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THE WORLD BANK

Washington, D.C.

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The World Bank

1818 H Street NW


Washington DC 20433

Telephone: 202-473-1000

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PUBLIC DISCLOSURE AUTHORIZED

INT/82/002 - Information 1984/86
& Training Program in Low Cost Water
Supply & Sanitation Vol. 1

 Archives
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UNDP/INT/82/002 - Information and Training Program in Low Cost Water Supply and
Irrigation - 1984 / 1986 Correspondence - Volume 1

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CLOSE - OUT SHEET

This file is closed as of November 30, 1984

For further correspondence, please see Vol. 2.

RECORDS MANAGEMENT SECTION

INT/82/002

November 30, 1964

Mr. Michael McGarry, Cowater International.

Saul Arlosoroff, Chief, Applied Research and Technology, WUD.

61790: pp

Meeting with N.F.B., Canada on INT/82/002 films.

You will accompany Mr. J.M. Kalbermatten to a meeting at the offices of the N.F.B. in Montreal on December 18 and 19. You will be joined there by Mr. H. McPherson. You will prepare a short summary of your meeting on your return to Ottawa.

During the meeting the scripts and footage of the three films will be revised and finalized for review and field testing.

cc: Messrs. N. Cohen, R. Middleton, A. Hamer, J.M. Kalbermatten (WUD)
H. McPherson (Consultant)
Ms. L. Obeng (WUD).

LObeng:hpb

INT/82/002

November 26, 1984

Those listed below

Saul Arlosoroff, Chief, Applied Research and Technology, (WUD).

61790


Review and Field Test Report INT/82/002.

Attached please find the first report of the Review and Field Testing exercise carried out by INT/82/002 during this year. The Report has been sent to the participants of the Review and Field Testing as well as to the Project Donors.

Encl.

cc: Messrs. A. Churchill, M. Cohen, R. Middleton, A. Hamer,
J. Kalbermatten (WUD),
H. McPherson (Consultant)

LObeng:hph

	UNITED NATIONS DEVELOPMENT PROGRAMME				FORM A SUMMARY
	PROJECT PROGRESS REPORT	PROJECT NUMBER INT/82/002	AGENCY World Bank	REPORTING PERIOD January-June 1984	

COUNTRY AND PROJECT TITLE: Interregional: Information and Training Program in Low-cost Water Supply and Sanitation Phase I & II			DURATION 26 months	UNDP BUDGET (SUS) \$761,600 ^{1/}
DATE PROJECT APPROVED May 19, 1982	START OF FIELD WORK		COMPLETION OF FIELD WORK	
	SCHEDULED March 1982	ACTUAL March 1982	ORIGINAL EST. April 1984	CURRENT EST.
				TRIPARTITE REVIEW? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
				DATE:

Summary of Project Implementation

1. Undertaken as part of the global effort in support of the United Nations Decade of Water Supply and Sanitation, this project has an overall objective to introduce lower-cost technologies and effective implementation strategies to low-income communities by providing information and training materials to decision makers, technical project staff and community workers. There are five specific project tasks:

Phase I

- (a) To prepare a Decision Package consisting of a film, slide sound show, brochure and information booklet that will introduce to senior government officials and other decision makers appropriate lower-cost technologies and promote their understanding and acceptance of these concepts.
- (b) To prepare a Project Preparation Handbook containing water supply and sanitation project preparation guidelines for use by engineers, economists and health personnel, etc., and case studies illustrating the identification phase and the preparation of pre-feasibility and feasibility reports (this will be part of (c) below).
- (c) To prepare a Technical Package consisting of three films and eighteen training modules to be used in training and informing technical personnel in the design and use of the lower-cost technologies and delivery alternatives. The modules will also provide information on health and community involvement. The main audience of the package is engineers and engineering students in universities or colleges teaching water supply and sanitation. Economists, project staff and others operating within the Governments, and consulting engineering firms in the industrial and developing countries will also benefit from the Package.
- (d) To prepare a User (Community) Participation Package for use by project staff and community workers in introducing low-cost water supply and sanitation projects to potential users.

1/ Funds quoted here reflect only those administered by UNDP. Other agencies have contributed to the activities described here.

NAME OF PROJECT MANAGER/EXPERT AND DATE S. Arlosoroff, Project Manager L. Obeng, Project Officer	October 1984	FORMS SUBMITTED (CHECK) *
		<input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> B <input checked="" type="checkbox"/> C <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> E-1 <input type="checkbox"/> E-2 <input type="checkbox"/> F <input checked="" type="checkbox"/> G <input type="checkbox"/> H <input type="checkbox"/> I-1 <input type="checkbox"/> I-2

*Forms E-2, F, H, I-1, I-2 are not included since they are not relevant for the reporting period.



UNITED NATIONS DEVELOPMENT PROGRAMME

**PROJECT
PROGRESS REPORT**

PROJECT NUMBER
INT/82/002

AGENCY
World Bank

REPORTING PERIOD
January-June
1984

**FORM A
SUMMARY**

COUNTRY AND PROJECT TITLE:			DURATION	UNDP BUDGET (SUS)	
DATE PROJECT APPROVED	START OF FIELD WORK		COMPLETION OF FIELD WORK		TRIPARTITE REVIEW? YES <input type="checkbox"/> NO <input type="checkbox"/>
	SCHEDULED	ACTUAL	ORIGINAL EST.	CURRENT EST.	DATE:

Summary of Project Implementation

Phase II

- (e) To initiate cost-effective dissemination and training programs using the materials prepared by the project; these programs will be targeted to specific audiences such as development planning offices, educational institutions, water and sanitation agencies and project staff.
2. Work on the project began in March 1982 with a preparatory assistance phase. The project is executed by the World Bank, through the Applied Research and Technology Unit of the Water Supply and Urban Development Department. Core funding for the project has been provided by the Canadian International Development Agency (CIDA) through cost-sharing with UNDP. The World Bank, SDC, GTZ, FINNIDA, UNDHS, UNDP, the National Film Board of Canada, and UNICEF are participants in the project and provide additional funds and other contributions. Other agencies and bilaterals are considering their level of participation.
3. Through the end of this reporting period (June 1984), major activities have been completed.
- (a) Initial editing of Asia and Africa film footage and selection of contents of the three films and of sections of the films requiring animated film footage inputs has been made.
 - (b) Preparation of the drafts of 31 submodules (parts of modules) for the Technical Package has been completed. Of the remainder, 8 are close to completion.
 - (c) Prefield testing trials, preparation of questionnaires to be used in review, and field testing of the modules have been completed.
 - (d) Preparations for review and field testing in some areas have been finalised. Review and field testing activities in other areas have been completed.
 - (e) Distribution of the Project Preparation Handbook is continuing.
 - (f) Two visual modules for use with community workers and communities are ready for production in multiple copies.

NAME OF PROJECT MANAGER/EXPERT AND DATE

FORMS SUBMITTED (CHECK)

<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	<input type="checkbox"/> E-1	<input type="checkbox"/> E-2	<input type="checkbox"/> F	<input type="checkbox"/> G	<input type="checkbox"/> H	<input type="checkbox"/> I-1	<input type="checkbox"/> I-2
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General Account of Project Implementation

During this reporting period, several activities have been completed. Production/presentation of the training materials was slowed down due to budgetary restraints.

Training Materials1. Films (Decision and Technical Packages)

1.1 The NFB (National Film Board of Canada) is producing one 10-minute and three 30-minute films (and a descriptive brochure and booklet to accompany the films). The 10-minute film will present a broad overview of the current options for water supply and sanitation; it is intended for use with senior government officials as an introduction to technological alternatives. Each of the 30-minute films will describe various technological alternatives while emphasizing technical design and project implementation procedures. The films will cover the existing low-income community environments; existing water and sanitation services; consequences of existing practices; inappropriate conventional technologies; low-cost solutions; community participation; implementation; financing; maintenance; hygiene education; and benefits of low-cost water supply and sanitation approaches. They are intended for use at one-day seminars or as introductory material for training courses based on the slide-sound modules.

- (a) Film I - Theme: Between costly full-scale advanced sewerage and water delivery systems on the one hand and open defecation on the other lies a complete range of intermediate technologies. Each has its own service level, costs and benefits. Designers should consider all appropriate technologies and incorporate only those that are suitable and affordable.
- (b) Film II - Theme: Intermediate technologies are relevant, practical and have been successfully implemented in several developing countries.
- (c) Film III - Theme: Technological systems by themselves, no matter how "appropriate" in choice and design, are not enough. Other considerations, if ignored, could render the whole scheme inoperative.

1.2 Laboratory shots for Film 2 have been made (at an Institute of Parasitology in Montreal), the contents of the animation sequences identified, and drafts prepared.

2. The Decision Package slide sound show is being prepared in draft form.

General Account of Project Implementation3. Modules

3.1 The training modules (to date 18 are in preparation) are listed below. Work on the modules is proceeding satisfactorily. Each module is divided into one or more submodules. The tape and slide sound show of each submodule will be accompanied by an illustrated script of the slide show, and trainers' and participants' notes, the three form the training manual. (In some cases there will be only one set of trainers' and participants' notes for each complete module.)

Submodules

- 1 Trainer's Module
- 2a, b, c Introduction to Low-cost Water Supply and Sanitation
- 3a, b, c Diseases related to Water Supply and Sanitation
- 4 Institutional and Financial Aspects of Water Supply and Sanitation
 - a - Organization and Management
 - b - Financial Aspects
 - c - Human Resources Development
- 5 Sanitation I
 - a - VIP Latrines
 - b - Pour Flush Latrines
 - c - Compost Latrines, Buckets, Vaults
- 6 Sanitation II
 - a - Septic Tanks and Soakaways
 - b - Small Bore Sewer Systems
 - c - Conventional Sewerage
- 7 Sanitation III
 - a - Site Investigations
 - b - Water and Sanitation Interactions
 - c - Technology Selection

General Account of Project Implementation

- 8 Waste Treatment and Resource Recovery
- a - Conventional Treatment
 - b - Waste Stabilization Ponds
 - c - Resource Recovery:
(i) Aquaculture; (ii) Biogas; (iii) Compost
- 9a,b,c Rainwater Roof Catchment Systems
- 10a,b,c Wells and Handpumps
- 11a,b,c Gravity Fed Water Supply
- 12a,b,c Water Distribution Networks
- 13a,b Water Treatment
- 14 Water and Sanitation Technology Upgrading and Appraisal
- a - Upgrading
 - b - Value of Money
 - c - Economic Analysis
- 15a,b,c Health Information
- 16a,b,c Project Preparation and Implementation
- 17a,b,c User Participation Part I
- 18 User Participation Part II Case Studies
- a - Malawi
 - b - Guatemala
 - c - Punjab, Pakistan
 - d - Balochistan, Pakistan



General Account of Project Implementation

3.2 Several of the slide sound shows and training manuals have been drafted and others are nearing completion. The lists below provide a summary of the appropriate condition of each one. 29 submodules were available for review and field testing during this reporting period.

Submodule Drafts

Module Number	Show and training manual complete	Show Complete	Script Complete Slides Identified	To be Completed at a later date
1		a		
2		a,b,c		
3	a	b,c		
4			c	a,b
5	a,b,c			
6	a,b,c			
7	b,c			a
8	b,c			a
9	a,b,c			
10			a	b,c
11	a,b,c			
12			a	b,c
13			a	b
14			a,b,c	
15	a,b,c			
16		a	b,c	
17	a,b,c			
18	a,b,c,d			

3.3 A pre-field test trial was held at the University of Nova Scotia, Halifax, Canada in the first four months of the year. Submodules were used as a course in Appropriate Technology. The questionnaires for participants, technical reviewers and trainers were developed and finalized during this time with the help of staff and students. Extensive comments received from the trainers will be included with other field testing results later on in the year (Submodules were also tested at the University of Ottawa).

General Account of Project Implementation

3.4 The actual field testing program was started during this reporting period. The submodules are being field tested at the following places on the appropriate audiences:

Asian Institute of Technology, Bangkok, Thailand
I.P.H.E.R., Lahore, Pakistan
Institute of Technology, Bandung, Indonesia
African Medical Relief Foundation, Nairobi, Kenya
Blair Institute, Harare, Zimbabwe
University of Nancy, Nancy, France (French Testing)
Loughborough University, Loughborough, England
Bradford University, Bradford, England
IHE, Delft, Netherlands

(The European Institutions run courses for developing country students).

3.5 Technical review of the submodules is also being carried out at the following institutions by agency staff, trainers etc:

World Bank
UNDP/UNICEF
CIDA
EAWAG, Switzerland
GTZ, W. Germany
Ross Institute, LSHTM England
WHO, Geneva

3.6 The review and field testing results will all be considered in making the adaptations before final production of the submodules.

3.7 The submodules are also being translated into French and tested on students from francophone, Africa.

4. Distribution of the project preparation handbook Volume I--Guidelines (written by Brian Grover) Vols. II & III Case Studies (written by Brian Grover, Nicholas Burnett and Michael McGarry) is continuing.

5. User Participation Package

5.1 The User (Community) Participation Package will consist of the following:

- (a) guidelines on community participation, hygiene education
- (b) various communication tools, posters, slide sound shows
- (c) relevant modules from the technical package
- (d) two visual modules (a) sanitation and disease (b) construction of a VIP latrine
- (e) other communication and training materials.

PROJECT PROGRESS
REPORT

PROJECT NUMBER

INT/82/002

AGENCY

World Bank

REPORTING PERIOD

January-June
1984FORM B
GENERAL
ACCOUNTGeneral Account of Project Implementation

5.2 As an additional support to the project, the Bank engaged Collier Macmillan (Middlesex, England) to prepare a "Visual Learning System" comprised of "visual" two modules to encourage users to adopt appropriate sanitation technologies and practices. Module I deals with the relationship between health and poor sanitation practices. It focuses on transmission routes of some diseases and the methods of interrupting their transmission. Module II describes how to build a ventilated improved pit latrine (VIP) using different building materials and under different conditions. They will be a part of the user (community) participation package. They have been tested in East, West and Southern Africa, adapted, and are now ready for final production.

UNITED NATIONS DEVELOPMENT PROGRAMME



PROJECT PROGRESS
REPORT

PROJECT NUMBER
INT/82/002

AGENCY
World Bank

REPORTING PERIOD
January-June
1984

FORM C
PROJECT
ACTIVITIES

ACTIVITY NO	PROJECT ACTIVITY	ACTIVITY STARTED		ACTIVITY COMPLETED		MAJOR POSITIVE/NEGATIVE FACTORS AFFECTING RESULTS OF ACTIVITIES AND IMPLEMENTATION
		SCHED.	ACTUAL (EST.)	SCHED.	ACTUAL (EST.)	
	Issue consultants' contracts		9/82			New contracts being prepared as required.
	Agree with potential participating agencies about their inputs.		5/82			This is an ongoing process.
	Training module production		10/82	12/84		Timing depends on the availability of the various authors during the year.
	User (Community) Participation Package II, III	4/83		12/84		
	Internal/External Review	1/84		10/84		
	Pre-field test trials	2/84			4/84	
	Field Testing	5/84		10/84		
	Preparation for dissemination (Phase II)	4/84		4/85		
	Modifications	9/84		12/84		
	Training and dissemination Phase II	5/85				Extent of activity is subject to the availability of funds.



UNITED NATIONS DEVELOPMENT PROGRAMME

**FORM D
PROJECT
INPUTS**

**PROJECT PROGRESS
REPORT**

PROJECT NUMBER
INT/82/002

AGENCY
World Bank

REPORTING PERIOD
January-June
1984

UNDP/AGENCY INPUTS

	DURING PERIOD		CUMULATIVE ^{1/}	
	PLANNED	ACTUAL	PLANNED	ACTUAL
EXPERTS (Man-months)	6.6	6.6 ^{2/}	6.6	6.6
SUBCONTRACTS (\$US 000)	78.0	198.3 ^{3/4/}	574.0	616.3
EQUIPMENT REC'D (\$US 000)	0	0 ^{4/}	0	0
FELLOWSHIPS (Man-months)				

GOVERNMENT INPUTS

COUNTERPART STAFF (Man-months)				
SUPPORT STAFF (Man-months)				
EQUIPMENT REC'D (\$US 000)				
BUILDINGS, LAND (\$US 000)				
CASH SUPPORT (\$US 000)				
OTHER _____ (Specify)				

REMARKS:

- 1/ Total amount since project inception (includes only UNDP funding).
- 2/ Part of experts costs was paid from other sources.
- 3/ The difference was covered by another source of funding.
- 4/ Equipment was purchased for the project by the main contractor and is included under subcontracts.

UNITED NATIONS DEVELOPMENT PROGRAMME

PROJECT PROGRESS
REPORT

PROJECT NUMBER
INT/82/002

AGENCY
World Bank

REPORTING PERIOD
January-June
1984

FORM E-1
AGENCY
PERSONNEL

POST NO.	POST DESCRIPTION	NAME OF INCUMBENT (AND NATIONALITY)	ARRIVED (MO/YR)		DEPARTED (MO/YR)	
			SCHED.	ACTUAL (EST.)	SCHED.	ACTUAL (EST.)
	<u>Washington, D.C.</u>					
	- Project Manager	S. Arlosoroff (Israeli)	7/83		N/A	
	- Senior Adviser	J. Kalbermatten (U.S.)	3/82		N/A	
	- Project Officer	L.A. Obeng (Ghanaian)	9/82	10/82	N/A	
	<u>Consultants^{1/}</u>					
	- Cole & Company, Ltd.	M. McGarry (Canadian)		7/82	12/84	
		H. McPherson (Canadian)		7/82	12/84	
		M. Boudreault (Canadian)		7/82	1/83	
		L. Stewart (Canadian)		(2/83)	12/84	
	- R.L. Walker & Partners	B. Grover (Canadian)		2/83	9/84	
	- Economist	J. Majumdar (Indian)		11/82	4/83	
	- Audio-visual Expert	L. Mackenzie (Canadian)		5/83	12/84	
	- Economist	N. Burnett (British)			9/84	
	- VLS Module Development	Collier Macmillan, Ltd. (U.K.)		7/81	9/84	

1/ Scheduled departure dates reflect contracts in force during the reporting period; contracts are extended as necessary. Other consultants are funded by other projects.



UNITED NATIONS DEVELOPMENT PROGRAMME

PROJECT PROGRESS
REPORT

PROJECT NUMBER
INT/82/002

AGENCY
World Bank

REPORTING PERIOD
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1984

FORM G.
EQUIPMENT

EQUIPMENT	DELIVERY (MO/YR)		REMARKS
	SCHED.	ACTUAL (EST.)	
<ul style="list-style-type: none">- 2 Osborne microcomputers and monitors- Caramate cassette projector system- Light tables (2)- Tape recorder- 16mm movie projector- Production equipment- Wonderboard (White Board)- Cassette duping equipment			See Form D, footnote 4.

November 12, 1984

Ms. Sally Timpson
United Nations Development Program
Room FF 12108
One United Nations Plaza

New York, NY 10017

Re:INT/82/002 - Review and Field Testing Program for the Technical
Package modules

Dear Ms. Timpson:

Please find enclosed for your information the first field test and review report of INT/82/002. It contains a summary of a large number of comments and recommendations received from viewers and field test participants. In addition the report contains a summary of the changes that we are making to the modules tested. We will be testing other modules and the films in the next two months and we will produce a similar report for these.

We would be interested to receive any further comments which you have on this report and would like to express our appreciation and thanks for all your support in the past.

Yours Sincerely

S. Arlosoroff, Chief
Applied Research and Technology, WUD
(UNDP Projects Manager of
INT/081/026, GLO/80/004, INT/82/002)

Encl.

cc:Ms. M. Elmendorf
Ms. N. Yacob
LOBeng:hph

OFFICIAL FILE COPY

November 12, 1984

Mr. Martin Beyer
Advisor, Drinking Water Program
UNICEF, ROOM A-4594
866 U.N.Plaza

New York, NY 10017

Re:INT/82/002 - Review and Field Testing Program for the Technical
Package modules

Dear Mr. Beyer:

Please find enclosed for your information the first field test and review report of INT/82/002. It contains a summary of a large number of comments and recommendations received from viewers and field test participants. In addition the report contains a summary of the changes that we are making to the modules tested. We will be testing other modules and the films in the next two months and we will produce a similar report for these.

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Yours Sincerely

S. Arlosoroff, Chief
Applied Research and Technology, WUD
(UNDP Projects Manager of
INT/081/026, GLO/80/004, INT/82/002)

Encl.

LObeng:hph

OFFICIAL FILE COPY

November 12, 1984

Mr. M. Potashnik
United Nations Development
Program
One United Nations Plaza

New York, NY 10017

Re:INT/82/002 - Review and Field Testing Program for the Technical
Package modules

Dear Mr. Potashnik:

Please find enclosed for your information the first field test and review report of INT/82/002. It contains a summary of a large number of comments and recommendations received from viewers and field test participants. In addition the report contains a summary of the changes that we are making to the modules tested. We will be testing other modules and the films in the next two months and we will produce a similar report for these.

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Yours Sincerely

S. Arlosoroff, Chief
Applied Research and Technology, WUD
(UNDP Projects Manager of
INT/081/026, GLO/80/004, INT/82/002)

Encl.

LOBeng:hph

OFFICIAL FILE COPY

November 12, 1984

Mr. Walter Marshall
Canadian International Development Agency
200 Promenade du Portage
Hull, Quebec

CANADA KIA 064

Re:INT/82/002 - Review and Field Testing Program for the Technical
Package modules

Dear Mr. Marshall:

Please find enclosed for your information the first field test and review report of INT/82/002. It contains a summary of a large number of comments and recommendations received from viewers and field test participants. In addition the report contains a summary of the changes that we are making to the modules tested. We will be testing other modules and the films in the next two months and we will produce a similar report for these.

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Yours Sincerely

S. Arlosoroff, Chief
Applied Research and Technology, WUD
(UNDP Projects Manager of
INT/081/026, GLO/80/004, INT/82/002)

Encl.

LOBeng:hph

OFFICIAL FILE COPY

November 12, 1984

Mr. Paul A. Obrist
Swiss Development Cooperation
Directorate for Development
Cooperation
Federal Department of Foreign Affairs
CH-3003 Bern

SWITZERLAND

Re:INT/82/002 - Review and Field Testing Program for the Technical
Package modules

Dear Mr. Obrist:

Please find enclosed for your information the first field test and review report of INT/82/002. It contains a summary of a large number of comments and recommendations received from viewers and field test participants. In addition the report contains a summary of the changes that we are making to the modules tested. We will be testing other modules and the films in the next two months and we will produce a similar report for these.

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Yours Sincerely

S. Arlosoroff, Chief
Applied Research and Technology, WUD
(UNDP Projects Manager of
INT/81/026, GLO/80/004, INT/82/002)

Encl.

LObeng:hph

OFFICIAL FILE COPY

November 12, 1984

Mr. Raimo Antolla
FINNIDA
Tehtannkatu 1A 00140
Helsinki 14

FINLAND

Re:INT/82/002 - Review and Field Testing Program for the Technical
Package modules

Dear Mr. Antolla:

Please find enclosed for your information the first field test and review report of INT/82/002. It contains a summary of a large number of comments and recommendations received from viewers and field test participants. In addition the report contains a summary of the changes that we are making to the modules tested. We will be testing other modules and the films in the next two months and we will produce a similar report for these.

We would be interested to receive any further comments which you have on this report and would like to express our appreciation and thanks for all your support in the past.

Yours Sincerely

S. Arlosoroff, Chief
Applied Research and Technology, WUD
(UNDP Projects Manager of
INT/081/026, GLO/80/004, INT/82/002)

Encl.

LOBeng:hph

OFFICIAL FILE COPY

November 12, 1984

Dr. B.W. Lohani
Division of Environmental
Engineering
Asian Institute of Technology
P.O. Box 2754
Bangkok 10501

THAILAND

Re: INT/82/002 - Review and Field Testing Program for the Technical
Package Modules.

Dear Dr. Lohani:

Please find enclosed the first field test and review report of INT/82/002. It contains a summary of thousands of comments and recommendations received from reviewers and field test participants, and a summary of the changes that we are making to the modules tested. We will be testing other modules and the films in the next two months and we will produce a similar report for these. We would like to take this opportunity to thank you, the other AIT staff and students for your assistance and especially for the cooperation you gave Mr. John M. Kalbermatten and Dr. Michael McGarry during the exercise. We would be interested to hear any further comments which you may have on this report.

Yours Sincerely,

Saul Arlosoroff, Chief
Applied Research and Technology, WUD
(UNDP Projects Manager of
INT/81/026, GLO/80/004, INT/82/002)

LOBeng:hph

OFFICIAL FILE COPY

November 12, 1984

Dr. Benny Chatib
Head, Department of Sanitary
Engineering
Institute of Technology, Bandung
Jalan Cranesh 10
Bandung

INDONESIA

Re: INT/82/002 - Review and Field Testing Program for the Technical
Package Modules.

Dear Dr. Chatib:

Please find enclosed the first field test and review report of INT/82/002. It contains a summary of thousands of comments and recommendations received from reviewers and field test participants, and a summary of the changes that we are making to the modules tested. We will be testing other modules and the films in the next two months and we will produce a similar report for these. We would like to take this opportunity to thank you and your staff for your assistance and especially for the cooperation you gave Dr. Michael McGarry during the exercise. We look forward to receiving your comments and recommendations which will be included in the next report. We would be interested to hear any further comments which you may have on this report.

Yours Sincerely,

Saul Arlosoroff, Chief
Applied Research and Technology, WUD
(UNDP Projects Manager of
INT/81/026, GLO/80/004, INT/82/002)

LObeng:hph

OFFICIAL FILE COPY

November 12, 1984

Professor L.J. Mostertman
Director
International Institute for Hydraulic
and Environmental Engineering
Oude Delft 95
P.O Box 3015
2601 BA Delft

THE NETHERLANDS

Re: INT/82/002 - Review and Field Testing Program for the Technical
Package Modules.

Dear Professor Mostertman:

Please find enclosed the first field test and review report of INT/82/002. It contains a summary of thousands of comments and recommendations received from reviewers and field test participants, and a summary of the changes that we are making to the modules tested. We will be testing other modules and the films in the next two months and we will produce a similar report for these. We would like to take this opportunity to thank you and your staff for the cooperation you gave Ms. Letitia Obeng during her visits. We look forward to receiving your comments and recommendations which will be included in the next report. We would be interested to hear any further comments which you may have on this report.

Yours Sincerely,

Saul Arlosoroff, Chief
Applied Research and Technology, WUD
(UNDP Projects Manager of
INT/81/026, GLD/80/004, INT/82/002)

LObeng:hph

OFFICIAL FILE COPY

November 12, 1984

Mr. R. Schertenleib
Head
IRCWD
Ueberlandstrasse 133
CH-8600 Dübendorf

SWITZERLAND

Re: INT/82/002 - Review and Field Testing Program for the Technical
Package Modules.

Dear Mr. Schertenleib:

Please find enclosed the first field test and review report of INT/82/002. It contains a summary of thousands of comments and recommendations received from reviewers and field test participants, and a summary of the changes that we are making to the modules tested. We will be testing other modules and the films in the next two months and we will produce a similar report for these. We would like to take this opportunity to thank you and your staff for your assistance and especially for the cooperation you gave Mr. John M. Kalbermatten and Ms. Letitia Obeng during the exercise. We would be interested to hear any further comments which you may have on this report.

Yours Sincerely,

Saul Arlosoroff, Chief
Applied Research and Technology, WUD
(UNDP Projects Manager of
INT/81/026, GLO/80/004, INT/82/002)

LObeng:hph

Encl.

OFFICIAL FILE COPY

November 12, 1984

Dr. M. Greenacre
African Medical and Research
Foundation
Wilson Airport
P.O. Box 30125
Nairobi

KENYA

Re: INT/82/002 - Review and Field Testing Program for the Technical
Package Modules.

Dear Dr. Greenacre:

Please find enclosed the first field test and review report of INT/82/002. It contains a summary of thousands of comments and recommendations received from reviewers and field test participants, and a summary of the changes that we are making to the modules tested. We will be testing other modules and the films in the next two months and we will produce a similar report for these. We would like to take this opportunity to thank you and your colleagues for your assistance and especially for the cooperation you gave Dr. Harold McPherson during the exercise. We would be interested to hear any further comments which you may have on this report.

Yours Sincerely,

Saul Arlosoroff, Chief
Applied Research and Technology, WUD
(UNDP Projects Manager of
INT/81/026, GLO/80/004, INT/82/002)

LObeng:hph

Encl.

OFFICIAL FILE COPY

November 12, 1984

Mr. Peter Morgan
Ministry of Health
Blair Research Laboratory
P.O. Box 8105
Causeway
Harare

ZIMBABWE

Re: INT/82/002 - Review and Field Testing Program for the Technical
Package Modules.

Dear Mr. Morgan:

Please find enclosed the first field test and review report of INT/82/002. It contains a summary of thousands of comments and recommendations received from reviewers and field test participants, and a summary of the changes that we are making to the modules tested. We will be testing other modules and the films in the next two months and we will produce a similar report for these. We would like to take this opportunity to thank you for your assistance and especially for the cooperation you gave Dr. Harold MacPherson during the exercise. We look forward to receiving your comments and recommendations which will be included in the next report. We would be interested to hear any further comments which you may have on this report.

Yours Sincerely,

Saul Arlosoroff, Chief
Applied Research and Technology, WUD
(UNDP Projects Manager of
INT/81/026, GLO/80/004, INT/82/002)

LObeng:hph

Encl.

OFFICIAL FILE COPY

November 12, 1984

Dr. John Hubley
Leeds Polytechnic
Health Education Unit
Leeds, LS2 9JT
Yorkshire

ENGLAND

Re: INT/82/002 - Review and Field Testing Program for the Technical
Package Modules.

Dear Dr. Hubley:

Please find enclosed the first field test and review report of INT/82/002. It contains a summary of thousands of comments and recommendations received from reviewers and field test participants, and a summary of the changes that we are making to the modules tested. We will be testing other modules and the films in the next two months and we will produce a similar report for these. We would like to take this opportunity to thank you and your students for your assistance and especially for the cooperation you gave Ms. Letitia Obeng during the exercise. We would be interested to hear any further comments which you may have on this report.

Yours Sincerely,

Saul Arlosoroff, Chief
Applied Research and Technology, WUD
(UNDP Projects Manager of
INT/81/026, GLO/80/004, INT/82/002)

LObeng:hph

Encl.

OFFICIAL FILE COPY

November 12, 1984

Professor John Pickford
University of Technology
Department of Civil Engineering
Loughborough, Leicestershire
LE 11 3TU

ENGLAND

Re: INT/82/002 - Review and Field Testing Program for the Technical
Package Modules.

Dear Professor Pickford:

Please find enclosed the first field test and review report of INT/82/002. It contains a summary of thousands of comments and recommendations received from reviewers and field test participants, and a summary of the changes that we are making to the modules tested. We will be testing other modules and the films in the next two months and we will produce a similar report for these. We would like to take this opportunity to thank you, your staff and students for your assistance and especially for the cooperation you gave Dr. Harold McPherson and Ms. Letitia Obeng during the exercise. We would be interested to hear any further comments which you may have on this report.

Yours Sincerely,

Saul Arlosoroff, Chief
Applied Research and Technology, WUD
(UNDP Projects Manager of
INT/81/026, GLO/80/004, INT/82/002)

LObeng:hph

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November 12, 1984

Dr. Richard Feachem
Department of Tropical Hygiene
(The Ross Institute)
London School of Hygiene and
Tropical Medicine
Keppal Street
London West 1

ENGLAND

Re: INT/82/002 - Review and Field Testing Program for the Technical
Package Modules.

Dear Dr. Feachem:

Please find enclosed the first field test and review report of INT/82/002. It contains a summary of thousands of comments and recommendations received from reviewers and field test participants, and a summary of the changes that we are making to the modules tested. We will be testing other modules and the films in the next two months and we will produce a similar report for these. We would like to take this opportunity to thank you, Dr. Blum, other staff and students for your assistance and especially for the cooperation you gave Ms. Leticia Obeng during the exercise. We would be interested to hear any further comments which you may have on this report.

Yours Sincerely,

Saul Arlosoroff, Chief
Applied Research and Technology, WUD
(UNDP Projects Manager of
INT/81/026, GL0/80/004, INT/82/002)

LObeng:hph

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November 12, 1984

Professor Nawaz Tariq,
Director and Professor of Public
Health Engineering
Institute of Public Health, Engineering
and Research
University of Engineering
& Technology
Lahore 31

PAKISTAN

Re: INT/82/002 - Review and Field Testing Program for the Technical
Package Modules.

Dear Professor Tariq:

Please find enclosed the first field test and review report of INT/82/002. It contains a summary of thousands of comments and recommendations received from reviewers and field test participants, and a summary of the changes that we are making to the modules tested. We will be testing other modules and the films in the next two months and we will produce a similar report for these. We would like to take this opportunity to thank you, your staff and students for your assistance and especially for the cooperation you gave Dr. Michael McGarry during the exercise. We would be interested to hear any further comments which you may have on this report.

Yours Sincerely,

Saul Arlosoroff, Chief
Applied Research and Technology, WUD
(UNDP Projects Manager of
INT/81/026, GLO/80/004, INT/82/002)

LObeng:hph

Encl.

November 12, 1984

Mr. J. Carney
UNCHS
P.O. Box 30030
Nairobi

KENYA

Re:INT/82/002 - Review and Field Testing Program for the Technical
Package modules

Dear Mr. Carney:

Please find enclosed for your information the first field test and review report of INT/82/002. It contains a summary of a large number of comments and recommendations received from viewers and field test participants. In addition the report contains a summary of the changes that we are making to the modules tested. We will be testing other modules and the films in the next two months and we will produce a similar report for these.

We would be interested to receive any further comments which you have on this report and would like to express our appreciation and thanks for all your support in the past.

Yours Sincerely

S. Arlosoroff, Chief
Applied Research and Technology, WUD
(UNDP Projects Manager of
INT/081/026, GLO/80/004, INT/82/002)

Encl.

L0beng:hph

OFFICIAL FILE COPY

November 12, 1984

Mr. Jyoti Majumdar
Project Planning Centre for
Developing Countries
University of Bradford
Bradford, West Yorkshire
BD7 1DP

ENGLAND

Re: INT/82/002 - Review and Field Testing Program for the Technical
Package Modules.

Dear Mr. Majumdar:

Please find enclosed the first field test and review report of INT/82/002. It contains a summary of thousands of comments and recommendations received from reviewers and field test participants, and a summary of the changes that we are making to the modules tested. We will be testing other modules and the films in the next two months and we will produce a similar report for these. We would like to take this opportunity to thank you, Simon Watt and your diploma students for your assistance and especially for the cooperation you gave Dr. Harold McPherson and Ms. Letitia Obeng during the exercise. We look forward to receiving your comments and recommendations which will be included in the next report. We would be interested to hear any further comments which you may have on this report.

Yours Sincerely,

Saul Arlosoroff, Chief
Applied Research and Technology, WUD
(UNDP Projects Manager of
INT/81/026, GLO/80/004, INT/82/002)

LObeng:hph

Encl.

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November 12, 1984

Dr. B.M. Dietrich,
Director
Division of Environmental
Health
World Health Organization
20 Ave Appia
122 Geneva 17

SWITZERLAND

Re: INT/82/002 - Review and Field Testing Program for the Technical
Package modules

Dear Dr. Dietrich:

Please find enclosed for your information the first field test and review report of INT/82/002. It contains a summary of a large number of comments and recommendations received from viewers and field test participants. In addition the report contains a summary of the changes that we are making to the modules tested. We will be testing other modules and the films in the next two months and we will produce a similar report for these.

We would like to thank you and your staff for the comments you gave us in June. We would be interested to receive any further comments which you may have with respect to this report.

Yours Sincerely

S. Arlosoroff, Chief
Applied Research and Technology, WUD
(UNDP Projects Manager of
INT/081/026, GLO/80/004, INT/82/002)

Encl.

LOBeng:hph

OFFICIAL FILE COPY

November 12, 1984

Mr. Klaus Kresse
Gesellschaft für Technische
Zusammenarbeit
D 6236
Echborn 1 beim Frankfurt
am Main
Postfach 5180

Federal Republic of Germany

Re:INT/82/002 - Review and Field Testing Program for the Technical
Package modules

Dear Mr. Kresse:

Please find enclosed for your information the first field test and review report of INT/82/002. It contains a summary of a large number of comments and recommendations received from viewers and field test participants. In addition the report contains a summary of the changes that we are making to the modules tested. We will be testing other modules and the films in the next two months and we will produce a similar report for these.

We would be interested to receive any further comments which you have on this report and would like to express our appreciation and thanks for all your support in the past.

Yours Sincerely

S. Arlosoroff, Chief
Applied Research and Technology, WUD
(UNDP Projects Manager of
INT/81/026, GLO/80/004, INT/82/002)

Encl.

LOBeng:hph

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November 12, 1984

Professor Duncan Mara
Dept. of Civil Engineering
Leeds University
Leeds, LS2 9JT
Yorkshire

ENGLAND

Re:INT/82/002 - Review and Field Testing Program for the Technical
Package modules

Dear Professor Mara:

Please find enclosed for your information the first field test and review report of INT/82/002. It contains a summary of a large number of comments and recommendations received from viewers and field test participants. In addition the report contains a summary of the changes that we are making to the modules tested. We will be testing other modules and the films in the next two months and we will produce a similar report for these.

We would be interested to receive any further comments which you have on this report and would like to express our appreciation and thanks for all your support and assistance in the preparation of the materials.

Yours Sincerely

S. Arlosoroff, Chief
Applied Research and Technology, WUD
(UNDP Projects Manager of
INT/081/026, GLO/80/004, INT/82/002)

Encl.

LOBeng:hph

OFFICIAL FILE COPY

November 12, 1984

Ms. Letitia Obeng, Project Officer

S. Arlosoroff, Chief, Applied Research and Technology, WUD

61468

Terms of Reference : Adaptation/Editorial Meeting on INT/82/002 Modules.

You will accompany Mr. Kalbermatten to an Adaptation/Editorial Meeting in Ottawa from December 3-7. During the meeting, the following activities will be carried out:

- a) Final review of adapted materials.
- b) Detailed review of materials currently being finalised for review and field testing.

cc: Messrs. N. Cohen, R. Middleton, A. Hauer, J. M. Kalbermatten (WUD)
M. McGarry (Cowater International)

LObeng:hph

October 23, 1984

Ms. Elizabeth MacKenzie, Cowater International.

S. Arlosoroff, Chief, WUDAT.

61790

Terms of Reference - Collection of Slides in Switzerland and England and identification of possible partner audiovisual producers and publishers for the reproduction of INT/82/002 materials in England.

Between November 3 and November 18, 1984 you will travel to Switzerland and England where you will visit WHO, Helvetas and other agencies to identify and collect slides for use in the INT/82/002 slide sound shows. In addition, in England you will identify audiovisual producers and publishers who may be able to reproduce the training materials in England.

Your fees will be paid for 10 working days and we will pay your subsistence for the period of travel.

You will send me a back to office report of your findings within 2 weeks of your return to Ottawa.

cc: Messrs. M. Cohen, R. Middleton, A. Hamer, M. Kalbermatten, Ms. L. Obeng.

LObeng:hph

OFFICE MEMORANDUM

yellow

INT/82/002

DATE October 11, 1984

TO Dr. Mike McGarry, Consultant

FROM G. Tschanerl, Acting Chief, WUDAT

EXTENSION 61785

SUBJECT Production of INT/82/002 Materials - September-December 1984.

Thank you for your proposed work program for September-December 1984.

We agree that by the end of December you would have completed the following activities :

- held the audio visual panel meeting in Ottawa involving audio visual specialists resulting in specific recommendations on improving the slide sound presentation and training manual format.
- held the technical panel meeting in Calgary reviewing the technical content of the modules and making recommendations based on the field test results and audio visual panel meeting conclusions.
- analyzed data from the field tests and prepared a report making specific recommendations on how the training modules should be adapted.
- completed the adaptation and improvement of training modules 1, 2abc, 3a, 5abc, 6abc, 8bc, 9abc, 11abc, 15abc, 17abc, 18abcd according to guidelines given at the Calgary technical panel meeting. (These will be in storyboard format).
- reviewed the extensive Helvetas slide collection in Switzerland and have them copied for the project.
- identified potential resources in the U.K. for slides production/reproduction and for narration of the slide sound shows.
- monitored films preparation in Montreal.
- completed the slide sound show and manual for 10c (handpumps) training module provided that necessary inputs are available from the World Bank.
- held an editorial panel meeting in Ottawa during December to finally review changes on submodules which have been field tested and revised.
- completed production of drafts of 3bc, 4ab, 7bc, 10ab, 14bc, 16abc for field testing and review (training manuals of 1, 2abc will also be reviewed and field tested)
- analyzed data from WEDC/UK field testing and Washington review of 3bc, 4ab, 7bc, 10ab, 14bc, and 16abc as well as the instructors training

manual provided that the necessary inputs from WEDC/UK and reviewers are available. (These materials may be reviewed and field tested in places other than WEDC and the Bank).

- sent to Washington for final approval storyboard and training manual for 11ab, 8b, 18a, 8c, 18b, 18c, 9a, 3a, 18d, 9b, (October 31), 17a, 17b, 9c, 17c, 6a, 15a, 6c, 15b, 15c, 5a, 5b, 2a, 2b, 2c, 5c, 1, 6b (November 30).

Submodules 3bc, 4ab, 7bc, 10abc, 14bc, 16abc will be adapted and finalized after field testing and review results have been received and analyzed and then sent to Washington for final approval.

Other submodules, 4c, 7a, 8a, 13ab, 12abc and the following will be completed, when expected funds become available :

- 1- the Guidelines for Community Participation comprising reviews of case studies and guidelines for project managers.
- 2- Guidelines on communication materials focussing on preparation of community level slide sound shows and including instructions on how to prepare slide sound shows for the community and specific examples.

cc: Messrs. M. Cohen, R. Middleton, A. Hamer, J.M. Kalbermatten,
Ms. L. Obeng

LObeng:hp

INT/82/002

October 3, 1984

Mr. T. Gobena, PMDSD

Mr. S. Arloscoff, Chief, WUDAT

61790

Amendment of Contract : Cole and Company, UNDP Project INT/82/002

Would you please amend the letter of appointment of August 24, 1984, to Dr. Michael McGarry of Cole and Company. The contract should be with Cowater International, 135875, Canada Ltd., rather than with Cole and Company. The amended letter should be sent to Dr. M. McGarry at the same address. Other terms and conditions should also remain the same.

cc:B.Gross, Carmen Del Castillo, L.Obeng

LObeng:hp

OFFICIAL FILE COPY

THE WORLD BANK / INTERNATIONAL FINANCE CORPORATION
OFFICE MEMORANDUM

INT/82/002

DATE August 24, 1984

TO Mr. H. McPherson (Consultant)

for FROM *[Signature]*
S. Arlosoroff, Chief, WUDAT

EXTENSION 61790

SUBJECT Terms of Reference - Technical Support to the
National Film Board of Canada (NFB)
- INT/82/002

You will make two trips to Montreal to provide technical support to the NFB as they complete the preparation of the INT/82/002 films for review and field testing. Each trip will last five working days. The first one will be between September 27 and October 15, and the second between October 29 and November. You will arrange suitable times within these two periods with the NFB. You will write a brief progress report on your return to Edmonton.

LO:bw

cc: Messrs. M. Cohen, R. Middleton, G. Beier, J. Kalbermatten
M. McGarry (Consultant, Cole and Company)
Ms. L. Obeng

WORLD BANK OUTGOING MESSAGE FORM Cable, Telex

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CATALYTIC INFLUENCE IN MANY COUNTRIES. TERTIO: OF 13 WATER SUPPLY AND SANITATION BANK-FINANCED PROJECTS APPROVED BY THE BOARD IN FY84 10 INCLUDED TRAINING COMPONENTS. OMISSION OF TRAINING COMPONENT INVARIABLY REFLECTS: AAA: BORROWER IS SELF-RELIANT FOR TRAINING. BBB: SECTOR TRAINING SUPPORT BEING ADEQUATELY PROVIDED BY OTHER DONOR AGENCY. CCC: PROJECT IS FOR PREINVESTMENT STUDIES. QUARTO: AN IMPORTANT TREND IS THAT BANK-FINANCED TRAINING COMPONENTS ARE INCREASINGLY SECTOR-RELATED. EXAMPLES AVAILABLE. QUINTO: BANK INITIATIVES ARE FOCUSING ON INCREASING THE AVAILABILITY OF LOCAL BROAD-BASED DIPLOMA PROGRAMS TO PRODUCE WATER RESOURCES TECHNICIANS. REGIONAL PROGRAMS ARE ESPECIALLY NEEDED TO MEET AGGREGATED DEMAND OF SMALL COUNTRY WATER SECTORS. SEXTO: CENTRAL TRAINING UNIT MAKING GOOD PROGRESS IN ESTABLISHING COMPUTERIZED PRT DATA BASE FOR SYSTEMATIC MONITORING. ALL LENDING SECTORS TO BE COVERED. TRAINING DATA FOR WATER PROJECTS NOW READY FOR STORAGE. SEPTIMO: BANK IS IN PROCESS OF ESTABLISHING REGIONAL TRAINING UNITS (RTU) (AT HEADQUARTERS) TO SUPPLEMENT WORK AND RESOURCES OF CENTRAL TRAINING UNIT. ADDITIONAL TRAINING SPECIALIST SUPPORT FROM RTU TO WATER SUPPLY PROJECTS BEGAN IN FY84. OCTAVO: UNDERSTAND YOU HAVE RECEIVED FROM JOHN KALBERMATTEN PROGRESS

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CLEARANCES AND COPY DISTRIBUTION:			AUTHORIZED BY (Name and Signature):		
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WORLD BANK OUTGOING MESSAGE FORM Cable, Telex

URGENT—PLEASE READ INSTRUCTIONS BELOW BEFORE TYPING FORM

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REPORT ON NETWORK OF TRAINING AND ADVISORY CENTERS FOR LOW COST
WATER SUPPLY AND SANITATION (PROJECT INT/82/002). NOVENO: IN FY84
EDI WATER SECTOR PROGRAM FOCUSING ON TRAINING OF TRAINERS WAS
PROVIDED TO MEXICO, SENEGAL, PERU, PANAMA, ETHIOPIA, INDONESIA AND
PHILIPPINES. BEST REGARDS, BARKER, EDUCATION AND TRAINING
DEPARTMENT, INTBAFRAD.

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CLASS OF SERVICE: Telex		TELEX NO.: 27821 OMS	DATE: 8/23/84
SUBJECT: DECADE STEERING COMMITTEE		DRAFTED BY: HWBarker/mbs	EXTENSION: 61638
CLEARANCES AND COPY DISTRIBUTION: cc: Messrs. Cohen, Kalbermatten(WUD) Core Group Members		AUTHORIZED BY (Name and Signature): H.W. BARKER, Sr. Training Specialist	DEPARTMENT: EDTPT
SECTION BELOW FOR USE OF CABLE SECTION			
CHECKED FOR DISPATCH			

INT/82/002

Mr. Saul Arlosoroff, Chief, WUDAT

August 17, 1984

Richard H. Middleton, Project Manager, WUDWS

Review of Canadian National Film Board film

In today's WUD Managers' Meeting, Mr. Churchill expressed a concern that the film being prepared on behalf of INT/82/002 might not be entirely consistent with the policy directions being developed through the Rural Water Supply and Sanitation Task Force. He therefore asked me to request you to discuss with him arrangements for a review meeting, probably to be held in the Bank in early September; I should be grateful if you would follow this up on your return.

cc: Messrs. Churchill, Cohen, Kalbersatten, Gunnerson, Ms. Obeng

RHMiddleton:wrw

INT/82/002

8/10/84

Back to office
report

THE WORLD BANK INTERNATIONAL FINANCE CORPORATION
OFFICE MEMORANDUM

yellow

DATE August 16, 1984
TO Shaul Arlosoroff, Chief, WUDAT
FROM Letitia Obeng, WUDAT
EXTENSION 61468
SUBJECT Back-to-Office Report: Review and field testing mission to Europe -
INT/82/002

In accordance with my original terms of reference and subsequent instructions, I carried out the following activities between May 1-June 13:

- (A) Accompanied Mr. Kalbermatten to meetings/discussions on the Network of Centres
- (B) Attended review meetings/field testing sessions at
 - (1) Leeds University, UK
 - (2) Leeds Polytechnic, UK
 - (3) Bradford University, UK
 - (4) Loughborough University, UK
 - (5) London School of Hygiene and Tropical Medicine (LSHTM), UK
 - (6) IRCWD in Zurich, Switzerland
 - (7) GTZ in Frankfurt, West Germany
 - (8) IHE in Delft, The Netherlands
 - (9) WHO in Geneva, Switzerland

Detailed comments and completed questionnaires received from reviewers and field test participants are being analyzed. Lists of individuals involved in review and testing are included in Annex I.

Summary

A series of intensive review/field testing meetings/discussions were held at different research and training institutions in May and June 1984. Questionnaires were completed by engineering students, health workers, engineers, medical personnel, social scientists trainers, etc. Their additional comments, suggestions, and criticisms were all noted down for consideration during finalization of the submodules. There was a lot of encouraging enthusiasm from potential users in developing countries who are

awaiting the final production of the materials so that they can use them. Examples of the questionnaires are included in Annex II.

(A) I accompanied Mr. Kalbermatten to the following meetings with: Mr. Grieveson (and colleague) of ODA in London; Mr. Maizarac, Mr. Blom and other staff from the Ministry of Foreign Affairs in the Hague; staff of IRC, The Hague; staff of KFW, BMZ and GTZ in Frankfurt. Mr. Kalbermatten has reported fully on these meetings so I will confine my report to the activities listed under (B). I also accompanied Mr. Kalbermatten to meetings with staff and students of Loughborough University's MSc, Diploma courses on Water and Wastes Engineering for Developing Countries run by the WDC Group (Dept. of Civil Engineering), and with Diploma students on a special course for senior Indian engineers at Bradford, University. Staff and students showed an interest in the idea of a Network and were also keen to discuss the Decade and the Bank's work in the sector. They had previously undertaken to review (test) the training modules. Students acknowledged the need for the training materials but expressed concern on the availability of the materials to them when they returned home. Some saw the idea of the Network as a useful means of making and keeping the materials available.

(1) Leeds University

I met with Professor Duncan Mara, Jeff Broome and some research students (both male and female) at Leeds University to give them an opportunity to review slide sound shows which they had not yet seen. Review questionnaires were completed. In general the drafts had a reasonable review although some concern was expressed about the tone of Module 2; it was thought to be slightly condescending. Other comments were aimed at improving the quality of the slide shows both visually as well as technically.

(2) Leeds Polytechnic

I met with the director, staff and students of a Diploma course on Health Education in Developing Countries. The students (both male and female) with a few exceptions were from West and Central Africa, and were not engineers. They were mainly Ministry of Health staff, or staff from other health oriented agencies. I showed them two slide sound shows on hygiene education 15a, 15c. Their response to the shows was very encouraging. They felt that the shows would be very useful in their work. (Some of them are going to be training other health education workers when they return to their countries). Their major area of concern was not with the materials or their content but with how they would have access to the materials. I later reviewed 15b with Dr. John Hubley and he provided some helpful comments for improving it (this submodule deals with ways of finding out about the community). He has an extensive slide collection covering water and health which might be of use to us in finalizing the slide sound shows.

(3) Bradford University

The Diploma course in Bradford for the senior Indian Engineers (males) is being conducted by Dr. Majumdar. This course is part of our field

test. I lectured this class using two of the slide sound shows (3. on disease description and 15a on hygiene education). The lecture covered aspects of 3b, 3c, 15b,c as well in order to give a full overview of the subjects. The engineers in general showed an interest in discussing disease transmission and control. They were, however, divided in their views on the importance of hygiene education in their projects. This resulted in a lively discussion between the 'field' engineers and 'ministry' engineers, with the former insisting that "technology is not enough". (This is the main message in 15a). Questionnaires which were completed at this time were added to the rest.

(4) Loughborough University

The Loughborough University WEDC group was also a part of our field test activities. The MSc students (male and female) viewed and discussed 25 submodules and the Diploma class (male and female) viewed and discussed 4. The training manuals were not fully used by the participants, i.e. questions (and worked examples) were not actually answered but their relevance discussed and commented on. I was available for questions and discussions during the review and testing period. I had many useful and encouraging discussions with students who wanted the materials for use in their own activities. Their comments on the modules were again highly constructive. They have been included with the other comments for analysis. I also spent time with each trainer discussing the modules. They have now reviewed modules (slide sound shows and training manuals) from the trainers' standpoint and their comments will be very useful in making the final changes to the modules. They are also prepared to review/test films and modules which are now being completed.

(5) Department of Tropical Medicine, LSHTM

Staff and students (male and female) of the Department of Tropical Hygiene (L.S.H.T.M.) reviewed two submodules 17a, 15a. 15A received a better response than 17a. They provided very useful comments based on their experiences working with communities in the health sector. Subsequent discussions which I had with individual staff members and students also proved very useful. We discussed the use of the materials and the network concept. Questionnaires were completed by this group and their additional comments noted down for consideration.

(6) IRCWD Zurich

A two day review meeting was held at the International Reference Centre for Waste Disposal (IRCWD). The list of Swiss organizations represented is given in Annex I. Questionnaires were completed after the reviewers saw the shows and specific comments on each one were noted down. Here, too, the comments were very constructive and helpful. Eleven submodules were reviewed during the two days. Reviewers will forward additional comments to us.

(7) GTZ Frankfurt

Mr. Kalbermatten and I met with a small group of people from GTZ and a few slide sound shows were reviewed. One outcome of the meeting is that

GTZ is going to use some of the submodules (15a, b, c, 5a, b) in one of their projects in Sri Lanka and provide us with some feedback on the use of the materials.

(8) IHE Delft

Meetings with the Director and staff of the International Institute for Hydraulic and Environmental Engineering resulted in a decision to use the materials next academic year (it was too late for this year) and to review modules which are still being prepared. In addition, we will send them the draft films for their comments.

(9) WHO Geneva

During the course of my mission, I was instructed to make a presentation at WHO. This meeting was organized by Mr. Gibson of the Environmental Health Group. He invited several colleagues to attend the meeting. Their completed questionnaires and other comments have been added to the rest for analysis.

I listed detailed comments (other than those on the questionnaires) on each submodule during all the meetings/discussions. The majority of the comments were on the slide sound shows and not on the training manuals. All the comments have been added to the numerous others to be considered in making the final revisions/adaptations of the modules. Modules sometimes received a good review from one group and a poor one from another usually for reasons of style and presentation although content was the reason in one or two cases. Modules 5c (Compost Latrines, Buckets and Vaults) and 6b (Small Bore Sewers) raised the greatest amount of concern mainly because it was felt that the messages they were presenting were inappropriate; 5c - The description of bucket latrines and their application and improvement and 6b, the "commercial" presentation of small bore sewers as having few disadvantages. A report is being prepared to document and summarize proposed changes for each submodule.

My final comments pertain to general reactions to the modules as a whole. The review and testing programme in Europe was very successful. We received numerous comments, not all complementary, but mostly constructive which will help in improving the quality of the materials being produced. If there had been little or no interest we would not have received the comments to help us improve the materials to fit the needs of the users. Many potential users were enthusiastic about the materials and their potential for helping to improve water supply and sanitation especially in the Decade and beyond. They saw the slide sound shows as a useful tool because they could easily be adapted to present local messages and meet local needs.

cc: Messrs. M.Cohen, R. Middleton, G. Beier, J.M. Kalbermatten,
M. McGarry

Annex I

Submodules were reviewed/tested in the following places (names and addresses of students not included):

Loughborough University

Loughborough, England
submodules were reviewed by the
lecturers

- (1) lectures WEDC (Civil all Engineering Dept.
- (2) 30 students MSc
- (3) 17 students Diploma (1)

Leeds University

Leeds, England

- (1) Professor D. Mara
- (2) J. Broome
- (3) research students

Leeds Polytechnic

Leeds, England

- (1) Dr. Hubley, Course Director, Health Education
- (2) 14 Diploma students

Institute Hydraulic Engineering

Delft, Holland

- (1) Professor Mostertman
- (2) Dr. W. Grijm
- (3) Dr. PJH Post

GTZ, Frankfurt, W.Germany

- (1) Mr. Eilers
- (2) Mr. Kresse
- (3) Mr. Schroter
- (4) Mr. Habermann

Dept. Tropical Hygienic (Ross)

London Institute

- (1) Staff (2) over 25 students MSc/Diploma

Bradford University

- (1) Staff (2) 21 Diploma students

IRCWD/EAWAG Zunch, Switzerland

28 5 84

Name

Organization

1. Martin Strauss	IRCWD
2. Martin Wegelin	IRCWD
3. Armon Hartmann	SDC, Berne
4. Daniel Gubler	Ex HELVETAS; Private Consultant
5. Karl Wehrle	SKAT, Swiss Centre for Apptech.
6. Hugo Luchinger	HELVETAS
7. Hanspeter Banziger	ex. Helvetas; consultant
8. Jean Pierre Wolf	KEK/CDC - Communications Development Center - Zurich
9. Ruedi Seeberger	KODIS, Winterthur
10. Stefan Wunderlin	Teacher (prepared slide shows for ILQ)
11. Andrew Basch	IRCWD
12. R. Sche?	IRCWD
13. Konrad Eichenberger	ex SDC, Berne
14. Krayenbuhl Laurent	Teacher
15. Howard Gibson	IGE, EPFL, 1015 Lausanne (Tech. Univ.)
16. Other IRCWD Staff	

WHO - Geneva, Switzerland

1. Peter Koenig
2. Bob Novick
3. Ulrike Goertz
4. Mike Acheson
5. Dick Ballance
6. Gunnar Schultzberg
7. Martin Jackson
8. Brian Appleton
9. Ingma Ahmer
10. Howard Gibson
11. Dr. Dietrich

ANNEX 11
FIELD TESTING FORMS

- A. PARTICIPANTS' BACKGROUND (1 page)
- B. PARTICIPANTS' QUESTIONNAIRE (2 pages)
- C. INSTRUCTORS' AND REVIEWERS ASSESSMENT (3 pages)
- D. INSTRUCTORS' ASSESSMENT (1 page)

Forms A, B is for all those who view the slide sound show and/or read the training manual.

Form C is for instructors and those who review the material from a technical and training point of view

Form D is for instructors who use the material for training purposes and wish to comment from a training perspective.

A.PARTICIPANT'S BACKGROUND

DATE

MALE ... FEMALE

NATIONALITY

PROFESSION

YEARS OF PROFESSIONAL EXPERIENCE

EDUCATION (please circle appropriate answers)

Primary School

Secondary School

Technical College

University Graduate

Post Graduate - Masters
- Doctorate

Other

FOR STUDENTS - DEGREE SOUGHT.....

- COURSE TITLE

DEVELOPING COUNTRY EXPERIENCE (Please describe)

B. PARTICIPANTS' QUESTIONNAIRE

You are asked to complete the following statements by circling the appropriate word

Slide Sound Show

1. The slide sound show is: very good good fair poor very poor
2. The slide sound show is: very stimulating stimulating fair boring very boring
3. Generally the slides are: excellent very good good fair poor
4. The graphics in the slides are: very clear clear understandable confusing very confusing
5. The narrated sound track is: too fast fast just right slow very slow
6. The voice is: easily understood understandable just understandable difficult to understand incomprehensible
7. The material is presented: too quickly quickly just right slowly too slowly
8. Understanding the content is: very easy easy not difficult difficult impossible
9. The material presented in the slide sound show was: too complicated complicated just right simple over-simplified
10. Please list the main messages presented in the slide sound show in the space below

The main message was to make the maximum use of rain in a proper way. Of course this applies to places where the groundwater quantity or quality is poor.

11. Please list other messages which you would like to have included.

II Discussion Session

12. The issues discussed were: very relevant relevant somewhat relevant not relevant totally irrelevant

Training Manual - Participants' Notes

13. How much of the Participants' notes have you read none some half most all

14. The supporting text is: very useful useful somewhat useful useless totally useless

15. The content of the supporting text is: very stimulating stimulating fair boring very boring

16. The supporting text is: too complicated complicated just right over simplified

17. The worked examples or case studies were: very good good fair poor very poor

18. Any reference material handed out was: very good good fair poor very poor

General

19. Material relevant to the women's role was: very good good fair poor non-existent

20. The predominant type of new material learned was: technical social managerial economic philosophical

21. Please list the main messages presented in this submodule:

22. Please write in any further comments you may wish to add in the space below:

C. INSTRUCTOR AND REVIEWER'S ASSESSMENT

Name: _____

Submodule No. _____

Date _____

The training submodule you are reviewing is one or a part of one of several modules produced by the World Bank/UNDP Information and Training for Low Cost Water Supply and Sanitation Project. These form part of the project's Technical Package.

The goals of the submodule are to;

1. inform the participants about the subject discussed in the submodule
2. motivate them to use the information in the course of their professional duties
3. provide basic training in the subject area of the submodule.

Timing and Presentation of the Submodule

Each submodule is designed to be given in a one hour time period. The submodule consists of a 20 minute slide sound show to be followed by a 40 minute discussion period (times are approximate). During this 40 minute period the trainer will (1) review with the participants the most important points in the slide sound show; (2) promote discussion using the questions given in the training manual or; (3) have the participants solve particular exercises. The format for the discussion period will differ depending on the content of the submodule. Some submodules include worked examples and case studies which will require time in addition to the one hour period. The slide sound show is not intended for use by itself. The discussion period is an essential integral part of the training exercise and participants must complete it to fully understand the material.

Target Audience

The submodules are designed for a particular target audience. The materials are directed to student and practicing engineers and other professionals working directly in the technical aspects of designing, operating and administering facilities in water supply and sanitation.

The modules are expected to be incorporated into the curricula of educational institutions mainly in the developing world, and to be used in a variety of training courses and workshops for government, non-government and international agencies working in the water and sanitation sector.

Your answers to the following questions will help us to improve the modules. Please feel free to comment on points or issues relating to the project not included in the questionnaire.

YOU ARE ALSO ASKED TO FILL IN THE PARTICIPANTS BACKGROUND AND PARTICIPANTS QUESTIONNAIRE FORMS A AND B.

Please respond to the following in addition to completing Forms A and B.

Slide Sound Show

1. Please list (by number) slides which are poor choices or inappropriate and why.

2. Please list graphics (by slide number) which are inaccurate or unclear state why, suggest any improvements.

Too much repetition of same slide

3. Please describe any deficiencies in the material's content and suggest improvements.

Slide 5: The comment about scum is unmitigated rubbish, but the description against slide 11 is correct

4. To which audience(s) is the submodule most appropriate, what other audiences may benefit from it?

5. Please comment in detail on the adequacy, relevance and format of both the trainers' notes and the participants notes. Describe specific deficiencies and suggest alternative questions or material.

State some of the most important observations

Overall Assessment

Please assess the degree to which the entire submodule meets the objectives listed in the Training Manual and provide suggestions as to how it may more fully meet the stated objectives.

with a view to the final publication of the manual as it is possible to make some changes with a view to the publication of the manual

D. INSTRUCTORS' QUESTIONNAIRE

Name: _____

Submodule No. _____

Date _____

You are asked to make comments and recommendations on the submodules you use. Some comments may be general and others specific to this particular submodule. Please make your comments on separate sheets of paper under the following headings.

1. Format

The manuals, slides and tapes are presented in a particular form. Please comment on:

- (a) organizational structure
- (b) binding and packaging
- (c) legibility/audibility/visual quality of the written material, tapes and slides.

2. Guidelines to Instructors

Please comment on the guidelines given in the training manual related to:

- (a) the classroom and audiovisual equipment set ups
- (b) summary paragraphs describing the module and the particular submodule itself.
- (c) guidelines and suggestions as to how the lecture or training session could be organized and run.

3. Training Methodology

Please comment on the following:

- (a) Use of slide sound shows as a training tool suggested for use in the discussion session
- (b) The ease with which the discussion session was conducted
- (c) the use of the supporting material, case study and worked examples, which are recommended for the lab or practical after showing the slide sound show and holding a discussion on the material.

4. Content

Please comment on the technical and other contents of:

- (a) the slide sound show,
 - (b) the training manual
- by filling in the reviewer's questionnaire.

5. Future Use

You may wish to comment on the future use of these training materials for:

- (a) complete/partial insertion into your future courses
- (b) insertion into other training courses
- (c) use by other audiences

6. Other Comments

Please provide any other comments on the submodule, manual, and the training program in general.

August 10, 1984

Mr. Don Nguyen, WUDSR

Carmen del Castillo, WUDSR

61499

CIDA Report - INT/82/002

This confirms our conversation of August 9, 1984 regarding the CIDA Report for INT/82/002.

We should report 1984 funds as utilized as follows:

(1)	CIDA	US\$26,311	Utilized first quarter of 1984 to finish off the CIDA FY
(2)	World Bank	105,597	Early 1984
(3)	FINNIDA	20,000	Use this up ahead of GTZ
(4)	UNDP	20,000	Use immediately after budget is approved.
(5)	CIDA Phase II	120,000	As budget is approved, use ahead of GTZ.
(6)	Swiss	226,900	
(7)	GTZ	100,000	(Sparingly) - saving this for L. Obeng

Let us discuss if you have any questions.

Attachment

CdelCastillo:aq

August 9, 1984

Miss Sally Timpson
United Nations Development Programme
Room DC 12388
One United Nations Plaza
New York, New York 10017

Dear Ms. Timpson:

Mr. Arlosoroff has asked me to provide you with an estimate for the additional support you agreed to provide to INT/82/002.

As you discussed with him, there are two tasks related to the production of teaching modules. First, the review of the decision makers module (it is only one) and participation in the final review after the adaptation reflecting field testing of all the modules has been made. In addition to those two tasks you discussed with Mr. Arlosoroff, I am also providing an estimate of an item we had previously discussed when I visited New York to show you and your colleagues some of the modules, namely a review of the script and the rough cuts of the film. I estimate that these tasks would take:

1. Decision maker module - 1 day
2. Final review - 7 days
3. Film and script review - 2 days
4. For a total of ten working days.

These ten days will be spent in Ottawa and Montreal, divided into two visits: one of five days to Ottawa and another of two days in Montreal and three days in Ottawa. The most likely time would be November 19-23 for the Ottawa and Montreal trip and December 3-7 or 10-14 for the final review in Ottawa.


In our earlier discussions, including those you had separately with Mr. Arlosoroff, the contribution to this project was estimated at \$50,000. I estimate that based on the requirements above plus the work already done, some \$15,000 has been spent or will be committed for consultants under direct contract with you which would leave \$35,000 for testing, review and adaptation.

Please notify us on how you would like to have this amount billed. We estimate at the moment that during the period of July to end December 1984, we will spend roughly \$100,000 on questionnaire analysis, module adaptation and modification. This, of course, does not include the cost of field testing which consisted principally of the cost of producing the necessary modules and the travel cost of project staff to introduce the modules to the institutions field testing them, and some limited cost of purchasing and providing necessary equipment. My preference, of course, would be to simply state that the \$35,000 is a contribution towards the total cost of field testing and adaptation since it would obviously be difficult to identify specifically what

proportion of the field testing, the analysis and adaptation have to do with the role of woman. I am, however, willing to discuss with you any suggestion and to provide you with specific justifications to the best of our ability to separate that cost.

I am taking the opportunity of sending you a progress report which discusses the results of my visit to a number of European bilaterals and some candidate participating institutions in Africa. As you can see from the report, there is considerable interest in participating in the proposed network of training and advisory centres and I hope we will be able to implement the establishment of the network sometime next year.

Sincerely yours,



John M. Kalbermatten
Senior Adviser
Applied Research and Technology

Enclosure

JMK:bw

cc: Mr. M Potashnik, UNDP; Mr. S. Arlosoroff; Ms. L. Obeng

July 27, 1984

Mr. W. Paatii Oforu-Amaah, LEGEA

Bruce Gross, Technical Assistance Officer, WUDSR

61472

UNDP Project INT/82/002: Budget Revision "C"

Attached for your records are an original and one copy of the fully-signed Budget Revision "C" for UNDP Project INT/82/002. The budget was signed on behalf of the Bank by Mr. Anthony A. Churchill, Director, WUD; and on behalf of UNDP by Mr. William T. Mashler, Senior Director, Division for Global and Interregional Projects.

You will note that this budget revision incorporates an increased UNDP contribution of \$20,000 and new cost-sharing contributions of \$120,000 from CIDA and \$148,000 from the World Bank.

cc with attachment: Messrs. Arlosoroff, Kalbermatten, Ms. del Castillo, WUD;
Ms. Obeng, WUD; Ms. Hwang, LOAAF; Ms. Lassen,
PPDPR

BGross/pd

UNITED NATIONS
DEVELOPMENT PROGRAMME



PROGRAMME DES NATIONS UNIES
POUR LE DEVELOPPEMENT

ONE UNITED NATIONS PLAZA
NEW YORK, N.Y. 10017

TELEPHONE: 999-5000

CABLE ADDRESS: UNDEVPRO • NEW YORK

REFERENCE: INT/82/002

10 July 1984

Dear Mr. Churchill,

Subject: INT/82/002, Information and Training Programme
in Low-Cost Water Supply and Sanitation

Further to your letter of 4 June 1984 in connection with the above
..... mentioned project, enclosed please find one copy of revision "C" which I
have duly signed on behalf of UNDP.

Kind regards.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'W. Mashler'.

William T. Mashler
Senior Director

Division for Global and Interregional Projects

Mr. Anthony A. Churchill
Director
Water Supply and Urban Development
Department
The World Bank
1811 "H" Street, N.W.
Washington, DC. 20433

UNITED NATIONS DEVELOPMENT PROGRAMME

BUDGET REVISION

Country : Interregional


Project Title : Information and Training program in Low-Cost Water
Supply and Sanitation

Project Number: INT/82/002/C/01/42

The purpose of this budget revision is to :

- 1) incorporate additional cost-sharing CIDA contribution of \$120,000 to the project.
- 2) incorporate increased UNDP contribution from \$17,000 to \$37,000 (net of \$20,000).
- 3) incorporate cost sharing contribution of \$148,000 of the World Bank to the project.
- 4) reflect 1983 expenditures and to rephase the budget for 1984

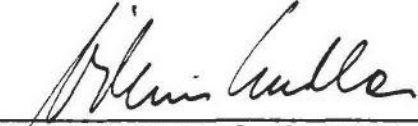
Previous Input (Budget Revision "B"):	\$473,600
Revised Input (Budget Revision "C") :	\$761,600
Total Increase in Input :	\$288,000



Agreed on behalf of the Executing Agency

6/11/84

Date



Agreed on behalf of UNDP

11/2/84

Date

Budget

Project: INT/82/002/C/01/42

Project Title : Information and Training Program in Low-Cost Water Supply and Sanitation.

	Total		1982		1983		1984	
	m/m	\$US	m/m	\$US	m/m	\$US	m/m	\$US
10. Personnel								
11.01 Project Manager	1	11,250					1.2	11,250
11.02 Senior Adviser	0	0						
11.03 Project Officer	0	0						
11.04 Consultant	32.9	574,488		79,289	12.4	339,138	20.5	156,061
13.00 Support Staff	0	29,426				9,426		20,000
15 Travel	0	42,856				7,856		35,000
16 Mission Costs	0	10,000						10,000
18 Over/Under Accrual	0	(15,377)				(15,377)		
19 Component Total	34	652,643	0	79,289	12	341,043	21.7	232,311
20. Subcontract								
21.01 Subcontract #1 (NFB)		20,000				20,000		
21.02 Subcontract #2 (Phase II)		60,000						60,000
29 Component Total		80,000		0		20,000		60,000
40. Equipment								
41. Expendable		2,007				2,007		
42. Non Expendable		1,160				1,160		
43. Premises		0						
49. Component Total		3,167		0		3,167		0
50. Miscellaneous								
51. Operation & Maintenance		100				100		
52. Reports		20,000						20,000
53. Sundry		5,690				3,690		2,000
59. Component Total		25,790		0		3,790		22,000
99. Total	34	761,600	0	79,289	12	368,000	21.7	314,311
103.01 Cost Sharing (CIDA)		526,600		79,289		301,000		146,311
103.02 Cost Sharing (UNICEF)		50,000				50,000		
103.04 World Bank Contribution		148,000						148,000
102 UNDP Contribution		37,000				17,000		20,000

PART IV. COST SHARING
(In US Dollars)

May 21, 1984

Project Number INT/82/002/C/01/42

Project Title: Information and Training Program in Low-Cost
Water Supply and Sanitation

	Total		1982		1983		1984	
	m/m	\$	m/m	\$	m/m	\$	m/m	\$
100. <u>Cost Sharing</u>								
103.1 CIDA ^{1/}		526,600		79,289		301,000		146,311
103.2 UNICEF ^{2/}		50,000		---		50,000		---
103.3 World Bank ^{3/}		148,000		---		---		148,000
109. Component total:		724,600		79,289		351,000		294,311
199. <u>Total Cost Sharing</u> ^{4/}		724,600		79,289		351,000		294,311

1/ The payment schedule for depositing of funds was as follows:

Phase 1. 1) March 31, 1982 - \$82,000
 ii) September 30, 1982 - \$324,600

Phase 2. June 1984 - US\$120,000 (C\$150,000). Deposits to be made into the Toronto Dominion Bank in Ottawa, UNDP Contribution Account No. 260959405. A revised project document will be sent shortly; includes World Bank support costs.

2/ Funds to be deposited into UNDP Contributions Account No. 015-002284 at the Chemical Bank, UN Branch, New York, N.Y., in a single deposit of \$50,000 April 30, 1983.

3/ Funds are to be deposited into UNDP contributions Account No. 015-002284 in a single deposit of \$148,000 by June 10, 1984.

4/ Additional donors available for the project as follows: FINNIDA, GTZ, SDC of Switzerland.

INT/82/002

The World Bank
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N.W.
Washington, D.C. 20433
U.S.A.

(202) 477-1234
Cable Address: INTBAFRAD
Cable Address: INDEVAS

July 23, 1984

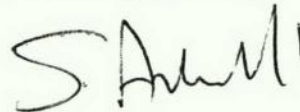
Mr. Kramer
Gesellschaft fur Technische Zusammenarbeit
D6236
Eschborn 1 beim Frankfurt am Main
Postfach 5180
Federal Republic of Germany

Dear Mr. Kramer:

Thank you for your letter dated February 9, 1984,
Ref. No. 512-kr-sa regarding GTZ Contribution to UNDP Project
INT/82/002.

I am enclosing herewith a second copy of the Agree-
ment which had been mailed to you last year.

Sincerely yours,



S. Arlosoroff, Chief
Applied Research & Technology, WUD
UNDP Projects Manager, INT/81/026, GLO/80/004, INT/82/002

Enclosure

INT/82/002

OFFICE MEMORANDUM

DATE July 23, 1984

TO Ms. Nancy C. Hwang, LOAAF; Ms. C. Del Castillo, WUDOR:
Mr. B. Gross, WUDOR
FROM S. Arlosoroff, WUDAT *SM*

EXTENSION 61790

SUBJECT GTZ/BMZ Contribution to INT/82/002

Enclosed please find copies of GTZ letter of February 9, 1984 informing us on the deposit of \$25,000 following the agreement reached with them. ✓

Enc.

SA:bw

cc: Messrs. M. Cohen, J.M. Kalbermatten, L. Obeng

INT/82/002

July 20, 1984

Through: Mrs. Nancy Hwang, LOAD2 and Mr. T. Gobena, PMDSD
Mr. A. Churchill, Director, WUDDR
Mr. S. Arlosoroff, WUDAT

61790/1

John M. Kalbermatten

Effective July 1, 1984, please transfer Mr. John M. Kalbermatten to UNDP Advisory Staff--Department #256 and Division #70. Mr. Kalbermatten will be the Senior Adviser on UNDP Project #INT/82/002. Please call Mrs. del Castillo if you need further information.

cc: Messrs. Cohen, WUDSR; Kalbermatten, WUDAT

Cdel
CdelCastillo:aq

OFFICIAL FILE COPY

The World Bank
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N.W.
Washington, D.C. 20433
U.S.A.

(202) 477-1234
Cable Address: INTBAFRAD
Cable Address: INDEVAS

INT/82/002

Yellow

July 12, 1984

Mr. Michael Potashnik
United Nations Development
Programme
Room No. 2382
One United Nations Plaza
New York, New York 10017

Dear Mike:

na
I am enclosing copies of trip reports of Mike McGarry pertaining to
(1) Indonesia, Thailand and Pakistan, and (2) Nova Scotia. I am also
enclosing copies of letters sent by Mike to Dr. Chatib at ITB, Bin Lohani
/ at AIT, and Dr. Tariq and Aziz at IPHER. These provide useful information
na as to the ongoing work of the INT/82/002 project.

Sincerely yours,

S Arlosoroff

S. Arlosoroff, Chief
Applied Research & Technology, WUD
UNDP Projects Manager, INT/81/026, GLO/80/004, INT/82/002

Enclosures

UNITED NATIONS
DEVELOPMENT PROGRAMME



PROGRAMME DES NATIONS UNIES
POUR LE DEVELOPPEMENT

ONE UNITED NATIONS PLAZA
NEW YORK, N.Y. 10017

TELEPHONE: 966-6000

CABLE ADDRESS: UNDEVPRO • NEW YORK

REFERENCE: INT/82/002

10 July 1984

OFFICIAL
DOCUMENTS

INT(INT/82/002)

Dear Mr. Churchill,

Subject: INT/82/002, Information and Training Programme
in Low-Cost Water Supply and Sanitation

Further to your letter of 4 June 1984 in connection with the above
..... mentioned project, enclosed please find one copy of revision "C" which I
have duly signed on behalf of UNDP.

Kind regards.

Yours sincerely,

A handwritten signature in dark ink, appearing to read 'W. Mashler'.

William T. Mashler
Senior Director

Division for Global and Interregional Projects

Mr. Anthony A. Churchill
Director
Water Supply and Urban Development
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The World Bank
1811 "H" Street, N.W.
Washington, DC. 20433

UNITED NATIONS DEVELOPMENT PROGRAMME

BUDGET REVISION

Country : Interregional

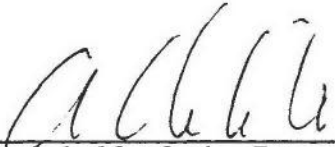
Project Title : Information and Training program in Low-Cost Water
Supply and Sanitation

Project Number: INT/82/002/C/01/42

The purpose of this budget revision is to :

- 1) incorporate additional cost-sharing CIDA contribution of \$120,000 to the project.
- 2) incorporate increased UNDP contribution from \$17,000 to \$37,000 (net of \$20,000).
- 3) incorporate cost sharing contribution of \$148,000 of the World Bank to the project.
- 4) reflect 1983 expenditures and to rephase the budget for 1984

Previous Input (Budget Revision "B"):	\$473,600
Revised Input (Budget Revision "C") :	\$761,600
Total Increase in Input :	\$288,000



Agreed on behalf of the Executing Agency

6/11/84

Date



Agreed on behalf of UNDP

11/7/84

Date

Budget

Project: INT/82/002/C/01/42

Project Title : Information and Training Program in Low-Cost Water Supply and Sanitation.

	Total		1982		1983		1984	
	m/m	\$US	m/m	\$US	m/m	\$US	m/m	\$US
10. Personnel								
11.01 Project Manager	1	11,250					1.2	11,250
11.02 Senior Adviser	0	0						
11.03 Project Officer	0	0						
11.04 Consultant	32.9	574,488		79,289	12.4	339,138	20.5	156,061
13.00 Support Staff	0	29,426				9,426		20,000
15 Travel	0	42,856				7,856		35,000
16 Mission Costs	0	10,000						10,000
18 Over/Under Accrual	0	(15,377)				(15,377)		
19 Component Total	34	652,643	0	79,289	12	341,043	21.7	232,311
20. Subcontract								
21.01 Subcontract #1 (NFB)		20,000				20,000		
21.02 Subcontract #2 (Phase II)		60,000						60,000
29 Component Total		80,000		0		20,000		60,000
40. Equipment								
41. Expendable		2,007				2,007		
42. Non Expendable		1,160				1,160		
43. Premises		0						
49. Component Total		3,167		0		3,167		0
50. Miscellaneous								
51. Operation & Maintenance		100				100		
52. Reports		20,000						20,000
53. Sundry		5,690				3,690		2,000
59. Component Total		25,790		0		3,790		22,000
99. Total	34	761,600	0	79,289	12	368,000	21.7	314,311
103.01 Cost Sharing (CIDA)		526,600		79,289		301,000		146,311
103.02 Cost Sharing (UNICEF)		50,000				50,000		
103.04 World Bank Contribution		148,000						148,000
102 UNDP Contribution		37,000				17,000		20,000

PART IV. COST SHARING
(In US Dollars)

May 21, 1984

Project Number INT/82/002/C/01/42

Project Title: Information and Training Program in Low-Cost
Water Supply and Sanitation

	Total		1982		1983		1984	
	m/m	\$	m/m	\$	m/m	\$	m/m	\$
100. <u>Cost Sharing</u>								
103.1 CIDA ^{1/}		526,600		79,289		301,000		146,311
103.2 UNICEF ^{2/}		50,000		---		50,000		---
103.3 World Bank ^{3/}		148,000		---		---		148,000
109. Component total:		724,600		79,289		351,000		294,311
199. <u>Total Cost Sharing</u> ^{4/}		724,600		79,289		351,000		294,311

1/ The payment schedule for depositing of funds was as follows:

Phase 1. 1) March 31, 1982 - \$82,000
 ii) September 30, 1982 - \$324,600

Phase 2. June 1984 - US\$120,000 (C\$150,000). Deposits to be made into the Toronto Dominion Bank in Ottawa, UNDP Contribution Account No. 260959405. A revised project document will be sent shortly; includes World Bank support costs.

2/ Funds to be deposited into UNDP Contributions Account No. 015-002284 at the Chemical Bank, UN Branch, New York, N.Y., in a single deposit of \$50,000 April 30, 1983.

3/ Funds are to be deposited into UNDP contributions Account No. 015-002284 in a single deposit of \$148,000 by June 10, 1984.

4/ Additional donors available for the project as follows: FINNIDA, GTZ, SDC of Switzerland.

INT/82/002 R

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ATTENTION MCGARRY, COWATER, OTTAWA. OUR REF. NO. 84/483.
RE YOUR INQUIRY OF JULY 3. YOUR CONTRACT FOR JULY AND AUGUST IS
BEING PROCESSED. YOU MAY PROCEED WITH YOUR MISSION TO NEW YORK
AND WASHINGTON AS ARRANGED BETWEEN YOURSELF AND WUD STAFF.
REGARDS, ARLOSOROFF, INTBAFRAD.

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CLASS OF SERVICE: TELEX	TELEX NO: 389 0533988	DATE: 7/5/84
SUBJECT: INT/82/002	DRAFTED BY: JKalbermatten:kb	EXTENSION: 61786
CLEARANCES AND COPY DISTRIBUTION: cc: Ms. Obeng	AUTHORIZED BY (Name and Signature): S. Arlosoroff	
	DEPARTMENT: WUD	
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INT/82/002
June 20, 1984

Mr. M. B. Grieveson
Overseas Development Administration
Eland House, Stag Place
London, SW1E5SH
England

Dear Mr. Grieveson:

During his meeting with you and Mr. Cook in your office on May 15, 1984, John Kalbermatten promised to send you an estimate of materials to be produced in Great Britain with the US\$150,000 you allocated to Phase I of the "Information and Training for Low Cost Water Supply and Sanitation Project" INT/82/002. The test estimates obtained from businesses in England are as follows:

1. Reproduction of 25 sets of modules
(52 submodules at 70 to 80 slides and
audio tapes) = \$30,000
2. Printing of written material for
modules, manuals and color re-
production of module slides with
sound text = \$40,000
3. Completion of artwork, ready for
printing, of Cassell Visual Learn-
ing Kit = \$40,000
4. 100 copies of Cassell Visual Learn-
ing Kit with leaflets = \$40,000

Two comments about these estimates need to be made:

(i) they were obtained telephonically; final estimates may vary somewhat, especially for modules significantly changed after field testing; (ii) unit costs of the Cassell Visual Learning Kit are relatively high given the small quantity, 500 would cost US\$90,000. If other donors provide additional funding, we will, of course, have larger quantities produced.

June 20, 1984

John's exploratory trip has gone well. There is little doubt that the network will be established. We all look forward to working with you and the other participants in this important task. I thank you for your support of this and previous projects on which we collaborated. John and Letitia send their regards.

Yours sincerely,

S. Arlosoroff, Chief
Applied Research & Technology (WUD)
(UNDP Projects Manager INT/81/026, GLO/80/004, INT/82/002)

JKalbermatten:phm

cc: Messrs. M. Cohen, J. Kalbermatten, W. Mashler, R. Middleton, G. Beier
Ms. L. Obeng

INT/82/002 ✓

cc. 640/78/006 18/14

TCP DIST8779 JWS0278
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REF : TCP HC
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JWS0278 JIT206 IN 18/05:44 OUT 18/05:46
4668 UNDEV ZW

Belau

INTBAFRAD WASHINGTON
U.S.A. *178/006*

18.06.1984 (UNDP HARARE ZIMBABWE)

M1168 MIDDLETON. AAA RAF/82/004, INT/81/047, INT/82/002 NOW
~~ENDORSED BY ZW GOVT.~~ BBB RE RURAL SANITATION AND WATER SUPPLY
DEVELOPMENT ADVISER (INT/81/047) WILL BE ATTACHED TO MIN HEALTH
FOR MINIMUM PERIOD ONE YEAR. HEALTH WILL ONLY OFFER OFFICE
ACCOMODATION. (AMBATCHEW)

=06180557

NNNN

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MONSIEUR PIERRE CASTELLA, SERVICE DE LA COOPERATION ET DU
 DEVELOPPEMENT, MINISTERE DES RELATIONS EXTERIEURES, 20, RUE
 MONSIEUR, 75007 PARIS, FRANCE.

NOUS AVONS L'HONNEUR DE NOUS REFERER A NOTRE TELEX DU 5 JUIN VOUS
 TRANSMETTANT DECOMPOSITION DES FONDS FRANCAIS ATTRIBUES AUX
 PROJETS PNUD/BANQUE MONDIALE. NOUS VOUS PRIONS DE BIEN VOULOIR
 EXCUSER QUELQUES OMISSIONS. LE TEXT CORRIGE DE CE TELEX SUIT:
 CITATION: OBJET: CONTRIBUTION FRANCAISE AUX PROJETS CONJOINTS
 DU PNUD ET DE LA BANQUE MONDIALE DANS LE DOMAINE DE
 L'APROVISIONNEMENT EN EAU ET DE L'ASSAINISSEMENT. NOUS SOMMES
 RECONNAISSANTS DU SOUTIEN QUE LE GOUVERNEMENT FRANCAIS PROPOSE
 D'APPORTER AUX PROJETS MENTIONNES CI-DESSUS. LES AFFECTATIONS
 BUDGETAIRES PROPOSEES POUR LES FONDS FRANCAIS SONT RESUMES CI-
 APRES POUR VOTRE COMMENTAIRE.

AAA. INT/82/002 "PROGRAMME D'INFORMATION ET DE FORMATION DANS LE
 SECTEUR DE L'APPROVISIONNEMENT EN EAU ET DE L'ASSAINISSEMENT A
 BON MARCHE". CE PROJET VOUDRAIT: REDUIRE AU MINIMUM LES ENTRAVES
 A L'EXECUTION RENCONTREES PAR PLUSIEURS PROJETS DESTINES AU
 SERVICE DE PROPORTIONS IMPORTANTES DE LA POPULATION DES PAYS EN
 DEVELOPPEMENT QUI MANQUENT DES SYSTEMES ADEQUATS
 D'APPROVISIONNEMENT EN EAU POTABLE ET D'ASSAINISSEMENT;

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CLASS OF SERVICE: TELEX		TELEX NO: 842 202363 F	DATE: 6/15/84
SUBJECT: FRENCH COOPERATION (UNDP)		DRAFTED BY: SA/RNM:jm	EXTENSION: 61451
CLEARANCES AND COPY DISTRIBUTION: cc: MM Churchill, Arlosoroff, Middleton		AUTHORIZED BY (Name and Signature): <i>M. A. Cohen</i> Michael A. Cohen	
		DEPARTMENT: WUD	
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PROMOUVOIR L'UTILISATION DE SYSTEMES TECHNIQUES APPROPRIES;
FORMER UN PERSONNEL TECHNIQUE AINSI QUE LES DECIDEURS A LA
FACTIBILITE D'OPTIONS TECHNIQUES A BAS PRIX ET DES SYSTEMES
TECHNIQUES ALTERNATIFS; ET FOURNIR DES MATERIAUX DE FORMATION
VISANT LA REALISATION DE TELS SYSTEMES. LES FONDS FRANCAIS
SERAIENT UTILISEES COMME SUIT:

FONDS POUR ACHEVER SERIE DE PRESENTATIONS

DIAPPOSITIVES/CASSETTES--\$52.000

TRADUCTION DE MATERIAUX ET GRAPHIQUES, DIAPPOSITIVES--\$53.000

LADITE SOMME DE \$53.000 COUVRE LES COMPOSANTES SUIVANTES:

TRADUCTION D'UN MANUEL--\$24.000

TRADUCTION DES MODULES DE FORMATION TECHNIQUE--\$17.000

TRADUCTION DE "DOCUMENTATION COLLECTIVITE" (IMPLICATIONS
SOCIALES DES NOUVELLES TECHNIQUES)--\$7.000

DIAPPOSITIVES--\$5.000

REVISION DES MATERIAUX DE FORMATION EN AFRIQUE DE L'OUEST--
\$15.000

FRAIS DE GENIE, DE GESTION ET DE SUPERVISION--\$30.000

TOTAL----\$150.000

BBB. GLO/80/004. "RECOUVREMENT INTEGRE DE RESSOURCES -

RECHERCHE ET DEVELOPPEMENT (RECYCLAGE DES DECHETS)". CE PROJET

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3 VISE A ATTEINDRE DES OBJECTIFS ECONOMIQUES ET SANITAIRES PAR DES
4 PROJETS SUSCEPTIBLES D'ETRE REPRODUITS DANS LES PAYS EN
5 DEVELOPPEMENT PAR LA MISE AU POINT DE POLITIQUES SANITAIRES
6 UTILISANT DES PROJETS DE RECOUVREMENT INTEGRE DES RESSOURCES;
7 DIFFUSER UNE INFORMATION TECHNIQUE, ECONOMIQUE, ETC. SUR DES
8 PROJETS DE RECUPERATION DE RESSOURCES DANS LES PAYS EN
9 DEVELOPPEMENT; DE COLLABORER AVEC D'AUTRES AGENCES DEJA ACTIVES
10 DANS CE DOMAINE. UNE VINGTAINNE DE LOCALITES DANS DES PAYS EN
11 DEVELOPPEMENT ONT ETE PROVISOIEMENT IDENTIFIEES COMME SUJETS
12 POUR DES ETUDES DE CAS. LES PAYS SELECTIONNES PRESENTENT DES
13 CARACTERISTIQUES GEOGRAPHIQUES, ECONOMIQUES, INSTITUTIONNELLES,
14 ENVIRONNEMENTALES ET CULTURELLES VARIEES. DES COMBINAISONS
15 DIFFERENTES DE SOURCES DE DECHETS, DE TECHNIQUES DE RECUPERATION
16 ET DE PRODUITS RECYCLES SERONT ETUDIEES. LES FONDS FRANCAIS
17 SERONT UTILISES POUR UNE ETUDE DE FACTIBILITE ET POUR IDENTIFIER
18 DES PROJETS POSSIBLES DE RECOUVREMENT DES RESSOURCES AINSI QU'UNE
19 ETUDE APPROFONDIE DES PROJETS IDENTIFIES. LA DECOMPOSITION DES
20 FONDS SUIT:

ETUDE DE PREFACTIBILITE: \$30.000

ETUDE APPROFONDIE: \$50.000

FRAIS DES INGENIEURS, DES ECONOMISTES, DE GESTION ET DE

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SOUTIEN: \$20.000

TOTAL \$100.000

CCC. INT/81/026. "MISE AU POINT ET ESSAIS SUR LE TERRAIN DE POMPES A MAIN POUR L'ALIMENTATION EN EAU DES COMMUNAUTES RURALES". LES OBJECTIFS PRINCIPAUX DE CE PROGRAMME SONT D'ACCROITRE LA SECURITE ET DE REDUIRE LES COUTS DE SYSTEMES RURAUX D'APPROVISIONNEMENT EN EAU QUI UTILISENT DES POMPES A MAIN DE SORTE QUE LA MAJEURE PARTIE DES POPULATIONS DES PAYS EN DEVELOPPEMENT PUISSE S'ALIMENTER EN EAU POTABLE SAIN. CE PROGRAMME FOURNIRA LA BASE TECHNIQUE NECESSAIRE A L'ELABORATION DE NOUVELLES POMPES A MAIN CARACTERISEES PAR UN MINIMUM D'ENTRETIEN ET UN MAXIMUM D'EFFICACITE-COUT ET DESTINEES A L'INSTALLATION DANS LES PAYS EN DEVELOPPEMENT. UN AUTRE OBJECTIF EST D'ENCOURAGER L'ELABORATION D'UNE NOUVELLE GENERATION DE POMPES A MAIN FABRIQUEES DANS LES PAYS EN DEVELOPPEMENT ET CONCUES DE TELLE MANIERE QUE DES UTILISATEURS VILLAGEOIS SOIENT CAPABLES DE LES ENTREtenir ET DE LES REPARER. LE PROJET COMPREND DES ESSAIS EN LABORATOIRE POUR SELECTIONNER ET EVALUER UN NOMBRE LIMITE DE POMPES A MAIN; LA RECHERCHE ET LE DEVELOPPEMENT, ET DES ESSAIS SUR LE TERRAIN DE POMPES A MAIN EN AFRIQUE (GHANA, COTE D'IVOIRE, KENYA, MALAWI, NIGER, SOUDAN, TANZANIE, HAUTE-VOLTA),

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EN ASIE (BANGLADESH, REPUBLIQUE POPULAIRE DE CHINE, INDE, PAPUASIE
 NOUVELLE-GUINEE, PHILIPPINES, SRI LANKA, THAILANDE), ET EN
 AMERIQUE LATINE (BOLIVIE). NOUS PROPOSONS QUE LA CONTRIBUTION
 FRANCAISE DE EU\$150.000 SOIT VERSEE A UN FONDS DE FONCTIONNEMENT
 POUR LA TOTALITE DU PROJET SANS AFFECTATIONS PREALABLES ET POUR
 LEQUEL LA FRANCE SERA RECONNU COMME PAYS DONATEUR.
 DDD. LE PROJET PILOTE PROPOSE SUR L'ALIMENTATION EN EAU ET
 L'ASSAINISSEMENT A FAIBLE COUT SERAIT ENTREPRIS PAR LE GROUPE
 CONSULTATIF POUR LA TECHNOLOGIE (TAG) DONT LE Q.G. EST A LA
 BANQUE MONDIALE ET DONT LES ACTIVITES SONT PRINCIPALEMENT
 FINANCEES PAR LE PROJET INTERREGIONAL INT/81/047 DU PNUD. TAG
 POSSEDE, GRACE A SES SIX ANNEES D'OPERATIONS DANS PLUSIEURS PAYS,
 UNE EXPERIENCE APPROFONDIE DE PARTICIPATION A L'ELABORATION ET A
 L'EXECUTION DE PROJETS D'ASSAINISSEMENT UTILISANT DES TECHNIQUES
 APPROPRIEES AUX CIRCONSTANCES PARTICULIERES D'UN PAYS ET D'UNE
 COMMUNAUTE VISEE. JUSQU'A UNE DATE RECENTE, DES RESSOURCES
 BUDGETAIRES LIMITEES ONT EMPECHE LE TAG D'AMORCER DES PROJETS
 DANS LES PAYS DE L'AFRIQUE FRANCOPHONE. A L'HEURE ACTUELLE
 CEPENDANT, UNE COLLABORATION AVEC LES AGENCES BILATERALES SUISSE
 ET ALLEMANDE A PERMIS LE RECRUTEMENT D'UN INGENIEUR, TRAVAILLANT
 A WASHINGTON, CHARGE DE L'ELABORATION DE PROJETS DANS DES PAYS

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FRANCOPHONES, ET LE TAG PREVOIT D'APPUYER SES ACTIVITES EN
RECRUTANT DANS LES MOIS A VENIR UN DEUXIEME SPECIALISTE CHARGE
DES ASPECTS NON-TECHNIQUES DE CES PROJETS. LE TAG PREVOIT
L'ETABLISSEMENT DE DEUX PROJETS AU BENIN AU DEBUT DE L'ANNEE
PROCHAINE; CES PROJETS SERONT APPUYES PAR UN CONSEILLER
RESIDENT. LE TAG POURSUIT EGALEMENT DES DISCUSSIONS AVEC
D'AUTRES GOUVERNEMENTS DE L'AFRIQUE OCCIDENTALE FRANCOPHONE
CHERCHANT A IDENTIFIER DES POINTS POTENTIELS DE SOUTIEN. LES
EVALUATIONS INITIALES DU TAG ET DES DISCUSSIONS AVEC DES AGENCES
BILATERALES ONT CONCLU QUE LES PAYS PRIORITAIRES SONT LE SENEGAL,
LA COTE D'IVOIRE, LA HAUTE VOLTA ET LE CAMEROUN. NEANMOINS, CES
PRIORITES PEUVENT ETRE CHANGEES EN FONCTION DES REACTIONS DES
GOUVERNEMENTS A NOS CONTACTS INITIAUX; NOUS VOUS SAURIONS GRE DE
NOUS TRANSMETTRE VOS CONSEILS SUR LES FACONS PAR LESQUELLES LA
COLLABORATION PROPOSEE AVEC LE TAG VOUS SERAIT UTILE OU POURRAIT
SOUTENIR VOS PROPRES OPERATIONS. AU COURS DES MOIS PROCHAINS,
NOUS VOUS SOUMETTRONS POUR COMMENTAIRE LES RESULTATS DES MISSIONS
DE RECONNAISSANCE DU TAG AINSI QUE DES DETAILS PLUS PRECIS DE
L'UTILISATION PROPOSEE DES FONDS. SI NOUS DECIDIONS DE
CONCENTRER TOUTES CES RESSOURCES DANS UN SEUL PAYS, NOUS AURIONS
LA REPARTITION APPROXIMATIVE DE CHARGES SUIVANTE (ECHELONNEES SUR

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UNE PERIODE DE 2 ANS):

1. ATELIER INITIAL POUR LE PERSONNEL DU SECTEUR ET D'AUTRES
AUTORITES CONCERNEES AINSI QUE LA CONSTRUCTION D'UNE
UNITE DE DEMONSTRATION--\$15.000
2. SOUTIEN AU PERSONNEL DES AGENCES LOCALES (FRAIS DIVERS,
VOYAGES, ETC.)--\$10.000/AN, SOUS TOTAL--\$20.000
3. ASSISTANCE DIRECTE AUX MENAGES POUR LA CONSTRUCTION DE
LEURS PROPRES LATRINES--\$75.000
4. PASSATION DE MARCHÉ DE PETITE ECHELLE POUR L'EXTENSION
DES SYSTEMES D'ALIMENTATION EN EAU--\$40.000
5. MATERIAUX DE FORMATION ET DE PROMOTION DU PROGRAMME,
VISANT UNE HYGIENE AMELIOREE DES MENAGES; \$10.000
6. SUIVI ET EVALUATION AINSI QUE SEMINAIRES RETROSPECTIFS
DANS LE PAYS--\$10.000
7. RESERVE--\$20.000
8. SOUTIEN AU PERSONNEL DU Q.G. (EQUIVALENT DE 20 POUR CENT
DU TOTAL NECESSAIRE POUR FINANCER LE SALAIRE D'UN
SPECIALISTE A PLEIN TEMPS, SECRETARIAT, VOYAGES ET AUTRES
CHARGES PENDANT 2 ANS)--\$70.000

TOTAL \$250.000.

EEE. LA BANQUE MONDIALE EST EGALEMENT L'AGENCE D'EXECUTION DU

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PROJET REGIONAL RAF/82/004 DU PNUD, QUI EST CHARGE D'ASSISTER LES
 GOUVERNEMENTS DE L'AFRIQUE A ELABORER ET A EXECUTER DES PROJETS
 D'ALIMENTATION EN EAU ET D'ASSAINISSEMENT DANS LE CADRE DE LA
 DECENNIE INTERNATIONALE DE L'EAU POTABLE ET DE
 L'ASSAINISSEMENT. CE PROJET ENCADRE 4 EXPERTS DONT DEUX SONT A
 NAIROBI ET DEUX A ABIDJAN. CHAQUE EQUIPE PORTE LE TITRE OFFICIEL
 DE MECANISME DE FINANCEMENT DE LA PREPARATION DES PROJETS (PPU)
 ET EST COMPOSEE D'UN INGENIEUR ET D'UN EXPERT EN
 FINANCES/INSTITUTIONS . LE CHEF DE CHAQUE EQUIPE EST UN EMPLOYE
 DE LA BANQUE MONDIALE EN DETACHEMENT POUR ASSURER UNE
 APPRECIATION DES QUESTIONS SECTORIELLES ET HAUTE QUALITE DANS LA
 PREPARATION DES PROJETS. TENANT EN COMPTE LES CONTRAINTES
 FINANCIERES GLOBALES DU PNUD, LA FERMETURE POSSIBLE DE CES DEUX
 BUREAUX AU COURS DE L'ANNEE 1985 NOUS INQUIETE CAR L'IMPORTANCE
 DE CES DEUX MECANISMES POUR LES GOUVERNEMENTS DE LA REGION EST
 EVIDENTE. NOUS PROPOSONS DONC D'UTILISER UN TOTAL DE \$EU350.000
 POUR FINANCER L'EQUIPE D'ABIDJAN EN 1985; LES AFFECTATIONS SONT
 COMME SUIVANT:

- A. INDEMNITES DU PERSONNEL--\$270.000
- B. SERVICES DE CONSULTANTS--\$15.000
- C. VOYAGES--\$30.000

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D. SECRETARIAT ET LOCAUX--\$27.000
E. CHARGES DIVERSES--\$8.000
CECI SERAIT EFFECTUE A TRAVERS UNE REVISION DE LA REPARTITION DES CHARGES DU BUDGET DU PROJET RAF/82/004 DU PNUD; SI CETTE PROPOSITION VOUS AGREE, NOUS VOUS FOURNIRONS PLUS DE PRECISIONS SUR LES DEMARCHES SPECIFIQUES A EFFECTUER. UNE TELLE UTILISATION DE VOTRE CONTRIBUTION SERA EXTREMEMENT UTILE DANS LA MOBILIZATION DE NOUVELLES SOURCES DE SOUTIEN POUR CES EQUIPES. LA PARTICIPATION D'UN IMPORTANT DONATEUR BILATERAL REVETERA AUX YEUX DU PNUD UNE RAISON DE PLUS DE MAINTENIR SON PROPRE SOUTIEN A CES EQUIPES; NOUS ESPERONS EGALEMENT CONVAINCRE LA DIRECTION DE LA BANQUE MONDIALE DE FOURNIR DEUX EXPERTS QUALIFIES SUPPLEMENTAIRES AU PROJET QUI SERONT LES COORDINATEURS DU TRAVAIL DE CES DEUX MECANISMES AINSI QUE DE CELUI DES AUTRES PROJETS AUXQUELS NOUS PARTICIPONS DANS CETTE REGION, C'EST-A-DIRE, LES PROJETS DE POMPES A MAIN, DE RECUPERATION DES RESSOURCES, ET DES ACTIVITES DU TAG. NOS ARGUMENTS SERAIENT RENFORCES PAR VOTRE PRISE EN CHARGE DES COUTS DU MECANISME POUR LA PREPARATION DES PROJETS A ABIDJAN. NOUS VOUS REMERCIONS POUR VOTRE CONTRIBUTION A CE PROGRAMME. FIN CITATION. SALUTATIONS DISTINGUEES. MICHAEL A. COHEN

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INT/81/002
cc. GLO/78/004
cc GLO/80/004
cc. GLO/82/002

June 11, 1984

Mr. Michael Cohen, WUD/OSR

Carmen del Castillo, WUD/OSR

61499

Status of Budget Revisions as of May 31, 1984

A. All mandatory budget revisions for all UNDP Projects executed by WUD have been completed, cleared by the appropriate departments and sent to UNDP with the following exceptions:

1. RAS/81/001. Budget was prepared, cleared by Richard Middleton on March 30, 1984 and given to Bruce Gross for clearance through the region and forwarding to UNDP.
2. RAF/82/004. Budget was prepared on May 14, 1984 and submitted to Richard Middleton. We are awaiting clearance from Mr. Middleton.

B. In the coming months, we will prepare appropriate budget revisions to incorporate cost-sharing contributions for the following:

- | | | | | |
|-----|------------|---|------------------|--------|
| 1. | INT/81/047 | - | Malawi \$244,000 | - done |
| 2. | INT/81/047 | - | Swiss | |
| 3. | INT/81/047 | - | BMZ/GTZ | |
| 4. | INT/81/047 | - | MORAD | |
| 5. | INT/81/047 | - | KfW | |
| 6. | INT/81/026 | - | Swiss | |
| 7. | INT/82/002 | - | Swiss | |
| 8. | GLO/80/004 | - | GTZ | |
| 9. | GLO/80/004 | - | CIDA | |
| 10. | RAF/82/004 | - | French | |
| 11. | GLO/80/004 | - | Swiss | |

Direct and Trust Accounts

- | | | |
|----|-------------------|------------|
| 1. | ODA Trust Account | INT/81/047 |
| 2. | GTZ Account | INT/82/002 |

CdelCastillo:aq

WORLD BANK OUTGOING MESSAGE FORM Cable, Telex

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PAGE 1 OF 6

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KRESSE, GTZ, FRANKFURT, FEDERAL REPUBLIC OF GERMANY. OUR TELEX 84/397. EXTENSION OF JOINT WORLD BANK/UNDP/GTZ PROGRAMS FOR 1985, 1986 AND 1987.

AAA INTEGRATED RESOURCE RECOVERY WASTE RECYCLING PROJECT - GLO/80/004.

111 LIMA PHASE 3.

ON THE BASIS OF THE REPORT WHICH HAS BEEN SUBMITTED TO YOU: DESIGN, CONSTRUCTION AND OPERATION INCLUDING THE COMPLETION OF THE HEALTH IMPACT STUDIES OF AQUICULTURE PRODUCTION AS A BY-PRODUCT OF LOW COST TREATMENT METHODS TO DECREASE MUNICIPAL SANITATION COSTS AND PROMOTE INVESTMENT IN URBAN SANITATION. REQUESTED BUDGET USD 250,000 TO 280,000.

222 INDONESIA.

EVALUATION STUDIES, ASSESSMENT AND FEASIBILITY ANALYSIS OF SOLID WASTE MANAGEMENT AND RECYCLING IN 3 SELECTED AND AGREED UPON CITIES, TOTTALLING 12 TO 18 SENIOR CONSULTANT MAN MONTHS, TRAVEL, PER DIEM, REPORTING AND MANAGEMENT USD 200,000 TO 230,000.

333 ACCRA.

FEASIBILITY STUDIES, INDEPTH CONSTRUCTION AND MARKETING STUDIES IN THE USE OF A SECTION OF THE LAGOON FOR AQUICULTURE PRODUCTION IN ORDER TO DECREASE THE LEVEL OF ENVIRONMENTAL AND HEALTH NUISANCES.

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MARKETING THE AQUICULTURE IN WET FORM FOR LIVESTOCK CONSUMPTION.
 ESTIMATED COST USD 100,000 TO 130,000.
 444 EXTENSION OF CHINA RESOURCE RECOVERY ACTIVITIES, PROCUREMENT
 OF LAB EQUIPMENT, EXPERT ASSISTANCE TO RECYCLING INDUSTRIES,
 ANALYSIS OF CHANGES IN PRODUCTION PROCESSES USD 120,000 TO 150,000.
 555 MANAGEMENT, MONITORING, SUPERVISION, ECONOMIC ANALYSIS ETC.
 USD 150,000.
 666 TOTAL REQUESTED FOR RESOURCE RECOVERY IS USD 820,000 TO
 940,000.
 BBB HANDPUMPS PROJECT INT/81/026 (FOLLOWING OUR TELEX NO 1560 OF
 DEC. 2, 1983).
 111 THE BASIS IS FOR JOINT ACTIVITIES IN ONGOING GTZ/BMZ RURAL
 WATER SUPPLY OPERATIONS.
 222 THE OBJECTIVES ARE: ALPHA CONTINUED EVALUATION OF NEW GENERA-
 TION OF VLOM HANDPUMPS UNDER VARIED FIELD CONDITIONS.
 BETA THE TECHNICAL-FINANCIAL AND MANAGEMENT PERFORMANCE EVALUATION
 OF DRILLING RIGS - CABLE, HYDRAULIC AND ROTARY. PURPOSE OF WORK
 IS TO PROMOTE THE USE OF LOW-COST - LOW-MAINTENANCE SMALL DIAMETER
 RIGS FOR THE MANY BOREHOLES NEEDED FOR HANDPUMPS APPLICATION
 BETWEEN 1985 AND 2000.

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333 THE ULTIMATE OBJECTIVE IS TO REDUCE THE COSTS AND INCREASE THE RELIABILITY OF RURAL WATER SUPPLIES BASED ON GROUNDWATER AND HANDPUMPS. THEREFORE THE PERFORMANCE EVALUATION WILL NOT ONLY DEAL WITH THE DRILLING EQUIPMENT BUT ALSO WITH THE MANAGEMENT OF THE WATER SOURCE EXECUTION, BOREHOLE DESIGN, BOREHOLE COMPLETION, MATERIALS FOR CASINGS AND SCREENS, PREPACKED SCREENS, ETC.

444 WE WOULD PREFER TO HAVE 2 OR 3 DIFFERENT DRILLING SYSTEMS IN EACH PROJECT OR REGION, HOWEVER, IF THIS IS NOT POSSIBLE, A COMBINATION OF TWO DIFFERENT RIGS IN EACH PROJECT.

555 A GEOGRAPHICALLY AND SOCIALLY BALANCED OPERATION IS PREFERABLE, E.G. 1 - 2 COUNTRIES IN EACH OF THE FIVE REGIONS: EAST AFRICA, WEST AFRICA, SOUTH ASIA, EAST ASIA AND LATIN AMERICA. ONGOING GTZ/BMZ PROJECTS IN SOUTH SUDAN, TANZANIA, GHANA, SRI LANKA, PARAGUAY, ETC., ARE HIGHLY SUITABLE FOR US, AS WE ARE ALREADY OPERATING IN THESE REGIONS.

666 AS WE ASSUME THAT DRILLING RIGS ARE PROCURED FROM THE GTZ/BMZ BUDGET IN ANY CASE, OUR NEEDS ARE THE FOLLOWING:
ALPHA PERFORMANCE EVALUATION ENGINEER IN EACH COUNTRY, WHO WOULD DEAL WITH DRILLING ACTIVITIES AND HANDPUMPS. IF WE ASSUME

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3 USING EXPERT ENGINEERS, THE SALARY OF ONE PLUS TRAVEL AND
 4 FRINGE BENEFITS PER YEAR IS USD 100,000 TO 120,000. HOWEVER,
 5 WE MAY MIX U.N. VOLUNTEERS AND EXPERTS IN THE PROJECT SO AS
 6 TO REDUCE THE AVERAGE COST TO ABOUT 65,000 USD PER YEAR PER
 7 PERSON. 3 PERSONS (ONE FOR EACH OF THREE COUNTRIES FOR TWO
 8 YEARS) TOTAL ABOUT USD400,000.

9 BETA ADDITIONAL PROCUREMENT OF BOREHOLE MATERIALS FOR
 10 EVALUATION OF PERFORMANCE LIKE PVC CASINGS, SCREENS, PREPACKED
 11 SCREENS, SPECIAL SAND AND GRAVEL, AND CHEMICALS FOR EXPERIMENTS
 12 IN ACIDATION. THESE WILL BE APPLIED TO A LIMITED NUMBER OF
 13 BOREHOLES IN EACH SITE SO AS TO EVALUATE DIFFERENT ENGINEERING
 14 SOLUTIONS TO BOREHOLES DESIGN AND COMPLETION. ESTIMATED COST
 15 50,000 TO 100,000 USD. GAMMA SUPPORT SERVICES BY REGIONAL
 16 PROJECT OFFICERS AND OTHERS, ENGINEERING ANALYSIS AND
 17 SUPERVISION, ECONOMIC AND FINANCIAL ANALYSIS, CONSULTANTS,
 18 REPORTS WRITING AND DISTRIBUTION. TOTAL INPUT APPROXIMATELY
 19 110,000 TO 150,000 USD.

20 777 SUB-TOTAL REQUESTED FOR THE GLOBAL HANDPUMP OPERATION
 (EXCLUDING CHINA) IS 560,000 TO 650,000.

21 888 ADDITIONAL SUPPORT FOR THE JOINT OPERATION IN CHINA, AS
 22 THE SCOPE OF THE PROGRAMME HAS ENLARGED AND BROADENED. FUNDS

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NECESSARY FOR 1985, ESTIMATED AT 350,000 TO 450,000 UDD, MAINLY FOR EXTENDING THE MONITORING TO OTHER PROVINCES, AND FOR INVESTIGATIONS, TECHNICAL ASSISTANCE AND DEMONSTRATION OF PLASTIC EXTRUSION AND MOLDING EQUIPMENT FOR THE MANUFACTURING IN CHINA OF VLOM PUMPS AND SPARE PARTS, PVC CASINGS AND SCREENS, ETC.

CCC TRAINING AND INFORMATION PROJECT INT/82/002. CONTINUED SUPPORT TO THE PRODUCTION OF SLIDE/SOUND MATERIALS AFTER CHANGES HAVE BEEN MADE ON THE BASIS OF FEEDBACK FOLLOWING THE REVIEW AND IMPLEMENTATION PROCESS. REGIONAL SEMINAR FOR DECISION MAKERS, DONORS AND CONSULTING FIRMS ACTIVE IN THE SECTOR TO PROMOTE LOW COST WATER SUPPLY AND SANITATION USD 200,000. THIS SUM IS FOR THE OPERATIONS OF THE PROJECT AS A WHOLE AND EXCLUDES GTZ CONTRIBUTIONS TO PARTICIPATING INSTITUTIONS.

DDD BUDGET TOTALS IN THOUSAND USD:

RESOURCE RECOVERY	820 - 940
(INCLUDES 120 - 150 CHINA)	
HANDPUMPS	910 - 1,100
(INCLUDES 350 - 450 FOR CHINA)	

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TRAINING AND INFORMATION 200
TOTAL 1,930 - 2,340
EEE THE ACTIVITIES CARRIED OUT SO FAR BY THE THREE PROJECTS
HAVE SUCCEEDED IN RAISING SOME KEY ISSUES IN THE INTERNATIONAL
ASSISTANCE COMMUNITY AS WELL AS PROVIDING SOME TENTATIVE ANSWERS.
WE FEEL IT IS IMPERATIVE TO UTILIZE THE EXISTING MOMENTUM AND
TO PROVIDE AND DEMONSTRATE BETTER SOLUTIONS. YOUR CURRENT
SUPPORT HAS SIGNIFICANTLY CONTRIBUTED TO THIS WORK AND WE
ARE VERY HOPEFUL THAT YOU WILL BE ABLE TO CONTINUE AND EXPAND
YOUR CONTRIBUTION. YOUR FAVORABLE RESPONSE WILL BE VERY MUCH
APPRECIATED. REGARDS TSCHANNERL/ARLOSOROFF, INTBAFRAD

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CLASS OF SERVICE: TELEX	TELEX NO.: 415 230 GTZ	DATE: JUNE 18, 1984
SUBJECT:	DRAFTED BY: GTSCHANNERL:PHM	EXTENSION: 61785
CLEARANCES AND COPY DISTRIBUTION: cc: Messrs. M., Cohen, C. Gunnerson M. Potashnik J. Kalbermatten Ms. L. Obeng S. Cointreau	AUTHORIZED BY (Name and Signature): <i>G. Tschanerl</i>	
	DEPARTMENT: WUD	
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INT/82/002

June 4, 1984

Mr. William Mashler
Senior Director
Global Programs
United Nations Development Programme
1 UN Plaza
New York, N.Y. 10017

Dear Mr. Mashler:

Enclosed please find three copies of Budget Revision C of
INT/82/002. The purpose of the budget revision is to:

- i) incorporate additional cost-sharing CIDA contribution of \$120,000 to the project;
- ii) incorporate increased UNDP contribution from \$17,000 to \$37,000 (net of \$20,000);
- iii) incorporate cost-sharing contribution of \$148,000 of the World Bank to the project; and
- iv) reflect 1983 expenditures and to rephase the budget for 1984.

Please return one signed copy to us for our files.

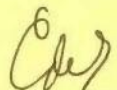
We thank you once again for your continued support.

Best personal regards.

Sincerely,

Anthony A. Churchill
Director
Water Supply and Urban Development Department

Attachments (3)

 CdelCastillo:aq

OFFICIAL FILE COPY

UNITED NATIONS DEVELOPMENT PROGRAMME

BUDGET REVISION

Country : Interregional

Project Title : Information and Training program in Low-Cost Water
Supply and Sanitation

Project Number: INT/82/002/C/01/42

The purpose of this budget revision is to :

- 1) incorporate additional cost-sharing CIDA contribution of \$120,000 to the project.
- 2) incorporate increased UNDP contribution from \$17,000 to \$37,000 (net of \$20,000).
- 3) incorporate cost sharing contribution of \$148,000 of the World Bank to the project.
- 4) reflect 1983 expenditures and to rephase the budget for 1984

Previous Input (Budget Revision "B"):	\$473,600
Revised Input (Budget Revision "C") :	\$761,600
Total Increase in Input :	\$288,000

Agreed on behalf of the Executing Agency

Date

Agreed on behalf of UNDP

Date

Budget

Project: INT/82/002/C/01/42

Project Title : Information and Training Program in Low-Cost Water Supply and Sanitation.

	Total		1982		1983		1984	
	m/m	\$US	m/m	\$US	m/m	\$US	m/m	\$US
10. Personnel								
11.01 Project Manager	1	11,250					1.2	11,250
11.02 Senior Adviser	0	0						
11.03 Project Officer	0	0						
11.04 Consultant	32.9	574,488		79,289	12.4	339,138	20.5	156,061
13.00 Support Staff	0	29,426				9,426		20,000
15 Travel	0	42,856				7,856		35,000
16 Mission Costs	0	10,000						10,000
18 Over/Under Accrual	0	(15,377)				(15,377)		
19 Component Total	34	652,643	0	79,289	12	341,043	21.7	232,311
20. Subcontract								
21.01 Subcontract #1 (NFB)		20,000				20,000		
21.02 Subcontract #2 (Phase II)		60,000						60,000
29 Component Total		80,000		0		20,000		60,000
40. Equipment								
41. Expendable		2,007				2,007		
42. Non Expendable		1,160				1,160		
43. Premises		0						
49. Component Total		3,167		0		3,167		0
50. Miscellaneous								
51. Operation & Maintenance		100				100		
52. Reports		20,000						20,000
53. Sundry		5,690				3,690		2,000
59. Component Total		25,790		0		3,790		22,000
99. Total	34	761,600	0	79,289	12	368,000	21.7	314,311
103.01 Cost Sharing (CIDA)		526,600		79,289		301,000		146,311
103.02 Cost Sharing (UNICEF)		50,000				50,000		
103.04 World Bank Contribution		148,000						148,000
102 UNDP Contribution		37,000				17,000		20,000

PART IV. COST SHARING
(In US Dollars)

May 21, 1984
 Project Number INT/82/002/C/01/42
 Project Title: Information and Training Program in Low-Cost
 Water Supply and Sanitation

	Total		1982		1983		1984	
	m/m	\$	m/m	\$	m/m	\$	m/m	\$
100. <u>Cost Sharing</u>								
103.1 CIDA <u>1/</u>		526,600		79,289		301,000		146,311
103.2 UNICEF <u>2/</u>		50,000		---		50,000		---
103.3 World Bank <u>3/</u>		148,000		---		---		148,000
109. Component total:		724,600		79,289		351,000		294,311
199. <u>Total Cost Sharing</u> <u>4/</u>		724,600		79,289		351,000		294,311

1/ The payment schedule for depositing of funds was as follows:

Phase 1. 1) March 31, 1982 - \$82,000
 ii) September 30, 1982 - \$324,600

Phase 2. June 1984 - US\$120,000 (C\$150,000). Deposits to be made into the Toronto Dominion Bank in Ottawa, UNDP Contribution Account No. 260959405. A revised project document will be sent shortly; includes World Bank support costs.

2/ Funds to be deposited into UNDP Contributions Account No. 015-002284 at the Chemical Bank, UN Branch, New York, N.Y., in a single deposit of \$50,000 April 30, 1983.

3/ Funds are to be deposited into UNDP contributions Account No. 015-002284 in a single deposit of \$148,000 by June 10, 1984.

4/ Additional donors available for the project as follows: FINNIDA, GTZ, SDC of Switzerland.

June 4, 1984

INT/82/002

Mr. Guillermo Davila
World Health Organization
525 23rd Street, N.W.
Washington, D.C. 20037

Dear Mr. Davila:

Re: Project Preparation Handbook -
UNDP/World Bank INT/82/002

Following our discussions on the proposed collaboration between PAHO and the World Bank/UNDP Project Management, we shall be grateful for your decision to translate into Spanish the Project Preparation Handbook which has become a highly demanded report.

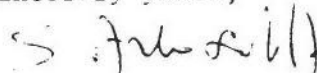
As you are aware, we have received a number of requests from governments and agencies in Latin America to publish the Handbook in Spanish, but our budget has been drastically reduced. The printing and dissemination of the Handbook will be done by the World Bank and a proper recognition for PAHO's contribution will be given in all three volumes.

We have an elaborate mailing list. However, we shall appreciate your proposed mailing list for the distribution of the Spanish version. We shall print 1000-1500 copies based on the size of the mailing list and the demand.

I attach herewith the World Bank Guidelines for the preparation and submission of technical papers. As you will realize the typist should follow the standard 8-1/2 x 11 format, 1 inch margin, regular type script, double space.

Following our recent discussions, we have asked Mr. Samuel Castrillon of Mexico City to get in touch with the PAHO office there and submit to you his proposal. As you may remember he has translated a draft version of Volume I and is now well briefed on the technical expressions to be used. We are looking forward to our collaboration in this important effort within the International Water and Sanitation Decade.

Sincerely yours,



S. Arlosoroff, Chief
Applied Research & Technology (WUD)
(UNDP Projects Manager INT/81/026, GLO/80/004, INT/82/002)

Enclosure

SArlosoroff:phm

cc: Messrs. M. Cohen, J.Kalbermatten, Ms.L.Obeng (WUD), Ms.V.Hitchcock (PUB)
M.McGarry, B.Grover, M.Potashnik, D.Potvin

INT/82/0023
yellow

May 7, 1984

Mr. R. Mc Kim
Foundation for International Training
Suite 200
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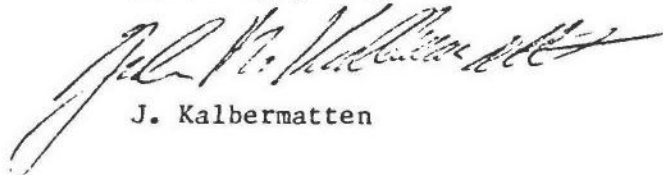
Dear Mr. Mc Kim:

Mike Mc Garry was kind enough to let me have the draft copies of the "Working Together for Better Water" text that he and his co-authors prepared for FIT. I think it is an excellent piece of work and the authors deserve to be complimented.

The project Mike and I are working on includes a variety of training tools. Amongst the needs which we have not yet fully addressed and training materials which can be used by community workers to inform, to educate and to organize communities in helping themselves to better water supply and sanitation service. We have in the preparation a Cassel visual learning kit for health education and latrine construction, but we lack a variety of written materials. I would therefore, be very interested to make use of "Working Together for Better Water", because I believe it would complement our other materials very well. I would like to know whether and under what conditions you would permit us to include this publication in our project for dissemination in developing countries. We will of course acknowledge that this publication has been prepared under the sponsorship of the Foundation for International Training in any form or matter you feel well adequately credit your organization.

Looking forward to your reply, I remain.

Sincerely yours,



J. Kalbermatten

JKALBERMATTEN-vk

620/78/006
C.C. INT/82/002

Mr. Saul Arlosoroff, WUDOR

May 7, 1984

Richard N. Middleton, Project Manager, INT/81/047

TAC Support of INT/82/002: Collier Macmillan contract

1. You will recall that in December 1982, when TAC's contribution to INT/82/002 was first clearly defined, it was agreed that TAC would meet the costs of the Collier Macmillan work up to a certain point in the process of module production, as well as providing the specialized consultancies (Mara, Faschen and Cross), the support for the field testing, and headquarters management. The direct costs of this portion of the overall Collier Macmillan work were estimated at \$46,000 (subsequently amended to \$48,000). For contractual simplicity, the agreement with Collier Macmillan (which covered the completion of the modules up to color separation stage) was drafted entirely as a TAC-administered contract, and we have indeed managed the contract up to this point. However, the additional costs of this extension, \$30,000, were not part of TAC's agreed support, but were an advance from TAC to INT/82/002 until such time as the latter could mobilize additional resources.

2. I understand that you have now been successful in obtaining some additional resources to support the project, and I should be grateful if you would make the arrangements necessary to refund the \$30,000 to the main TAC budget.

cc: Mr. Carlos del Castillo

RMMiddleton:11

May 4, 1984

Mr. S. Arlosoroff, Chief, Applied Research and Technology (WUD) and UNDP
Projects Manager (INT/81/026, GLO/80/004, INT/82/002)
J. M. Kalbermatten, Senior Advisor, ART/WUD

61786

INT/82/002 Module 12

Professor D. Lauria visited the Bank to review work on this module on May 1. I informed him that at the moment we were not in a position to pay him for his efforts and could therefore not authorize completion of the module. Dr. Lauria indicated, however, that he would, on his own responsibility, attempt to complete the module (essentially, preparing the case study which represents the third submodule), due to his interest in the module itself and the fact that during the summer months he will have some time available. I indicated that I had no problem with this but also reiterated that we will only be able to pay him at some future date when additional funding has been made available.

In the meantime, I will send the text of the first two submodules to Mike McGarry for his review and comments. I suggested that at a convenient time Mike McGarry and Don Lauria ought to get together to determine what, if any, modifications to the script are necessary so that Don would have some guidance in the preparation of the last and final submodule. I'm inviting Mike, by copy of this memo, to make the necessary contacts with Dr. Lauria.

J.M. KALBERMATTEN:nmr

cc: Messrs. M. McGarry, D. Lauria
Ms. L. Obeng

OFFICE MEMORANDUM

DATE May 4, 1984

TO Mr. John M. Kalbermatten

FROM S. Arlosoroff, Chief, Applied Research and Technology (WUD) and UNDP
Projects Manager (INT/81/026, GLO/80/004, INT/82/002)

EXTENSION 61790

SUBJECT INT/82/002 Promotion of Phase II - Terms of Reference

You should follow up previous contacts and your recent correspondence with bilateral agencies in Europe, Australia, and New Zealand with a visit to discuss the proposal for INT/82/002 Phase II. You should also meet with selected institutions who are candidates for participation in Phase II activities. You should begin your trip on May 7 and return to the Bank on or about August 13.

Your discussions should be based on the proposal "Creating the Network of Training and Advisory Centers for Water and Waste Management" which you have already forwarded to the appropriate officials in these organizations. You should concentrate on determining what support bilateral agencies are prepared to make in this global effort, and what suggestions they have for organizing this effort.

In your discussions with potential participating institutions in developing countries, you should determine what interests exist in their participation and under what conditions they would be willing to become part of the proposed network.

You will visit the institutions and officials indicated in Annex A, following more or less the schedule of your travel itinerary attached as Annex B. You will also join Mr. Cohen and myself at the joint meeting of Nordic Bilateral Agencies which will be held in Umea on June 6 and 7 and make a presentation about INT/82/002. You will, at that time, inform Mr. Cohen and myself of progress to date and then prepare a progress report for submittal to CIDA on July 15.

While in England you will visit the Universities of Loughborough and Bradford where INT/02/002 modules are being tested by participants of special Sanitation Engineering courses for overseas students, to address the students and review the project with them. You will similarly, participate in reviews at the International Institute for Hydraulic and Environmental Engineering in Delft, Holland, and meetings organized by Swiss sector officials in Zurich and German counterparts in Frankfurt. In these review meetings you will be accompanied by Ms. Letitia Obeng who will be traveling under separate terms of reference and is responsible for the review and testing of INT/82/002 training materials in Europe.

Mr. J. M. Kalbermatten
May 4, 1984
Page Two

On your return to the Bank, you will prepare a report on your findings and revise the draft proposal as indicated for discussions with the Bank and other potential participating institutions in North America.

J.M. KALBERMATTEN:nmr

cc: Mr. M. Cohen
Mr. M. McGarry
Ms. L. Obeng

INT/82/002

April 30, 1984

Mr. S. Arlosoroff, Chief, Applied Research and Technology, WUD

J. M. Kalbermatten

61786

INT/82/002 Module 4, Submodules a, b, and c

~~W~~ have spoken to Mike Cohen and Letitian Obeng about this module and we agreed that the Bank could ill afford not to prepare precisely the submodules in those topics it possesses the greatest expertise. M. McGarry suggested he prepare the modules based on information provided by D. Jones (Finance), R. Costa (Institution/Management) of WUD and J. Austin (Human Resources Development) of AID. Mike believes that if he could spend two to three mornings with each, he would be able to write a script in the afternoon for subsequent review and so produce the three submodules during a two⁶ day stay in Washington. This approach is probably the only realistic chance we have to get this. Mike could at that time also select slides appropriate for those submodules from EDI (time value of money, etc.). The budget for July includes the estimated ten days.

J. KALBERMATTEN:nmr

cc: Messrs. M. Cohen, M. McGarry, Ms. L. Obeng

INT/82/002

4-27-84

Back to office
report

INT/82/002

Mr. Richard W. Middleton, Project Manager

April 27, 1984

Christopher R. Schulz, Research Assistant

TRA 4.3

INT/81/047: Back-to-Office Report -

Preparation of training materials on water treatment: OTTAWA

1. In accordance with terms of reference dated March 20, 1984, I visited Ottawa, Canada from March 26-30. The objective of my mission was to prepare a slide/sound show on simplified water treatment plants (Submodule 13A) as part of TAG support of the Information and Training Project (INT/82/002). I had several informal meetings with officials from CoWater Inc., the main contractors for the Project, who advised me on how to organize the slide/sound show and supporting material for the submodule, and reviewed several of the drafts. Persons met are listed in Annex I.

2. It was agreed with Mr. McGarry of CoWater that Module 13 would be entitled "Community Water Treatment" and comprise two submodules, 13A and 13B, entitled respectively; "Low-Cost Rapid Filtration Plants for Water Treatment", and "Treatment Alternatives for Small Communities". Work completed on Submodule 13A is summarized below.

- (a) Slide-sound show and script. A draft was completed; the script is attached as Annex II. Sketches of graphics and title slides were left with the audiovisual specialist for final production.
- (b) Instructors' Notes. A draft was completed and is attached as Annex III. It includes an introduction to Module 13, a brief description and set of objectives for Submodules 13A and 13B, and a list of possible questions and answers for the discussion period of a training session.
- (a) Participant's Notes. A draft of the supporting text portion of the Participant's Notes was completed and is attached as Annex IV. The remaining two parts of the Notes-- a glossary of technical terms and key references-- will be completed by me in Washington, D.C.

3. Submodule 13A is scheduled to be completed in draft final by mid-June 1984 (it must still be reviewed and edited by staff at CoWater, Inc.) at which time it will be incorporated into the review sessions being held at the World Bank.

4. A list of topics to be covered in the second submodule, "Treatment Alternatives for Small Communities" is contained under Submodule B of the Instructors' Notes (Annex III). Mr. McGarry expressed his interest in having me prepare this submodule and we agreed that he would discuss this further with you in the near future. Its preparation would involve quite a bit of background research, and so I estimate a minimum of four uninterrupted weeks would be needed to complete a first draft.

cc: Messrs. Arlosoroff, Wright, Ms. Obeng, WUD

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OFFICIALS MET

CoWater International, Division of Cole and Company

- | | |
|------------------------|-------------------------|
| 1. Michael McGarry | Chief Technical Editor |
| 2. Lynn Stewart | Project Secretary |
| 3. Elizabeth MacKenzie | Audio-visual Specialist |
| 4. Brian Latham | Technical Editor |
| 5. Debbie Hine | Editorial Assistant |
| 6. Keven Jones | Editorial Assistant |

13B-LOW COST RAPID FILTRATION PLANTS FOR WATER TREATMENT

INTRODUCTION

1. This slide sound presentation is a part of the Training program for Low Cost Water Supply and Sanitation, a program executed by the World Bank in support of the International Drinking Water Supply and Sanitation Decade. Eighteen training modules are being prepared on various subjects related to low cost water supply and sanitation for use in training courses and engineering curricula around the world. Each of these training modules is divided into three parts or submodules comprising a 20 minute slide sound show followed by 40 minutes of discussion supported by a training manual.

You will now see a draft version of one of these slide sound shows. Your written comments will be used when making the final revisions before field testing.

2. Low-cost rapid filtration plants for water treatment.

3. Rivers throughout the world exhibit wide fluctuations in flow and turbidity, with high turbidities resulting from carriage of silt in rainy seasons.

4. These conditions are exacerbated in many areas of the world by farming methods that promote soil erosion

5. deforestation of catchment basins

6. and seasonal flooding. Thus the removal of silt and other suspended matter is an important water treatment problem in many areas of the world.

7. Turbid river waters generally require full conventional treatment comprising coagulation and rapid mixing, flocculation, sedimentation, filtration and disinfection. These treatment processes are carried out in rapid filtration plants.

8. The design and construction of rapid filtration plants should be based upon the proper application of current technology.

9. Treatment plants that employ complex machinery and equipment

10. instrumentation and automated facilities

11. and rely on imported chemicals tend to fail in some communities because of the shortage of skilled personnel to operate and maintain such plants, and the difficulty in obtaining spare parts or replenishing chemicals.

12. This submodule introduces low-cost approaches for the design of rapid filtration plants that avoid undue reliance on mechanization, instrumentation and automation.

13. The specific objectives of this presentation are to:

- (a) present general guidelines for the simplified low-cost design of conventional rapid filtration plants;
- (b) introduce technologies for designing new plants;
- (c) introduce technologies for upgrading existing plants.

14. Rapid filtration plants, even when designed for simplicity, are relatively expensive to build, operate and maintain.

15. Therefore, in small communities in rural areas, where skilled operators and technical support services are not always available, simple, low-cost treatment methods, like these slow sand filters should be used whenever possible. Treatment alternatives for small communities are discussed in the next submodule in this series.

16. The design and construction of the treatment units in a conventional rapid filtration plant, including the chemical feed equipment, rapid mixer, flocculator, settling basins, and filters, should be tailored to local conditions.

17. We will now review some basic guidelines for the simplified design of such treatment plants.

18. First, the use of equipment, such as pumps and motors, should be minimized.

19. When equipment is necessary, such as for chemical feeding, it should be simple in design and easy to operate. Only equipment that can be properly maintained once it has been installed in the plant, should be considered.

20. Second, hydraulic methods that rely on gravity, rather than mechanical methods, should be employed for mixing, flocculation, and filter rate control.

21. Gravity is always available; does not vary in magnitude or intensity; and is a free commodity -- hence it is a valuable resource to the design engineer, and should be utilized in the design of treatment plants whenever possible.

22. Third, water treatment chemicals should be selected on the basis of local availability. The chemicals necessary in treatment include coagulants, generally alum;

23. disinfectants, generally chlorine;
....

24. and chemicals for pH control, generally lime. These chemicals are available in most countries. Use can be made of natural coagulant aids derived from plants or animals to reduce alum consumption in plants where alum must be imported.

25. Other types of chemicals to provide fluoridation, taste and odor removal, and stability and corrosion control, should only be used in major cities where skilled supervision and the chemicals are available.

26. Fourth, designs should encourage the use of labour, rather than mechanization and automation, in the operation of the plant. The more complex the treatment plant, the more difficult and costly it is to operate and maintain.

27. Labour-intensive technologies are especially suitable in places where unskilled labour is cheap and abundant.

28. Little formal training is required to carry out operations in simplified plants and individuals can be provided any necessary training on the job.

29. There is a wide range of water treatment technologies available that conform to these guidelines. We will now examine some of the more important ones for the design of new treatment plants.

30. Where excessive silt in rivers is encountered on a continuous or seasonal basis, pretreatment using simple presedimentation basins without coagulation facilities should always be considered.

31. The treatment objective is simply to settle out the larger suspended material in the water, such as sand and grit, by gravity.

32. Pretreatment serves three useful functions:

- (a) better operation of the main plant is likely because raw water quality is less variable;
- (b) less sludge is produced, and therefore less cleaning is needed for the main settling basins;
- (c) because a large portion of the suspended solids is removed in the pretreatment step, fewer chemicals are used in subsequent treatment.

33. This last advantage is very important in countries that must import alum. The savings realized by reducing coagulant consumption are a function of flow and chemical costs and may pay for the capital costs of pretreatment facilities in a relatively short time.

34. The construction of a presettling basin can be quite simple and inexpensive. This design uses a triangular shape with changing depth for achieving a uniform distribution of water both at the inlet and in the settling unit. A bypass channel is used when presedimentation is not necessary or when the unit must be cleaned. To minimize costs, the walls of the structure are laid at flat slopes and

lined with a layer of cement and wire mesh.

35. Alum consumption may also be reduced chemically by using natural coagulant aids derived from plants or animals. Seeds from this plant have been used in the Sudan to clarify muddy river waters.

36. Seeds from the Indian nirmali tree have been tested in India for their coagulant properties and shown to be effective, in reducing alum dosages by as much as 40% when treating high turbidity waters.

37. Chitosan is another effective coagulant aid now being used in Japan. It is derived from the shells of crustacea such as prawns and lobster. These are common waste products of the seafood industry. If they are locally available in sufficient quantities, natural coagulant aids should be considered.

38. For rapid mixing, hydraulic flumes and weirs can achieve sufficient turbulence without using mechanical equipment.

39. A useful design guideline is that the mixing should appear violent and that the coagulant should be added at the point of maximum turbulence.

40. Coagulant diffusers should be located above the water so that they are accessible and easy to clean. This diffuser spans a rectangular weir and is made from plastic pipe with small openings along the bottom.

41. Here is a series of flume rapid mixers for a large plant serving Rio de Janeiro, Brazil. The coagulant solution is prepared in the adjacent chemical building and then conveyed by gravity to the point of application.

42. The incoming flow of water to the plant is measured upstream of the hydraulic jump by a simple float-operated recorder, housed in a green casing.

43. For flocculation, hydraulic devices should be used that can provide a slow mix to promote the growth of flocs.

44. In practice hydraulic flocculators provide a reasonable effective solution, although they are less flexible than mechanical flocculators in responding to changes in flowrate, raw water quality, or temperature.

45. Baffled channel flocculators are the most widely used hydraulic method but are limited to relatively large treatment plants where the higher flowrates can maintain sufficient head losses in the channels for slow mixing. The baffles must be spaced far enough apart to permit manual cleaning.

46. Slow mixing is accomplished by either reversing the flow of water through channels formed by around-the-end baffles, or chambers formed by over-and-under baffles. The latter may be difficult to clean if weep holes are not provided at the bottom of the baffles for drainage.

47. In practice, a design providing a velocity of flow tapering from about 30 cm/sec at the inlet to 10 cm/sec at the outlet, baffles ensuring 15-30 changes of direction is sufficient for most applications. Detention times normally range from 15 to 30 minutes.

48. The velocity of flow, and hence the degree of mixing, may be tapered by varying the spacing of the baffles; that is close spacing of baffles to achieve higher velocities, and wider spacing to achieve lower velocities. Such a design can reduce the shearing forces on the flocs as they agglomerate, and thereby reduce the chance of floc break-up.

49. For small treatment plants, a gravel-bed flocculator is a suitable design. The flocculation process is simple: the incoming water flows in either an upward or downward direction through a bed of gravel about 2-3 metres in depth.

50. The bed of gravel provides ideal conditions for flocs to grow because of continuous recontacts provided by the sinuous flow of water through the gravel.

51. Tapered flocculation can be achieved by varying either the size of the gravel media or the cross-sectional area of the bed. The design shown here combines both methods and has been used successfully in small plants in India.

52. For sedimentation, rectangular horizontal-flow basins are generally preferred over upflow units.

53. They are simple to construct and can adapt to various raw water

conditions, such as sudden changes in turbidity, flow increases, or too-high flow rates.

54. When upflow units are overloaded, however, sludge can escape in large volumes, and clog the filters that follow.

55. Horizontal-flow basins can be readily cleaned by unskilled labourers. This basin in Latin America is equipped with high-pressure nozzles on the basin floor to flush the sludge remaining in the basin to drainage during cleaning operations.

56. An efficient type of inlet arrangement employs a perforated baffle that distributes the incoming water uniformly across the full cross-sectional area of the inlet zone without causing excessive turbulence which would break the floc.

57. Perforated launders made from concrete or plastic pipe are suitable structures for withdrawing the effluent water from the basin.

58. The most complex and costly treatment units in a rapid filtration plant are the filters.

59. Nevertheless, the proper design of two important filter components—the systems for rate control and backwashing—can lead to simplified solutions at low cost.

60. In fact it is possible to eliminate elaborate piping, valves and control systems, like those shown here, that are common to conventional filtration schemes.

61. The flow of water through a filter can be controlled at either a constant or declining rate.

62. Both methods can be achieved without using complex mechanical rate-of-flow controllers, which are too complex to operate and maintain by unskilled personnel.

63. To maintain a constant water surface in the filter, a rate controller must be provided in the filter outlet pipe. A very simple control consists of a float connected by a small cable running over sheaves to a butterfly valve in the filter outlet pipe.

64. In declining rate filtration the filter inlet is placed below the

minimum water level, and no rate controllers are used in the filter outlet. Filtration will take place at a declining rate as the sand bed gradually clogs with impurities. The water level in the filter will rise during the filter run. When the water reaches a predetermined level, backwashing is necessary.

65. A detailed description of constant and declining rate filter control systems is beyond the scope of this presentation; you should consult the participants' notes and key reference list for further information.

66. Elevated washwater tanks that are free-standing or placed on the roof of the plant's chemical building are suitable arrangements for backwashing the filters. When feasible, water for the tanks should be drawn from the pressurized distribution system, rather than relying on a separate washwater pump.

67. For larger facilities, an interfilter-washing filtration system is ideal. This system is virtually free from conventional backwash equipment such as washwater tanks, pumps, pipe galleries and washwater rate controllers.

68. Basically, the system cleans a dirty filter by using filtered water from companion filter units. The washwater and pressure head for backwashing a filter are obtained from filter units that are connected in parallel through a common underdrain system.

69. A treatment plant must have at least four filter units, and each unit must be substantially deeper than conventional designs in order to provide enough water and pressure for the required backwash rate.

70. This type of backwash system is used at the treatment plant serving Cali, Colombia which has a capacity of 250,000 m³/day.

71. To avoid the construction of new and expensive treatment plants, two low-cost techniques are available to increase the capacity and improve the treatment performance of existing plants, without the need for any major structural additions, such as new basins or filters.

72. Inclined-plate settlers can be used to increase capacity and improve performance of sedimentation basins by increasing the effective surface area of the basin on which suspended particles in the water may settle.

73. They are made of parallel plates inclined at an angle of 40-60 degrees to the horizontal. The distance between plates is about 5 cm. Units are installed near the outlet of the basin.

74. The capacity of sand filters can be easily increased at low cost by their conversion to dual-media filters, which means that a layer of coarse lighter material is placed above the sand layer.

75. For example, a layer of crushed coconut shells or crushed coal, about 15 cm in depth can be placed over an existing sand bed without changing the structure or method of operation of the plant. Of course the hydraulic capacity of the piping to and from the filter must be adequate.

76. Water treatment plants designed for simplicity generally have much lower construction costs than mechanical plants of similar capacity. This graph compares the construction costs of simplified plants built in Latin America to mechanized plants built in the USA. The difference in costs is nearly ten-fold!

77. In summary, we have been considering simplified low-cost approaches for the design of conventional rapid filtration plants. This treatment method is generally appropriate only for treating high turbidity waters, such as lowland river-derived sources. Relatively clear waters should be treated by less costly methods, which are described in the next submodule.

78. In the design of rapid filtration plants there must be a concerted effort to minimize equipment, to maximize the use of gravity and hydraulic methods, to make use of locally available chemicals and materials for construction and operation and to make use of labour rather than equipment in the operation of the plant whenever possible.

79. Treatment plants designed with these guidelines in mind are likely to provide more reliable service at lower cost in communities where money, managerial and technical skills, and skilled labour are in short supply.

INSTRUCTOR'S NOTES

MODULE 13a

LOW-COST RAPID FILTRATION PLANTS FOR WATER TREATMENT

1. INTRODUCTION TO MODULE

This module comprises two submodules dealing with drinking water treatment for urban and rural communities.

The participant should participate in both submodules to gain a clear understanding of the wide range of technologies available for water treatment and the conditions under which each should be used. Technical terms that may not be familiar to the participant are underlined in this text and defined in the glossary.

The costs and difficulties associated with water treatment, particularly the day-to-day problems of operation and maintenance of water treatment plants, need to be carefully considered. The source of water has a major effect on the selection and design of treatment facilities, and hence on costs. Therefore, the raw water source of highest quality economically available should be selected to minimize or even to eliminate treatment facilities. Of course, the capacity of the source must be adequate to furnish the needs of the community.

When treatment is necessary, the design of treatment facilities should be kept as simple as possible, and based on the drinking water needs of the community. This will assure that such facilities are properly operated and maintained and will serve the community for the intended design period.

Submodule A - Low Cost Rapid Filtration Plants for Water Treatment

The first submodule examines simple low-cost approaches for the design of conventional rapid filtration plants that avoid undue reliance on mechanical equipment, instrumentation, and automation. Rapid filtration plants are shown to be most appropriate in urban communities, although they may be suitable for treating high turbidity waters in rural areas. General guidelines are presented for the simplified design of treatment components, and technologies are introduced for the design of new treatment plants, as well as the upgrading of existing treatment plants. The construction costs of rapid filtration plants designed for simplicity and economy are shown to be substantially lower than those of mechanized treatment plants.

Submodule B - Treatment Alternatives for Small Communities

The second submodule discusses appropriate treatment alternatives for small communities

in rural areas, especially those located a long distance from a major city. It first examines the principal factors upon which water treatment schemes are based, including water quality and quantity criteria, selection of source and treatment processes, and how these are applied in rural communities. Several off-site treatment alternatives are then introduced, including slow sand filtration, dynamic filtration and infiltration galleries. Simple methods for removing iron and fluoride from drinking water are also discussed. Finally, proven methods for treating and storing water in the home are reviewed.

2. Submodule Objectives

Submodule A - Objectives

Upon completion of this submodule, the participant should be able to :

- a. explain under what conditions and in which communities, rapid filtration plants are suitable.
- b. understand the general guidelines that govern the design of simple and low cost rapid filtration plants.
- c. describe a range of simplified technologies for the design and construction of new treatment plants.
- d. describe two low cost methods for upgrading existing treatment plants.

Submodule B - Objectives

Upon completion of Submodule B, the participant should be able to:

- a. describe the principle factors upon which water treatment schemes are based, and explain how they differ in rural and urban communities.
- b. describe the basic components of a slow sand filter, dynamic filter and infiltration gallery.
- c. describe simple methods for the removal of iron and fluoride from drinking water.
- d. describe simple methods for treating and storing water in the home.

This slide sound show is approximately 20 minutes long. Discussion questions are provided for approximately 40 minutes of discussion, following the presentation of the slide sound show.

Before commencing the discussion period the trainer should review the basic components of a rapid filtration plant and review any misunderstood technical terms in the glossary with the participants. Clearly, the detailed design of a rapid filtration plant cannot be covered in this submodule. The trainer and participants are strongly encouraged to consult the key references listed at the end of this text for more detailed information.

Some suggested discussions questions and possible answers are:

1. Under what conditions are rapid filtration plants most suitable?

They are suitable for the treatment of high turbidity river waters, when simpler treatment alternatives are technically inappropriate; in urban communities where the shortage of available land precludes the use of larger slow sand filters; in large cities where skilled personnel and technical and managerial support services are available.

2. What are the basic guidelines for designing rapid filtration plants that are relatively simple to operate and maintain?

- use of mechanical equipment should be minimized
- use of hydraulic methods that utilize gravity should be maximized
- select water treatment chemicals that are locally available
- use labour-intensive designs rather than mechanized or automated ones.

3. When raw water turbidity is excessive during part or all of the year, how can the costs of treatment be minimized?

- by installing pretreatment facilities, such as presettling basins ahead of the main plant. They are designed to settle out the heavier suspended material, and hence reduce coagulant consumption, and chemical costs at the main plant.

4. In places where alum must be imported, how can alum consumption be reduced?

By using natural coagulant aids, derived from plants or animals, which may improve the coagulation process, and hence reduce the amount of alum needed.

5. How can the design of the rapid mixer be simplified?

- Use of hydraulic flumes or weirs, which do not need mechanical equipment.
- use of coagulant diffusers placed above the water at the point of maximum turbulence.

6. How can the design of the flocculator be simplified?

- use of hydraulic methods, such as baffled channel and gravel bed flocculators which do not require mechanical equipment.
- use of tapered designs (eg, varying the spacing of baffles or the size of the gravel media) to promote the agglomeration of floc particles.

7. How can the design of the sedimentation basin be simplified?

- use of rectangular horizontal-flow basins with manual sludge removal.
- use of a perforated baffle at the inlet of the basin to assure uniform distribution of the water across the basin width.
- use of perforated launders at the outlet of the basin to assure uniform withdrawal of settled water and to minimize short circuiting.

8. How can the design of the filters be simplified?

- by using declining rate filters which do not require mechanical rate-of-flow controllers.
- by using elevated washwater tanks with water supplied from the pressurized distribution system.
- for larger treatment plants, by using an interfilter-washing filtration system, which does not require costly pumps, pipe galleries, and valves for backwashing the filters.

9. What low-cost methods are available for upgrading the capacity and/or performance of existing treatment plants?

- installation of inclined-plate settlers in the sedimentation basin to increase the effective settling area of the basin, and hence reduce the required detention time.
- conversion of single-media sand filters to dual-media filters which comprise a layer of coarse lighter material above the sand layer. The storage capacity of the filter is thus increased, and higher rates of filtration may be used.

PARTICIPANTS NOTES

SUBMODULE 13A

LOW-COST RAPID FILTRATION PLANTS FOR WATER TREATMENT

NOTES

Included in the Participants' Notes are:

- Illustrated scripts to the slide/sound show
- Supporting text for module
- Glossary of technical terms
- Key references

SUPPORTING TEXT

1. INTRODUCTION

Rapid filtration plants are the conventional means of treating water in the industrialized countries (located mainly in North America and Europe), and are well suited to the prevailing capital-intensive economies in these countries. A much different set of economic, sociocultural and technical conditions exists, however, in most countries of Africa, Asia and Latin America. Therefore, conventional rapid filtration plants as designed in the industrialized countries are generally inappropriate in these regions, except perhaps in the capital cities where skilled personnel and support services are available.

Treatment plants that employ complex machinery and equipment, and rely on imported chemicals tend to fail in smaller communities for the following reasons.

1. shortages of skilled personnel to operate and maintain such treatment plants;
2. difficulties in obtaining foreign exchange to order replacement parts or to replenish chemicals;
3. weak institutions that must administer and service water supply facilities.

Therefore, it is desirable to use simple low-cost methods of water treatment with a minimum of mechanical equipment and with minimum dependence on imported chemicals. Labour-intensive technologies are attractive in places with an abundance of unskilled labour.

It is beyond the scope of this submodule to cover the detailed design of rapid filtration plants; such information is provided in the key references listed at the end of this text. It is intended, rather, to focus on practical technologies for simplifying the design of rapid filtration plants and for reducing the cost of their construction and operation and maintenance.

2. SOURCE SELECTION

The quality of the raw water source will determine the type of treatment required and its cost. Whenever possible, the source of highest quality economically available should be selected, provided that its capacity is adequate to furnish the water supply needs of the community.

Ground water is the preferred source for community water supplies because it generally does not require treatment and operation is limited to pumping and possibly chlorination. If no suitable aquifers are available, relatively clear waters from lakes or streams are preferred, because these can be treated by less complex treatment methods like slow sand filtration (see submodule 13B). Only as a last resort, should sources be developed that require treatment by rapid filtration plants and even then, only simple low-cost technologies should be used for design. The treatment units in a conventional rapid filtration plant are shown in Figure 1. Simplified technologies for each of the main treatment units in a plant are discussed separately below.

3. PRETREATMENT

Pretreatment is designed to remove the larger sized settleable material from water by gravity before the water reaches the main plant. It is only justified for treating excessively turbid raw water from rivers or streams; lakes, reservoirs and other slow moving or still bodies of water; inherently provide natural settling of the heavier suspended material. Proper design and location of intakes can minimize the requirements for pretreatment and protect treatment units.

A. Technologies:

- Storage: The detention period for storage facilities ranges from about one week to a few months. Storage facilities not only reduce turbidity, but also can improve the quality of the water by reducing the number of pathogenic bacteria. The reliability of the water supply is also improved because the storage reservoir can be drawn upon during periods of short supply of raw water.

- Plain sedimentation basis: These units have detention periods ranging from 0.5 to 3 hours and hence are much smaller and less costly than storage facilities. Their construction can be quite simple as shown in Figure 2. This design has a triangular shape with variable depth for achieving a uniform distribution of water across the basin. The walls of the structure are laid at flat slopes and lined with a thin layer of cement and wire mesh (ferrocement).

B. Design Criteria

Parameter	Range of Values	
	Storage	Plain Sedimentation
Detention time (hour)	one week to several months	0.5 to 3
Surface loading (m/day)	-	60 to 80
Depth of basin (m)	15	1.5 to 2.5

4. CHEMICALS AND CHEMICAL FEEDING

Water treatment chemicals should be selected on the basis of local availability. Fortunately, the chemicals necessary in rapid filtration plants: alum (for coagulation), chlorine (for disinfection) and sometimes lime (for pH control) are generally available in most countries. Where iron salts are available as a by-product locally, it is an economical coagulant. Hypochlorite compounds may be used in place of chlorine gas for disinfection at smaller plants, as they are easier to handle and apply to the water.

A. Technologies:

- In places where alum must be imported, locally available coagulant aids derived from plants or animals may be helpful in reducing alum consumption. They are usually applied in conjunction with the primary coagulant (e.g., alum, iron salts) but at much smaller doses (less than 1 mg/l). Seeds from several species of plants native to Africa and Asia have been shown in laboratory studies to aid clarification, sometimes reducing alum consumption by as much as 40%. Chitosan, which is extracted from the shells of certain crustacea, is used commonly as a coagulant aid in Japan and has recently been approved for use in the United States.
- Chemical feeders: They should be simple in design and easy to operate. Hypochlorite and coagulant solutions may be fed by gravity using solution-type feeders. A constant-head solution feeder, shown in Figure 3, is suitable for most applications. The constant level box with float valve ensures a constant rate of chemical feeding.

5. HYDRAULIC RAPID MIXING

The rapid mixer is located at the beginning of the treatment plant and is designed to generate intense turbulence to the incoming raw water for chemical mixing. The coagulants are added to the water by means of an above-water diffuser located at the point of maximum turbulence.

A. Technologies

- Flume Mixers: This type of mixer includes a narrow chute followed by an open channel with a drop in the elevation of the channel floor as shown in Figure 4. As water flows through the flume, the transition from high velocities of flow in the chute to lower velocities of flow in the channel creates a hydraulic jump, and hence turbulent conditions in the water for rapid mixing. Flumes of standard dimensions, such as the Parshall or flume may also be used to measure the flow of water into the treatment plant.
- Weirs: These are suitable for smaller treatment plants and also may be used as a flow measuring device. They are less expensive to construct than flumes but have a relatively large head loss (0.3 to 0.6 metres). Triangular and rectangular weirs are used for small and large flowrates, respectively.
- Coagulant Diffusers: These can be made quite easily from plastic pipe. Orifices about 1 cm in diameter are drilled not more than 15 cm apart along the bottom of a pipe so as to distribute the coagulant evenly across the channel. When low-grade coagulants are being used, a trough with triangular weirs on one side may be preferable to avoid clogging the orifices. Two sets of diffusers are desirable so that one may be cleaned while the other is in service.

B. Design Criteria

The mixing should appear violent, and the chemicals should be added at the point of maximum turbulence. Detention times should be as short as possible (less than 30 seconds).

6. HYDRAULIC FLOCCULATION

Flocculation follows directly after the rapid mix process and provides continuous slow mixing during which suspended flocs in the water agglomerate so that they may be removed from the water in the sedimentation basins.

A. Technologies

- **Baffled-Channel Flocculators:** There are two main types of baffled channel flocculators: around-the-end and over-and-under. The first is sometimes preferred because it is easier to drain and clean, but the second is more compact and hence suitable where there is a scarcity of land. Baffled-channel flocculators are limited to relatively large treatment plants (10,000 m³/day) where the higher flow rates can maintain sufficient head losses in the channels for slow mixing. The baffles must be spaced far enough apart to permit cleaning.

The head loss, which governs the degree of mixing, is a function of the number of baffles in the flocculation chamber. Hence, the degree of mixing can be adjusted by inserting or removing baffles. Tapered mixing, which is sometimes desirable to improve agglomeration of flocs, can also be achieved in this manner.

- **Gravel-Bed Flocculators:** This method is appropriate for smaller treatment plants. The flocculation processes are more efficient than in baffled-channel flocculators because of the agitation provided by continuous recontacts between suspended particles in the water and gravel media. As a result, the time of flocculation can be reduced considerably. The agitation is a function of:

- (1) the size of the gravel;
- (2) rate of flow;
- (3) cross-sectional area of the bed; and
- (4) head loss across the bed.

The direction of flow through the gravel bed can be either upward or downward.

The design shown in Figure 5 has been used in small plants in India. Tapered mixing is achieved by varying both the cross-sectional area of the bed and the size of the gravel media. Flow is in an upward direction.

B. Design Criteria

Parameter	Range of Values	
	Baffled-Channel	Gravel-Bed
Detention period (min.)	15 to 30	5 to 10
Degree of mixing (sec ⁻¹)*	100 to 10	100 to 10

*as measured by the velocity gradient

7. SEDIMENTATION

The sedimentation process provides for the settling and removal of flocculated particles prior to filtration. The two main types of sedimentation basins are:

- (1) horizontal-flow units; and
- (2) upflow units.

The operational requirements of upflow clarifiers are so strict that they are generally not suitable for small treatment plants or where skilled operators are not available. Upflow units are not covered in this text.

- **Horizontal-Flow Basins:** These basins provide a quiescent environment that enables particles of specific gravity greater than water to settle to the bottom of the tank. A well-designed horizontal-flow settling basin can remove up to 95% of raw water turbidity following effective coagulation and flocculation. Manually cleaned horizontal-flow basins are generally preferred over upflow units because of their simplicity and ability to adapt to various raw water conditions, such as sudden changes in turbidity or flow increases. Mechanical sludge removal equipment is difficult to maintain in tropical climates and more expensive than hiring labourers to clean the basins manually.

A typical rectangular horizontal-flow sedimentation basin is shown in Figure 5. Flocculated water is distributed uniformly across the inlet side by means of a perforated baffle. The water slowly traverses the length of the basin, depositing settled floc on the tank bottom. A sludge layer is formed in a fashion outlined by the sludge profile in Figure 5. The clarified water is collected by submerged effluent launders at the outlet side of the basin. The sloping floor facilitates drainage of sludge and cleaning operations.

B. Design Criteria

Parameter	Range of Values		
	Poor Pretreatment*	Good Pretreatment*	Excellent Pretreatment*
Detention period (hour)	3 to 4	2 1/2 to 3 1/2	1 1/2 to 2 1/2
Surface loading (m/day)	20 to 30	30 to 45	40 to 60
Depth (m)	2 to 4	2 to 4	2 to 4

*rapid mixing and flocculation

3. RAPID FILTRATION

Rapid filtration is a physical and chemical process for separating suspended and colloidal impurities from water by passage through porous media. A rapid filter consists of a layer of graded sand, or in some instances, a layer of coarse filter media placed on top of a layer of sand, through which water is filtered downward at rates ranging from 4 to 21 metres/hour. The filter is cleaned by backwashing with water. When a filter is backwashed, an upward flow is introduced at a rate sufficient to fluidize the filter media and to allow the accumulated impurities in the filter bed to be carried away by the washwater to waste. The basic elements of a rapid sand filter is shown in Figure 6.

The filter is generally the most complex and costly treatment unit in a rapid filtration plant; the cost of construction is about 20-35% of the total cost of the plant. Nevertheless, the design and construction of rapid filters may be simplified at low cost by adopting one or more of the technologies described below.

A. Technologies:

- Filter media: Sand has been used traditionally as the single filter medium in water treatment plants because of its wide availability, low cost and the satisfactory results that it has given. However, the capacity of sand filters are restricted due to the backwashing process which leaves the finer portions of sand at the top of the filter bed and hence limits the removal of impurities from the water to the topmost layers. The capacity of rapid filters can be greatly increased by using dual-media filters where lighter media of larger size occupy the upper layers of the filter, allowing greater penetration of impurities.

Dual-media filters possess several advantages over conventional sand filters:

- (1) higher filtration rates (10-21 metres/hours) than for conventional filters, resulting in a reduction in the total filter area required for a given design capacity;
- (2) longer filter runs at any given loading;
- (3) the capacity of existing sand filters can be easily increased at low cost by their conversion to dual-media beds (see "Upgrading Technologies" below).

A wide variety of unconventional filter media, such as crushed coconut shells or coal may be used as the coarse upper layer in a dual-media filter. Locally available media should be tested for their suitability as the coarse filter medium or as the fine medium in place where suitable sand is not available.

- Elevated washwater tanks: These tanks can be free-standing or located on the roof of the plant's chemical building. The tank should have sufficient capacity to wash at least two filters in succession before refilling. Small pumps may be used to fill the washwater tanks during intervals between backwashings, or the tanks may be filled using pressurized water from the distribution system. The height of the bottom of the tank is normally about 4 to 6 metres above the washwater gullet in the filter.
- Interfilter-washing filtration system: For larger treatment plants, this type of system is ideal because it eliminates conventional backwash equipment such as washwater tanks, pumps, piping and control valves. The washwater for backwashing a filter unit is obtained from other filter units that are connected in parallel through a common underdrain system, as shown in Figure 7. A filter unit is backwashed by closing the inlet and opening the drainage outlet of the unit. The water level in the filter is thus lowered, creating a positive pressure head which reverses the direction of flow through the filter bed and

begins the backwash cycle. After washing, the drain is closed and the inlet opened. The filtration cycle then resumes. A minimum of four filters is needed and each filter must be substantially deeper than conventional designs to provide the necessary flow for backwashing.

- Constant-rate filters: To operate filters at a constant flow rate and to maintain a constant water level in the filters some of the rate-control system is necessary to compensate for the increases head loss in the filters as it becomes clogged with impurities. A relatively simple but effective system consists of a float connected by a small cable running over sheaves to a butterfly valve on the filter-outlet pipe, as shown in Figure 8. When the filter is first placed in operation after backwashing, the water level will tend to drop, causing the butterfly valve to close. As the filter becomes clogged, the water above the filter will tend to rise, causing the valve to open. When the valve is fully opened, the float will become submerged, thus providing a signal to the plant operator to backwash the filter.

- Declining-rate filters: When no rate controllers are used and the filter inlet is placed below the minimum water level, as shown in Figure 9, filtrations will take place at a declining rate. The water level in the filter will rise during the filter run as the bed becomes clogged with impurities. When the water level reaches a predetermined height, backwashing of the filter is necessary. Declining-rate filters are generally designed to operate at 150% (at the start of the filtration cycle) to 50% (at the end of the cycle) of the average design filtration rate, which ranges from 5 to 7 metres/lower. Higher rates are possible when using dual-media filters.

- Direct filtration: The direct filtration process subjects the water to rapid mixing of coagulants, and sometimes flocculation, followed directly by rapid filtration. The sedimentation step is omitted. It is generally practicable only for raw waters that are low in turbidity, but is a comparatively low cost treatment option. Cost

savings can be realized from lower construction costs (by the elimination of flocculation and sedimentation units) and reduced coagulant consumptions. Low coagulant dosages are used to provide a floc of small size that is not settleable but can be removed easily by the filters. Because direct filtration eliminates sedimentation, it is not appropriate where raw water quality is highly variable. In most cases, pilot plant studies are warranted before selection of design approaches.

B. Design Criteria

<u>Parameters</u>	<u>Ranges of Values</u>	
	<u>Rapid Sand Filters</u>	<u>Dual-Media Filters</u>
Rate of filtration (m/hr)	4 to 10	10 to 21
Size of bed (m ²)	40 to 400	40 to 400
Depth of bed (cm)	30 to 45 cm of gravel 60 to 70 cm of sand	30 to 45 cm of gravel 40 to 75 cm of coarse media
Size of media (mm)	Sand: effective sizes 0.55 mm and higher, uniformity, inefficient 1.5 and lower	Sand: same as sand filter; Coarse media: effective sizes 1.0 to 1.6 mm, uniformity inefficient between 1.3 and 1.7.

9. UPGRADING TECHNOLOGIES

To avoid the construction of new and expensive treatment plants when the capacity of an existing plant can no longer meet the water supply needs of the community, low-cost upgrading techniques are available to increase plant capacity and improve plant performance.

A. Inclined-Plate Settlers

These units are installed in sedimentation basins to increase the surface area on which suspended particles in the water may settle. They are made of thin plates, about 1 metre wide and a few centimetres thick, aligned in parallel at an angle of 40 to 60 degrees, as shown in Figure 10. The distance between plates is about 5 cm. Units are installed near the outlet side of the basin. Because of the higher surface loading rates used after installing inclined-plate settlers in a basin, the number of effluent weirs and launders may have to be increased.

The individual plates can be fabricated from plastic, treated wood, or asbestos-cement (the latter should have a protective coating to prevent corrosion from alum-treated water).

B. Design Criteria

<u>Parameter</u>	<u>Range of Values</u>	
	<u>Conventional Sedimentation Basin</u>	<u>Sedimentation Basin with Inclined-plate Settlers</u>
Surface loading rate (m/day)	30 to 45	120 to 200

C. Dual-Media Filters

The capacity of existing sand filters can be easily increased by their conversion to dual-media filters. These filters can operate at filtration rates 3 to 5 times higher than conventional sand filters because of the increased capacity of the bed to entrap impurities. Furthermore, they can be incorporated into an existing filter system with changes in plant structure or method of operation if the hydraulic capacity of the inlet and outlet piping is adequate. A layer of coarse media about 15 cm in depth placed above the sand bed provides a reasonably effective solution.

GLOSSARY

KEY REFERENCES

310/78/006

VCC INT/82/002

Mr. Richard N. Middleton, Project Manager

April 27, 1984

Albert M. Wright INT/81/047

TRA 7.1

Collier MacMillan VLS Modules

Attached is a draft reply to Mr. Kobrak's letter of April 16.

I was not in favor of Mr. Kobrak's proposal because it could prove difficult to monitor to ensure compliance. Moreover, it would mean asking some of the module users to pay for a cost which others would not be required to pay.

I am informed by Letitia that John Kalbermatten has assured her that funds would be available in INT/82/002 to cover the cost of \$17,000. It is on this basis that I have written the attached letter as I have.

Attachment

[Faint, mostly illegible text, likely the content of the attached draft reply.]

[Handwritten signature]
AMW/alf

cc: Mr. Middleton, Mr. Kalbermatten, Mr. Stang, WND
cc: Mr. Cohen, WND

DRAFT
TRA 7.1
AMW/alf
4/27/84

Mr. F. Kobrak

Dear Mr. Kobrak,

Thank you for your letter of April 16, 1984 in which you explain that the sum of \$17,000 is needed to match your original quotation. This short fall represents the cost of preparing color separators, plates and make-ready for one module.

In effect your contract with Anambra State provides for the State to pick up this cost for one of the modules; and your letter under reference seeks clearance to enable you to distribute the cost of the remaining module over the prices of the first 1000 units of the two modules (i.e., 500 of each, say).

After due consideration, we have decided that since the amount of \$17,000 is part of the development cost for the modules, that cost should be borne by donors and not by the users of the modules. Consequently, the cost per module should remain at \$35.00; once the requisite work is done, the invoice for the amount of \$17,000 should be sent to the Bank for settlement. You may therefore proceed with further development of the art work to the stage of color separation and plates make-ready.

I trust that you will find this arrangement satisfactory.

Yours sincerely,

RNM

to be cleared with & cc: Messrs. Arlosoroff, Kalbermatten, Ms. Obeng, WUD
Mr. D. Howarth, WAP
cc: Mr. Cohen, WUD

April 18, 1984

L. Obeng, WUD/ART

S. Arlosoroff, Chief, Applied Research and Technology (WUD)

61790

Terms of reference. Review and field testing activities in Europe - INT/82/002

Between May 8 and June 13, you will travel to Europe where you will present the information and training submodules to reviewers and assist instructors in the field testing of the material. You will visit/attend discussions at the following places:

- (a) Leeds University, England (review)
- (b) Loughborough University, England (field test)
- (c) Ross Institute, London University, England - field trip (review field test)
- (d) IRC The Hague, Netherlands (review)
- (e) University of Delft, Netherlands (review/field test)
- (f) GTZ - Frankfurt, West Germany (review)
- (g) EAWAG/SDC Switzerland (review)
- (h) Imperial College, ITGD London, England (review)

You will provide all participants with questionnaires and assist the trainers with the field test preparations including familiarizing them with the materials. You will return with all the field test/review results wherever possible. You will present me with a summarized report of all the results within two weeks of your return to Washington and a full report when all the other field test/review results have been received.

cc: Messrs. M. Cohen, J.M. Kalbermatten, R. Middleton, G. Beier (WUD)
M. McGarry, H. McPherson (Consultant)

LO/lgl

INT/82/002

4-17-84

April 17, 1984

S. Arlosoroff, Chief, Applied Research and Technology (WUD)

L. Obeng, WUD/ART

61468

Back to office report - Meeting in Ottawa on review and field testing
INT/82/002.

In accordance with my terms of reference, I travelled to Ottawa on April 14 for a meeting with Messrs. Kalbermatten, McGarry, McPherson and Ms. Mackenzie. This was held on April 15.

During the meeting we discussed the results of the Nova Scotia Pretrials (which Dr. McGarry will present to you seperately) and revised and finalised the questionnaires (attached) for the review and field testing exercise. We also discussed our various roles in the whole process and sorted out the logistics of carrying/delivery the submodules to the various groups of people and of the collection of the results at the end.

In summary, material for testing in Asia has been delivered by M. McGarry or posted and results will be collected by J. Kalbermatten. M. McPherson will be responsible for testing/review in Bradford, Nairobi, Harare. I will be responsible for testing/review at the following places: Loughborough, The Ross, GTZ, Zurich, Hague and Delft.

cc: Messrs. M. Cohen, J.M. Kalbermatten, G. Beier, R. Middleton (WUD)
M. McGarry, H. McPherson (Consultant)

INT/82/002

April 10, 1984

Ms. Hildegard Bromberg Richter
Director
TAPS
Rua Borges Logoa, 503 CEP 04038
Sao Paulo, SP Brasil

Dear Ms. Richter:

Mr. Arlosoroff forwarded to me your letter of March 11 as I am looking after the completion of the information and training for low cost water supply and sanitation project to which you make reference in your letter.

I am enclosing for your information the project brochure which describes the various training materials which we are preparing and will field test during the next few months prior to finalization and production. The description of the various modules and guidelines should enable you to decide which ones are of greatest interest to you and in particular which ones you may wish to consider for translation into Portuguese. We will be delighted, of course, to have these modules translated and have no objection whatsoever to your doing so. Our interest is to see these materials distributed and used as widely as possible and we therefore encourage organizations to translate them into local languages and to adapt the modules and materials to local conditions where this is necessary.

Please let us know which one of the modules and of the materials would be of primary interest to you. Most of it will be available within a month or two, with the exception of the learning kit. While the draft of the kit is available we will not produce the colored plastic version until we have a good idea of the demand so we know how many need to be produced. We will, however, send you a black and white copy of the kit which will give you a fair idea of its use and application.

I plan to visit Brazil this Summer and will let you know the date so we can meet. I would like to discuss with you some ideas we have for a systematic effort for training and dissemination activities. In the meantime, I remain,

Sincerely yours,

J. M. Kalbermatten
Senior Advisor, ART/WUD

JMK:nmr

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INT/81/026
C.C. INT/82/002

April 10, 1984

Dr. Urs Heierli
SKAT
Varnbuelstra Be 14, CH-9000
St. Gallen, Schweiz
SWITZERLAND

Dear Dr. Heierli:

Thank you for your interesting letter and the attached material from OECD. I have meanwhile telexed SKAT on the proposed collaboration between our organizations on the INT/81/026 - Rural Water Supply Handpumps project. You will soon hear from John Kalbermatten, our senior adviser on the INT/82/002 Project (information and training material on Low Cost Water Supply and Sanitation) on a visit to your organization to explore the possible collaboration on the proposed dissemination network.

You have clearly explained your position on your publications. We did order from you 20 copies of your report. We shall continue to order from you any publications we wish to obtain and distribute to our field staff. If you will send us a few copies of your 1984 list we will distribute it to the World Bank Divisions and other groups or organizations active in our section possibly having an interest in your publications and in the SATIS network.

I do not think there will be any difficulty for World Bank units to purchase your publications, therefore I do not think it is necessary to reach a special agreement. There is a simple procedure for ordering publications and all units are aware of it.

Your remarks and the OECD report express views which are very close to ours. We are involved in Appropriate Technology for mass production and not in the sub-sector of "Small is beautiful," which is better dealt with by NGOs, FWOS and the like. I fully agree with Jequier that large-scale implementation can only be achieved through the usual technical decision-making process. I would add that I view the pre-appraisal phase as the most important step for the implementation of AT and/or low-cost water supply and sanitation techniques. In many cases, even the pre-appraisal stage may be too late, and the education of engineers, decision makers, and representatives of the bilateral and multi-lateral agencies should be carried out constantly and by all media in order for them to consider AT options before a project brief is written from my own personal experience in our sector in the developing world, I may believe that the most important element in the Decision-making process vis-a-vis AT is the initial approach and discussions. If a politician or village and municipality officials are approached initially with options that are "modern, western technology high level of service etc.," it is difficult later to come in with AT options. The whole system in which a ministry is offered a project and unlimited sum to achieve maximum coverage and minimization of O&B costs is a "source of evil".

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Part of the problem is our fault, as we have not developed and expressed clearly enough how large-scale AT projects can be tendered, negotiated, signed, designed and constructed by the common consulting offices and construction firms. The association of AT with self labour as a form of community participation (instead of stressing involvement in the decision-making process and in operation and maintenance) - is also one of the main stumbling blocks.

The above are just few thoughts following your interesting letter and document.

I look forward to our collaboration with SKAT.

Yours Sincerely,

S. Arleseroff, Chief
Applied Research and Technology, Chief
UNDP Projects Manager, (INT/81/026, GLO/80/004, INT/82/002)

cc: M. Cohen, J. Kalbermatten, L. Obeng, G. Tschannerl, C.C. Gunnerson (WUD)
P. Obrist (SIDA, Sweden)

SA:lgl

V INT/82/002

cc INT/83/003

April 9, 1984

Mr. William Mashler
Senior Director
Global Programs
UNDP
866 U.N. Plaza
New York, N.Y. 10017

Dear Mr. Mashler:

I share your pleasure about the support CIDA has agreed to provide to INT/82/002. I am equally pleased at the proposed contribution by UNDP, though I do not want to hide my disappointment about the fact that the available funding for FY 1984 is substantially less than we were led to believe at the meeting in Ottawa. I understand the existing constraints; at the same time, I continue to believe that this project will have the most far-reaching impact on the achievement of IDWSSD objectives and is thus worthy of greater direct support from the organisation charged by the United Nations with Decade lead agency responsibilities. Project that should lead to the promotion and dissemination of low cost water supply and sanitation to enable realistic large scale coverage of basic needs to the rural and urban poor. This project concludes 10 years of work by the World Bank, UNDP and others. I am consoled by my equally firm belief that you will continue your efforts to obtain additional support, which is essential for the review, testing, completion and for the establishment of the dissemination network.

Your proposal to use INT/83/003 funds principally in efforts to ensure that womens' roles are adequately treated and are imminently sensible. You may recall that during the formulation of that project, John Kalbermatten suggested to M. Potashnik that INT/83/003 assume the responsibility for the production of modules principally concerned with the role of women in our sector. We believe that Ms. M. Elmendorf is an excellent choice for the review of the materials and look forward to reviewing Ms. M. Jacob's resume; as well as a proposal of Ms. Coinreau. We are working with several LDC behavioural scientists which we may have participating in the field testing, rather than the general review. However, professionals not closely associated with the project are, in our opinion, a better choice for that task. Ten days beginning around May 15 are acceptable to us. We estimate that this review should cost between \$5,000 and \$8,000 and that the remaining \$42-45000+ would be available for completion and field testing of community participation modules, manuals and guidelines.

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Your comments on the Baldia Earthscan book and our Baldia module are interesting, though we do not agree with your conclusions. Before getting to specifics, let me say, however, that it is a pleasure to see that one single issue gets so much attention from a Senior Official of a funding agency. With that kind of support, INT/83/003 will surely achieve great things. As to the details of your comments, I would like to state first of all that the community organiser, Qurabul Air, was in fact the person who provided the author with the information on which the module was based. The module was drafted in the field and reviewed by Qurabul Air, who appears in the module and is one of the speakers. The module stresses community participation, describes womens' roles and is quite elaborate on auxiliary women's activities and benefits resulting from the project, such as the literacy campaign and home schools. Had we stressed latrine building by women and neglected education, we would probably now be reminded of that. In any event, the identification and correction of such aspects is the purpose of our field testing and review which, as you know, is a very extensive one. We'll certainly consider adding a description about latrine construction by women when we analyze and incorporate the results of field tests and reviews.

That brings me to a further, more general comment. Much has been written by Earthscan and others about the Decade. More will undoubtedly be written in the future. Usually these efforts are directed to or against specific audiences or interests, and not necessarily expresses correct and objective views. INT/82/002 has to address a wide range of issues and convince a wide range of audiences. One of our major concerns is therefore to present the case for change, whether it is in technology, community participation (incidentally, Earthscan's description you quote is typical of the wrong approach which considers participation as the provision of free labor rather than involvement in the entire planning and decision-making process), education, financing, etc. So it is our objective to try and produce material acceptable to all and if it proves impossible at least for a majority of the interested parties. All of the issues deserve a lobby, for they are all important for the success of a program, but we have to make sure that we do not end up convincing one group at the cost of another and by doing so reduce acceptability. Clearly, we will have to make some choices once the reviews are in and I suspect we will not make everybody happy when we decide on how to incorporate the comments. We may not be able to satisfy you completely on womens issues as you would like, just as we may not satisfy the conventional engineer or economists, but we do believe we can get women and engineers to work together to improve the projects so they provide more benefits to the presently underserved - and that, presumably, will be the test of success for INT/82/002.

S. Arlosoroff, Chief
Applied Research & Technology
Water Supply and Urban Development Department

cc: Messrs. Cohen, Kalbermatten, Middleton, Ms. Obeng (WUD);
Potashnik (UNDP, NY); Beyer (UNICEF, NY).

JMK:slj

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cc: INT/81/006
cc: INT/82/002 ✓
~~cc: INT/82/004~~

Mrs. Carmen del Castillo, WUDOR

March 30, 1984

Richard N. Middleton, WUDOR

Tracking of Reimbursable Expenditures

1. As you know, on occasion we enter into agreements with donors through which they agree to reimburse the project directly for expenses rather than through cost sharing or through a trust fund. As I understand it, the system presently in place for these arrangements is as follows:

- (a) we complete, generally through a letter of understanding or a brief contract, an agreement with the donor specifying the services to be provided, and the actual or estimated expenses reimbursed;
- (b) we bill the donor for the actual costs when the services are completed, or arrange for regular payments (as with the present Interconsult contract) during the course of the contract; instructions on how the reimbursement is to be made (by check or direct) are included; and
- (c) controllers credits the funds to the project when they are received.

Unfortunately, it appears as if we have no means established to verify that the funds are received from the donor and credited to the proper account. In World Bank terms, the amounts are trivial (often only a few hundred or thousand dollars), but collectively they form an important part of the funds budgeted for project activities.

2. I am at present preparing a detailed three-year work plan and budget which will include amounts we expect donors to reimburse directly as well as other funds from external sources. To ensure that direct reimbursements are credited to the project in the future, I ask that you establish a monitoring system to track these reimbursable agreements which will:

- (a) ensure that reimbursement is claimed;
- (b) monitor the receipt of funds from the donor;
- (c) verify that controllers has credited the funds to the proper account; and
- (d) provide me with quarterly status reports on the above.

3. As in the past, I will furnish you with the necessary copies of the agreements and of our invoices to the donor.

cc: Messrs. Cohen, Arlosoroff (WUD)

BGrass/1m

OFFICIAL FILE COPY

INT/82/002

March 28, 1984

Mr. J. M. Kalbermatten, Senior Adviser, Applied Research & Technology, WUD

S. Arlosoroff, Chief, Applied Research & Technology, WUD

61790

Terms of Reference - INT/82/002: Information and Training for Low cost Water Supply and Sanitation
Review of Audio-Visual Modules with UNDP and UNICEF;
Consultation on Film Production with NFB;
Review field testing procedures with contractor

1. On April 11 you should review with staff of UNDP and UNICEF selected audio-visual modules, as arranged with Messrs. Nyi Nyi and Beyer (UNICEF) and Potashnik (UNDP).
2. On April 12 you should continue to Montreal where you should meet with Mr. H. McPherson (travelling under separate TOR's) and together with him review progress by NFB in film production and script preparation and agree on a production schedule. You should also brief Mr. McPherson on preparations for the Second Phase of INT/82/002 for his discussions with Blair Institute (Zimbabwe) and AMREF (Kenya).
3. From Montreal you should proceed to Ottawa where Mr. McGarry will brief you on the pre-field testing conducted at the University of Nova Scotia. You should agree with Messrs. McGarry and McPherson and Ms. L. Obeng (who will join you under separate TOR's) on field testing procedures. On April 17 you should attend the one-day CIDA workshop demonstrating the use of the Project Preparation Handbook.
4. On April 18 you should return to Washington and report on your activities.

~~JM:slj~~

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INT/82/002

March 27, 1984

L. Obeng, WUD/ART

S. Arlosoroff, Chief, Applied Research and Technology Division (WUD)

61790

Preparation of field testing protocol for INT/82/002.

You will travel to Ottawa on April 13 to join Mr. Kalbermatten, Mr. McGarry, Mr. McPherson and Ms. MacKensie for final discussions on the protocol to be used in the field testing in which you will be involved in May and June. Your discussions will be held on April 14, 15. You will present me with the protocol on your return to Washington.

LO/lgl

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March 26, 1984

H. McPherson, Consultant

S. Arlosoroff, Chief, Applied Research and Technology Division (WUD)

61790

Field Testing of INT/82/002 Materials and Technical Support
to NFB, Canada.

We understand that you will be travelling to Zimbabwe and Kenya in May and June. We request that while you are on this trip you carry out the various support and field testing activities listed below. We will pay your expenses only during the time that you carry out the following activities: You will spend: (a) May 1-4 in Montreal at the offices of the NFB, Canada providing them with technical support in the production of the films. (b) You will visit the Universities of Loughborough and Bradford between May 5-8 to help them with preparations for field testing and review activities to be carried out by these universities.

Between May 9 and June 30 you will spend time in the following places either discussing our proposed dissemination activities (on which Mr. Kalbermatten will brief you when you meet in Montreal April 12) or helping with the review and field testing activities: Harare 6 days, Khartoum 4 days, Nairobi 5 days. On your return to Edmonton you will provide Dr. McGarry with the results of the field testing you were involved in and report to me on the results of the rest of your discussions.

LO/lgl

INT/82/002

March 26, 1984

M. McGarry, Consultant

S. Arlosoroff, Chief, Applied Research and Technology Division (WUD)

61790

Pre field test trial at the University of Nova Scotia.

You will travel to Halifax, Nova Scotia about April 8 and spend two days discussing the results of the pre-field test trial with staff and students involved in the course on Appropriate Technology at the University of Nova Scotia. You will also together with staff (and students) finalise the content of the 3 questionnaires. You will report your findings to Mr. Kalbermatten during his visit to Ottawa from April 13-18.

cc: M. Cohen, R. Middleton, J. Kalbermatten, L. Obeng (WUD)

LO/lgl

INT/82/002

March 26, 1984

H. McPherson, Consultant

S. Arlosoroff, Chief, Applied Research and Technology

61790

Technical Support to NFB Canada

You will spend two days between April 11 and 16 at the Office of the NFB, Canada where you will be joined on April 12 by Mr. Kalbermatten. You will provide them with technical support in the preparation of the four films for INT/82/002. You will in addition to review, together with Messrs. McGarry and Kalbermatten and Ms. Obeng, the Field Testing Protocol now undergoing its initial application at Nova Scotia University spend two days in Ottawa. You will report your conclusions to Mr. Kalbermatten prior to your departure from Ottawa.

LO/lgl

TAG Staff and Sanmen

March 23, 1984

Richard W. Middleton, Project Manager

TRA 8.2

INT/81/047: Progress Report and Proposed Activities 1984-86: Information and Training program in Low-cost Water Supply and Sanitation (UNDP/INT/82/002)

1. I am pleased to send you herewith a copy of the progress report and the proposed work plan for INT/82/002 for the period 1984-86. *low*
2. The report gives a comprehensive description of the background, objectives and progress so far made in the preparation of various training materials for low-cost water supply and sanitation. Proposed strategies for dissemination are also discussed.
3. The information presented in the report should enable you to make adequate preparation to make full use of the training materials in your work.

Attachment

AW/elf

INT/82/002

March 23, 1984

Dr. M.A.C. Dowling
Technical Adviser
Division of Health Manpower Development
World Health Organization
1211 Geneva 27-Switzerland

Dear Dr. Dowling:

Thank you for your letter to Mr. Arlosoroff. I am now back in the Bank after my sabbatical and will be coordinating the field testing and dissemination activities. I will be in Europe in May/June together with other colleagues and will provide you with a sample of the modules to review at that time. We will consider your review comments together with those of agencies currently participating in INT/82/002 who will also be reviewing the materials during that time (CIDA, UNDP, UNICEF, GTZ, FINNIDA, SDC) and the numerous technical and other comments which we hope to receive from numerous technical experts, trainers, engineers, technicians, students etc. worldwide. We will then analyse all review comments as well as the results of the field tests before making the final modifications.

We look forward to including your comments.

Yours Sincerely,

J.W. Kalbermatten
Senior Advisor
Applied Research and Technology Division
Water and Urban Development

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March 23, 1984

Dr. T.V. Luong
Project Officer
Water and Environmental Sanitation
UNICEF
Regional Office for South Central Asia
UNICEF House
73 Lodi Estate
New Delhi 110003
India

Dear Dr. Luong:

I hope your work is going well. With respect to your request to Mike for modules, those which we have completed are in draft form and are being reviewed and field tested in June and July of this year. After field testing they will be modified. We will then start a large scale training and dissemination effort at which point they will be available for general distribution. We will keep you informed of progress either directly or through Mr. Beyer, UNICEF, New York, who we hope will be involved in our review and field testing program.

Thank you for your interest.

Sincerely,

J.N. Kalbermatten
Senior Advisor
Applied Research and Technology Division
Water and Urban Development

cc: S. Arlosoroff, L. Obeng (WUD)
M. Beyer, (UNICEF/New York)
M. McGarry (consultant)

LO/lgl

6 W 178 000

cc. INT/82/002

March 21, 1984

Mr. Fred Kobrak
President
Collier MacMillan International
866 Third Avenue
New York, NY 10022

Dear Mr. Kobrak,

Your letter of February 15th to Geoffrey Read has been passed to me to reply, since he is at present on mission.

I note from the quotation attached to the letter that the price of the VLS modules has now risen from the \$35 originally envisaged to a total of \$124 (\$31.50 for the module, \$7.50 for the folder, \$25.00 for the carrier bag, and \$75.00 for the magnetic board - we presume that the \$15.00 for the last item is an error, given the extrusion at a \$75.00 rate). There are, as you know, already criticisms from a number of the agencies with which we collaborate that the system appears to be too expensive for the intended use, and this quadrupling of price will do nothing to allay their fears. I hope you will reconsider the proposal.

To minimize shipping and other costs we are likely to print the accompanying booklets in the countries concerned, rather than centrally (although we may reproduce some in the Bank for our own use). I should be grateful if you would forward the print-ready material so that we may investigate the best way to proceed.

The further dissemination of this material will be managed through the parent training and dissemination project, INT/82/002 which is now developing the follow-up phase to finance the purchase and distribution of all the materials being produced. I am therefore passing your proposal and letter to them for their information, but I am sure that in the foreseeable future they will not have at their disposal funds of the order of magnitude which you envisage. We shall therefore be dependent on incorporating components into existing projects in order to produce and use the material (as is now being proposed for Nigeria under a Bank-supported project). In order to do this it is essential that we reach agreement on the price issue; I should be grateful for your response on this.

Yours sincerely,

Richard N. Middleton
Project Manager
UNDP Interregional Project
INT/81/047

RNM/alf

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INT/82/002

March 21, 1984

J.M. Kalbermatten, Senior Advisor, Applied Research & Technology Div., WUD

A. Churchill, Director, WUD

69484

Terms of Reference: Secondment to INT/82/002

1. You are seconded to Project INT/82/002 Information and Training Programme in Low Cost Water Supply and Sanitation for the period March 1, 1984, to November 30, 1984. Your responsibilities under this assignment are

- (a) Monitoring the field testing and trial dissemination of audio-visual material; organizing/supervising review of material produced to ensure its appropriateness for the intended use and the quality of content and presentation; coordinating the production of a complete prototype set of all materials ready for production;
- (b) Monitoring the production of the films and providing necessary technical advice during the period of your secondment (films will not be completed during this time);
- (c) Preparing a proposal for the establishment of a permanent training and dissemination strategy and infrastructure; discussing the proposal with potential donor and participating agencies in an effort to secure support (financial and/or in kind); organizing donor meeting to finalize/approve proposal.

2. Your work program for the period in question should be as follows:

- March 1 - (a) Participation in in-house review of modules per schedule listed in S. Arlosoroff's memo of March 5, 1984, and organization of modules' field testing. Organization/participation of modules' review with UNICEF and UNDP in New York. Visit to NFB Montreal, Cowater, and CIDA, Ottawa.
- May 11
- (b) Drafting of Training and Dissemination Strategy and Infrastructure Proposal based on your draft and reflecting comments by CIDA, GTZ and SDC.
- (c) Monitoring of consultants' work and film production by NFB.
- May 14 - (d) Visits to potential donors and participating organizations to discuss the Infrastructure Network Proposal and financing arrangements. Redrafting of Infrastructure Proposal as required and submittal of Interim Report to CIDA on July 15.
- Aug. 23

- Aug. 26 - (a) Redrafting and internal review of Infrastructure Proposal. Sub-
Sept. 7 mittal to CIDA.
- Sept. 10 - 12 (f) Address New Orleans World Fair Symposium "Water for Human
Consumption".
- Sept. 13 - 18 (g) Review and approval of consultants' recommendations on material
modifications based on the analysis of field test results.
- Sept. 19 - 21 (h) Chairing Workshop at Congress on Tropical Medicine in Calgary.
- Sept. 24 - (i) Expert Panel Review of Training Material. (subject to budget
Oct. 19 limitations). Final review of material with consultants.
Authorization of final changes and subsequent production of
prototype.
- Oct. 22 - 25 (j) Meeting with CIDA.
- Oct. 26 - 31 (k) Preparation for and donor meeting in Bonn or Frankfurt (subject to
the previous arrangements and commitments by Donors)
- Nov. 1 - 4 (l) Meeting with ATM in Manila to finalize participation.^{1/}
- Nov. 5 - 8 (m) Meeting with Japanese foreign aid officials to report on donor
meeting, finalize participation.
- Nov. 9 - 26 (n) Meeting with Peoples' Republic of China training institution^{1/} and
participation in GLO/80/004 project preparation seminar.
- Nov. 27 - 30 (o) INT/82/002 Interim Phase wind-up.

3. During this period, you will take annual leave, July 7 - 15,
August 6 - 10 and November 15 - 21.

4. Your workprogram may be changed as mutually agreed between
Mr. S. Arlosoroff and you, and is expected to be completed by November
30, 1984. Your further involvement in this project or any other
assignment will be considered at that time. Your workprogram for the
latter stages in particular should reflect results of contacts made in
May and June.

5. For administrative purposes, you will report to Mr. S. Arlosoroff,
Chief, ART and Projects Manager INT/82/002, for the duration of this
secondment.

1/ Subject to decision at donor meeting

Cleared with Mr. S. Arlosoroff, Chief, ART/WJD

JKM:slj

INT/82/002

CS
Christopher Schulz, Research Assistant, INT/81/047

March 20, 1984

Richard W. Middleton, Project Manager, INT/81/047

Terms of Reference, OTTAWA, Preparation of Training Materials on
Water Treatment

1. You will arrange to visit Ottawa from March 26-29 to continue working on the two submodules on water treatment, which you are preparing for the UNDP-funded Information and Training Project (INT/82/002).
2. In particular, you will complete the following tasks in consultation with the audio-visual specialist for the Project:
 - a) prepare a final draft the submodule on simplified water treatment plants;
 - b) prepare in draft the accompanying trainer's and participants' notes;
 - c) prepare a detailed outline for the second submodule on alternative treatment methods for small communities.
3. On your return to Washington, D.C. you will write a brief report to me summarizing your work, including a time-table for completing both sub-modules.

Cleared with & cc: Mr. Arlosoroff, Ms. Obang (WUD)

cc: Messrs. Cohen, Costa, Pettigrew, WUD; Potashnik, UNDP/DGIP;
Wright, TAG

CS
CS/epo

OFFICIAL FILE COPY

INT/82/002

March 14, 1984

Mr. Paul A. Obrist
Swiss Development Cooperation
Directorate for Development Cooperation
Federal Department of Foreign Affairs
CH-3003 Bern, Switzerland

Dear Mr. Obrist:

Re: UNDP/World Bank INT/82/002--Information and Training
for Low Cost Water Supply and Sanitation

Enclosed please find the Progress Report and Proposed Work Plan for 1984 - 1986 for the above-mentioned project. This includes a draft proposal for dissemination activities based on John Kalbermatten's draft proposal of which you have a copy.

Approximately two years have passed since this programme was initiated by the World Bank, UNDP and CIDA. With the active participation of our consultants, the National Film Board of Canada and the World Bank/UNDP projects staff, most of the materials has already been produced during this short period.

Within the "Technical Package"--the core of the programme--30 submodules have been completed, while the remainder of Priority I will be completed in mid-1984. The Project Preparation Handbook (three volumes) has been reviewed, published and distributed in English to over 7,000 recipients throughout the world. We have received highly positive reactions from a variety of organisations and individuals.

The "Decision Package" and the "User Participation Package" are also in their final stages of preparation and production. The only delay is in the production of films by the National Film Board.

We are approaching the completion of Phase I; the material will be reviewed, field tested and modified on the basis of the comments received. The material will then be ready for wide-scale dissemination by early 1985.

OFFICIAL FILE COPY

Mr. Paul A. Obrist

March 14, 1984

We hope to encourage several agencies to participate in Phase II-DISSEMINATION, which has exciting prospects for increased human resources development through information, training, advisory and promotion activities.

Mr. John Kalbermatten (Senior Adviser Water and Urban Development Department) will be contacting you in the near future to discuss dissemination itself and the training and organisational activities associated with the process.

Sincerely yours,

S. Arlosoroff, Chief
Applied Research & Technology Division, WUD
(UNDP Projects Manager, INT/81/026, GLO/80/004, INT/82/002)

Enclosures

cc: T. Churchill, M. Cohen, G. Baier, R. Middleton, J. Kalbermatten

Copy: Messrs. M. Potashnik (UNDP, New York)
M. Mc Garry (Cole & Company, Ottawa)
C. Gunnerson, G. Tschannerl, L. Obang (UNDP)

SArlosoroff:mg

INT/82/002

March 14, 1984

Mr. R. Anttola
FINNIDA
Tehtaankatu 1A 00140
Helsinki, Finland

Dear Mr. Anttola:

Re: UNDP/World Bank INT/82/002—Information and Training
for Low Cost Water Supply and Sanitation

Enclosed please find the Progress Report and Proposed Work Plan for 1984 - 1986 for the above-mentioned project. This includes a draft proposal for dissemination activities based on John Kalbermatten's draft proposal of which you have a copy.

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OFFICIAL FILE COPY

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Sincerely yours,

S. Arlosoreff, Chief
Applied Research & Technology Division, WUD
(UNDP Projects Manager, INT/81/026, GLO/80/004, INT/82/002)

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Copy: Messrs. M. Potashnik (UNDP, New York)
M. Mc Garry (Cole & Company, Ottawa)
C. Gunnerson, G. Tschannerl, L. Obeng (UNDP)

SArlosoreffmg

March 13, 1984

Mr. Klaus Kresse
Gesellschaft für Technische
Zusammenarbeit
D-6236
Eschborn 1 beim Frankfurt am Main
Postfach 5180
Federal Republic of Germany

Dear Mr. Kresse:

Re: UNDP/World Bank INT/82/002—Information and Training
for Low Cost Water Supply and Sanitation

Enclosed please find the Progress Report and Proposed Work Plan for 1984 - 1986 for the above-mentioned project. This includes a draft proposal for dissemination activities based on John Kalbermatten's draft proposal of which you have a copy.

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Mr. Klaus Kresse

March 13, 1984

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tion itself and the training and organisational activities associated with
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Sincerely yours,

S. Arlosoroff, Chief
Applied Research & Technology Division, WUD
(UNDP Projects Manager, INT/81/026, GLO/80/004, INT/82/002)

Enclosures

cc: T. Churchill, M. Cohen, G. Beier, R. Middleton, J. Kalbermatten

Copy: Messrs. M. Potashnik (UNDP, New York)
M. McGarry (Cole & Company, Ottawa)
C. Gunnerson, G. Tschannerl, L. Obeng (UNDP)

SArlosoroff:mg

INT/82/002

March 13, 1984

Dr. J. Slamet Soemirat
Department of Sanitary Engineering
Bandung Institute of Technology,
Institut Teknologi Bandung
Jalan Ganesha 10
Bandung, Indonesia

Dear Dr. Soemirat:

I am writing with respect to Dr. McGarry's telegram of February 17, 1984. Dr. McGarry is a consultant to the Information and Training Project for Low Cost Water Supply and Sanitation described in the enclosed prospectus.

This is an United Nations Development Program project which is being executed by the World Bank. The project is producing various information and training materials on low cost water supply and sanitation technologies and their application, partly in support of the (IDWSSD) International Drinking Water Supply and Sanitation Decade for three major groups of people, a) decision makers, b) student and practicing engineers, c) project staff and the communities or users. We are at the point of field testing the materials and would like to test those for the student and practicing engineers at training institutes in developing countries, such as BIT. We will be testing the materials with a number of other institutions/training centers around the world.

We request that your Department undertake a review of these materials which are in the form of audio-visual training submodules within your regular courses or at special workshops. We have prepared 3 draft protocols for use in the testing process:

- A. Reviewers Assessment
- B. Instructors Comments and Recommendations
- C. Participants Questionnaire.

These are now being finalized through prefield testing trials of the submodules.

Should you or your staff wish to review submodules from a technical content perspective, they can be reviewed in much the same way as books or articles are reviewed using protocol A as a guideline. We are particularly interested in discovering technical inaccuracies and in receiving suggestions for modifying and improving the materials.

OFFICIAL FILE COPY

Dr. J. Slamet Soemirat

March 13, 1984

We ask that the instructor or trainer review each submodule from a training perspective as outlined in protocol B. Similarly, we ask that each student or participant fill out the questionnaire at the end of each session in the classroom or workshop. I attach a list of submodules which we feel you would find appropriate, but which can be adjusted to suit your needs.

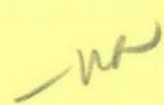
We would like to have the materials tested during May and June, 1984. In addition to visiting you in March, Dr. McGarry will be made available during early May to familiarize you and your staff with the project, its training materials and presentation technique.

We would also appreciate your response to the idea of the Bandung Institute of Technology being a principal center for training and dissemination of the finalized training materials in Indonesia. I will contact you at a later date to discuss dissemination question.

We look forward to working with you and your staff on this project.

Sincerely,

John Kalbermatten
Senior Advisor
Applied Research and Technology Division
WUD Department
World Bank

Enclosure 

cc: Mr. S. Arlosoroff, TWD
Mr. Mc Ma Garry
Ms. L. Obeng, WUD
Mr. M. Cohen, URB
Mr. A. Wright

JKalbermatten:mg

INT/82/002

March 13, 1984

Dr. C. Woods
Director
African Medical Research Foundation
P.O. Box 30125
Nairobi, Kenya

Dear Dr. Woods:

This letter is to summarize the various discussions AMREF has had with Dr. H. Mc Pherson on the field testing program for the materials produced by the Information and Training Program for Low Cost Water Supply and Sanitation and to provide more specific details on the procedures, materials and timing for the field test.

We greatly appreciate your agreeing to undertake this work and realize that changes may have to be made to fit in with your schedule so please regard these as draft suggestions. We would like you to:

1. technically review the modules
2. test the modules under classroom conditions.

The technical review should be carried out by staff members who are most familiar with the subject matter covered in the modules. We would like the reviewers to critically review the modules in much the same way as they would treat an article or book. We are particularly interested in discovering technical inaccuracies and in receiving suggestions for modifying or improving the materials. A copy of a draft protocol we have used for our own internal review is enclosed (A) to give the reviewers some guidelines.

For the classroom tests we have prepared a guideline for the instructor's comments and recommendation (B) and a participants questionnaire (C). These are enclosed and should be completed at the end of each session. The modules can be tested in existing courses at the University of Nairobi if this is possible and appropriate and also as we discussed before in a special 5 day short course for practicing engineers working the sector. A list of the submodules we suggest you review is attached.

We would like to have the materials tested during May and June 1984. If you are agreeable, Dr. Mc Pherson will come to Nairobi in early May to discuss the final arrangements for the field test and to brief your group.

OFFICIAL FILE COPY

Dr. C. Woods

March 13, 1984

We would also like you to review the three films produced by the National Film Board of Canada for the project. The Film Board wishes to be present during the field test and they will develop a testing protocol. I believe that the films' testing could be carried out during a single day. The timing for this can be settled later.

As you are aware we will be field testing our materials in several countries. In all cases our practice will be to fully acknowledge the assistance of each institution and to provide them with two complete sets of all the audio-visual materials including videos of the four films and multiple copies of the training manuals and copies of various World Bank publications on the subject of low cost water supply and sanitation. I hope to visit you in Nairobi in early July, at which time I would like to review with you possible more permanent collaboration as a follow-up of present activities. We look forward to a fruitful collaboration with you.

Sincerely,

John Kalbermatten
Senior Advisor
Applied Research and Technology Division
WUD Department
World Bank

Enclosure

cc: Dr. N. Greenacre, AMREF
Mr. H. Mc Pherson
Dr. M. Mc Garry
Mr. S. Arlosoroff, WUD
Ms. L. Obeng, WUD
Mr. A. Wright, WUD

JKalbermatten:mg

INT/82/002

March 13, 1984

Dr. B. N. Lohani
Division of Environmental Engineering
AIT
P.O. Box 2754
Bangkok 10501
Thailand

Dear Dr. Lohani:

Further to my recent telex and your discussions with John Kalbermatten and Mike Mc Garry in October, 1983, I am writing to confirm our interest in having your Division review training materials prepared by the Information and Training Project on Low Cost Water Supply and Sanitation, and wish to provide more specific details on procedures, materials and timing.

We greatly appreciate your agreeing to undertake this work and realize that changes may have to be made to fit in with your schedule, so please regard these as draft suggestions. We would like you to:

1. technically review the modules.
2. test the modules under classroom conditions.

The technical reviews should be carried out by staff members who are most familiar with the subject matter covered in the modules. We would like the reviewers to critically review the modules in much the same way as they would treat an article or book. We are particularly interested in discovering technical inaccuracies and in receiving suggestions for modifying or improving the materials. A copy of a draft protocol we have used for our internal review is enclosed (A) to give the reviewers some guidelines.

We are developing two protocols for the classroom tests: drafts are enclosed. The B. Instructor's Comments and C. Participants Questionnaire should be used after each session. The suggested list of submodules is attached. These can be tested in regular classroom sessions, special courses or workshops during May and June 1984. Dr. Mc Garry will visit AIT in March and in April for initial discussion on the review and field testing of the materials and to determine your specific requirements and timing. Dr. Mc Garry will be available in early May to familiarize you and your staff with the submodules content, presentation techniques and testing procedures.

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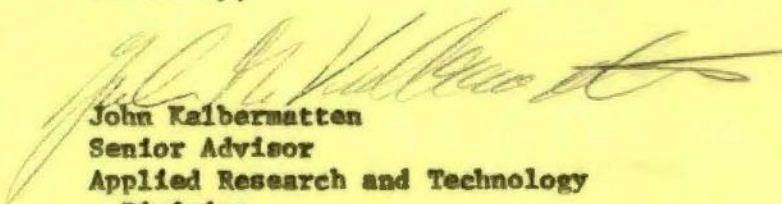
Dr. B. N. Lohani

March 13, 1984

While appreciating your kind offer to review the submodules from the trainer and student's perspectives in the classroom, we recognize that technical review of the submodules will require greater individual effort and specialized expertise. (We are therefore prepared to offer \$150 per submodule reviewed technically).

We would also like to initiate discussions with you on the dissemination of the training materials within Thailand. In this respect we appreciate your intention to free faculty time for this activity. By the time you get this letter, Dr. Mc Garry would have spent some time with you on the subject and Mr. Arlosoroff will meet with your colleagues in April.

Sincerely,



John Kalbermatten
Senior Advisor
Applied Research and Technology
Division
WUD Department
World Bank

Enclosure

cc: Dr. N. Greenacre, AMREF
Mr. H. Mc Pherston
Dr. M. Mc Garry
Mr. S. Arlosoroff, WUD
Ms. L. Obeng, WUD
Mr. A. Wright, WUD

JKalbermatten:mg

INT/82/802

March 13, 1984

Mr. Len Hutton
WEDC
Department of Civil Engineering
University of Technology
Loughborough
Leicestershire LE11 3TU
England

Dear Mr. Hutton:

This letter is to summarize the various discussions we have had on the field testing program for the materials produced by the Information and Training Program for Low Cost Water Supply and Sanitation and to provide more specific details on the procedures, materials and timing for the field test.

We greatly appreciate your agreeing to undertake this work and realize that changes may have to be made to fit in with your academic schedule so please regard these as draft suggestions. We wish your work unit to do the following:

1. technically review the modules
2. test the modules under classroom conditions.

The technical review should be carried out by staff members who are most familiar with the subject matter covered in the modules. We would like the reviewers to critically review the modules in much the same way as they would treat an article or book. We are particularly interested in discovering technical inaccuracies and in receiving suggestions for modifying or improving the materials. A copy of a draft protocol we have used for our own internal technical review is enclosed to give the reviewers some guidelines (A).

For the classroom tests we have prepared a guideline for the instructor's comments and recommendations (B) and a participants questionnaire (C) for quick responses. The submodules we would like you to review are listed on the attached page. *LM*

We would like to have the materials tested during May and June 1984. If you are agreeable, Letitia Obang will spend some time with you between May 20 and May 31, briefing your staff and discussing the field test program. Harry Mc Pherson will also spend one day with you at the beginning of May on his way to Africa.

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Mr. Len Hutton

March 13, 1984

We would also like you to review the three films produced by the National Film Board of Canada for the project. The Film Board wishes to be present during the field test and they will develop a testing protocol. I believe that the films' testing could be carried out during a single day. The timing for this can be settled later.

As you are aware we are going to field test the materials in several countries. In all cases our practice will be to fully acknowledge the assistance of each institution and to provide them with two complete sets of all the audio visual materials including videos of the four films and multiple copies of the training manuals and copies of various World Bank publications on the subject of low cost water supply and sanitation.

I hope to be in Loughborough at the end of May to discuss the Project in greater detail and also its follow-up with you and Mr. Pickford.

Sincerely,

John Kalbermatten
Senior Advisor
Applied Research and Technology Division
WUD Department
World Bank

Enclosure

cc: Mr. J. Pickford

JKalbermatten:mg

INT/82/002

March 13, 1984

Professor Nawaz Tariq
Director
Institute of Public Health,
Engineering and Research
University of Engineering and Technology
Lahore 31
Pakistan

Dear Professor Tariq:

With reference to your discussions with our consultant Dr. Mc Garry in November and his telegram of February 17, 1984, I am pleased to confirm our interest in having IPHER test the training modules prepared by the World Bank - UNDP project on Information and Training for Low Cost Water and Sanitation.

We request that your Institute undertake a field testing of training submodules prepared by the project within your regular courses or at special workshops. I enclose draft protocols:

- A. Reviewers Assessment,
- B. Instructors Comments and Recommendations,
- C. Participants Questionnaire.

These are being finalized through prefield testing trials of the submodules and are intended for use during field testing.

Should you or your staff wish to review submodules from a technical content perspective, they can be reviewed in much the same way as books or articles are reviewed using protocol A as a guideline. We are particularly interested in discovering technical inaccuracies and in receiving suggestions for modifying and improving the materials.

We would like to have the materials tested before July and trust that you have been able to spend sufficient time with Dr. Mc Garry during his March visit for him to familiarize you and your staff with the project, its training materials and presentation technique.

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Professor Nawaz Tariq

March 13, 1984

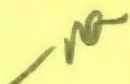
We would also appreciate the opportunity to discuss the possibilities of IPHER:

- (1) carrying out a trial dissemination of the technical package within Pakistan; and
- (2) being the principal centre for dissemination of the materials in Pakistan once the materials are finalized.

I look forward to more detailed discussions and working with your staff on this project.

Sincerely,

John Kalbermatten
Senior Advisor
Applied Research and Technology Division
WUD Department
World Bank

Enclosure 

cc: Dr. N. Greenacre, AMREF
Mr. H. Mc Pherson
Dr. M. Mc Garry
Mr. S. Arlosoroff, WUD
Ms. L. Obeng, WUD
Mr. A. Wright, WUD

JKalbermatten:mg

INT/82/002

3-12-84

Back to office
report

March 12, 1984

Mr. A. Churchill, Director, WUD

J. M. Kalhermatten, Senior Advisor, WUD

61785

**Back-to-Office-Report - Germany: Meetings with BMZ, KfW, GTZ,
BMZ-UNEP Solid Waste Conference**

- Thailand: DNT/82/002 Film Laberviews

**- Individual Study Program: Data Collection in
Thailand, Philippines, Japan, Switzerland**

1. The itinerary and activities described in the Terms-of-Reference of August 2 were changed on the basis of the individual study program described in Mr. E.B. Eriksen's (PMD) memo to me of August 31, requests made to me after my departure from Washington by Messrs. Arlosoroff and Gunnerson (cleared by you) and a residence change initiated by me and cleared by Mr. Eriksen. The principal itinerary changes consisted of my participation in the BMZ-UNEP Solid Waste Conference in Germany (9/25 - 10/03) and elimination of the Nepal/India visits for which I substituted visits to the Philippines and Japan. Finally, I returned to Germany January 22-26 to participate in a policy meeting with staff of BMZ, KfW and GTZ. My residence from November 1, 1983 to February 23, 1984 when I returned to Washington, was in Zurich, Switzerland.

2. During the BMZ-UNEP solid waste conference I spent a day with Mr. Knipschild (BMZ) in Bonn, reviewing a draft sector policy paper and answering queries about the TAC advisors for Africa for which German funding had been requested. I also spent a day with Mr. Kresse (GTZ) in Eschborn drafting a project document/supplementary budget request for funding of waste resource recovery and training project activities. Messrs. Arlosoroff and Gunnerson were kept informed of actions to be taken in connection with these projects. Funding for these activities has in the meantime been approved.

3. Filming in Thailand was successful, according to NPFC and those of my colleagues who have seen the rushes. As is my custom when visiting AIT in Bangkok, I lectured to the Sanitary Engineering Students. I also discussed preliminarily, DNT/82/002 Phase II with appropriate senior AIT faculty, including the president, and found great interest in future participation by AIT. I also took the opportunity, while at AIT, to use ENSIC's library and obtained microfiched data, abstracts and publications.

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4. In Manila, I obtained from LWUA, case study material and cost data from water supply and sanitation projects executed by LWUA. In Tokyo, I obtained data about the sectors development in Japan and visited Messrs. Kwapong and Ploman of the United Nations University to inform them of INT/82/002 and find out how UNU could fit into the field testing and dissemination phase. I left the discussions with assurances of interest, even enthusiasm, but question the practical value of cooperation during the field testing. UNU would select other schools/experts to whom testing would be contracted, something we may as well do ourselves without a "middleman". On the other hand, subsequent networking with UNU may be useful because that is something with which UNU has experience.

5. On the way, (rather than to return to Spain from Germany) to Thailand, I spent five days in Zurich visiting with EAWAG and other professional institutions to review information resources and determine what support in my individual study program I could obtain. On the basis of my findings I decided to stay in Zurich for the rest of my leave. Mr. Ericksen approved this change in residence from Spain to Switzerland. This also made it possible for me to visit WHO in Geneva to obtain data not only for myself but necessary for the water and waste chapter I wrote for Mr. W. Baum's book on project preparation during the period of my leave. I am now writing some additional sections for that chapter.

6. On January 26, 1984, I participated in a BMZ, KfW, GTZ review meeting devoted to the new German bilateral financial assistance policies in the water and waste sector (at Mr. Knipschild's invitation). The policies eventually adopted are very similar to those described in the Bank's Sector Support Strategy Paper. On the way to Bonn I visited the "Institute fuer Siedlungswasserbau Wasserguete and Abfallwirtschaft" of the University of Stuttgart where I discussed some aspects of my book with members of the research staff. I also stopped for a day in Eschborn where I explored with Mr. Kresse (GTZ) possible scenarios for Phase II of INT/82/002. I learned during this visit that the Peoples' Republic of China had just submitted an official request for German assistance for the establishment and operation of two Water and Waste Sector Training Institutions - a welcome result of "matchmaking" efforts during my last visit to China.

7. During my stay in Zurich, I visited SDC in Bonn, (once in the company of Mr. S. Arlosoroff), and EAWAG several times to review programs and answer questions on our various joint activities and served as an informed contact between them and the Bank - activities I reported to Messrs. Arlosoroff/Gunnerson as they occurred.

8. With respect to the six months leave of absence, I am well satisfied with the time spent away from the Bank. It provided me with the opportunity to "recharge my batteries", to reflect about progress - or lack thereof - in the sector and my role in it, away from the pressures of the institution. I did not finish my book (I'm about 3/4 through writing the draft) mostly because I spent more time than originally anticipated in Bank-related activities, principally writing the water and wastes chapter for Mr. Baum.

cc: Mr. Hussain (OPSVP)
Eriksen/Hammond, Denton (FMD),
Cohen, Arlosoroff, Middleton, Gunnerson (WUD)

JKH:slj

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BOOK OF TWO

REP

DENIS POTVIN, SENIOR PROGRAMME OFFICER, UNDP PROGRAMMES
DIVISION, CIDA, HULL, QUEBEC, CANADA. (TELEX 534140 MUD)

REP

W. MASHLER, SENIOR DIRECTOR, GLOBAL PROGRAMS, UNDEVPRO,
NEW YORK, NEW YORK 10017 (TELEX 422862)

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ATTENTION DENIS POTVIN, SENIOR PROGRAMME OFFICER, UNDP PROGRAMMES
 DIVISION, CIDA, HULL, QUEBEC, CANADA. FOR INFORMATION MASHLER,
 UNDP NEW YORK. OUR REF. NO. 84/141. RE UNDP PROJECT INT/82/002.
 AAA AS AGREED DURING DISCUSSIONS ON FEBRUARY 29, 1984 IN YOUR
 OFFICES, WE HAVE REVIEWED THE WORK PROGRAM AND NEEDS OF PROJECT
 INT/82/002 PHASE II, " PREPARATION OF TRAINING AND DISSEMINATION
 ACTIVITIES." WE HEREBY FORMALLY IN THE NAME OF UNDP/DGIP AND
 THE BANK REQUEST FUNDING FOR THE FOLLOWING PHASE II ACTIVITIES:
 (111) DEVELOPMENT OF TRAINING AND DISSEMINATION STRATEGY
 CONSISTING OF (A) ELABORATION OF ORGANIZATION ALTERNATIVES AND
 STRATEGIES INCLUDING COST ESTIMATES: (B) DISCUSSIONS WITH
 POTENTIAL DONORS AND PARTICIPATING INSTITUTIONS: (C) PREPARATION
 OF INTERIM REPORT AND FINAL REPORTS FOR SUBMITTAL TO CIDA ON
 JULY 15 AND SEPTEMBER 15 RESPECTIVELY; (D) REVIEW MEETING WITH
 CIDA IN EARLY OCTOBER AND DECISION MEETING WITH INTERESTED DONORS
 MID TO LATE OCTOBER; (222) TRIAL DISSEMINATION OF SELECTED
 MATERIALS IN PAKISTAN: (333) FIELD TESTING OF MATERIALS BY AT
 LEAST SIX LDC AND FIVE INDUSTRIALIZED COUNTRY INSTITUTIONS
 TOTALLING 150,000 CANADIAN DOLLARS (444) TRANSLATION OF
 AUDIOVISUAL MATERIAL, SUPPORTING AND COMPLIMENTARY TEXT INTO
 FRENCH TOTALLING CANADIAN DOLLARS 50,000. (555) TRANSLATION OF

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PROJECT PREPARATION HANDBOOK INTO FRENCH TOTALLING 50,000
CANADIAN DOLLARS. BBB WE REQUEST CONTRIBUTION TOWARDS THESE
ACTIVITIES, WHICH ARE ALSO SUPPORTED BY UNDP AND OTHER DONORS.
AT THIS TIME, WE ARE UNABLE TO MAKE MORE ACCURATE PROJECTIONS
THAN ARE CONTAINED IN THE FEBRUARY 29 PROGRAM REPORT FOR
PHASE III, "TRAINING AND DISSEMINATION INFRASTRUCTURE." WE HOPE
THAT A SUCCESSFUL CONCLUSION OF PHASE II WILL RESULT IN THE
ESTABLISHMENT OF AN EXCITING AND VALUABLE CONTRIBUTION TO THE
IDWSSD BEGINNING ON OR ABOUT JANUARY 1, 1985, AND LOOK FORWARD
TO DISCUSSING IN GREATER DETAIL YOUR PARTICIPATION IN THAT
PHASE WHEN WE MEET IN OCTOBER. REGARDS, COHEN/ARLOSOROFF,
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 J. KATZMANN
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INT/82/002 ✓

INT/81/026

3-12-84

March 12, 1984

Mr. S. Arlosoroff, Chief, Applied Research & Technology Division, WUD

J.M. Kalbermatten, Senior Advisor, ART/WUD

61785

Mission to Canada Feb. 28 - March 1, 1984

1. UNDP/World Bank INT/82/002 - Information and Training of Low Cost Water Supply and Sanitation
2. UNDP/World Bank INT/81/026 - Rural Water Supply Handpumps (Testing and Technological Development)

Back-to-Office Report

Per Terms-of-Reference of February 17, 1984, I visited CIDA in Ottawa to discuss the INT/82/002 workprogram. As you already know, I did not participate in discussions about the INT/81/026 program and collaboration with IDRC; instead, I spent the morning of March 1, 1984, with Cowater International reviewing the INT/82/002 introductory module and samples of the written material used in the CIDA discussions the previous day. Because you and Mr. M. Cohen participated in the meetings with CIDA, I report only the principal conclusions.

1. CIDA Meeting

The significant result of the meeting are as follows:

- (i) Mr. M. Potashnik of UNDP's Global and Interregional Projects Division committed UNDP to fund one third of the estimated shortfall of US\$ 345,000 of the expanded Phase I of INT/82/002.
- (ii) Mr. E.W. Hare, after lengthy questioning of the reasons for the cost overrun, respectively the justification for the expansion of Phase I, accepted the need for additional funds but explained that CIDA's agreement to co-finance INT/82/002 stipulated that no additional finance would be made available for Phase I. Consequently, he will explore how to overcome this bureaucratic hurdle and advise us of any action necessary on our part to obtain the funds to complete Phase I with CIDA's help.

- (iii) CIDA is definitely interested in participating in Phase II, i.e. in a permanent follow-up training and advisory organization. The amount of contribution cannot be determined until Phase II has been developed in greater detail. Discussion of Phase II revealed that CIDA staff present at the meeting firmly support it, believe the passive dissemination is not sufficient but that the active may be too ambitious. (See Progress Report Part III and Annex III for description). They would like to have different scenarios explored.

2. Cowater International Visit

During this visit, I was able to:

- (i) Review the INT/82/002 Introductory Module. I found it well prepared; particularly noteworthy is the systematic explanation of the concept and purpose of appropriate technology and the need to consider more than just technical aspects in project development. There remain however, some "rough edges" which can be improved (reducing duplications and improving sequencing).
- (ii) Review written material (module texts, instructors' notes, students' manuals). I found the material excellent, although sometimes making the case for certain technologies and approaches somewhat too enthusiastically.
- (iii) Discuss progress in the preparation of the three films being prepared by NFB of Canada with INT/82/002 consultant R. McPherson. Progress is slow, for no readily discernible reason. Nevertheless, McPherson believes that with some advisory input by project staff, high quality films would eventually be produced.

3. Recommendations

Based on the observations reported above and other impressions, I suggest the following actions be taken.

- (i) Field testing of modules should proceed as outlined in the progress report. Results of the field testing should be vetted by a review group and incorporated in modules. Subsequently experts not involved in module production (engineers, sociologists, health educators) should undertake final review to ensure that module quality reflects appropriate professional standards.

(ii) Amongst the submodules postponed as second priority (Annex I, page 1 of progress report) are "Organisation and Management" and "Financial Planning, Tariff Scheme, Revenue Collection". I believe these are among the key topics. It would reflect badly on the Bank as the foremost assembly of expertise in this field not to produce the modules. I realize that the shift of staff cancelled arrangements made for the production of these submodules prior to the organisation of WUD. Nethertheless, I believe WUD should take whatever action necessary to produce these two submodules as a first priority.

(iii) Mr. McPherson should be authorized to spend one week each of the next four months with NFB in Montreal to provide technical review of scripting and editing of the films. In McPherson's judgement, at this level of input, film quality should be satisfactory. We should decide whether or not to preserve for possible later use (at a cost of CAN\$3600) a copy of all film shot. Topical films on latrines, handpumps, etc., could be produced at a cost per film of CAN\$37,000 (NFB estimate). If this recommendation about Mr. McPherson is acceptable, I can inform Mr. B. Howell when I call him this week to express the Bank's concern about slow progress in the film production.

4. I have not made any recommendation with respect to the preparation of Phase II, for which I will prepare a workprogram during the next few days, after consultation with you.

cc: Messr. M. Miller, EDS; R. Costa, G. Beier, R. Middleton,
M. Cohen, J. Pettigrew, G. Tschannerl, Ms. L. Obeng (WUD)

JMK:slj

March 5, 1984

Dr. Nyi Nyi
 Director
 Program Planning and
 Planning Development
 UNICEF 866 United Nations Plaza
 New York, NY 10017

Dear Dr. Nyi Nyi,

I would like to thank you for taking the time and meeting with us a few weeks ago. We shall continue to take any opportunity to report to your organization on the current progress of the Information and Training project (UNDP/WB/ INT/82/002) and to discuss with you the problems associated with the community package, its field testing and dissemination. We are grateful for UNICEF's support both in cash and kind in the past year.

We are attaching here a draft of our recent progress report for the total programme. As you will realize most of the production work has already been completed and by June 1st, 1984, we intend to complete 40 of the submodules including those of the community package.

We shall hold a 2-day Review with your staff and UNDP in New York; we shall be grateful if W. Beyer will be available for the coordination of this review exercise so that we shall have the optimum participation.

We are now embarking on: Review, field testing, trial dissemination and following the comments to initiate the final changes and modification of the material.

For the purpose of field testing we have identified a number of institutions in the world dealing with training of developing country professionals in our sector of water and sanitation. The following institutions have ~~been~~ ^{so far agreed} to be involved: AIT, Bangkok; University of Loughborough, ^{ons} UK; AMREF, Kenya; University of Nova Scotia; and IPHR, Pakistan while discussions continue with others.

Following your advice we are also contacting a few which are specializing in the education and training of community workers to request their active participation. If you have any suggestions we would be grateful for them.

However, we are seriously constrained by the scarcity of funds available for Phase II of the project and most important for the proper field testing and modification.

I would like to use this opportunity to request your organization's support and continuing collaboration with this project. We shall be grateful if a higher level of financial support, can be cost-shared by UNICEF during FY 1984 mainly for field testing and completion of the community-package.

We look forward to hearing from you, as soon as it will be possible, and as always we are grateful for your collaboration and assistance.

Yours Sincerely,

S. Arlosceroff, Chief

Attachment

SA/bp

cc: M. Beyer, UNICEF
M. Potashnik
M. Cohen

OFFICE MEMORANDUM

DATE March 5, 1984

TO Distribution

FROM S. Arlosoroff, Chief, Applied Research and Technology Division (WUD)

EXTENSION 61790

SUBJECT Review of materials being produced in WUD by Information and Training Program in Low Cost Water Supply and Sanitation (UNDP INT/82/002).

As you are aware we have been holding a series of meetings to enable staff to review our training materials. Our final group of review meetings will be held on March 13, 16, 22; April 6, 13, 20 and 27th; June 8 and 15.

We realise that staff will not be able to attend all these meetings. We have therefore listed on the attached page the submodule topics to be reviewed at each meeting. Staff will then be able to choose which meetings to attend.

All meetings will be held in room N-961 from 10 - 12:30. Please inform any staff who might be interested, regarding the meetings.

Distribution:

Messrs: Sandstrom, MacWilliam Graham (ASPUW)
 Al Khafaji, Aikins-Afful, Katsu, Howarth (WAPWS)
 Sud, Bruestle, Motte, Ms. Gochenour (AEPUW)
 Thys, Fernandes, Coyaud, Wang, Ms. Saad (EMENA)
 Buky, Almassy (EAP)
 Yepes, Rietveld, Mbi, Cajina, Rodruiguez, Ms. Yacub (LCPWS)
 Ringskog, Gittinger, Loewen, Didier, (EDI)
 Barker (EDC)
 Overby (PPDES)
 Lindermann, Ms. Baldwin (PUB)
 Warford, Radel, Ms. Davies de Valdivia (PHN)
 WUD professional/assistant level staff

Attachment

LO/11

REVIEW DATES

March 13

Module 11 - Gravity Flow Water-Supply Systems

- 11a - Introduction
- 11b - Construction
- 11c - Program Development

Module 18 - User Participation, Part II Case Studies

- 18b - Guatemala, rural water supply & sanitation

March 16

Module 15 - Hygiene Education

- 15a - The Team Effort
- 15b - Understanding the community

Module 7 - Sanitation III

- 7b - Water and sanitation interactions

Module 17 - User Participation, Part I

- 17b - Understanding the Community

March 22

Module 2 - Introduction to Low-Cost Water Supply and Sanitation

- 2a - Water, wastes and health in the developing world

Module 6 - Sanitation II

- 6c - Conventional Sewers

Module 18 - User Participation, Part II Case Studies

- 18c - Rural Sanitation, Punjab

Module 15 - Hygiene Education

- 15c - Developing the Program for Change

April 6

Module 18 - User Participation, Part II Case Studies

18a - Malawi: gravity-fed water system

18c - Rural Sanitation, Punjab

Module 3 - Health Aspects of Water Supply and Sanitation

3a - Disease Description

Module 17 - User Participation, Part I

17c - Implementing the User Participation Project

April 13

Module 8 - Waste Treatment and Resource Recovery

8b - Waste stabilization ponds

8c - Resource recovery: Biogas/
Aquaculture/Composting

Module 16 - Stages in Project Development

16a - Overview and Identification

Module 1 - Trainers' Module

This twenty-minute slide show and accompanying manual will be designed to inform the trainer on the use of the remaining slide-sound modules. It will be primarily introductory and motivational in content. Specifically, it will explain the modules' subject headings and format, how to incorporate the modules into existing curricula, how to use the slide-sound show to the best effect, and why the content of the training modules is so important and applicable to development programmes.

- April 20**
- Module 3 - Health Aspects of Water Supply and Sanitation**
 - 3b - Disease Transmission
 - 3c - Disease Control
 - Module 16 - Stages in Project Development**
 - 16b - Preparation and Approval
 - 16c - Implementation, Operation and Evaluation
- April 27**
- Module 13 - Water Treatment**
 - 13a - Low cost conventional water treatment plants
 - Module 7 - Sanitation III**
 - 7c - Technology selection
 - Module 2 - Introduction to Low-Cost Water Supply and Sanitation**
 - 2b - Alternative technologies
 - 2c - Project planning and delivery strategies
- June 8**
- Module 13 - Water Treatment**
 - 13b - Treatment alternatives for small communities
 - Module 14 - Water Supply and Sanitation Technology, Upgrading and Appraisal**
 - 14a - Technology upgrading sequences
 - 14b - Time value of money
 - 14c - Economic appraisal
- June 15**
- Module 10 - Wells and Handpumps**
 - 10a - Introduction
 - 10b - Construction of wells and boreholes
 - 10c - Handpumps
 - Module 4 - Institutional and Financial Aspects of Water Supply and Sanitation**
 - 4c - Human resources development

INT/82/002

March 2, 1984

Michael A. Cohen, OSR

S. Arlosoroff, Chief, Applied Research & Technology Division, WUD

617915 *Lat*

Confirmation of GTZ Funding: UNDP Project INT/82/002

1. Attached ^{*na*} is a letter from GTZ which confirms their contribution of \$100,000 to the Information and Training Project and outlines some of the administrative procedures for reporting and accounting for funds. GTZ had requested that their contribution be channeled through the Bank's trust fund department rather than as cost sharing through UNDP, so no revision of the project document and budget are needed.

2. You will note that, as the initiative was done by TWD, by mistake the letter was sent to the Transportation and Water Department. I received telexed permission from GTZ to amend the name of the department prior to signature. I have signed the letter and will return one copy to GTZ along with further instructions on deposit of funds.

cc with attachment: Ms. Hwang (LOAD2); Lao (ACTED); Obeng,
del Castillo (WUD)

B
BGross/so

January 30, 1984

Capt. Sunthorn Ruanglek
Director General
Royal Irrigation Department
Samsen Road
Bangkok
THAILAND

Dear Sir,

This letter is to confirm our cable to you dated January 11, 1984. As you know, the Bank is carrying out a worldwide Study on "Options and Investment Priorities in Irrigation Development", with the support of the UNDP (Interregional Project INT/82/001) and the Government of France. The main objectives of the Study are to develop a methodology for irrigation investment analysis, and to test it in five countries. The Study will analyze the irrigation options in each of the five countries, and rank the diverse projects according to their priority to achieve the different national development objectives. We anticipate the Study results will be helpful to the Thai Government and its agencies in providing systematic material to support their decision-making process, and will help the Bank and other donors in better tailoring external support to the Thai development efforts. For your ready reference, please find attached a copy of the UNDP-World Bank Project Document, the Study's Implementation Plan, and the current draft version of the Methodology we are developing for conducting the country studies.

After discussions between Bank staff and officials of the Royal Irrigation Department, and between the UNDP's Resident Representative Office in Bangkok and Thai Government authorities, about one year ago, Thailand was chosen as one of the five countries to be studied.

The first country study, on Morocco, has just been successfully completed, and a workshop was carried out to analyze the experience gain and lessons learnt. The next scheduled country studies are on Thailand and Peru. In each case, the work to be done is closely associated with the regular overall Bank work. In the particular case of Thailand, the Study is coordinated with the project identification exercise currently being done by the FAO Cooperative Program, and the irrigation sub-sector review to be initiated shortly by the Agriculture I Division in our East Asia and Pacific Region Office, whose chief is Mr. O.T.W. Price.

The Bank hired the French joint venture SCET Agri/GERSAR to prepare the five country case studies. They, plus Thai consultants they will hire for this purpose, will carry out most of the work, trying to minimize the burden on your staff. A mission comprised of the leader of the consultant's team, Mr. Yves Lancelot, and his deputy, Mr. Romain Jean,

OFFICIAL FILE COPY

will carry out an initial mission to Thailand between February 13 and 15, remaining in Bangkok until the 17th. This mission will serve basically three purposes: to discuss in detail with you, or the members of your staff you delegate for this purpose, the Study's objectives and methods as they refer to Thailand; to identify the relevant information your agency may hold or have access to, or knowledge of; and to invite you to participate more fully under the Study by assigning - if you so wish and if that is satisfactory to you - counterpart personnel to work with the consulting firm's team.

The Thai consulting firm to be hired by SCET Agri/GERSAR for the Study will carry out most of the ground work, collect the information available, and have it processed by mid-April. Then a mission made up initially by the consultant's team would visit Thailand for about five weeks (April 16 to May 18, 1984) to review the information collected, conduct further analyses, and carry out final discussions with you and other Thai authorities. Mr. Jose Olivares, a Senior Agricultural Economist in this Department and the Study's Project Manager, will join the mission during May 14 to 18, 1984 to supervise and review the work done by the consultants and participate in the final meetings with Government

We have asked our colleagues from our Regional Mission in Bangkok to contact your office to set up an appointment for the mission. If possible, one of them will introduce Messrs. Lancelot and Jean to you.

In the hope of having once again a successful cooperative endeavour between the Royal Thai Government and the Bank,

I remain,

Sincerely yours,

D. C. Pickering
Acting Director
Agriculture & Rural Development Department

Cleared with: J. van Holst Pellekaan, AGREP

cc: Messrs. Yudelman o/r, Donaldson, Le Moigne, Olivares (AGR); Price (EAPAI); Hermans (AEADA); Lancelot (Consultant) (without attachments).

Jolivares:esw

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DOCUMENTS

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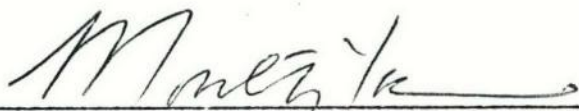
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UNITED NATIONS DEVELOPMENT PROGRAMME

BUDGET REVISION

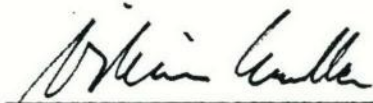
Country: Interregional
Project Title: Options and Investment Priorities
in Irrigation Development
Project Number: INT/82/001/R/01/42

The purpose of this budget revision is to merge Categories 11.01 Senior Consultants; 11.02 Consultants (local and international), 15 Official Travel and US\$7,000 out of the US\$8,000 allocation to Category 13 Support Services into Category 11.01, for an unchanged sub-total of US\$112,000. The consultants will undertake all expenses associated with this work, including local consultants, most support services, and official travel.



Agreed on behalf of the Executing Agency
Mr. Montague Yudelman, Director, AGR

July 8 1983
Date



Agreed on behalf of the UNDP
Mr. William T. Mashler, Senior Director

18 July 1983
Date

Table

Project Budget Covering UNDP Contribution (US\$)
(for Phase I)

Country : Interregional Duration: 12 months
 Project Title: Options & Investment Priorities Starting
 in Irrigation Development. Date: March 1983
 Project Number: INT/82/001/B/01/42

BUDGET ITEM		Total	1983
		\$	\$
10	<u>Project Personnel</u>		
	11.01 Senior Consultants	112,000	112,000
	11.02 Consultants (local and international)	-	-
	13. Support Services	1,000	1,000
	15. Official Travel	-	-
	19. Component Total	<u>113,000</u>	<u>113,000</u>
50	<u>Miscellaneous</u>		
	Computing	2,000	2,000
	52. Reports	2,000	2,000
	53. Sundry	<u>3,000</u>	<u>3,000</u>
	59. Component Total	<u>7,000</u>	<u>7,000</u>
99.	Project Total	120,000	120,000

INT/82/002

February 23, 1984

Dr. Christopher H. Wood
African Medical Research
Foundation
Nairobi, Kenya

Dear Dr. Wood:

Allow me first to introduce myself. I am project manager for the UNDP/World Bank Project Information and Training Program for Low Cost Water and Sanitation Project - INT/82/002. Last June, Dr. Harry McPherson discussed with you and Mr. Nick Greenacre the possibility of AMREF testing the slide-sound modules being produced by the project. At that time W.H.O. (Dr. MacDowling) were considering funding this part of the project.

It has now been decided that the costs for the field test will be met from project funds and not as originally proposed through a separate contract between W.H.O. and A.M.R.E.F.

We plan to test the materials in Africa along the lines outlined by Dr. McPherson during the optimum period early May to July 1984. By that time, all the necessary slide-sound shows will be ready for Testing and Review. The films will be ready in 1985 however, they are not the dominant part of the package.

At this juncture I should like to confirm that AMREF is still willing to undertake the field testing program and that the dates meet your schedule. We expect to send you approximately 20 slide-sound shows (sub-modules), each consists of 20 minutes show and 40 minutes of discussion guided by written material that accompanies the modules.

Sincerely,

S. Arlosoroff, Chief
Applied Research and Technology Division (WUD)
(UNDP Projects Manager, INT/81/026, GLO/80/004, INT/82/002)

LO/ SA:jc

cc: Messrs. M. McGarry, H. McPherson, D. Grey,
M. Cohen, J. M. Kalbermatten
Ms. L. Obeng

DATE February 17, 1984
TO Mr. John M. Kalbermatten, Senior Advisor, ART, (WUD) VINT/82/002
FROM S. Arlosoroff, Chief, Applied Research & Technology Division (WUD) cc. INT/81/026
EXTENSION 61790
SUBJECT Terms of Reference: Mission to Canada: (February 28, 1984 - March 2, 1984)
1. UNDP/World Bank INT/82/002 - Information and Training of Low Cost
Water Supply and Sanitation
2. UNDP/World Bank INT/81/026 - Rural Water Supply Handpumps
(Testing and Technological Development)

You will leave for Ottawa on February 28 for:

- (a) Discussions with CIDA officials regarding the Progress Report and Work Program of the INT/82/002 project.
- (b) To discuss the INT/81/026 Handpump program and possible collaboration with IDRC.

You will return to Washington on or about March 2 and present a Back-to-Office Report on your findings.

SArlosoroff:phm

cc: Messrs. M. Miller, EDS; M. Cohen, R. Costa, G. Beier, R. Middleton, J. Pettigrew, G. Tschannerl, Ms. L. Obeng (WUD)

INT/82/002

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2-CHOME SHIBUYA-KU, TOKYO 150, JAPAN (TELEX OR FULL RATE CABLE)
781-25442
2. MASHLER, UNDEVPRO, NEW YORK, NEW YORK 10017 (TELEX 422862)

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CLASS OF SERVICE:		TELEX NO.:	DATE: 2-14-84
SUBJECT:		DRAFTED BY:	EXTENSION:
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		DEPARTMENT:	
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ABBREVIATION

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(FOR CASHIER'S USE ONLY)

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UN UNIVERSITY, TOHO, SEIMEI BUILDING, TOKYO. INFORMATION
 MASHLER, UNDEVPRO, NEW YORK. OUR TELEX 84/86. ATTENTION
 MR. EDWARD PLOMAN, VICE RECTOR AND MIGUEL URRUTIA, DEVELOPMENT
 STUDIES. RE UNDP/WORLD BANK EXECUTED INT/82/002 INFORMATION
 AND TRAINING MATERIAL FOR LOW COST WATER SUPPLY AND SANITATION.
 AAA THE APPLIED RESEARCH AND TECHNOLOGY DIVISION, UNDER THE
 WATER AND URBAN DEPARTMENT OF THE WORLD BANK IS EXECUTING
 THE UNDP PROJECT INT/82/002. BBB THE PROJECT PRODUCES HIGHLY
 IMPORTANT MATERIAL TO BE INCLUDED IN ENGINEERING COURSES AT
 INSTITUTIONS DEALING WITH THE WATER SECTOR IN AND FOR DEVELOPING
 COUNTRIES. CCC RELATED MATERIAL AND DESCRIPTION OF THE PROJECT
 OUTPUTS IS BEING POUCHED TO YOU SEPARATELY. DDD THE CORE OF
 THE MATERIAL IS 14-15 MODULES OF SLIDE SOUND SHOWS DIVIDED
 INTO 40 SUB MODULES OF ONE HOUR EACH. (20 MINUTES SHOW PLUS
 DISCUSSION) AND ASSOCIATED SUPPORTING WRITTEN MATERIAL, PLUS
 THREE FILMS AND BOOKS. EEE WE HAVE REACHED THE STAGE WHERE
 THIS MATERIAL SHOULD BE TESTED IN INSTITUTIONS BEFORE THE
 PRODUCTION OF THE FINAL VERSION. FFF EYE AM THE DIVISION CHIEF
 AND THE PROJECT MANAGER FOR THIS PROGRAM AND WILL BE IN TOKYO

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CLASS OF SERVICE:	TELEX NO.:	DATE: FEB. 14, 1984
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CLEARANCES AND COPY DISTRIBUTION:	AUTHORIZED BY (Name and Signature):	
	DEPARTMENT:	
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WORLD BANK OUTGOING MESSAGE FORM Cable, Telex

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Message number grid

Test number grid

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ON APRIL 19 AND WISH TO MEET YOU AND DISCUSS THE POSSIBILITY OF INTEGRATING YOU INTO THE NETWORK FOR FIELD TESTING AND ONE OF THE CENTERS OF DISSEMINATION. GGG SHALL BE GRATEFUL IF YOU COULD MEET ME ON APRIL 19 AT 10:00 A.M. IN YOUR OFFICE TO DISCUSS THE ISSUE AND CONFIRM YOUR AGREEMENT BY TELEX. REGARDS, ARLOSOROFF, CHIEF, APPLIED RESEARCH AND TECHNOLOGY DIVISION, WATER SUPPLY AND URBAN DEVELOPMENT DEPARTMENT, INTBAFRAD

END OF TEXT

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INFORMATION BELOW NOT TO BE TRANSMITTED

CLASS OF SERVICE:

TELEX NO.:

DATE: FEB. 14, 1984

SUBJECT:

DRAFTED BY: SARLOSOROFF:PHM

EXTENSION: 61790

CLEARANCES AND COPY DISTRIBUTION:

AUTHORIZED BY (Name and Signature): S. ARLOSOROFF

Signature: S. Arlosoroff

DEPARTMENT: WUD

cc: Messrs. M. McGarry
J. Kalbermatten
Ms. L. Obeng

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Signature: SMY

yellow

February 17, 1984

Mr. William T. Mashler
Senior Director
Division for Global and
Interregional Projects
United Nations Development
Programme
One United Nations Plaza
New York, New York 10017

Dear Mr. Mashler:

W Re: UNDP/World Bank INT/82/002--Information and Training
for Low Cost Water Supply and Sanitation

Enclosed please find the Progress Report and Proposed Work Plan for
1984 - 1986 for the above-mentioned project.

Approximately two years have passed since this programme was initiated
by the World Bank, CIDA and your organization. With the active participation
of our consultants, the National Film Board of Canada and the World Bank/UNDP
projects staff, most of the material has already been produced during that
short period.

Within the "Technical Package"--the core of the programme--30 sub-
modules have been completed, while the remainder of Priority I will be
completed in mid-1984. The Project Preparation Handbook (three volumes)
has been reviewed, published and distributed in English to over 7,000
recipients throughout the world. We have received highly positive reactions
from a variety of organizations and individuals.

The "Decision Package" and the "User Participation Package" are also
in their final stages of preparation and production. The only delay is in
the production of films by the National Film Board.

We are approaching the completion of Phase I; the material will be
reviewed, field tested and modified on the basis of the comments received.
The material will then be ready for wide-scale dissemination by early 1985.

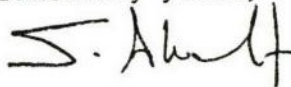
We are seriously constrained, however, by the lack of adequate funding. Despite all the good will and contributions that we have had from your organization, the World Bank, CIDA, UNICEF, GTZ (Federal Republic of Germany) and others, we are unable to proceed with the field testing and dissemination in any form without additional funds.

We would like to request your continued assistance and collaboration for which we are as always grateful. This will be for field testing and adaptation activities, as well as for preparations for the dissemination phase during 1984 and the dissemination activities during 1985 and 1986.

We hope to encourage several agencies to participate in Phase II-- DISSEMINATION, which has exciting prospects for increased human resources development through information, training, advisory and promotion activities.

We look forward to seeing you on the 29th of February in Ottawa to discuss the programme.

Sincerely yours,



S. Arlosoroff, Chief

Applied Research & Technology Division, WUD
(UNDP Projects Manager, INT/81/026, GLO/80/004, INT/82/002)

Enclosures

Copy: Messrs. M. Potashnik (UNDP, New York)
M. McGarry (Cole & Company, Ottawa)

cc: Messrs. Churchill, Cohen, Beier, Middleton, Gunnerson, Tschannerl,
Ramuglia, Burnett, Gross
Ms. Obeng

INT/82/002

yellow

February 17, 1984

Mr. E.N. Hare
Director General
U.N. Programmes Division
Multilateral Branch
Canadian International Development
Agency
200 Promenade du Portage
Hull, Quebec
K1A 0G4 Canada

Dear Mr. Hare:

na
Re: UNDP/World Bank INT/82/002--Information and Training
for Low Cost Water Supply and Sanitation

Enclosed please find the Progress Report and Proposed Work Plan for 1984 - 1986 for the above-mentioned project.

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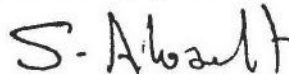
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Sincerely yours,



S. Arlosoroff, Chief

Applied Research & Technology Division, WUD
(UNDP Projects Manager, INT/81/026, GLO/80/004, INT/82/002)

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Copy: Messrs. M. Potashnik (UNDP, New York)
M. McGarry (Cole & Company, Ottawa)

cc: Messrs. Churchill, Cohen, Beier, Middleton, Gunnerson, Tschannerl,
Ramuglia, Burnett, Gross
Ms. Obeng



Record Removal Notice



File Title UNDP/INT/82/002 - Information and Training Program in Low Cost Water Supply and Irrigation - 1984 / 1986 Correspondence - Volume 1		Barcode No. 1180770		
Document Date February 9, 1984	Document Type Letter			
Correspondents / Participants To: Saul Arlosoroff, Head of Transportation, The World Bank From: Scharpenberg, Kramer, German Agency for Technical Cooperation				
Subject / Title GTZ- Contribution to UNDP Project INT/82/pp2 - Information and Training for Low Cost Water Supply and Sanitation				
Exception(s) Financial Information (iv)				
Additional Comments		<p>The item(s) identified above has/have been removed in accordance with The World Bank Policy on Access to Information. This Policy can be found on the World Bank Access to Information website.</p> <table border="1"><tr><td>Withdrawn by Shiri Alon</td><td>Date May 23, 2016</td></tr></table>	Withdrawn by Shiri Alon	Date May 23, 2016
Withdrawn by Shiri Alon	Date May 23, 2016			

INT/82/002 ✓

Christopher R. Schulz

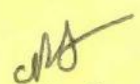
February 8, 1984

Richard N. Middleton

Terms of Reference: NORTH CAROLINA

TRA 4.4

1. You will arrange to visit the University of North Carolina, Chapel Hill, N.C. from February 16 to 17, 1984.
2. You will collect 35-mm slides from Professors Lamb and Okun on water treatment unit processes for inclusion in the water treatment training modules you are now preparing for INT/81/002. ?
3. You will make 35-mm slides of pertinent photographs, drawings and graphs on water treatment using the University's photo laboratory.
4. You will meet with Professor Lauria to discuss the upcoming workshop at the World Bank this spring on computer design tools for sanitary engineers working in developing countries, particularly on his contributions to the workshop.
5. Within two weeks of your return to Washington, you will submit to me a brief report of your trip.


 CRS:gfrg

OFFICE MEMORANDUM

INT/81/026
cc. INT/82/002

DATE February 7, 1984

TO Mr. S. Arlosoroff, Chief, Applied Research & Technology Division (WUD)
M.A. Cohen and UNDP Projects Manager

FROM Michael Cohen, Chief, Operations Support & Research (WUD)

EXTENSION 74591

SUBJECT Terms of Reference: Mission to Canada: (February 28, 1984 - March 2, 1984)
1. UNDP/World Bank INT/82/002 - Information and Training of Low Cost
Waster Supply and Sanitation
2. UNDP/World Bank INT/81/026 - Rural Water Supply Handpumps
(Testing and Technological Development)

You will leave for Ottawa on February 28 for:

- (a) Discussions with CIDA officials regarding the Progress Report and Work Program of the INT/82/002 project.
- (b) To discuss the INT/81/026 Handpump program and possible collaboration with IDRC.

You will return to Washington on or about March 2 and present a Back-to-Office Report on your findings.

cc: Messrs. M. Miller, EDS; R. Costa, G. Beier, R. Middleton, J. Pettigrew,
G. Tschannerl, Ms. L. Obeng (WUD)

OFFICE MEMORANDUM

cc. GLO/80/004
cc. INT/82/002

DATE February 7, 1984

TO Mr. S. Arlosoroff, Chief, Applied Research & Technology Division (WUD)
Michael Cohen and UNDP Projects Manager

FROM Michael Cohen, Chief, Operations Support & Research (WUD)

EXTENSION 74591

SUBJECT Terms of Reference: Mission to Japan, Philippines and Thailand:
(April 15, 1984 - May 3, 1984)

1. UNDP/World Bank INT/81/026 - Rural Water Supply Handpumps
(Testing and Technological Development)
 2. UNDP/World Bank GLO/80/004 - Integrated Resource Recovery
(Waste Recycling)
 3. UNDP/World Bank INT/82/002 - Information and Training of
Low Cost Water Supply and Sanitation
-

1. On or about April 15 you will leave for Tokyo for a meeting with the Director of the U.N. University on a possible arrangement for field testing of the INT/82/002 project material.

2. On April 19 you will arrive in Manila for discussions with officials of MPWH and their Project Management of RWS, monitoring and site visits regarding the INT/81/026 Handpump Project in the Batangas, Nueva Ecija and Bulacan region. You will be accompanied by the INT/81/026 Regional Project Officer, Mr. Leif Rosenhall who is coordinating the meetings and the site visit with our counterparts. You will brief the UNDP Resident Representative on the project's progress.

3. From April 25 to May 1 you will visit Thailand for:

(a) Discussions, monitoring and site visits to the Handpump field trial based at Saraburi.

(b) Discussion with consultants on the GLO/80/004 project.

(c) Discussions with AIT officials on their proposed role in the field testing and possible trial dissemination of training material within the INT/82/002 project.

(d) Discussion with Dr. Peter Edwards, AIT, on his terms of reference for GLO/80/004 (GTZ co-funded project), for the preparation of study for a pilot project on wastes recycling.

(e) You will brief the UNDP Resident Representative on the progress of the projects.

On or about May 3 you will return to Washington and present a Back-to-Office Report on your findings.

Cleared with & cc: Messrs. I. Sud, AEPWU; A. Sonmez, AEADB; C. Hermans, AEADA

cc: Messrs. R. Costa, G. Beier, R. Middleton, J. Pettigrew, C. Gunnerson,
G. Tschannerl, Ms. Obeng (WUD)

OFFICE MEMORANDUM

INT/82/002
Ali. You may want to attach.
Files

DATE February 1, 1984

TO To those listed below

FROM S. Arlosoroff, Chief, Applied Research & Technology Div., (WUD)

EXTENSION 61790

SUBJECT Review of training materials being produced by UNDP/World Bank Project INT/82/002

The review meeting scheduled for Friday February 3, 1984, has been postponed until Friday February 10, 1984. We would like to use part of that review meeting to present to you for review and comment some of the other materials being produced by the project for use by those working directly with communities. A special consultant will be coming from the UK to present visual learning materials being prepared for this project.

We will present 2 submodules (from the Technical Package) on:

- (a) on VIP Latrines (5a)
- (b) community participation - the need for community involvement (17a)

and two modules (from the User Participation Package) for use by community workers:

- (a) on the relationship between sanitation and health
- (b) on a sanitation technology

The meeting will be held in Room N961 from 10-12:30 am on February 10.

Distribution:

- Messrs. Sandstrom, MacWilliam, Graham (SAUWS)
 Al-Khafaji, Aikins-Afful, Katsu, Howart (WAPWS)
Sud, Bruestle, Motte, Ms. Gochenour (AEPWU)
 Thys, Fernandes, Coyaud, Wang (EMENA)
 Buky, Almassy, Hechtenberg, (EAP)
 Yepes, Rietveld, Mbi, Ms. Yacub, E. Roduiguez,
 A. Cajina (LAC)
 Ringskog, Gittinger, Loewen (EDI)
 Barker (EDC)
 Overby (PPDES)
 Ms. Baldwin, Lindemann (PUB)
 Warford (PHN)
 Nanjundiah (TRP)
 WUD professional/assistant level staff

INT/82/002

February 1, 1984

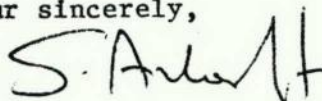
Dr. Don Waller
Centre for Water Resources Studies
Technical University of Nova Scotia
P.O. Box 1000
Halifax, Nova Scotia
Canada B38 2x4

Dear Dr. Waller,

I would like to express thanks on behalf of the World Bank and UNDP for your cooperation and collaboration with us in allowing us to pretest our information and training submodules being produced by the UNDP/World Bank project information and training program for low cost water supply and sanitation (INT/82/002) in your course on Appropriate Technology. We hope that the materials will be useful in the course and that we will also derive useful information to help us to complete production successfully. The completed materials will be available to you for your use.

With best wishes.

Your sincerely,



S. Arlosoroff, Chief
Applied Research and Technology Division (WUD)
(UNDP Projects Manager, INT/81/026, GLC/80/004, INT/82/002)

copies: Dr. B. Hart
M. Cohen (WUD)
M. Potashnik (UNDP)

INT/82/002

February 1, 1984

Dr. M.A.C. Dowling
Technical Adviser
Division of Health Manpower Development
W.H.O.
1211 Geneva 27, Switzerland

Dear Dr. Dowling,

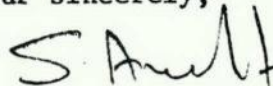
Thank you for your letter of December 22, 1983, I was pleased to learn of your interest in INT/82/002 and in particular the field testing of the training modules.

Your letter suggests that the pretrials we are undertaking at the Nova Scotia Technical University and the University of Ottawa are being undertaken on modules in their final stages of development. However, as indicated by Dr. McGarry in previous discussions and in my letter of October 7 the modules will undergo a carefully planned cost effective series of testing and adaptation stages beginning with the pretrials at the above Universities. (1) The pretrials are being ran in parallel with internal Bank review of the modules and they will be used in developing the field testing protocol. (2) The material will then undergo a thorough technical review by developing country institutions which are directly involved in the sector. (3) The full scale field testing program is scheduled to take place from mid-May to August at the University of Loughborough, UK within its specialised program for developing country engineering practioners and students from Africa, Asia, at the Asian Institute of Technology and possibly in Kenya. Discussions with other institutions are under way. Final adaptation will occur after the technical reviews and testing with the target audiences. Other project materials will be tested on their typical target audiences.

As previously indicated we would welcome your participation in the field tests program particularly as we are interested in AMREF's involvement following your earlier recommendation. Your specific suggestions as to how you might participate in the field tests and dissemination activities will be welcomed.

I look forward to your reply.

Your sincerely,



S. Arlosoroff, Chief
Applied Research and Technology Division (WUD)
(UNDP Projects Manager, INT/81/026, GLO/80/004, INT/82/002)

Copy: M. McGarry

The World Bank

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N.W.
Washington, D.C. 20433
U.S.A.

(202) 477-1234
Cable Address: INTBAFRAD
Cable Address: INDEVAS

INT/82/002

February 1, 1984

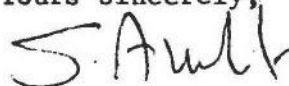
Professor J. Pickford
WEDC
University of Technology
Loughborough
Leicestershire LE11 3TU England

Dear Professor Pickford,

I would like to thank you for your interest in the Information and Training Program for Low Cost Water Supply and Sanitation (INT/82/002). I have been informed by Ms. L. Obeng and Dr. H. McPherson (with whom I understand you have had detailed discussions) of your interest in field testing the training submodules and films on your students who are from developing countries. We are in the process of pre field test activities to develop a testing protocol for the 40 submodules and 3 films. This letter is to confirm our intention to take up your offer and test materials at your University. We hope to do this between mid May and the end of July 1984. We will be in touch soon to discuss details and see how best the testing process will fit into your timetable.

We look forward to a useful and fruitful collaboration in this effort.

Yours sincerely,



S. Arlosoroff, Chief
Applied Research and Technology Division (WUD)
(UNDP Projects Manager, INT/81/026, GLO/80/004, INT/82/002)

OFFICE MEMORANDUM

INT/82/002

cc INT/83/003

DATE February 1, 1984

TO S. Arlosoroff, Chief, Applied Research and Technology Division (WUD)

FROM ^{AD} Letitia Obeng, (WUD)

EXTENSION 61789

SUBJECT Meeting with UNDP, UNICEF and discussions at the University of Nova Scotia, Halifax, Canada on INT/82/002.

In accordance with my terms of reference, I attended meetings in New York and Halifax, Canada.

New York UNDP

The following were present during the meetings: M. Potashnik (UNDP), S. Arlosoroff (WUD), M. McGarry (Cons.), L. Obeng (WUD); Ms. Timpson (UNDP) was present part of the time. The major topics discussed during the meeting were:

- (a) the progress of the project in general
 - (b) review
 - (c) field testing
 - (d) dissemination strategies
 - (e) INT/83/003 collaboration
- (a) Current progress and the contents of the draft progress report including the budget were discussed in detail.
- (b) It was proposed to hold a 1/2 day review session in New York for UNDP, UNICEF and others to review the materials in the Technical Package.
- (c) The field testing strategy was discussed in detail and it was suggested that more developing country institutions should be used as test sites than those already chosen. We will explore the possibility during the next month (field testing is scheduled for May-July 1984).
- (d) Dissemination strategies were discussed briefly and will be discussed in more detail when the full description as presented in the program report has been studied.
- (e) Collaboration between the Project INT/83/003 and INT/82/002 was discussed. It was proposed that INT/83/003 continue to review the training materials from that projects point of view and that we would propose terms of reference to that effect (the materials could be reviewed during the New York review sessions or in Washington).

- (f) Production of short films and participation in dissemination activities were also discussed.

Meeting at UNICEF

The following were present during the meeting: Dr. Nyi Nyi, Dr. M. Beyer, Ms. V. Marsick (UNICEF); S. Arlosoroff (WUD), M. McGarry (Cons.), Ms. L. Obeng (WUD).

We gave our colleagues from UNICEF a brief program report on the project, described the User (Community) Participation Package in detail and then discussed field testing and dissemination activities. We also discussed/identified sites for testing the community participation package.

In addition we met with Ralph McKim of Foundation for International Training (FIT) and discussed areas of collaboration with him. He will write to us with a proposal in the near future.

Meetings at the University of Nova Scotia - Pre field test trial

M. McGarry and I then proceeded to Halifax to the University of Nova Scotia. The main purpose of the visit to the University was to brief Dr. Hart and other staff on the use of the submodules, and work together with them on preparing and trying out a protocol which would be used for field testing.

- (1) We spent some time with the instructors/trainers, discussing the project, its goals and then worked on the 3 types of questionnaires/comments which we hope the instructors and students will fill out/write.
- (2) We developed a general questionnaire for the students which Dr. Hart, his colleagues and the students will adapt as the term progresses. Annex 1. ✓
- (3) This general questionnaire will be used together with the reviewers questionnaire which we are using for technical (and other detailed) reviews. Annex 2 ✓
- (4) We also listed topics on which the trainer/instructors comments and suggestions would be helpful. This list is also going to be adapted during the term. Annex 3. ✓
- (5) Dr. Hart will develop a detailed list of questions for the students based on the training manual which will be used in grading the students. They will also have to write a course paper.

- (6) Dr. Hart and colleagues will keep in close contact with us during the term. The timetable for the 50 minute "lectures" is given in Annex 4.
- (7) He is also hoping to make available a training room where students can go through the slide sound shows on their own after class.

Below are some details of the new course being held in appropriate Technology at the University of Nova Scotia.

The course is being run by the Centre for Water Resources Studies of the University. There are 50 students both from Canada and developing countries and they are mostly engineers. A large number of the Canadian students are taking the course because of their interest in developing country work. There are 4 developing country postgraduates assisting Dr. Hart and they will be given a chance to take some of the classes as well as to do detailed technical reviews based on their student and training experiences back home.

There are 3 important lessons which we have already learned and which will be helpful for field testing.

- (1) Instructor/Trainer's workshop. We found that it would be necessary to go through all the materials with the trainers before we used them, so that we could answer all their questions both technical and otherwise. It is important that the trainers feel at home with the material especially since it is still in draft form and therefore may contain inconsistencies. We were unfortunately due to lack of time only able to go through a few of the submodules in detail. As a compromise we have asked the trainers to contact us at any time with questions. It will therefore not be enough in future simply to arrive with a package just before each test and leave it with the instructors/trainers. Time will have to be spent with them on the use of and contents of the submodules.
- (2) We met with several of the students to get their reactions on samples of the material and to answer their questions on the contents and on the project. This is necessary since they are being used to test materials which are as yet uncomplete and to fill in various questionnaires. We had a very useful and lively discussion session with some of the students, and we hope to get their continued cooperation in filling the questionnaires and adapting them.
- (3) Reference material for every submodule will have to be available before the field testing so that we can provide at least one copy to each institution for the students (especially where such material is hard to come by).

The initial results from the questionnaires will be sent to M. McGarry's office for compilation before being sent here for analysis.

We met with the director of the Centre for Water Resources Studies. We were also photographer with the President of the University. I expressed thanks to him on your behalf and that of others involved in the project for the university's cooperation and collaboration and I was briefly interviewed about the project and its goals.

cc: M. Cohen, R. Middleton, M. McGarry

LO/11

NAME _____

SUBMODULE NO. _____

C. STUDENT REVIEW OF TRAINING SUBMODULE

YOU ARE ASKED TO COMPLETE THE FOLLOWING STATEMENTS BY CIRCLING THE APPROPRIATE WORD

SLIDE SOUND SHOW

- 1. The slide sound show is: very good good so/so poor very poor
- 2. The slide sound show is: very stimulating stimulating so/so boring
very boring
- 3. The slides are: excellent very good good fair poor
- 4. The graphics in the slides are: excellent very good good fair
poor just right
- 5. The narrated sound track is: too fast fast just right slow very slow
- 6. The material is presented: too quickly quickly just right slowly
too slowly
- 7. Understanding the content is: very easy easy not difficult difficult
impossible
- 8. Based on your background the material presented in the slide sound show was:
~~too complicated~~ complicated appropriate simple ~~over-simplified~~
over-simplified simple appropriate complicated too complicated

DISCUSSION FOLLOWING SLIDE SOUND SHOW

- 9. The issues discussed were: very good good so/so poor very poor
- 10. The discussion on these issues was: very good good so/so poor very poor

TRAINING MANUAL - PARTICIPANT'S NOTES

- 11. The content of the supporting text is: very stimulating stimulating so/so
boring very boring
- 12. The supporting text relates to the slide sound show: very well well so/so
poorly very poorly
- 13. The worked examples or case studies were: very good good so/so poor
very poor
- 14. Any reference material handed out was: very good good so/so poor
very poor

Based on your background the written material was: too complicated complicated
appropriate simple over-simplified

GENERAL

- 15. The predominant type of new material learned was: technical social
managerial economic philosophical

Reviewers' Notes

The training submodule you are reviewing is one or a part of one of the 18 modules produced by the World Bank/UNDP Information and Training for Low Cost Water Supply and Sanitation Project. These form part of the project's Technical Package.

The goals of the submodule are to;

1. inform the participants about the subject discussed in the submodule
2. motivate them to use the information in the course of their professional duties
3. provide basic training in the subject area of the submodule.

Timing and Presentation of the Submodule

Each submodule is designed to be given in a one hour time period. The submodule consists of a 20 minute slide sound show to be followed by a 40 minute discussion period (times are approximate). During this 40 minute period the trainer will (1) review with the participants the most important points in the slide sound show; (2) promote discussion using the questions given in the training manual or; (3) have the participants solve particular exercises. The format for the discussion period will differ depending on the content of the submodule. Some submodules include worked examples and case studies which will require time in addition to the one hour period. The slide sound show is not intended for use by itself. The discussion period is an essential integral part of the training exercise and participants must complete it to fully understand the material.

Target Audience

The submodules are designed for a particular target audience. The materials are directed to student and practicing engineers and other professionals working directly in the technical aspects of designing, operating and administering facilities in water supply and sanitation.

The modules are expected to be incorporated into the curricula of educational institutions mainly in the developing world, and to be used in a variety of training courses and workshops for government, non-government and international agencies working in the water and sanitation sector.

Your answers to the following questions will help us to improve the modules. Please feel free to comment on points or issues relating to the project not included in the questionnaire.

EVALUATION SHEET FOR SUBMODULE REVIEWERS

Please circle the appropriate answer(s). Use overleaf for further suggestions.

TITLE OF SUBMODULE.....DATE.....

NAME OF REVIEWER

AGE MALE FEMALE NATIONALITY

PROFESSION:

Student Consultant Teacher or Professor Government employee

International Agency Employee Non government agency employee Other.....

EDUCATIONAL EXPERIENCE:

Degrees: Bachelor's Master's Doctorate Other.....

Subject: Engineering Medicine Planning Public Health

Sociology Economics Other.....

PROFESSIONAL EXPERIENCE:

Please list developing countries you have worked in:

Please indicate the number of years spent working in developing countries

SLIDE SOUND SHOW:

1. The slide sound show is: excellent very good good fair poor

2. The slide sound show is: very stimulating stimulating boring very boring

3. The slides are: excellent very good good fair poor

Please list slides which are poor choices or inappropriate (by number) and why

5. The graphics are: excellent very good good fair poor

6. Please list graphics which are inaccurate or unclear

7. The technical content is: excellent very good good fair poor

8. Please describe inaccuracies or ambiguities and suggest improvements

The material content is: very easy to understand easy to understand
difficult to understand very difficult to understand
incomprehensible

10. Please note specific difficulties

11. The amount of information presented is: too little just right
excessive

.RAINING MANUALS:

1. The training manual is: excellent very good good fair poor

2. The discussion questions are: excellent very good good fair poor

3. Please describe specific difficulties and suggest alternative questions or additions

4. The worked examples are: excellent very good good fair poor
5. Please note specific difficulties and suggest additions or deletions

6. The supporting text is: excellent very good good fair poor
7. Please describe any changes you think necessary

8. The reference list is: excellent adequate incomplete
9. Please suggest additions or deletions and suggest modifications

OVERALL ASSESSMENT

The objectives of the submodule are listed in the Training Manual. In the training context would the submodule meet these objectives:

fully mostly partially not at all

Please provide suggestions as to how it may more fully reach its objectives:

INSTRUCTORS/TRAINERS ASSESSMENT AND RECOMMENDATIONS

You are asked to make comments and recommendations on the submodules you use. Some comments may be general and others specific to a particular submodule. Please make your comments under the following titles (noting the submodule number if comments are specific).

1. FORMAT

The manuals, slides and tapes are presented in a particular form. You may wish to comment on:

- (a) organizational structure
- (b) binding and packaging
- (c) legibility/audibility/visual quality of the written material, tapes and slides.

2. GUIDELINES TO TRAINERS

You are provided with guidelines and notes for each submodule. You may wish to comment on

- (a) The guidelines on use of the materials,
- (b) The amount of overall background technical information,
- (c) The amount of information on the philosophy of the package as a whole.

3. TRAINING METHODOLOGY

You may wish to comment on the following:

- (a) The suggested training methods to be used in discussion,
- (b) The use of the practical supporting material, case study and worked examples,
- (c) The ease with which the discussion session was conducted for the different submodules.

4. CONTENT

You may wish to comment on the technical (and other) content of:

- (a) The slide sound show,
- (b) The training manual,

by filling in the reviewer's evaluation sheet. You may also wish to make more detailed comments on the submodule and how it fulfills its objectives.

5. FUTURE USE

You may wish to comment on the future use of these training materials for:

- (a) complete/partial insertion into your future courses,
- (b) insertion into other training courses,
- (c) use by other audiences.

-6. GENERAL

You may wish to comment on:

- (a) availability and type of equipment,
- (b) overall impressions.

TIMETABLE

Jan 30	9a	Mar 28	17a
Feb 1	9b	Apr 2	17b
Feb 6	9c	Apr 4	17c
Feb 8	9b practical	Apr 9	Closing Dis- cussion (project staff with students and instructors)
Feb 13	11a		
Feb 15	11b		
Feb 20, 22,	no class		
Feb 27	11c		
Feb 29	18b		
Mar 5	3a		
Mar 7	16a		
Mar 12	6c		
Mar 14	6a		
Mar 19	5b		
Mar 21	18d		
Mar 26	8c		

People Met at the University of Nova Scotia.

President of the University - P. Clare Callaghan

Dr. Don Waller - Director of Centre for Water Resources Studies
Dr. B. Hart - Coordinator, Course on Appropriate Technology
Mr. P. Ross - Information Development Officer
B. Sheppard - Instructor/trainer
J. Chandy Vatakatucherry - Instructor/trainer
M.P. Attanagake - Instructor/trainer
D. Thirumusthi - Instructor/trainer
Ramalingaiah - Instructor/trainer

INT/82/002

Mr. Jeff Broome, University of Leeds

February 1, 1984

Mr. R. N. Middleton, Project Manager INT/81/047

INT/82/002: Training Submodule 6b

I acknowledge with thanks receipt of your memo of January 27, 1984 together with its enclosures.

For our records, we would appreciate knowing the approximate date when we may expect to receive slide numbers 53 and 55 missing from the slides for submodule 6b.

cc: Ms. L. Obeng
Mr. M.G. McGarry

Am
2/1

THE WORLD BANK / INTERNATIONAL FINANCE CORPORATION
OFFICE MEMORANDUM

✓ INT/82/002

DATE January 31, 1984

TO Mr. Michael Cohen

FROM S. Arlosoroff

cc. GLO/80/004

cc- INT/81/026

EXTENSION 61790

SUBJECT Discussions in New York (January 25, 1984)

Following your Terms of Reference, Letitia Obeng, M. McGarry and I met UNDP (DGIP) personnel (Messrs. W. Mashler, M. Potashnik and Ms. S. Timpson), UNICEF (Messrs. Nyi-Nyi, M. Beyer and Ms. V. Marsick, Training Officer), and Mr. R. McKim the Director of the Foundation for International Training (FIT) in Toronto, Canada.

1. INT/82/002 - Training and Dissemination

We have briefed the UNDP and UNICEF personnel on the progress report and the proposed scenarios of dissemination.

- (a) Both have expressed satisfaction and support.
- (b) UNDP/DGIP will support the continued collaboration with CIDA and will participate in the special meeting to be convened in Ottawa during the last week of February.
- (c) Financial support from UNDP/DGIP has been requested to be US\$100,000 for 1984 for the completion and testing of the training material. Support to 1985 and 1986 will be considered on the basis of bilateral support to the dissemination phase and the decision on the dissemination strategy. Comments on the draft Progress Report will be mailed as soon as possible, as we have to include the changes and submit final report to UNDP/DGIP and to CIDA.
- (d) A letter will be sent from us to UNICEF (Nyi-Nyi) and attached to the revised Progress Report requesting their continued support to the project for the field testing phase and completion of the community package. The same level of 1983 contribution (US\$50,000) will be requested by us and will be probably approved.

2. GLO/80/004 - Resource Recovery

UNDP/DGIP have informed us that following the discussions held in Hershey, and the clarifications that we have given them, a decision has been reached to submit the project for extension to the Governing Council in June 1984.

I have again stressed our position that US\$800,000 for 1984, 1985 and 1986 is the minimum core-funding expected from UNDP/DGIP to continue at a low profile operation and to maintain our commitments to Italy, Germany, Switzerland, Canada and the relevant developing country governments, including the review and publication of all reports of Phase I and Phase II.

All present activities and commitments are expected to be completed by December 31, 1986.

3. INT/81/026 - Handpumps Program

The draft revised Project Document has been given to UNDP/DGIP for their comments. There are hardly any changes in the text as the previous revisions that included GTZ and CIDA cost sharing have already included most of the necessary changes for Phase II. The proposed budget for 1985, 1986 and 1987 has been included based on present level of funding plus the essential additions as a result of the inflation and changes in rates of exchange.

SArlosoroff:p hm

cc: Messrs. G. Beier, C. Gunnerson, G. Tschannerl, R. Middleton, WUD
M. Potashnik, UNDP

OFFICE MEMORANDUM

DATE **January 4, 1984**

TO **Saul Arlosoroff** ^{SA} Chief, Applied Research & Technology Div., WUD

FROM **M. Cohen** ^{ma Cohen} - Chief, Operations Review and Support Unit

EXTENSION **74591**

SUBJECT **Terms of Reference Meetins with UNDP and UNICEP in New York re INT/82/002.**

You will travel to New York on January 25 to discuss progress of project INT/82/002 with Messrs. Mashler and Potashnik of UNDP and Messrs. Nyi Nyi and Beyer of UNICEF. You will be accompanied by L. Obeng (WUD) and M. McGarry (Consultant).

cc: R. Middleton