palau and Kiribati.

Mr Fisher then presented a summary and tabulation of all available water and sanitation data for the Western Pacific Region. It was pointed out that some countries were not yet able to complete the ten sector digest reporting forms for the IDWSSD, and thus do not yet have an adequate data base to prepare and implement national plans. Problems in obtaining information for global and national monitoring were discussed.

Dr I. Wallis, WHO Consultant, presented a paper on guiding principles for national monitoring, emphasizing the many benefits which accrue to a country from a well-designed project monitoring and evaluation programme. He presented several examples of the use of a monitoring system, and recommended two WHO publications on monitoring for detailed consideration by the participants.

Dr J. Robey, Regional Adviser in Health Information in the WHO Western Pacific Regional Office, in his presentation on information system development for primary health care focussed on three basic points. First, that to improve the health status of people the most underserved geographic areas and social groups must be located and the causes of their situation identified. Second, economically and socially acceptable remedies must be determined together with the measures of success or failure of this implementation. Lastly, the information system to achieve the first two points must be built on systems of records or reports developed at the lowest service point of the primary health care system.

The country reports from Papua New Guinea and Solomon Islands were then presented and discussed. Following that, the second session when the workshop participants were divided into three groups (workshop group B) was held to discuss national planning, and the essential role of information in keeping the national plans realistic and up-to-date. Most countries had general national plans which included items of water supply and sanitation (as described in the country reports) but many comments were made on the potential to improve monitoring of existing systems. In the final part of the workshop group session, the participants were asked to note suggestions for actions which could be taken to improve monitoring in their country.

On Wednesday, the third day of the workshop, Dr Nakamura, WHO Temporary Adviser, introduced the first three steps in planning of water and sanitation projects. Essentially, there are many important factors which are often overlooked by the conventional process of planning rural water supply systems. Identification and accommodation of the true needs of the people is a most important but also frequently overlooked step. The underlying message in Step 1 was described that there is a need to prepare at the beginning of the project to identify the true needs of the people. The message in Step 2 is that there are many ways in which the true needs of the people can be defined without making the people in the community too uncomfortable. The message in Step 3 is that appropriate technology, human resource development and institutional development will have to be closely interrelated in the process of planning.

The third session in groups (workshop group C) was held to discuss the planning steps in developing rural water supply and sanitation projects, and the selection criteria used to identify projects and establish priorities for expenditure. Most participants indicated that willingness to pay a portion of the cost and to provide free labour, was the principal selection criteria. During the final part of the group session, participants were asked to note suggestions for improving the assessment of community needs and priorities, and for letting people have more influence on the choice of technology.

Dr Ismail Yaziz, as guest lecturer to the workshop then presented a paper entitled "preliminary evaluation of a village water supply system - a case study". He described the various steps in planning design, financing, implementation and operation and maintenance as carried out in a rural water supply project in Malaysia.

Mr Schultzberg presented the remaining planning and implementation steps. These start with community consensus and community commitment prior to the decision to implement the project, including the support elements in terms of institution building and human resources development. The final step in the process is to keep the facilities in good operating condition, which requires that there is a monitoring system that alerts management when something goes wrong. Procedures and resources must also be available to take action upon the problems exposed by the monitoring system.

The commitment made at the outset are generally two-fold with the community agreeing to undertake certain obligations (e.g., contribution towards capital cost, payment for operation and maintenance, provision of operator) and the government agency to train the operator, provide tools and spare parts (at cost) and to provide a backup service when a breakdown requires resources beyond the capacity of the community.

The fourth session when the participants worked in three groups (workshop group D) was held to discuss the potential to increase rural community commitment to projects, and to ensure the long-term operation and use. Participants considered that there was considerable scope for improvement in providing operator training and backup, and also noted that official agencies did not always have an adequate supply of parts, or a proper backup service. In the final part of the group session, participants were asked to note suggestions for improving community commitment, training of local operators and the backup service from the water agency.

The sessions on Thursday were started by Mr Schultzberg who introduced the guidelines on "Minimum evaluation procedure (MEP)" (WHO/ETS 83.1), a low-cost, simple and quick method of evaluating water supply and sanitation projects. The assessment of the functioning and utilization of facilities are the key elements of MEP. The presence of software support programmes in terms of institutional development and human resources development are elements that also need to be reviewed to ensure that the projects are sustainable. Indicators, data requirements and data collection methods were discussed with particular emphasis on simple methods of collecting sociocultural data. The most important aspect of monitoring is the follow-up to improve upon existing facilities and to improve the planning for future projects based on the lessons learned.

Dr Wallis discussed operations and maintenance of rural water supply schemes. He described the types of problems which could occur, their situation, and the type of monitoring and information systems necessary to properly operate systems in the long-term. During his summary on operations and maintenance, Dr Wallis noted the following points:

- Commissioning a small allowance of time and resources should be made to ensure that systems function well for the first year of operation.
- 2. Support encouragement, advice and training are needed by villages from the responsible regional agency.
- 3. Spare parts local agencies should stock spare parts so that they are readily available to villages, and also help when there are changes in the model specifications of pumps and other components.
- 4. Subsidies almost all Western Pacific countries provided a subsidy to rural water and sanitation systems, meeting part of the initial costs, and also assisting later in repairing and replacements. More explicit recognition and definition of this support would help.
- 5. Depreciation a significant cost of rural water supply and sanitation systems was the cost of depreciation, and it was important for national planning and funding allocations to have an information system which established this cost.

Dr Wallis concluded this presentation by recommending a realistic monitoring system to provide data on the operations and maintenance of existing systems.

The fifth session of the discussion groups (workshop group E) was held to discuss common operating problems with water supply and sanitation facilities, the monitoring system which presently operated, and potential improvements. During the last section of the session, participants were asked to note what could be done to improve the knowledge of installed facilities, and the problems they experience.

Following lunch, an information transfer exercise was held. This exercise involved dividing the participants into groups representing:

Regional Director
District Officer
Supply Manager
Workshop Manager
Chairman of Village A Water Committee
Chairman of Village B Water Committee

Several realistic problems of pump replacement, need for chlorine, office furniture, etc., were introduced, and participants explored the flow of information needed to solve the problems. This session had a very enthusiastic response from the participants, who considered it the most exciting and educational of all the sessions.

Mr Toon van Dam explained the role and activities of the IRC to the participants. IRC is an information-oriented organization which focusses on water supply and sanitation in rural and urban fringe areas. He explained how information was gathered and disseminated by IRC:

- (1) development and demonstration projects;
- (2) advice and evaluation;
- (3) training and education; and
- (4) information services, including exchange of information with PEPAS, CEPIS (latin America) and CIEH (West Africa). All participants were urged to supply all types of relevant field information to IRC so that it can be included in the information base, and users can also become providers of information.

Country reports by Samoa, Tonga and Vanuatu were then presented and discussed. To close the day's activities, Dr Robey made a short presentation on the need to integrate monitoring of water supply and sanitation projects with other health and resource monitoring arrangements.

On Friday, the last day of the workshop Mr Unakul opened the sessions by describing the various ways in which PEPAS had been assisting, and would in the future collaborate with countries or areas in the WHO Western Pacific Region. He emphasized the extent of information dissemination, and technical assistance provided by PEPAS staff and consultants. Dr Nakamura then presented an overview of the information distribution and dissemination service that PEPAS is now developing, focussing on selected areas in water supply and sanitation.

A final plenary discussion was then held, with Mr Fisher as Chairman. Two recommendations from the group work were discussed:

- Value of modifying WHO sector digest forms to make them fit the individual national monitoring information systems, so that more accurate information would be supplied.
- 2. Promotion of exchange visits between health officers of similar countries.

After discussion on these points, it was concluded at the workshop that:

- 1. There should be collaboration between WHO and the countries to modify the sector digest forms, and make them fit the individual national monitoring systems. This would make the forms easier to complete accurately, and also strengthen the various countries' information systems.
- 2. Exchange visits between similar countries already occur to a limited extent, but countries could consider devoting a higher proportion of their individual WHO country allocation or other sources of funding as part of the technical cooperation between developing countries (TCDC) to exchange visits.

Mr K. Rishayakaran, from the Ministry of Health, Malaysia, then briefed the participants on the development of PVC handpumps. This is a joint project by the University of Malaya and the Ministry of Health, sponsored by the International Development and Research Centre (IDRC), Canada. After initial field testing with 17 prototype handpumps, some 15 000 pumps have been manufactured and installed under the Ministry of Health's rural water supply programme. Mr Rishayakaran also demonstrated the pump and its various parts as well as the design changes it underwent since the first prototypes were developed. The main feature of the handpump were:

- (a) the foot valve, which could be removed without dismantling the pump;
- (b) design of the piston and foot-valve assembly (both of which are interchangeab]e); and
- (c) the design of the piston ring (which has been improved to minimize wear on the cylinder).

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Field experience has led to modification of the lever system and the change in materials from wood to galvanized iron.

Dr Nakamura then presented an integrated summary of the activities at the workshop, drawing upon aspects of several presentations, and using a case study of Malaysian rural water supply as a reference. This presentation illustrated the flow of monitoring information in a realistic manner, and clarified the possible ways in which participants could put into practice the knowledge and understanding they had acquired at the workshop.

### 5. EVALUATION OF THE WORKSHOP

At the concluding session several participants commented on the benefit of meeting and exchanging ideas with the workshop secretariat and other participants. The participants felt that the workshop had achieved its objectives and this was borne out unanimously in the evaluation questionnaires. Most participants said that they would like a field trip, but this was not considered a practical use of time in the region around Kuala Lumpur. Other participants commented on the value of the information transfer exercise at the workshop, which provided such a clear demonstration of the practical aspects of obtaining accurate information on existing problems and available resources, and many participants indicated that they hoped to use the exercise in their subsequent national and provincial workshops of their own. Many participants noted that they would like to have PEPAS support similar types of workshops including field inspections and information exercises, in their own countries or further regional workshops.

It was noted during the workshop that participants were much more willing to participate in discussions during the group sessions.

### LIST OF PARTICIPANTS, SECRETARIAT MEMBERS AND OBSERVERS/REPRESENTATIVES

### Name

### Designation and address

Ms Wu Mei Project Management Officer Ministry of Public Health 44 Hou Bei Yen

Beijing People's Republic of China

Project Management Officer 2. Mr Zhao Weixi Ministry of Public Health

44 Hou Bei Yen

Beijing

People's Republic of China

Mr Neri Tiaeke 3. Senior Health Inspector

Ministry of Health and Family Planning

Bikenibeu Tarawa Kiribati

Deputy Chief of Cabinet Dr Bovora Chounlamountri

Ministry of Health

Vientiane Laos

5. Dr Bounthan Mixap Director

Institute of Hygiene and Epidemiology

Vientiane Laos

Senior Public Health Engineer 6. Mr Kathigasu Rishayakaran

Engineering Services Unit

Ministry of Health

Block E, Government Offices Complex

Jalan Dungun 50490 Kuala Lumpur Malaysia

7. Mr Fauzi bin Hj. Omar Principal Assistant Secretary

Ministry of National and Rural Development

1st Floor, Bangunan Bank Rakyat

Jalan Tangsi 50606 Kuala Lumpur

Malaysia

8. Mr Kaoga Galowa Senior Health Inspector

Environmental Health Section

Department of Health

P O Box 3991

Boroko

Papua New Guinea

9. Engr Emerito B. Liquigan Supervising Sanitary Engineer Regional Health Office no.2

Carig, Tuguegarao

Cagayan Philippines

10. Engr Mariano R. Agdeppa

Senior Sanitary Engineer Bureau of Health Services

Ministry of Health

Manila Philippines

11. Mr Sesela Siimoa

Health Inspector and

Assistant Health Inspector Training Director

Health Department Ministry of Health

Apia Samoa

12. Mr Tom Lolemae

Chief Health Inspector

Ministry of Health and Medical Services

P O Box 349

Honiara

Solomon Islands

13. Mr Salesi Finau

Senior Public Health Inspector

Ministry of Health

Nuku'alofa Tonga

14. Mr Bujen Jacob

Chief Sanitarian

Republic of the Marshall Islands

Marshall Islands 96960

15. Mr Edward Babauta

Civil Engineer

Department of Public Works

c/o Director of Health Department

Public Health and Environmental Services

Dr Torres Hospital, CM 96950

Saipan

Commonwealth of the Northern Mariana Islands 96950

16. Mr Lucio Abraham

Safe Drinking Specialist

P 0 Box 100

Koror

Republic of Palau 96940

17. Mr Elison Sese Boyu

Senior Environmental Health Engineer

Environmental Health Section Preventive Medicine Department

Ministry of Health

Port Vila Vanuatu

18. Mr Bui Trong Chien

Chief

Bureau of Hygiene NHA Trang

Socialist Republic of Viet Nam

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### Secretariat

1. Mr Somnuek Unakul Director WHO(PEPAS)

2. Mr B. Fisher Decade Engineer

Operational Officer for the workshop

WHO(PEPAS)

3. Ms Y.M. Tan Special Assistant

Acting Administrative Officer

WHO(PEPAS)

4. Mr G. Schultzberg Sanitary Engineer WHO Headquarters

Geneva

5. Dr J. Robey Regional Adviser in Health Information

WHO Regional Office for the Western Pacific

Manila

6. Dr M. Nakamura Temporary Adviser

WHO(PEPAS)

7. Dr I. Wallis Consultant

WHO(PEPAS)

8. Dr U. Han Tun WHO Liaison Officer with ESCAP

WHO Regional Office for South-east Asia

9. Mr T. Appulingam UN Volunteer

Laos

### Observers

1. Dr Ramachandra Deshpande Environmental Affairs Officer

Regional Office for Asia and the Pacific

United Nations Environment Programme

The United Nations Building

Rajadamnern Avenue Bangkok 10200 Thailand

2. Mr Toon van Dam

International Reference Centre for Community Water Supply and Sanitation

P O Box 93190 2509 AD The Hague The Netherlands

3. Dr Ismail Yaziz

Lecturer

Department of Environmental Sciences Faculty of Science and Environmental

Studies

Universiti Pertanian Malaysia

43400 UPM Serdang

Malaysia

### OPENING ADDRESSES

### Message from the Regional Director

Dean of the Faculty of Science and Environmental Studies. Ladies and Gentlemen.

On behalf of Dr H. Nakajima, Regional Director of the World Health Organization Regional Office for the Western Pacific Region . I have the pleasure of welcoming you all to attend this five-day regional workshop on planning and information systems for rural water supply and sanitation projects, which is being held at PEPAS. Unfortunately, Dr Nakajima is unable to attend the opening of this workshop today due to his previous commitments, so on his behalf I wish to take this opportunity of reading his message and at the same time extending our best wishes to you all.

As you will know, the United Nations General Assembly in November 1980 proclaimed the period 1981-1990 as the International Drinking Water Supply and Sanitation Decade, during which Member States would assume a commitment to bring about a substantial improvement in the standards and levels of services in drinking water supply and sanitation by the year 1990. The proclamation called upon Governments to develop the necessary policies and set the targets to this end and to take all appropriate steps for their implementation.

In accordance with these policies, WHO is collaborating with Member States in the development of national plans and programmes, the identification and implementation of projects, and the strengthening of national institutions and capabilities. In addition, at the global level WHO has assumed responsibilities for the monitoring of the Decade's implementation and for reporting on other Decade developments.

This workshop is directed at these two subjects. During the workshop, planning guide lines for the implementation of the various Decade programmes, which will ensure that essential components such as community education and participation, choice of appropriate technology, institution building and human resource development are fully incorporated in the methodology of project planning, will be developed. To assess the progress made towards Decade targets specified by Member States, it will be necessary for countries to strengthen their information systems. This will enable them to intensify, adjust or reorient programmes in the light of progress and benefits achieved.

The other aim of the workshop is to cooperate with countries of the Region in the implementation, redesign or strengthening of their information systems in order, particularly to reinforce their capacity for analysis, decision-making and management of plans.

I would like, by way of introduction, to provide a little background to this workshop by describing the present status of Decade plans and water and sanitation coverage in the Western Pacific Region. Only four of the developing countries or areas in the Region have specified Decade targets and formulated national plans detailing the needs and the necessary steps and policies to meet these needs. The information necessary to monitor country progress in Decade activities is largely the result of data that have been hastily compiled on an ad hoc basis when the occasion demands. There is little attempt in many cases to measure progress and benefits against resources used.

Coverage of the rural areas of developing countries or areas in the Region with adequate water supplies has increased from 50% to 62% during the first half of the Decade but the percentage coverage for rural sanitation has remained virtually constant at 57%. Individual country figures vary widely from these figures.

I am sure that this workshop will provide a useful forum for the identification and discussion of problems common to all or many countries or areas in the field of information systems.

I will conclude my remark by wishing all of you a fruitful and pleasant week of discussions and an enjoyable stay. Thank you.

<u>Welcome address by the Dean of the Faculty of Science and Environmental Studies</u>

Mr Unakul, Dr Patwary, Distinguished guests, workshop participants, Ladies and Gentlemen,

On behalf of the University, I bid you "Selamat Datang" ("Welcome") to our green campus in Serdang and hope that you will find the environment and facilities, both pleasant and satisfactory.

When I received the invitation to attend the opening ceremony of this workshop, I noticed that both the "planning" and "information systems" aspects of rural water supply and sanitation, which are wide topics in themselves, has been included under one title. I must congratulate the organizers of this workshop for this very apt title because it further strengthens my belief in the integrated approach of examining problems and finding solutions. I think it would be correct to say that, of necessity, any planning system must involve, directly or indirectly, a wide variety of information from a variety of sources at different levels. Some will make only a small contribution, such as a stroke on a worksheet while others, such as information officers or economists could be engaged full time in designing special studies or analyzing data from a number of sources. Therefore, planning and information systems in a way could be viewed as the "Horse" and "Cart" for water supply and sanitation systems, i.e., they are inseparable.

As in many other countries, we in Malaysia will be installing a large number of new urban and rural water supply projects during the Water and Sanitation Decade (1981 - 1990) to augment or rehabilitate existing facilities in the country. At the same time, many local authorities have also embarked on centralized sewerage and rural sanitation projects to supplement the water supply undertakings in their localities. Hence, taking into account the current emphasis on privatization, it is therefore likely that many public and private water supply and sanitation organizations will expand several-fold within this period and handle vast sums of money. The need for a good management-oriented information system is therefore evident for supporting the day-to-day operation and decision-making requirements as well as the planning needs of this large undertaking. The workshop is thus very timely for us in Malaysia.

In the context of water supply and sanitation in most countries of the South-east Asian Region, information about communities and their water supply and sanitation situations are collected at the local level and passed to the regional level and from there to the central level. Generally, there is relatively little or no horizontal flow of information between communities at the local levels or between regions except for specialized technical or financial information. Thus, comparative evaluations of the effectiveness of projects are often missed by the executors as well as the recipients of these programmes with the result that the gap between the local people and planners widen and the project fails to achieve its full objectives. A coordinated but flexible data and information system for decision-making and planning is required in this context and planners must involve the local people in a joint search for the proper mix of hardware and software to meet community needs. These are all obvious points but they still tend to be overlooked!

Workers in developing countries or areas typically face problems of access to useful information and a lack of time to extract useful information from documents even if they are available. In general, some also lack the ability to understand fully the technical substance of the information provided even when they have the time and the resource materials.

To address this problem, PEPAS has developed a Focalized Network Information Service Programme and our University (i.e, UPM) was contracted to develop the information based on selected subjects and to present it in a visually appealing and easily digestible fashion using guiding charts. The topics focus on the multidisciplinary aspects of rural water supply and sanitation and includes community involvement, planning, appropriate technology and surveillance systems. In addition, the UPM library, in its role of supporting the academic and research functions of the University, has also built up a wide collection in the environmental sciences and has started an Environmental Information System (EIS) reference and referral service beginning 1984 with emphasis on the ASEAN region. The library is also the National AGRIS Centre and has access to various information centres around the world.

For the future, I envisage the need for a closer interaction between executing agencies and project recipients for rural water supply and sanitation. Even with pragmatic information systems being evolved, in the final analysis, the human element assumes the most important role. Workers must be not only be conversant with theory but must involve themselves practically with the local community to determine their problems, their needs, their priorities, and to balance these factors with organizational objectives in order to achieve degrees of success in project implementation. Standard plans and designs are no longer the norm but must be appropriate for the community and it's environment. Although numerous technical books and guidelines have been published, there is relatively less information on "social approaches" for community water supply and sanitation projects.

In this context, I feel that this regional workshop is indeed timely and important for us in this Region. We CANNOT afford to continue to invest UNWISELY. I therefore congratulate PEPAS for organizing this meeting and I strongly urge all of you to participate with full enthusiasm and with an open mind. Once again, I welcome all of you to our campus and hope that you will find our deliberations in this workshop useful and rewarding.

Thank you.

### **AGENDA**

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0810 - Overseas participants assemble in Holiday Inn lobby

0815 - Departure of minibus to PEPAS

0900 - 0930 Introduction
Mr Somnuek Unakul
Director, PEPAS

Opening address
Dr K.M. Patwary
Acting WHO Representative to Brunei Darussalam,
Malaysia and Singapore, on behalf of the Regional
Director

Welcome address
Associate Professor Dr Norani Abdul Samad
Deputy Dean, on behalf of Dean, Faculty of Science and
Environmental Studies, University of Agriculture,
Malaysia

0930 - 1010 Introduction of consultants and participants (B. Fisher)

Group photograph

1010 - 1030 Refreshments

1030 - 1040 Administrative briefing (M. Tan)

1040 - 1100 Introduction to workshop session (B. Fisher)

1100 - 1200 Introduction to booklet, "Achieving success in community water supply and sanitation projects" - 'Green Book' (G. Schultzberg)

1200 - 1300 Lunch

1300 - 1445 Workshop review of 'Green Book'

1445 - 1500 Refreshments

1500 - 1700 Country reports - China, Malaysia, Philippines, Laos

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Tuesday, 7 October	
0900 - 1045	Country reports - Marshall Islands, Mariana Islands, Palau
1045 - 1100	Refreshments
1100 - 1200	Water and sanitation data for the Western Pacific Region (B. Fisher)
1200 - 1300	Lunch
1300 - 1400	Guiding principles for national monitoring (I. Wallis)
1400 - 1500	Information systems for primary health care (J. Robey)
1500 - 1515	Refreshments
1515 - 1545	Country reports - Papua New Guinea, Solomon Islands
1545 ~ 1700	Workshop groups - national plan and information systems

1900 - Social evening for workshop group

### Wednesday, 8 October

0900 - 0930	Country reports - Viet Nam, Kiribati
0930 - 1015	Planning guidelines (M. Nakamura)
	Steps 1 to 3
1015 - 1030	Refreshments
1030 - 1200	Workshop groups - planning steps
1200 - 1300	Lunch
1300 - 1345	Evaluation of village water supply systems - A Malaysian case study (Dr Ismail Yaziz)
1345 - 1430	Community commitment and project implementation (G. Schultzberg)
	Steps 4 to 6
1430 - 1445	Refreshments
1445 - 1615	Workshop groups - implementation steps
1615 - 1700	IDRC Film, "A Handle for Health"

Thursday, 9 October	
0900 - 1000	Minimum evaluation procedure (G. Schultzberg)
1000 - 1015	Refreshments
1015 - 1100	Operations and maintenance (I. Wallis)
1100 - 1200	Workshop groups - monitoring of operations
1200 - 1300	Lunch
1300 - 1430	Information transfer exercise (I. Wallis)
1430 - 1445	Refreshments
1445 - 1515	IRC and its activities (Toon van Dam)
1515 - 1630	Country reports - Samoa, Tonga, Vanuatu
1630 - 1700	Health for All by the Year 2000 (J. Robey)
Friday, 10 October	
0900 - 0930	Potential WHO/country cooperation possibilities (S. Unakul)
0930 - 1015	Plenary discussion - recommendations from group sessions - information for national and global monitoring
1015 - 1030	Demonstration on Malaysian handpump (K. Rishayakaran)
1015 - 1030 1030 - 1045	Demonstration on Malaysian handpump (K. Rishayakaran) Refreshments
1030 - 1045	Refreshments  Finalization of country action reports  1. Introduction  2. National plan  3. Selection criteria  4. Needs assessment  5. Community participation  6. Training of operators  7. Monitoring/evaluation  8. Possible WHO collaboration
1030 - 1045 1045 - 1200	Refreshments  Finalization of country action reports  1. Introduction  2. National plan  3. Selection criteria  4. Needs assessment  5. Community participation  6. Training of operators  7. Monitoring/evaluation  8. Possible WHO collaboration  9. Other recommendations
1030 - 1045 1045 - 1200 1200 - 1300	Refreshments  Finalization of country action reports  1. Introduction  2. National plan  3. Selection criteria  4. Needs assessment  5. Community participation  6. Training of operators  7. Monitoring/evaluation  8. Possible WHO collaboration  9. Other recommendations  Lunch  Case study on "Malaysian drinking water quality
1030 - 1045 1045 - 1200 1200 - 1300 1300 - 1340	Refreshments  Finalization of country action reports 1. Introduction 2. National plan 3. Selection criteria 4. Needs assessment 5. Community participation 6. Training of operators 7. Monitoring/evaluation 8. Possible WHO collaboration 9. Other recommendations  Lunch  Case study on "Malaysian drinking water quality monitoring" (M. Nakamura)
1030 - 1045 1045 - 1200 1200 - 1300 1300 - 1340 1340 - 1430	Refreshments  Finalization of country action reports 1. Introduction 2. National plan 3. Selection criteria 4. Needs assessment 5. Community participation 6. Training of operators 7. Monitoring/evaluation 8. Possible WHO collaboration 9. Other recommendations  Lunch  Case study on "Malaysian drinking water quality monitoring" (M. Nakamura)  Workshop evaluation (B. Fisher)

### WORKSHOP GROUPS

There will be five periods during the workshop when participants will have the opportunity to discuss in small groups aspects of planning and information systems. These periods are:

Α.	Monday, 6 October	1300 - 1445 hours
В.	Tuesday, 7 October	1515 - 1700 hours
C.	Wednesday, 8 October	1030 - 1200 hours
D.	Wednesday, 8 October	1445 - 1615 hours
Ε.	Thursday, 9 October	1100 - 1200 hours

Initially, participants will be divided into the following three groups:

Group 2	Group 3
(Meeting room)	(Coffee room)
Kiribati	Marshall Islands
Samoa	Mariana Islands
Solomon Islands	Palau
Tonga	Papua New Guinea
Vanuatu	Viet Nam
	(Meeting room)  Kiribati Samoa Solomon Islands Tonga

Observers are encouraged to participate in discussion, and may join any group.

During the last 15 minutes of each period of group discussions, participants are asked to write down their suggestion for improvements in their own countries. These written suggestions should be handed in and will be typed for you, so by the end of the week you will have some points for your report in the workshop. For convenience, those suggestions will be accumulated according to the attached outline, and given to you on Friday morning to review and finalize.

### GROUP WORK A

WORKSHOP GROUP - REVIEW OF 'GREEN BOOK'
(Scheduled time: 1300 - 1445 hours on 6 October 1986)

Discuss the cartoon on page 2 within the group.

- 1. Does the illustration fit into the situation in your country or not?
- 2. To what extent do people get involved in:
  - \* planning and design
  - \* construction
  - \* operation and maintenance

of rural water supply and sanitation projects in your country?

- 3. What are the constraints to get the people involved? How can the constraints be overcome?
- 4. How would you define minimum level of community acceptance?

Please stop the discussion when 15 minutes remain of the session.

During these last 15 minutes, each member of the group should make notes of steps that could be taken in his country to improve participation of the community, particularly the women.

### GROUP WORK B

WORKSHOP GROUPS - 'NATIONAL PLAN AND INFORMATION SYSTEM' (Scheduled time: 1515 - 1700 on 7 October 1986)

Discuss within the group the status of your national plan and the monitoring of its progress.

- 1. Has the national plan been completed? Does it:
  - (a) define the country's situation and needs;
  - (b) define schedules and responsibilities;
- 2. Do you have a national monitoring system of the plan in your country? If not, how could one be established?
- 3. Who should do it? Is help needed?

During the last 15 minutes, each member of the group should make notes on how the national plan for water supply and sanitation in his country could be improved, and what action should be taken and by whom to improve or initiate monitoring.

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### GROUP WORK C

WORKSHOP REVIEW - PLANNING STEPS
(Scheduled time: 1030 - 1200 hours on 8 October 1986)

Discuss the planning steps within the group.

- Step 1: Select oriority community and recruit project facilitator
- Step 2: Use Community Education and Participation to find needs
- Step 3: Plan to meet needs with proper hardware/ software mix
- 1. Which criteria are used in your country to select communities for projects? Any difficulties in applying them?
- 2. Is a 'community needs assessment' (see page 27 of 'Green' Book') or something similar carried out in your country?
- 3. How is the teamwology chosen? To what extent can the choice be influenced by the people?

During the last 15 minutes, each member of the group should make notes of steps that could be taken in his country to:

- \* improve upor the selection criteria that are used
- \* establish community priorities for water and sanitation in relation to other needs
- \* let beoble have an increased influence on the choice of technology

### GROUP WORK D

WORKSHOP REVIEW - IMPLEMENTATION STEPS
(Scheduled time: 1445 - 1615 hours on 8 October 1986)

Step 4: Develop community consensus and community commitment

Step 5: Implement

Step 6: Ensure backup when necessary

Discuss the implementation steps within the group.

- 1. Is there a traditional way of arriving at a consensus within the rural communities in your country?
- Is the traditional system used for community consultation by the water supply agency?
- 3. How are water supply operators at the village level selected, trained and paid in your country?
- 4. What backup is provided by the water agency in case of breakdown?

During the last 15 minutes, each member of the group should make notes of steps that could be taken in his country to improve:

- \* community consensus
- \* community commitment
- \* training of local operators
- \* the backup service from the water agency; or
- \* reduce the need for a backup service

### GROUP WORK E

WORKSHOP GROUPS - MONITORING OF OPERATIONS
(Scheduled time: 1100 - 1200 hours on 9 October 1986)

Discuss in your group the following questions.

- 1. What are the most common problems with rural water supply and sanitation facilities in your country? How do you know this?
- 2. Is there a monitoring system in your country that provides you information on:
  - \* What facilities have been installed?
  - \* What facilities function (and which don't)
  - \* To what extent are the facilities used?
- 3. Are records of inspections available. Who takes action on monitoring reports?
- 4. Are the results of monitoring existing systems used in making plans for the future?

During the last 15 minutes, each member of the group should make notes of what ought to be done in his country to improve the knowledge of the condition of installed facilities.

Appendix

### COUNTRY ACTION REPORT

### Country:

### Name of participant(s):

### 1. Introduction

During group discussions at the workshop, the following suggestions were seen as possible ways of improving the planning, and information systems, for planning in my country.

### 2. National planning

The following steps are suggested to improve the national plan:

from GROUP WORK B

At present, the information for planning future rural water supply and sanitation systems is provided by:

from GROUP WORK B

The following steps are suggested to obtain better information on what to plan:

from GROUP WORK B

### 3. Selection criteria

The criteria used to select communities for projects are currently as follows:

from GROUP WORK C

They could be improved upon by:

from GROUP WORK C

### 4. Establishment of community priorities

Community priorities for water and sanitation could be established by:

from GROUP WORK C

### 5. Community participation

The community participation could be improved upon by the following measures:

from GROUP WORK A

Their influence on the choice of technology could be increased through:

from GROUP WORK C

Community involvement in the final decision-making (community consensus) could be improved by:

from GROUP WORK D

Community commitment could be improved by:

from GROUP WORK D

### 6. Training of operators

Methods to have a trained operator at each site are:

from GROUP WORK D

The backup service should be:

from GROUP WORK D

### 7. Monitoring of operators

The most common problems with rural water supply and sanitation facilities are:

from GROUP WORK E

The knowledge of the condition of installed facilities could be improved by:

from GROUP WORK E

- 8. Suggestions for future cooperation with WHO
- 9. Other recommendations