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MISC676 FOR RICHARD MIDDLETON FROM GEOFFREY READ TWT RE UNCDF MISSION REPORT ON LESOTHO PRIMARY SCHOOLS STOP MISSION PROCEEDING SATISFACTORILY STOP SARAH BECKER CONTRACT STATES NO PAYMENT OF FEES UNTIL UNCDF RECEIVES REPORT STOP PROPOSE DRAFT FOR CLEARANCE WILL BE TYPED LONDON BY 10 APRIL AND HAND CARRIED TO WASHINGTON FOR CLEARANCE STOP DUE TO MISSION TRAVEL ETC ANTICIPATE REPORT WILL NOT BE FINAL TILL LATER IN MAY WHICH MEANS BECKER AND CROSS WILL NOT RECEIVE FEES TILL JUNE OR JULY CAN YOU ADVISE COMMENT OR ASSIST REGARDS (CHALLONS UNDEVPRO MASERU)

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**Mr. Middleton**

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DP109 MAGDI MISC680 INFO MIDDLETON LES/BO/CO2 RURAL SANITATION  
INVIEW MISSIONS FURTHER CONSULTATIONS WITH TECHNICAL MINISTRIES AND  
DRAFTING FINAL MISSION REPORT PLEASE EXTEND CONTRACTS OF SARAH  
BECKER AND PIERS CROSS UNTIL 12 APRIL. SHOULD BECKER AND CROSS  
FINISH EARLIER YOU WILL BE INFORMED ACCORDINGLY. REGARDS  
(CHALLONS UNDEVPRO MASERU)

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2/10/78/006

Mr. Robert F. Skillings, Division Chief, LAC II

March 27, 1981

Roberto Incer, Economist, LAC II

BRAZIL - UNDP Global Project GLO/78/006  
Report of Messrs. Duncan Mara and Augusto Pinto Guimaraes

1. Messrs. Duncan and Augusto Pinto Guimaraes of the Technological Advisory Group of the UNDP Project's GLO-78/006 (Demonstration Projects in Low Cost Water Supply and Sanitation) visited Brazil from January 19 to February 13, 1981. According to the terms of reference the mission should address the following points:

(a) World Bank Related Sanitation Projects

- (i) review World Bank medium-sized cities projects (Executive Agency CNDU) especially Natal's and Campinas Grande's Projects and discuss CNDU strategy for a sanitation program in Victoria;
- (ii) join World Bank LCPUR mission and discuss the extent of the sanitation program components of the Bank's Urban Development project for Recife;
- (iii) identify TAG assistance in the sanitation projects which form part of World Bank Rural Development program for the N.E.;

(b) Future Projects of UNDP

- (i) discuss CETESB's research on low-cost sanitation. CETESB is seeking international funding for this research;
- (ii) brief IPT on the Global Project in Brazil;
- (iii) brief BNH on the status of TAG technical assistance cooperation in Brazil;
- (iv) inquire with BNH the status of low participation projects for Salvador and septic tank pilot study in Rio;
- (v) discuss within the appropriate agencies in Rio TAG's role in providing technical assistance in low-cost sanitation programs in the favelas.

2. The findings of the mission are the following:

(a) World Bank Related Projects

- (i) Medium-Sized Cities Projects. The mission made revisions and prepared recommendations for the following projects:
  - a. Monte Carlos
  - b. Natal
  - c. Campinas Grande

3. At CNDU's request the TAG mission will participate in its preparation rather than in its appraisal missions to take better advantage of TAG's technical assistance, starting with CNDU's preparation mission to Vitoria in March 1981.

- (ii) Urban Development Project in Recife. This project that will go into appraisal for World Bank loan in July 1981 will include three low-cost sanitation projects:
  - a. Recife (Executing Agency PCR)
  - b. Substandard Housing Improvements (Executive Agency COHAB-PE)
  - c. Jaboalao Industrial Project (Executive Agency Jaboalao Municipal Council)
- (iii) Salvador. The mission was informed by COSAN of BNH that the study of the low-cost presentation study in Salvador will materialize when the proposed World Bank funded Salvador Urban Development project starts later this year.

(b) The mission held the following discussions:

- (i) Sao Paulo. A final revision of CETEB's low-cost sanitation proposal to be submitted later through Itamarati to the UNDP.
- (ii) Rio de Janeiro. Discussion on FUNDREM on low-cost sanitation activities in Greater Rio. Due to lack of coordination among the different low-cost sanitation sector agencies of Greater Rio, FUNDREM will start a pilot project in the area of Baixada. FUNDREM is requesting TAG input to this project which TAG considers a priority.

4. Mr. Middleton explained that the points addressed to the memorandum not currently related to Bank projects were undertaken at the request of the Brazilian authorities to the UNDP. He considered worthwhile to look on these programs for he is perceiving a clear change in Brazilian authorities' attitude to provide basic social services to the poor sectors of the country. He considers the World Bank should not miss this change in mood and be ready to present technical alternatives of low-cost sanitation projects to the Brazilian authorities since low-cost considerations are likely to encourage them to speed up their decision to go into these programs. The institutional reorganization of the public agencies in Greater Rio de Janeiro is an encouraging signal since the multiplicity of public agencies, local, state and federal, with responsibilities for health, housing and urban programs for the favelas had been a major obstacle for a massive and comprehensive program of this kind in Rio.



Mr. Robert F. Skillings

- 3 -

March 27, 1981

Since Mr. Middleton is leaving today for Brazil, after his explanation I cleared the OK for Messrs. Mara's and Guimaraes' report. He promised to keep the Division informed on further developments on these matters.

RIncer/gw&dp



DRAFT PROGRAM

Technical Advisory Group Staff Meetings in Washington, May 1981

- Monday, May 11 ..... p.m. - (Read and Wright arrive in Washington)
- Tuesday, May 12 ..... 9 a.m. - General discussion (Middleton, Perrett, Read, Wright) on Lesotho and Tanzania rural sanitation projects: similarities, differences, outstanding issues.
- p.m. - (Wright to New York for ASCE meeting)  
Read briefs E. Africa Urban Projects Division (Cook, Singh, Racki) and TWT (Kalbermatten) on urban sanitation costs in Botswana and Lesotho
- Wednesday, May 13 ..... a.m. - Wright in New York for ASCE meeting.  
Read briefs Programs and Projects staff (Polak, Pearce, Callejas) on Lesotho Rural Sanitation Project
- ..... p.m. - Review (Read, Middleton, Perrett) of report to UNCDF on Lesotho Rural Sanitation Project
- Thursday, May 14 ..... a.m. - Wright briefs Programs and Projects staff (Kozel, Gore, Calderisi) on rural sanitation work in Tanzania  
Read follows up on Nordic donors' meeting May 6 (e.g., through discussions with Programs and Projects staff on TAG involvement with SIDA program in Kenya)
- ..... p.m. - (Mara arrives in Washington)  
Mission report and workplan review (Middleton, Perrett, Read, Wright) on Botswana, Lesotho and Tanzania
- Friday, May 15 ..... Discussion of outstanding technical issues and of appropriate follow-up (working papers, applied investigations, etc.)
- pit emptying
  - pit ventilation
  - insect breeding in pits
  - groundwater pollution
  - pour-flush latrine technology
  - VIP technology
  - applications for possible \$15,000 SIDA funding
  - use of 2 man-year input from BRE (UK)
  - BARC developments using municipal refuse.
  - etc., etc.



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MARCH 25 1981

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275. MIDDLETON

PLEASE PASS FOLLOWING MESSAGE TO ALBERT WRIGHT 'RE ADVANCE LEFT  
WITH DAR OFFICE. HAVE RECEIVED BILL FROM OYSTER BAY HOTEL WHICH  
HAVE SETTLED. PLEASE LET US KNOW WHAT OTHER HOTELS HAVE TO BE  
PAID. BILL FOR OYSTERBAY WAS TSH497/75.'

REGARDS, DE COSTA

GLO/78/006

Mr. David Dalmat

March 25, 1981

Richard N. Middleton, Project Manager

UNDP Global Project GLO/78/006 - Activities During My March/April Mission

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During my absence on mission you will undertake the following work:

	Estimated time (days)
(a) Revise the draft Innis/Ferrero manual on desludging of septic tanks and pit latrines, and send copies to TAG (Read, Mara, Carroll) for review;	4
(b) Prepare draft technical notes or memoranda in a form suitable for dissemination to TAG staff, on the information you have collected in your capacity as project research assistant, grouped into topics;	5
(c) Prepare and send off sector briefing packages on Kenya (to Read) and Indonesia (to de Kruijff);	2
(d) Complete clearances and revision of the draft report on your Haiti mission;	1
(e) Prepare and submit to Mr. Loewen any additional material he may require to complete the program report for GLO/78/006 for CY80;	2
(f) Prepare and submit to Mr. Loewen, in UNDP format, the information needed to complete the progress report on PHI/80/015 for CY80;	1/2
(g) Follow-up with PMD (Groen, Ringle) their response to enquiries from UNDP (Brazil) on payment procedures for Mr. Guimaraes and on the rental agreement for office space and facilities to be provided in UNDP's Rio Offices.	1/2

To the extent that this work and your annual leave does not completely occupy the period until I return, you will assist Mr. Loewen and new budget assistant in review of existing budget and personnel files and in establishing improved control system.

cc: Mr. J. Kalbermatten  
Mr. M. Loewen

RNMiddleton:ph

March 25, 1981

Mr. Y. N. Nanjundiah  
 Member Secretary,  
 Gujarat Water Supply and  
 Sewerage Board  
 G. H. Road  
 Sector 16  
 Gandhinagar, Gujarat

UNDP Global Project GLO/78/006  
INDIA - Gujarat State

Dear Mr. Nanjundiah:

Mr. John Kalbermatten is at present on mission in China and has passed to me your letter PB/M.27-2/5881 dated January 9 concerning the sullage disposal problems in Gujarat.

I believe that the decision of the Government of India that non-sewered, low-cost sanitation systems should be adopted in all except the Class I cities in India will be seen in retrospect as one of the landmark decisions of the International Drinking Water Supply and Sanitation Decade. Its potential impact upon the health and living conditions of millions of people is incalculable. Of course we, as professional engineers, want to see all aspects of environmental sanitation improved - not only excreta disposal but also drainage and solid wastes management - but I think we have to concede that, in terms of public health and social priorities, and taking due cognizance of the institutional and financial constraint which will always beset us, safe means of excreta disposal must take first priority.

Mr. Roy, my colleagues in the Bank, and I have debated this issue on many occasions, but always come to the same conclusion: not that the other components are unimportant, but that, where resources are limited and institutional competence is being built up, these other components should yield precedence to the latrine program. Following receipt of your letter, I have been over the matter again with Mr. Clement, and he has again confirmed that the IDA Credit now being considered will contain provision for the latrine program but that it cannot at this stage be expanded to include substantial sullage and solid wastes management investments.

This should not be taken as a decision to do nothing. The first phase of the latrine program (through 1985) will concentrate its major effects on ready acceptors and on installations where ground conditions are such that no major

March 25, 1981

problems are likely to be encountered with leach pits. Built into this program, however, should be the detailed planning of the next phase, including the design and piloting of installations in less favorable areas (for example, those with impermeable soils or where the groundwater table is high), and as part of this work, the Board should develop a program for improved sullage disposal in the project towns. Given the energetic effects of the Safai Vidyalaya in promoting such schemes in rural areas, it seems likely that your staff, working with the Safai Vidyalaya, could undertake a number of pilot activities in the near future. I am sure that this is an area which the World Bank appraisal mission will want to explore with you.

In the meantime, we fully concur with Mr. Roy's views that it would be counterproductive at this late stage to ask his team to expand the mandate given them by the Government of India so as to develop a major new project component.

With my best personal regards,

Yours sincerely,

Richard N. Middleton,  
Project Manager  
UNDP Global Project  
GLO/78/006

cleared with and cc: Mr. B. Clement, ASP

cc with incoming: Messrs. Melder, ASA; Mr. Sandstrom, ASP; Lamson-Scribner, ASP;  
Ms. Hamilton, ASA; Evans, PHN; Schebeck, PHN  
Kalbermatten, (o/r); Mr. Roy, TAG

RMiddleton:ba



Messrs. Duncan Mara and Augusto Sergio P.  
Guimaraes, TAG  
Richard N. Middleton, Project Manager

March 25, 1981

UNDP Global Project GLO/78/006: BRAZIL  
Workplan for Resident Adviser

I have reviewed the proposed workplan set out in Duncan Mara's memorandum of February 9 and would like to make the following comments:

- (a) The major emphasis in all TAG work during the next six months must be the development and implementation of low-cost sanitation projects. This implies concentrating on the "Group A" organizations, where our technical assistance can be directly related to ongoing or planned projects.
- (b) The March/April mission to Washington/UNC is inappropriate because: (i) it is of lower priority than project development [ (a) above], (ii) I shall be away until almost the end of April, and (iii) Donald Lauria is at present fully committed on various World Bank assignments and could not arrange orientation at UNC.
- (c) A better time for a visit to Washington/UNC might be mid-May, to participate in the concluding sessions of the TAG technical meetings and in the debriefing of the World Bank's preappraisal mission. However, it will not be until late April, when I return, that we can take a decision on this point; it depends on Mr. Lauria's commitments, the status of the Recife project, and the workload in Brazil.
- (d) Decisions on the timing of the visit to England (and possibly some TAG project areas) should await clarification of (c).
- (e) I think it is most important that, at a fairly early stage in project development work, Heli Perrett visits Brazil to agree on appropriate "software" approaches and inputs. This could be a brief visit, any time after late May.
- (f) I need, as soon as possible, an assessment of the present status and future program for each of the "Group A" projects, so that we can assess the likely timing of TAG input into planning, design, implementation, monitoring and evaluation.

cc. H. Perrett, GLO/78/006 (with incoming)

RNM:mfb

OFFICE MEMORANDUM

TO: Mr. Eric Canessa, LCPUR  
through Mr. Richard N. Middleton, Project Manager DATE: March 24, 1982

FROM: S. Castrillon, UNDP INT/81/047 *S. Castrillon*

SUBJECT: COLOMBIA - Second (Cartagena) Urban Development Project  
- Intermediate Sanitation Study  
- Comments on the Consultant's Second Interim Report

1. Following my terms of reference dated February 18, 1982, I visited Cartagena, Colombia from February 17 to 20, 1982 to participate in the supervision mission led by Mr. Eric Canessa (LAC). The purpose of my visit was to familiarize myself with the project area, and review the second interim report presented by Jose Henrique Rizo Pombo, consultant to the Instituto de Credito Territorial (ICT) on low-cost sanitation solutions for the S.E. Zone of Cartagena and Pasacaballos; to inspect the pilot solutions being tested; and, time permitting, to review progress on the sewage treatment study being carried out for ICT by the consortium Civil Hidraulica Sanitaria Ltda., Jose Henrique Rizo Pombo Co. Ltda. (CHS/Rizo Pombo). A list of persons met is attached as Annex I.

SUMMARY

2. The consultants have recommended only one technology for wastes disposal to be applied in both project areas: the use of septic tanks to be followed by small bore sewers to carry out the settled effluent - Alcantarillado Sin Arrastre de Solidos (ASAS).

- On-site disposal solutions are ruled out by the consultants due to soil conditions (low permeability and high groundwater table); they are also reported to be more costly than the ASAS.

3. Review of the consultants' report followed by field visits suggest that:

- The highest priority should be given to resolving poor drainage and flooding accentuated by interference from raised roads, streets and the incomplete landfill of lots and areas. Filling and the construction of storm drainage is a precondition for upgrading.
- Suitable fill will probably be sufficiently pervious to permit the use of on-site systems, such as pour-flush latrines connected to leach pits - with sullage being discharged to storm drains - or possibly on-site disposal by infiltration of septic tank effluent.

- It is essential that on-site disposal options be fully costed and piloted before any further decisions are taken on the technology options to be offered. On-site systems stand a better chance of being affordable.
- Off-site systems, as proposed, unless completed with appropriate sewage treatment and disposal, will cause nuisances and health hazards, and almost certainly will not be affordable. The costing of the alternative proposed by the consultants should also be improved, and adjusted to reflect ultimate disposal costs.

#### Background and Mission Activities

4. Prior to this visit, the first interim report presented by the consultants was reviewed and commented on separately by Ms. Heli Perrett, Mr. J. Freedman and myself.<sup>1/</sup> Having now visited the project area, I consider that these comments still apply, and I recommend that they should be transmitted to the consultants with a request that the consultants reexamine the problem and the possible solutions. Some additional comments and suggestions resulting from this mission are given in Annex V.

5. The mission visited the pilot solutions being tested, in Fredonia (S.E. Zone) and in Pasacaballos. In both sites only one technology was illustrated, and consisted of an ASAS sewer line located - and serving the households - along one side of the street. The domestic facilities consisted of a superstructure housing the sanitary bowl<sup>2/</sup> and a shower. On the outside, two sinks - one for laundry, the other to wash kitchenware - are attached. Both sewage and sullage drain into an uncompartmented septic tank.

The septic tank effluent is discharged through a domestic small bore sewer leading into inspection boxes located alongside the street and interconnected through ASAS. The ASAS discharges on to open land on the Cienega's margins - in Fredonia - or in a drainage ditch discharging in turn into the Mamonal channel (in Pasacaballos).

The facilities were built at no cost to the homeowners and follow individual preferences in relation to location, layout of the units and kind of superstructure. The homeowners are therefore fully satisfied with the facilities.

As may be expected in newly commissioned units with full sludge storage capacity, the septic tank effluent showed apparently reduced amounts of suspended solids.

The inspection boxes and the sewer lines which are located at very shallow depth look extremely vulnerable.

---

1/ Copies attached for easy reference as Annex II, III and IV.

2/ Low volume water, pour flush sanitary bowl.

6. The mission visited the offices of the consortium C.H.S./Rizo Pombo to review progress on the sewage treatment study to be carried out by the said consortium for ICT. The purpose of this study is to identify and design the facilities required to provide treatment to all wastewater - being or to be - discharged in the Cienega de La Virgen in Cartagena.

The study is to be conducted in two stages, basically consisting of

Stage One:

- Gathering and evaluation of related background data.
- Wastewater flows. Assessment of existing and future situation.
- Characterisation of the receiving body and establishment of water quality criteria. Effluent limitations.
- Analysis and selection of the most viable alternative for wastewater treatment process and works.

Stage Two:

- Detailed design of the selected wastewater treatment works: Design memoranda, construction drawings, specifications, bills of quantities, estimates of cost, bidding documents, and operational and maintenance manuals.

The mission met with the General Manager, Project Manager and other staff assigned to the project. It was briefed with an overview of the problem and was informed that the study had just commenced being in the stage of gathering and evaluating all related data available. The consortium is to benefit from support from foreign consultants: a team of two British engineers from Halcrow-Balfour Ltd. was scheduled to arrive in Cartagena from February 21, 1982. Their proposed terms of reference are attached as Annex VI.

cc: Messrs. Scott, LCPUR; Kalbermatten, Freedman, Loewen, Arlosoroff, TWT

SCastrillon:pd

List of Persons Met

Instituto de Credito Territorial (ICT)

- |                                 |   |
|---------------------------------|---|
| - Dr. Ricardo Borge Koval       | Director Regional                                     |
| - Arq. Enrique Villabona Galvis | Jefe de la Division de Politica Urbana                |
| - Lic. Marly Camargo de Osorio  | Directora Area Social - Proyecto de Desarrollo Urbano |
| - Ing. Hernando Caldas Pareja   | Director, Zona Sur Oriental                           |

Jose Henrique Rizo Pombo & Cia Ltda.

- |                                      |                       |
|--------------------------------------|-----------------------|
| - Ing. Jose Henrique Rizo Pombo      | Gerente General       |
| - Ing. Jaime Martinez                | Ingeniero de Proyecto |
| - Lic. Raul de Jesus Paniagua Bedoya | Sociologo             |

Consortio Civil Hidraulica Sanitaria - J. H. Rizo Pombo

- |                                |  |
|--------------------------------|--|
| - Ing. Jaime Logreira Arrazola | Gerente General  |
| - Ing. Antonio J. Paz Grau     | Sub-Gerente Tecnico, Ingeniero de Proyecto del Estudio de Aguas Servidas de la Cienaga de la Virgen. |

Mr. Ian Scott, LCPUR

November 16, 1981

Richard N. Middleton, Project Manager

COLOMBIA - Second (Cartagena) Urban Development Project  
- Intermediate Sanitation Study

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1. The first interim report prepared by the consulting engineers, forwarded to Mr. Kalbermatten for comment under cover of your memorandum of September 22, has now been passed to this unit for review. I attach comments by Ms. Perrett and Mr. Castrillon, which I endorse (although you will appreciate that none of us is familiar with the project area).
2. Ms. Perrett's comments are brief and self-explanatory; I attach the guideline to which she refers in her final paragraph, which may be of interest to you (you are aware, I am sure, of the general guidelines on this subject being developed by Mr. Harvey Ludwig for TWTWW, on which David Cook has commented extensively).
3. I may summarize Mr. Castrillon's comments as follows:
  - (a) Reclamation of low-lying land by filling is a precondition for upgrading.
  - (b) Off-site systems, as proposed, are almost certainly not affordable.
  - (c) On-site systems:
    - (i) reflect current practices (though the report could be more specific on this);
    - (ii) can be hygienic with some simple design modifications;
    - (iii) would be feasible technically, especially after landfill;
    - (iv) stand a better chance of being affordable.
  - (d) Subject to review of the cost estimates for various alternatives, the following low cost on-site technologies appear promising:
    - pour-flush latrines over a leach pit
    - pour-flush latrines with an offset pit ("fosa cartagenara")
    - water-seal toilets connected to a fosa cartagenara discharging to an infiltration trench.

Sullage disposal could be by a leach pit or (less desirably) direct discharge into the storm drains. If water usage is high, then a multi compartment septic tank should be considered, with sullage discharging into the final compartment.

Mr. Scott

November 13, 1981

- (e) A decision will have to be made on whether latrines are to be relocated when full (which appears feasible in view of the large lot sizes) or emptied (in which case appropriate provisions must be made for both emptying and disposal).

4. If you would like to discuss these comments further, I suggest your staff contact Ms. Perrett or Mr. Castrillon directly. Their new numbers are 61777 (Ms. Perrett) and 61778 (Mr. Castrillon).

cc: Mr. Castrillon, Ms. Perrett, TWT

RMiddleton:pd

Mr. Richard N. Middleton, Project Manager

October 27, 1981

Heli Perrett, Social Science and Health Education Adviser

COLOMBIA: Estudio de Soluciones de Saneamiento en la Zona sur Oriental  
de Cartagena y el Corregimiento de Pasacaballos

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1. As you requested I have quickly reviewed the above 2 volume study (first draft) prepared by Jose Henrique Rizo Pombo & Cia Ltda for Urban Projects. I limit my comments to general ones: Mr. Samuel Castrillon has conducted a more thorough review and I leave the detailed comments to him.
2. The Report suffers from:
  - (a) its poor structuring and rambling presentation;
  - (b) the fact that the sanitation survey data was not available at the time it was drafted (see pages 99-100 and Annex 6.11);
  - (c) ignorance about low-cost options for sanitation (most of their knowledge seems to be second-hand academic).
3. However, the engineering firm responsible for it should be complemented on its fairly thorough review of social and cultural aspects (perhaps a little too thorough in comparison to the engineering ones). Most of the discussion makes sense, but some of the information presented, while interesting in itself, is not absolutely essential for the report.
4. On the other hand, more attention might have been given on the social side to:
  - (a) practices directly relevant to selection of technology options (along the lines of the brief section on page 49 on cleansing practices and materials and on page 50 of practices that have resulted in destruction and shortened life-span of the technologies provided in the area);
  - (b) implication of multi-family houses for sharing of facilities.
5. In my opinion proportionally more attention might also have been given to evaluation of existing programs and experiences in introducing different sanitation options in the area. The analysis of institutional policies and capabilities is also weak. There also appear to be some misunderstandings of and ignorance about low-cost sanitation technologies (as evidenced, for instance, on page 86).



Mr. Middleton

October 27, 1981

6. My concrete recommendations for the second draft are:
- (a) to restructure the report with summary and recommendations up front and annex much of the detailed discussion of social aspects and technology options available internationally;
  - (b) to provide a more through review of existing experiences with different low-cost technologies in this area or in similar areas nearby (with attention to behavioral, institutional and financial as well as engineering aspects);
  - (c) to consolidate the currently dispersed discussion on education and motivation support and explain why such past activities have been ineffective and whether it is possible to improve them;
  - (d) strengthen the discussion of institutional capabilities.
7. Urban Projects may wish to forward the consulting firm in question a copy of the outline for feasibility studies compiled for TAG by you and used by us in various countries.

cc: Mr. Castrillon

HPerrett:pd

Technology Advisory Group      UNDP Global Project GLO/78/006  
Demonstration Projects in Low-cost Water Supply and Sanitation

## OFFICE MEMORANDUM

TO: Mr. Richard N. Middleton, Project Manager      DATE: November 13, 1981  
FROM: Samuel Castrillon, Deputy Project Manager  
SUBJECT: COLOMBIA: Second (Cartagena) Urban Development Project  
          Comments on "Estudio de Soluciones de Saneamiento en  
          la Zona Suroriental de Cartagena y el Corregimiento  
          de Pasacaballos"

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1.       As you requested, I have reviewed and now comment on the first report prepared by Jose Hernandez Rizo Pombo, dated July 1981, referring to Preliminary investigations on the communities with Analysis and first solutions selected.

Background (Information contained in the report)

2.       The study is scheduled to be carried out in three stages:
- Stage One: presenting the specific solutions in sanitation required for the study area;
  - Stage Two: producing the detailed engineering design the solutions proposed; and
  - Stage Three: implementing of a pilot or demonstration project to include the actual construction of same facilities <sup>1/</sup> and the elaboration of programs to educate the future beneficiaries - and to promote their participation - in the actual construction program and the proper operation and maintenance of the facilities, etc.

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1/ The scale of this experience is not indicated.

3. The actual report covers the first phase of Stage one, being limited to an account of the economic, sociocultural and physical constraints in the study area, identifying all technical solutions that may be applicable. In a second phase, through consultations with the community, the acceptability of the different solutions proposed will be ascertained and graded. No timetable is included.

4. The study area covers: the village of Pasacaballos with a population of 5,500, and the Zona Suroriental (Cartagena). The 'Zona' itself is subdivided into a low-lying area (below the elvation of 1.5m)\* and considered to be a 'rehabilitation area', and a relatively high-lying area (above 1.5 m) considered to be a 'consolidation area'. The total population in the 'Zona' is 90,000.

#### Technological Options Considered

5. It is assumed that each home within the area will be served by a house connection to a public water system (1.7.1.(g) )

6. In the report the use of pit latrines - dry or humid - is ruled out as present design produce smells and breed insects. If used in combination with a waterseal it is assumed that they will be converted into a 'poza septica cartagenera' (page 86). The use of the 'poza septica cartagenera' itself is ruled out for use in the Zona due to the low permeability in the area. They may be used in Pasacaballos since permeability is higher (page 86).

7. All technological options that may be applicable to each area are presented, ranked by cost in tables on pages 95 and 96. The most appropriate - less costly options - identified are:

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\* above mean sea level.

- Pasacaballos: a septic tank <sup>1/</sup> or an aqua privy, to be followed by a small bore sewer, or connected to a soaking pit or infiltration trench.
- Zona "consolidation area": conventional sanitary sewers <sup>2/</sup>
- Zona 'rehabilitation area': septic tank or aqua privy followed by a small bore sewer.

Obviously, all the above solutions imply final disposal of the effluent in the Cienega.

8. The monthly cost per home for the above options varies for the alternative technologies from P \$476 to P \$588. The monthly cost for conventional sanitary sewers is estimated at P \$760. <sup>3/</sup>

Above costs include also the cost of water being used. I have not checked the cost estimates in detail, but they appear to be incorrect; for example, a septic tank is shown as costing about the same to construct as a simple pit latrine, which would be most unusual and does not appear to correspond to the detailed designs shown.

9. The effects of final sewage disposal - in the Bahia de Cartagena and the Cienega - is not discussed (1.7.1). Disposal of septage - from septic tank emptying - and solid waste disposal are also not discussed.

10. Storm drainage is discussed inconclusively. In 3.3.5 it is stated that a drainage system of open channels is already under construction in the higher - consolidation-area of the Zona. This implies the same system will be continued through - and serving - the lower Zona area. In Pasacaballos storm drainage occurs naturally and no technical problem exists which would preclude a similar solution (see page 88 in the annex for further discussions).

#### Sociocultural and Economic Data

11. The socio cultural study indicates that it can be expected - through appropriate motivation - to gain sympathy, support and a positive attitude in relation to community labor from the inhabitants of Pasacaballos: it is,

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<sup>1/</sup> Impervious or pervious (fosa cartagenera).

<sup>2/</sup> See last portion of para. 1.2, page 2

<sup>3/</sup> US\$1 = P \$55

however, doubtful whether any positive reactions can be obtained from the people of the Zona (3.3.10).

12. The economic level of the population is always low but variable: unemployed, temporarily employed, partly employed. Those employed on a fixed income generally receive between P \$4,000 to P \$12,000 monthly (page 17). However, it is assumed (1.7.3.) that the beneficiaries will pay for construction costs, plus further operation and maintenance of the facilities.

General Comments

13. The report will benefit from including at the beginning a summary with the conclusions of the author specifying the technologies selected. In this way the reader will be able to validate the author's conclusions as the narrative of the report progresses. (It is agonizing to be forced to read 300 pages - of 100 report plus 200 of annexes - before the solutions are revealed.)

14. Most of the detailed discussions on social aspects and general discussions on technological options available can be put in annexes. The annexes themselves could be divided into two volumes (being bulky and difficult to handle). Volume I with data or discussions directly related to the project area, and Volume II with general information on technological options.

On Economic Aspects

15. There is no estimate of the percentage of population employed or of the average - or modal - family income. Neither is there an indication of the amount of money the population would be willing to spend - or is capable to pay for sanitation. This is a basic planning figure that needs to be worked out in spite of all the uncertainties involved.

Warning! If a communal solution is proposed (in this sense "communal" is used to mean any one single system - such as a sewer network - to which everyone has to connect) and the "affordability" criteria is based in average family income, all families below that average - generally the largest group would be unable to meet the payments.

Most of the alternatives proposed by the author are communal and even the most economical one proposed - poza cartagenera followed by small bore sewers - has a monthly cost of P \$476. This amount may be affordable for a family on the P \$12,000 level, but clearly unaffordable to a family with a fixed income of P \$4,000 since it will represent 11% of the monthly basic wage.

On Technological options for the Rehabilitation area

16. The construction of the proposed Via Perimetral will aggravate or compound the already existing drainage problems in the low-lying rehabilitation area. Filling of all the internal low-lying area and the construction of an appropriate storm drainage system are therefore imperative. No sanitary condition could exist or basic sanitation measures be applied and be effective in areas which are regularly inundated; in fact under these conditions it is very doubtful whether any significant improvements in living conditions can be achieved. Therefore any sanitation measures envisaged for this area should be based on the assumption that all low area will be filled and served by a storm drainage system, and appropriate allowance should be made in the overall project estimates.

17. This is most significant in the selection of all possible technologies applicable and the final choice of the most appropriate one. The new condition will allow:

- the discharge into soak pits or storm sewers of all grey water, allowing the separate disposal of a reduced volume of sanitary sewage;
- the construction of a variety of sanitary facilities such as pit privies, pour-flush latrines, septic tanks, etc., previously ruled out because of the proximity of the groundwater table in

particular the system already in use in many areas (the fosa cartagenera) with which the inhabitants are familiar);

- the construction of infiltration trenches, in the refilled areas (higher above the water table, with higher infiltration capacity to dispose of a reduced volume of sanitary sewage).

18. Basically, I recommend that the following should be considered:

(a) for the low income population, with one yard water tap:

- the construction of sanitary latrines with on-site disposal.

Water being available, the pour-flush latrine is indicated, since it avoids bad odors and insect breeding completely. The solution applicable for the low-lying - high water table - may be similar to the one illustrated in Annex I. It is basically a semi-buried pit privy covered with a slab and a pour-flush bowl. It takes advantage of the refilled area increasing the volume of the pit and the lateral infiltration area (with improved characteristics). If required, to increase its capacity for liquid to infiltrate, a perforated pipe with gravel around may be laid through and within the refilled area, and connected to the pit by a tee or elbow.

This technology will permit the recovery and upgrading of most of the existing insanitary latrines. It may be noted that the population itself, and the authorities,<sup>1/</sup> have identified pit privies as an "appropriate technology", which, if not fully satisfactory at present, on grounds of public health and convenience, may be improved at a reasonable cost. They have the advantage of

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<sup>1/</sup> Servicio de Salud, see page 79.

being known and accepted, do not involve technical or sociocultural uncertainties and are affordable, as their existence and use have proved. It may be expected that the pit will be filled in about four years, making emptying necessary <sup>2/</sup> or the construction of a new pit.

(b) for higher income population (defined by the use of internal plumbing):

- there will be higher water consumption producing consequently higher volumes of wastewater;
- all grey water will be disposed of into the storm sewers;
- the use may be considered of any low volume waterseal toilet, similar to the 'Taza campesina',<sup>3/</sup> or the 'sanitario corona',<sup>4/</sup> and a flushing cistern may be provided;
- only sanitary sewage will be discharged into a septic tank, or poza cartagenera, the effluent to be disposed of through perforated pipes laid within the refilled area. The septic tank will require periodical emptying.

On technological options for the consolidation area

19. The report proposed conventional sanitary sewers. There is nothing wrong with this technology if it is affordable, there is sufficient flow of wastewater to allow correct operation, and no problem is created in the area of final disposal. It is felt that a question exists for each one of the previous conditions and reconsideration must be given to the use of alternative low cost solutions.

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<sup>2/</sup> See Annex II on the use and emptying of pit latrines.

<sup>3/</sup> Described in page 79.

<sup>4/</sup> Described in Annex 5.8/9/10 of report.



20. The use of small bore sewers may reduce the capital costs, will work better hydraulically - at the expected reduced flows - and, if the problem of final disposal is solved, may be the technology of choice. The small bore sewer will, of course, need to be preceded by a septic tank, to allow the settling of solids, and this tank will require emptying periodically.

21. Sewage disposal will require a main sewer collector, into which all small bore sewers will drain, possibly a pumping station and some sort of sewage treatment facilities to render an effluent admissible for discharge into the cienga. As a first stage of implementation, the toilet facilities may be improved, a septic tank installed and, as an interim measure - until sewers and treatment works are available - an infiltration trench may be built. This is a relatively low cost facility and all the houses seem to have sufficient area to accommodate it. It may be that this arrangement will prove to be sufficient and the small bore sewers will be no more required.

#### On technological options for Pasacaballos

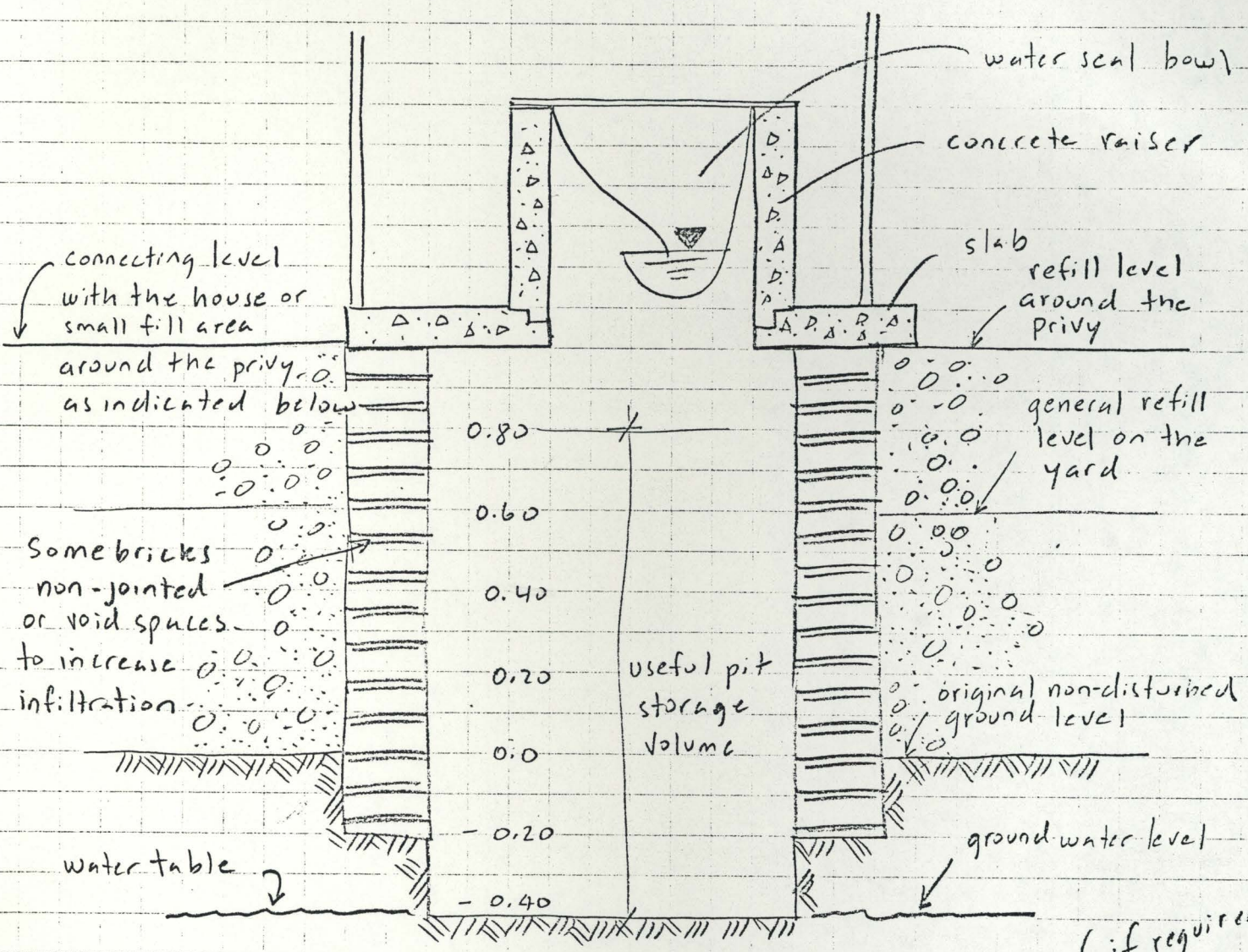
22. Being a semi-rural community, with large size plots, and soil with good infiltration characteristics, the on-site solutions will be appropriate. A watersealed pit privy is in all probability the cheapest and most satisfactory solution that may be offered.

#### Final comments

22. The socio economic level of the project area is such, that unless grants are obtained, the self capacity to pay for communal solutions - such as sewerage - is limited. With government guidance and support, however,

satisfactory individual solutions may be implemented. For a private, and poor, individual it is difficult (expensive) to buy cement, gravel, sand, filling materials, to enable him to improve his latrine or refill his yard. But, if the concrete slabs and raisers are made available at a reasonable cost, and filling material is deposited at the curb of each property at nominal cost, it is almost sure that improvement will occur. It should be emphasized that water sealed latrines are an acceptable technology in urban and semi-urban areas of low density (see Annex II).

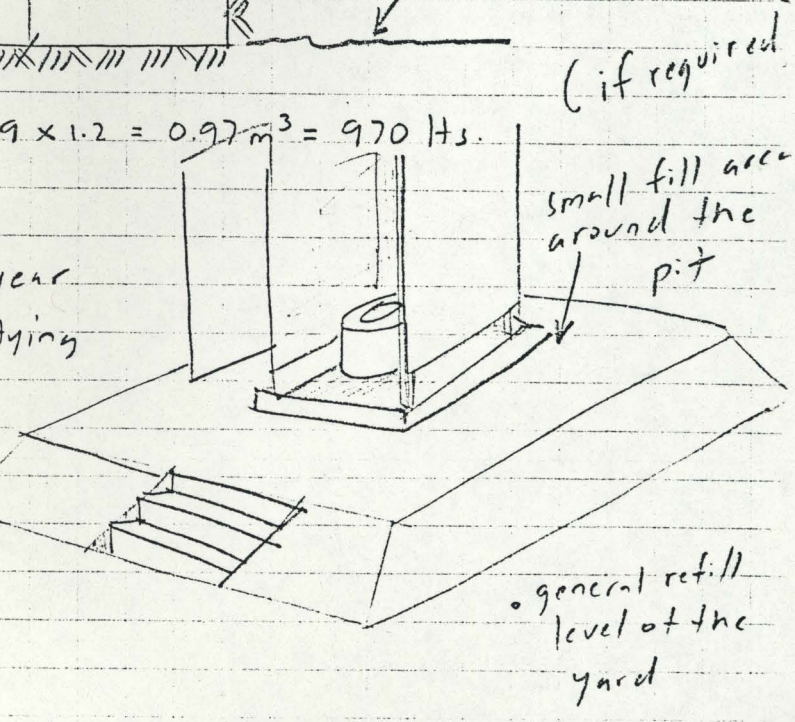
# SEMI-BURIED POUR AND FLUSH PIT PRIVY (Schematic - Not to scale)



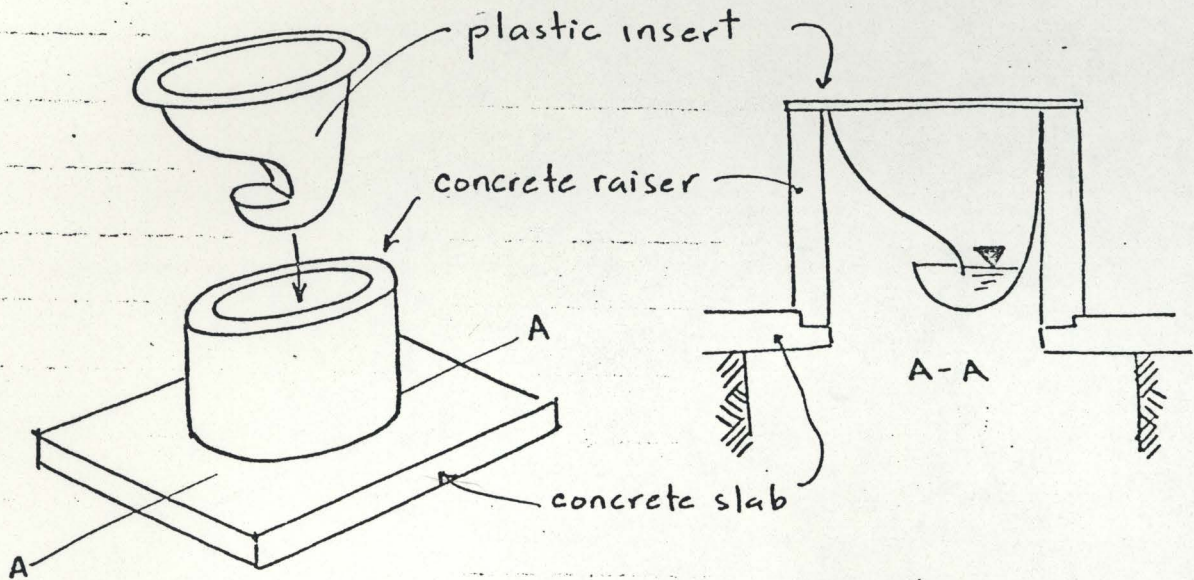
useful volume of the pit  $0.9 \times 0.9 \times 1.2 = 0.97 \text{ m}^3 = 970 \text{ lts.}$  (if required)

Volume of waste accumulated  
 6 people  $\times$  40 lts/per/year = 240 lts/year  
 useful life or frequency of emptying required:  $\frac{970}{240} = 4 \text{ years}$

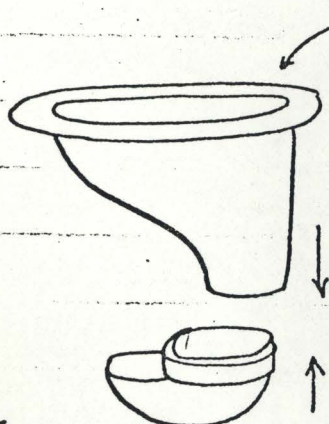
infiltration area (just lateral)  
 $(1.20 \times 0.9) \times 4 \text{ sides} = 4.32 \text{ m}^2$   
 ↑  
 internal



WATER-SEAL PLASTIC INSERT USED IN THE WHO/UNICEF  
ASSISTED FIJI SCHOOL SANITATION PROJECT (1973)



the two pieces are  
joined in the field  
with an appropriate  
type of solvent cement  
or resin .



the plastic insert is made  
of two pieces, to facilitate  
the manufacturing process,  
also to facilitate transport  
since they may be stacked  
one upon another for  
packing purposes.

THE USE AND EMPTYING OF PIT LATRINES

1. The use of pit latrines in urban areas has been limited traditionally by the following constraints:

- they are unsightly and odorous;
- they breed mosquitoes and flies;
- when emptying is required, the operation is difficult and extremely unpleasant; and
- the handling and disposal of latrine waste is messy and involves health hazards.

2. When water is available, a waterseal bowl will remove the first two constraints listed above; a minimal amount of water (say 2-3 liters/use) is required for proper operation of the bowl. The toilet will remain clean and odorless in relation to user cleanliness. No odor or insects will escape through the waterseal.

3. The contents of a waterseal pit privy - admitting only excreta and paper - may be removed by any vacuum tanker, in a similar way to which sludge is removed from a septic tank. A most satisfactory vacuum pumping unit, at half the cost of a standard truck mounted vacuum tanker, may be assembled with (components in order from the pit):

- a suction hose;
- a vacuum tank, mounted on a trailer, and connected to:
  - a vacuum pump, driven by a power take off;
- the trailer to be towed by an agricultural tractor which will also provide the power for the vacuum pump;
- mounted above the vacuum tank is a clean water tank to be used for cleaning the equipment after use. Note that the vacuum pump is located after the vacuum tank and, as such, never comes into contact with the pit privy waste.

A similar unit has been used successfully in a TAG <sup>1/</sup> assisted demonstration project on latrine emptying in Haiti. The time actually spent in emptying a normal capacity latrine (2 or 3 m<sup>3</sup>) was on average six minutes from stopping in front of the premises to departure time.

The unit is operated by a crew of two people, the driver/operator and one assistant, and provides an effective, low cost, sanitary alternative to latrine emptying and transport of the waste to an appropriate disposal site.

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<sup>1/</sup> The Technology Advisory Group, established by the World Bank under UNDP Global Project GLO/78/006.

# OFFICE MEMORANDUM

TO: Mr. Ian Scott, LCP

FROM: Joseph Freedman, Water & Wastes Support Adviser, TWT

SUBJECT: CARTAGENA - Second Urban Development Project  
Intermediate Sanitation Study

DATE: February 5, 1982

This is a detailed study to resolve some of the sanitation problems in two low income zones in Cartagena. The problems are due to the low-lying nature of the site, the high water table, poor drainage, low permeability of the soil in one of the zones, population characteristics, low-income, and the random nature of the developments.

The report has copious information about the socio-economic conditions of the inhabitants and analyzes the costs for various solutions, onsite and offsite disposal of excreta and waste water. However, the report does not bring up the need for a sanitary survey and diagnosis until its very end. (page 99) At the writing of the report the sanitary survey was being completed. On looking back, it seems that the sanitary survey should have been done at the beginning of the study. It is a basic tool of all public health planning and is overlooked too frequently by engineers and planners. It is expected that the survey will assist the determination of solutions acceptable to the people.

Preceding this discussion of the survey (page 90) there is a tabulation of 19 alternatives for Pasacaballos Parte Alta, 9 alternatives for Pasacaballos Parte Baja; and 6 alternatives for Zona Sur. Many of these alternatives are variations of a few different solutions, but certainly the consultants should have narrowed their recommendation to a preferred solution and an alternative.

The highest priority should be given to resolving poor drainage and flooding accentuated by interference from raised roads, streets and walkways and the incomplete landfill of lots and areas. The report (it may not be in the terms of reference of the consultants but it is so obvious it cannot be ignored) merely states that filling would be costly and that many property owners are not inclined to fill their lots. Attention should be given to ways and means of achieving adequate filling and grading of the site. Perhaps a combination of contract work to transport fill close to the property sites with self and mutual help to fill the lots could be used. A method, plan, schedule and cost estimate for this filling and grading should be carried out. Without this work, the sanitation of the zones will not succeed.

Therefore, I would recommend that:

- 1) First, the filling and grading of the areas be done with selected granular fill. Suitable fill can in some sites serve for privy and tank effluent disposal by infiltration. The filling and grading can be done by a combination of contract work and selfhelp. Financial and technical assistance will be needed by many of the householders to raise the floors of their houses and to make other improvements.

Mr. Ian Scott

February 5, 1982

- 2) Second, lot size and conditions permitting, on site solutions with simple privies, pour flush latrines and water seal toilets should be considered for installation,
- 3) Third, an analysis should be made as to whether sludge emptying equipment is needed and if so whether suitable arrangements can be made for efficient operation and maintenance for the equipment and final sludge disposal.

cc: Messrs. Castrillon, Middleton (UNDP), Canessa (LCP with documents)

JFreedman:sp



COLOMBIA - SECOND (CARTAGENA) URBAN DEVELOPMENT PROJECT

Further comments

1. Following my visit to the project area, I reviewed the latest report presented by the consultants and had technical discussions with them. I may offer the following further comments:

Technical solution presented by the consultants

2. The consultants have selected and recommended the same technology to be applied in both project areas: the use of septic tanks to be followed by small bore sewers to carry-out the settled effluent ASAS. The consultants report that this choice was reached taking into account the following considerations:

- (a) the disposal of sullage poses a problem which the community feels is as important as the disposal of sanitary sewage (carrying human excreta);
- (b) ASAS provides a single solution for disposal of both sanitary sewage and sullage;
- (c) soil conditions (extremely low permeability and high groundwater table) makes on-site disposal infeasible;
- (d) on-site solutions are reported to be more costly than ASAS;
- (e) storm water will be dealt with in a separate drainage system.

Advantages of ASAS

3. ASAS has the obvious advantage of removing the problem - disposal of wastewater - from the immediate vicinity of the household and transferring it to some other area.

4. At this stage of project development it also presents the following subjective advantages:

- it has been selected and proposed by the consultants and it may be expected they will defend strongly the technology of their choice;
- it seems to be acceptable to ICT;
- it is reported to be acceptable to the community (no doubt being influenced by the prototypes already built\* and the general drive towards "urban" values and solutions).

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\* Only this technology was illustrated, at a relatively high level of convenience and no cost for the homeowner.

5. The implementation of an ASAS makes an extremely interesting demonstration project, worthwhile of close monitoring, which may be of great value in the search for less expensive sewerage systems.

Disadvantages of ASAS

6. As with any other off-site system, it does not solve a public health hazard, it merely transfers it to another site. The effluent from a septic tank is, from a public health point of view, nearly as dangerous as raw sewage and - unless discharged into an adequate underground soakaway system - requires further treatment before disposal. The problem of sewage treatment and disposal must be solved at the same time as ASAS construction, otherwise health hazards and nuisances may arise through the formation of pools of stagnant pathogenic wastes or the increased contamination level in the Cienega.

7. The ASAS will require to be complemented - in each area - by a main sewer collector, into which all small bore sewers will drain (and possibly by a pumping station) and some sort of treatment facilities to render an effluent admissible for discharge into the Cienega. Unless integrated into a comprehensive sewage treatment scheme for the whole Cartagena area, the most likely technology to be applied will be a series of stabilization ponds. This is a relatively inexpensive technology but will of course add to the present estimates of capital and operational costs.

8. For several technical and economic reasons the pipes in ASAS are laid at shallow depths.<sup>1/</sup> This will make the lines vulnerable to damage unless all the streets are properly filled, leveled and graded. A proper system of storm drainage should be built and the sewer pipes properly installed and protected, with special care at every crossroad.

9. The proposed inspection boxes are also extremely vulnerable. Unless they are strongly made - in precast reinforced concrete and provided with a heavy lid - they will be broken or the covers stolen; in one case allowing dangerous, malodorous effluent to seep into the street, and in the other allowing the entrance of foreign matter that will clog the small bore sewers.

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<sup>1/</sup> The effluent is discharged from settling tanks close to ground surface, the grades are flatter, they need to discharge or be collected above high water level in the Cienega or will incur the penalty of extra excavations and obligatory pumping.

10. The technology proposed consists of:
- a septic tank (the most costly element in on-site technology, and requiring periodic emptying);
  - the cost of ASAS (construction costs, likely periodic repairs and maintenance); and
  - final sewage treatment and disposal (capital and operational costs).

All the above may be expected to be costlier than a modified on-site system, that will be hygienic, technically feasible and with a better chance of being affordable.

Re-examining the problem and possible solutions

11. The key issue is centered on the possibility - or impossibility - of disposing on-site of the excreta and wastewater produced within the household. The percolation tests carried out by the consultants have shown extremely low permeability in the Zona, ruling out the possibility of infiltrating into the ground the total liquid waste - sewage + sullage - which is estimated to be  $105 \text{ lcd} \times 7 \text{ persons/household} = 735 \text{ l/d}$

12. There is, however, the possibility of on-site infiltration of the reduced volume resulting from the operation of a pour flush latrine, which may be estimated as:

$7 \text{ persons} \times 2 \text{ uses/day} \times 4 \text{ liters/use} = 56 \text{ l/d}$ ; to this volume may be added the volume of urine produced, estimated at 1 lcd, to reach a total liquid volume of:

$$56 + 7 = 63 \text{ l/d}$$

This low volume - less than 9% of the total liquid waste estimated above in paragraph 11 - will certainly be infiltrated in a horizontal type of privy similar to the one illustrated in Figure 1.

The sanitary bowl may be located directly above the latrine, or off-set, and connected through a short length of pipe laid with appropriate gradient.

13. In dry pits, where the soil permits percolation of all the water reaching the pit, the life of the pit - or required frequency of emptying it - is governed by the sludge build-up taking place in the pit. On the other hand, in wet pits where the groundwater table is always above the bottom of the pit and in soils with low permeability such as clay, there will be a rapid build up of liquid depth in the pit until a kind of plateau is reached.

The liquid depth required to reach the preliminary plateau will depend on both the permeability of the soil and the rate at which liquid is added. The latrine illustrated in Figure 1 will perform as a wet pit; the liquid will rapidly reach the level corresponding to the undisturbed - low permeability - soil, afterwards it will easily percolate through the lateral filling - made of selected granular soil of high permeability - to be disposed of throughout a large horizontal area.

14. The technology illustrated solves the hygienic disposal of sanitary sewage. It will require, however, periodic emptying, in a manner similar to that of a septic tank. For an average of seven users the frequency of emptying may be estimated as five years.

This technology does not solve the problem of sullage water; this item is discussed separately in paragraph 16.

15. Another type of on-site technology that may be considered is the installation of a septic tank followed by an infiltration trench, to be located in the refilled area see Figure 2. Due to the larger infiltration area, this technology will allow - with a marginal increase in cost - to dispose on-site of both sewage and the sullage originating in the kitchen (sullage from the laundry and shower to be disposed of separately).

#### Sullage water

16. The consultants report that the community considers the disposal of sullage water a problem as important as the disposal of sanitary sewage. From public health view point this position has no justification. Sullage water is more a nuisance than a significant public health risk.<sup>2/</sup>

It is obvious that a trade-off must be made between convenience and cost. An improved and not too costly system for sullage disposal may be a separate small soaking pit or drain field to overflow into the storm drainage system.

17. Off-site solution: ASAS

If ASAS is the final technology of choice, some suggestions are offered that may improve performance:

- A two-compartment tank should be considered, with sullage discharging into the final compartment. This modification will increase retention time and provide more quiescent settling for fecal solids.

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<sup>2/</sup> The fecal hazard of sullage is discussed in the World Bank publication "A Summary of Technical and Economic Options".

- The possibility of by-passing the septic tank and discharging the bath and laundry sullage, through a catch pit, directly into the domestic sewer - prior to the inspection box - may also be considered. The domestic sewer - by its short length - may be laid at steep slope allowing the carriage of soil or other inert solids that may find their way into the bathroom or laundry. The solids will settle into the catch pit,<sup>3/</sup> thus allowing settled, solid-free effluent flow through the low grade ASAS.

The increased retention time and quiescent settling for fecal solids will have a significant effect on pathogen reduction. The reduction of inert solids in the septic tank will reduce solids build-up and will lengthen the required periodicity of emptying.

A suggested lay-out for the sanitary unit is illustrated in Figure 3.

18. A more detailed costing is required for the two basic technologies proposed - on-site and ASAS - and their financial affordability ascertained. This costing should include operation and maintenance and water supply costs. Consideration must be given to the feasibility of staging sanitation sequences, for example:

- the initial sanitation facility may consist in a PF latrine or in a septic tank folowed by a drain field;
- to be upgraded after a period of time to the proposed ASAS (say when the main sewer collector and treatment facilities will be available, or simply when the progressive clogging of the drainfields will make them inappropriate).

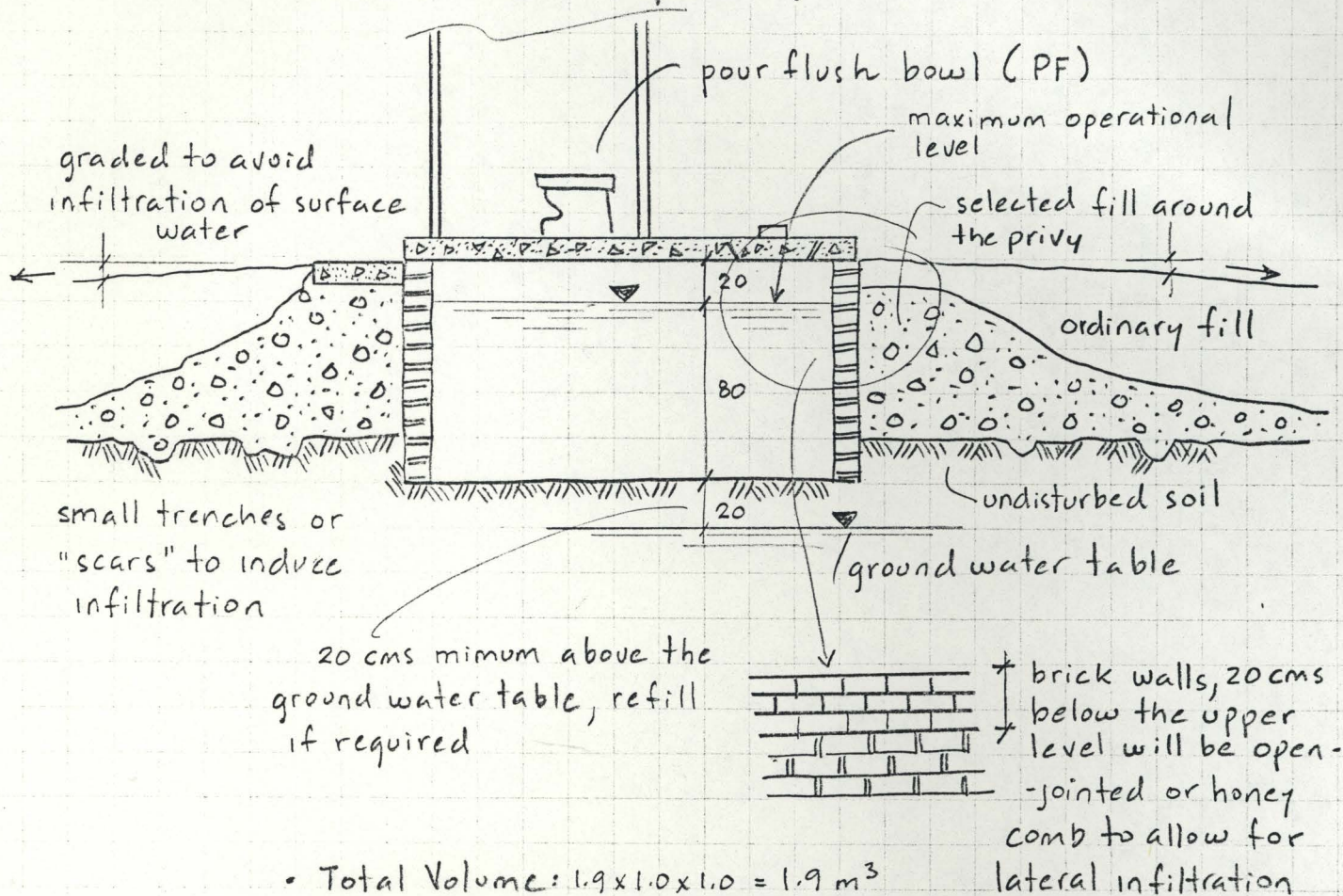
Progressive staging should result in considerable financial savings.

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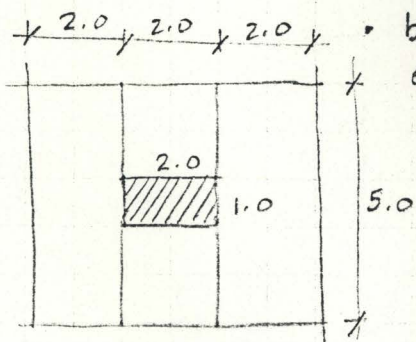
<sup>3/</sup> Periodic emptying of the catch pit will be required. This operation will be simple since it is located outside the premises, it is shallow and the quality of the solids being emptied is harmless.

FIG. 1 SEMIBURIED, HORIZONTAL PRIVY

- To receive only sewage -



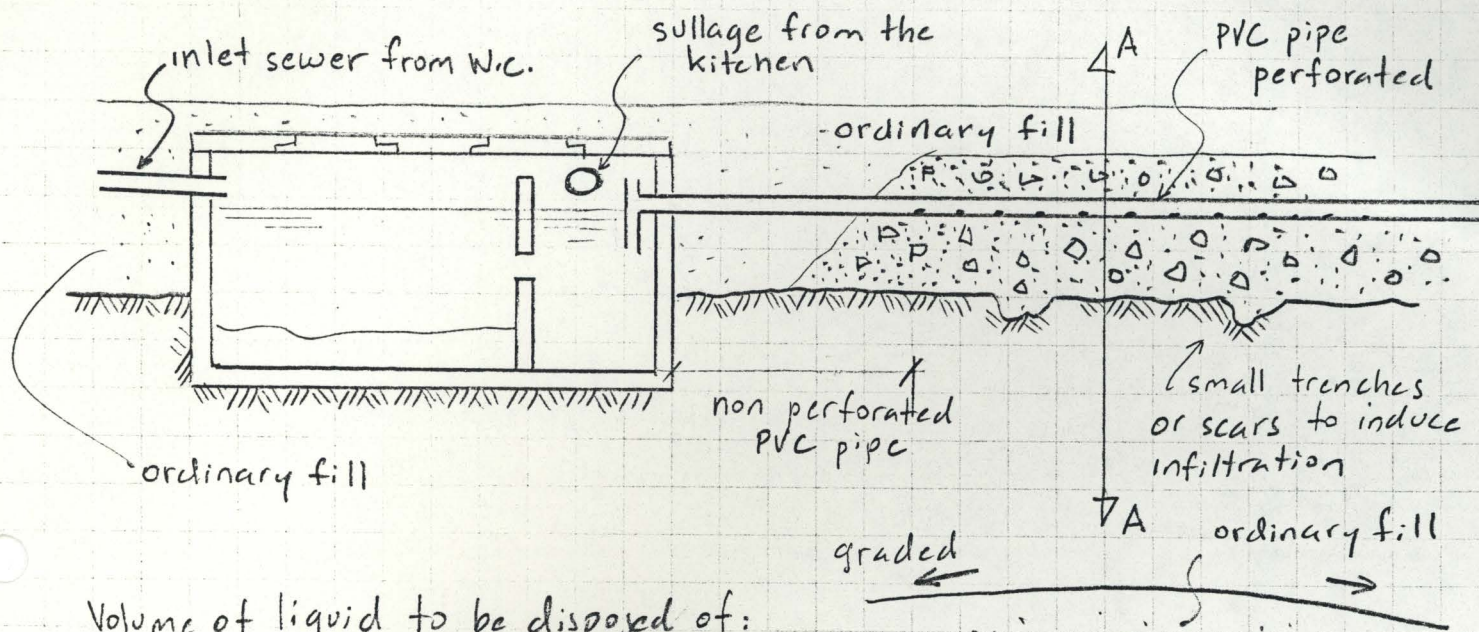
- Total Volume:  $1.9 \times 1.0 \times 1.0 = 1.9 \text{ m}^3$
- effective volume:  $1.9 \times 1.0 \times 0.8 = 1.52 \text{ m}^3$
- Lateral area (internal, up to operational level):
  - $1.9 \times 0.8 \times 2 = 3.04$
  - $1.0 \times 0.8 \times 2 = 1.60$
  - $4.64 \text{ m}^2$



- bottom area within the pit =  $1.9 \times 1.0 = 1.9 \text{ m}^2$
- bottom area surrounding the pit, \* and supposing to extend 2 m. around the pit:
  - laterals:  $2 \text{ m} \times 2 \text{ m} \times 2 = 8.0 \text{ m}^2$
  - heads:  $5 \text{ m} \times 2 \text{ m} \times 2 = 20.0 \text{ m}^2$
  - Total  $28.0 \text{ m}^2$

\* note from the drawing above, that a shallow "tail" or "apron" of selected fill may be extended in any direction, as to increase the soaking area.

FIG. 2. TWO-COMPARTMENT SEPTIC TANK AND DRAINFIELD  
- To receive sewage plus sullage from the kitchen -



Volume of liquid to be disposed of:  
sanitary sewage: 63 l/d.  
+ kitchen sullage:

$$7 \text{ h} \times 20 \text{ l/h/d} = 140 \text{ l/d}$$

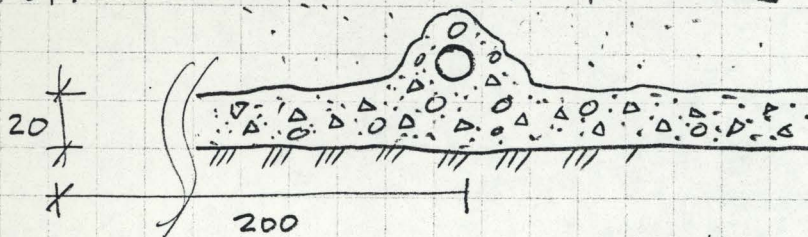
$$140 + 63 = 203 \approx 200 \text{ l/d.}$$

to be disposed of in an area:

$$4 \times 10 = 40 \text{ m}^2$$

and corresponding to a rate  
of  $200 \text{ l}/40 \text{ m}^2 = 5 \text{ l/m}^2/\text{day}$   
figure that seems conservative.

Note: Evapotranspiration will provide supplemental wastewater disposal.



or more, depending on the availability of selected fill

Volume of selected fill required.

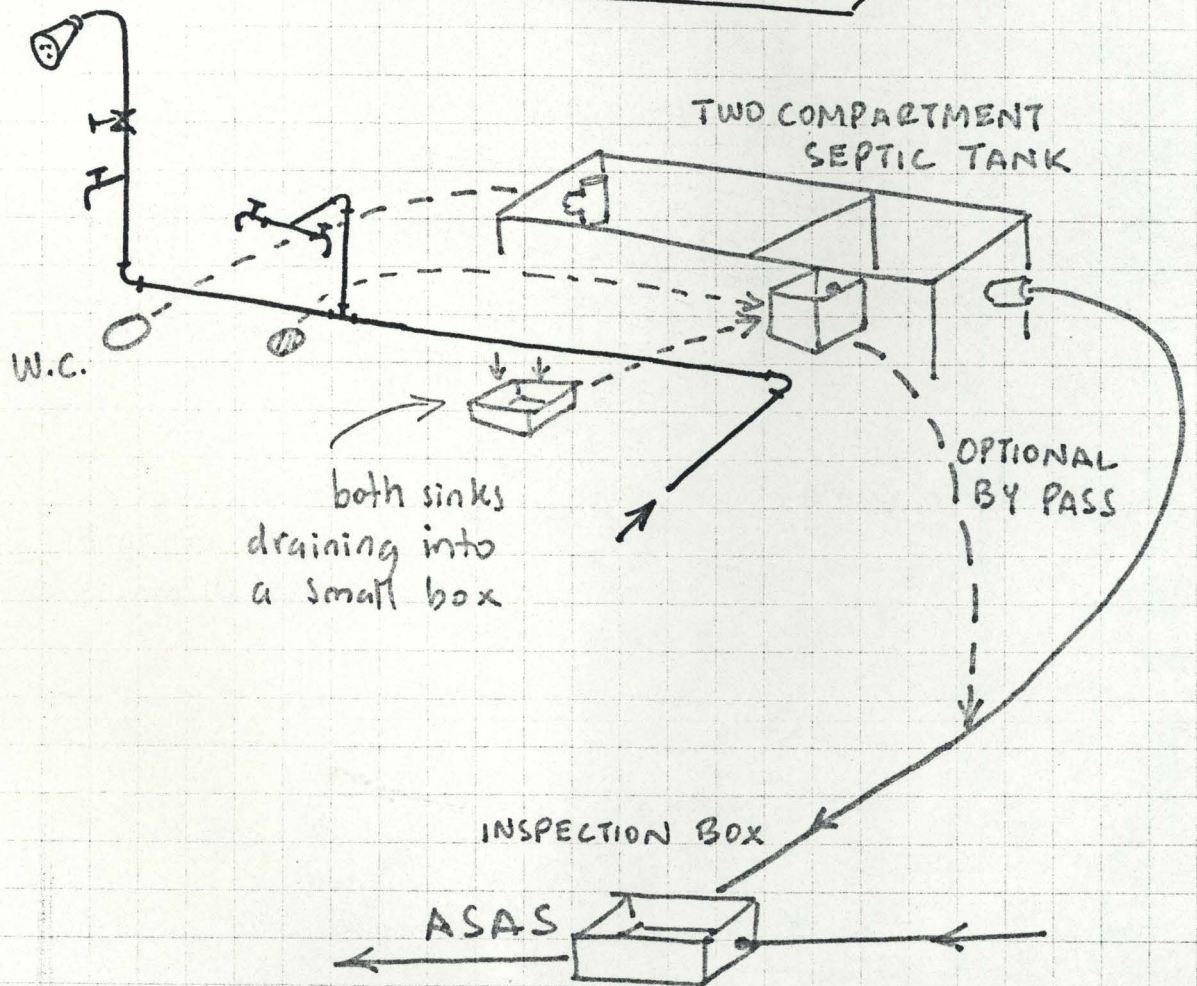
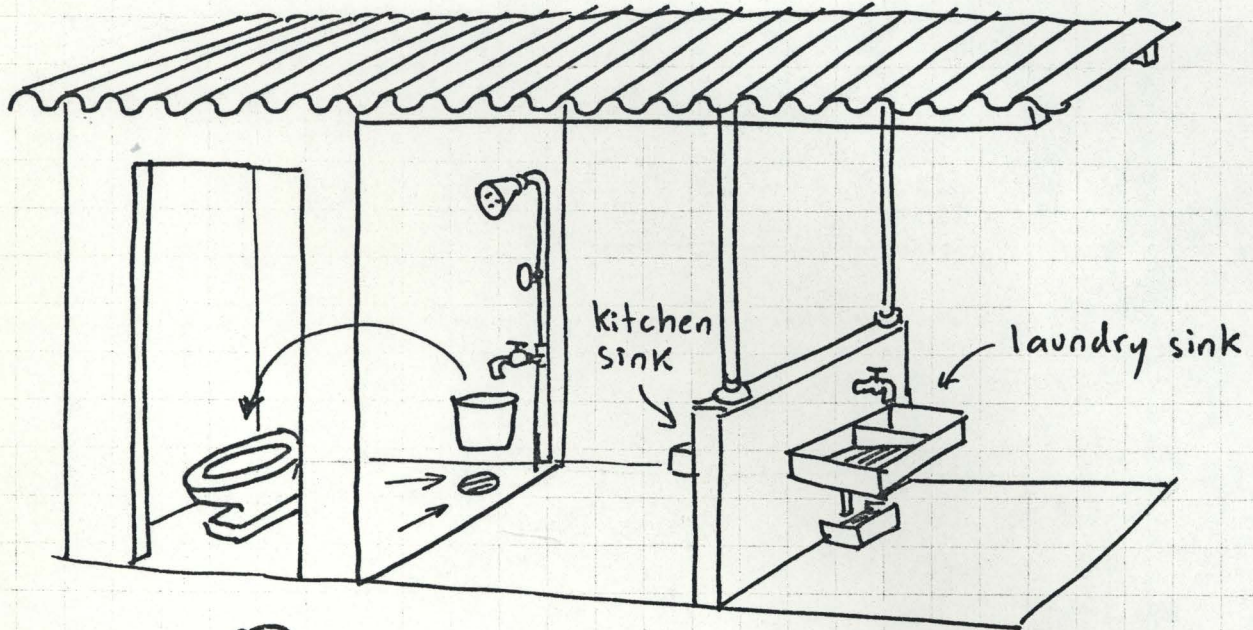
$$\text{Area} = \frac{0.5 \times 0.5}{2} + 0.2 \times 4 = 0.925 \text{ m}^2/\text{ml}$$

in a 10 m length of drainfield.

$$10 \times 0.925 \text{ m}^2/\text{ml} = 9.25 \text{ m}^3;$$

less than two truckloads.

FIG. 3 SUGGESTED LAYOUT FOR THE SANITARY UNIT





HALCROW-BALFOUR LTD.

FIRST SCHEDULE

HBL ASSIGNMENTS AND RESPONSIBILITIES

SPECIALIST MANAGEMENT:

Management will be provided for:

- Direction of HBL staff input in Cartagena and London.
- Specialist advice on Sanitary Engineering of Sewerage and Sewage Treatment Systems.

ENVIRONMENTAL AND CHEMICAL ENGINEERING:

Environmental and Chemical Engineering will be provided to the Project Manager for:

- Direction of the water quality investigations of the Cienaga.
- Establishment of water quality objectives for the Cienaga and of effluent quality standards.
- Process design of the sewage treatment systems.

Sanitary Engineering:

Sanitary Engineering will be provided for:

- Development of alternative sewerage and sewage treatment strategies.
- Advice on engineering aspects of the sewage treatment works design.
- Direction of wastewater and stormwater sampling programme.
- Organization of collection of cost data, development of unit costs for sewerage and sewage treatment installations and of preliminary cost estimates.

Specialist Advice (Provisional):

Specialist Advice will be provided, if required, on the following:

- Chemical aspects of water quality and wastewater treatment.
- Geotechnical aspects.
- Hydraulic aspects.

ej 20/78/006

March 24, 1981

Mr. John Pickford  
WEDC  
University of Technology  
Loughborough LE11 3TU  
England

8th WEDC Conference, India, February 1982

Dear John:

Geoffrey Read has sent me a copy of your leaflet asking for papers for this conference. I do not know how much he has told you about Global Project operations in India, but we are very extensively involved in low-cost sanitation programs there and certainly would like to present a paper. I imagine that it should be on the issues we have had to resolve in drawing up feasibility studies for the first part of the investment program, which will cover 110 towns in 7 states and a population of some 4.6 million (we are currently having discussions with the Government of India on expanding this work to cover the remaining states and territories).

Since we have project staff in India, under our Regional Manager, A. K. Roy, I will suggest to him that he contact Professor Pitchai directly to agree on exactly which topics would be of most interest to the audience (since I imagine that a number of prospective authors will be from institutions with which we have been collaborating during this feasibility work, and we should avoid duplication).

With best regards,

Sincerely yours,

Richard N. Middleton,  
Project Manager  
UNDP Global Project  
GLO/78/006

cc: Messrs. Mara, Read, Roy, TAG

RMiddleton:ba

ejw/78/006

Mr. Duncan Mara, TAG

March 24, 1981

Richard N. Middleton, Project Manager

UNDP Global Project GLO/78/006: TAG Regional Network in South America

With reference to your memorandum of February 10, 1981, I suggest that you raise the questions of longer-term funding of Mr. Guimaraes' position and of establishing a TAG regional network when you visit Washington in May. As I mentioned to you, on the first point there may be a possibility of establishing Mr. Guimaraes within a suitable central agency (such as CNDU) with proceeds from an Urban Projects' loan; Mr. Watson would, I believe, support this. On the second, we should talk with Mr. Loewen. By then, Mr. Castrillon will have joined us and will be able to participate in the discussions; I expect him to be principally responsible for any networks we may establish in Latin America or francophone Africa.

RMiddleton:ba

2/10/78/006

Mr. Augusto Sergio Pinto Guimaraes, TAG

March 24, 1981

Richard N. Middleton, Project Manager

UNDP Global Project GLO/78/006: BRAZIL  
ABES Congress, Fortaleza  
September 1981

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With his memorandum to me of February 9, Duncan Mara sent an outline for a day's session, provisionally on September 22, on "Basic Sanitation for Low-Income Communities", proposing John Kalbermatten, Heli Perrett, Don Lauria and yourself as panel members. This sounds like an excellent idea and I have confirmed that John Kalbermatten will indeed be available. Please let me know what we have to do to make hotel reservations, register for the Congress, etc. It would obviously be simplest if you could make reservations for us at this stage as part of the general ABES arrangements; we would confirm them formally later if necessary.

I am also suggesting to Don Lauria that he take the opportunity of this visit to Brazil to give a seminar for BNE/COSAN, COPASA, and other interested agencies, but at present I am not sure of his other commitments. I will let you know what we propose in due course.

cc: Messrs. Kalbermatten, TWT (o/r); Ms. Perrett, UNDP Global Project;  
Lauria, Mara, TAG

RMiddleton:ba

ejw/78/006

Mr. John M. Kalbermatten, Senior Adviser, TWT

March 24, 1981

Richard N. Middleton, Project Manager

UNDP Global Project GLO/78/006: Donald T. Lauria

In February, you instructed me not to use Mr. Lauria further on Global Project work until he had completed assignments outstanding from his sabbatical at the Bank or which were being undertaken under his direction by students supported through a UNC/Bank contract. The outcome of this instruction and of subsequent telephone conversations with him was a memorandum to both of us dated March 6 setting out budget needs for FY82, and a letter to you (copied to me) dated March 10 giving more precise details on the status of his various activities.

On this basis, I would like to make the following general approach for Global Project work to be undertaken by Mr. Lauria during the remainder of 1981 and perhaps early 1982:

- (a) We will not call upon his services to any appreciable extent prior to mid-June (minor exceptions are supervising Gerry Laniak, funded by PHI/80/015, modify LBPN to incorporate intermediate pressure constraints; assisting Paul Hébert, again under PHI/80/015, before he leaves for the Philippines about June 1; and some minor inputs, under GLO/78/006, into Paul Hébert's work on Lesotho). This should enable him to complete most items of work for you: the water demand study; revision of the staging/upgrading study; most or all of the five computer tools listed in his March 10 letter; and verification of the RES II equations.
- (b) The Manila interagency workshop under PHI/80/015 is now scheduled for June 22. Mr. Lauria's participation is essential, especially as he will be responsible for the second overseas' training course which will follow later in the year. Allowing for preparation, travel and reporting, this implies a two-week assignment, about June 19 - July 2.
- (c) TAG has been asked to participate in the ABES Congress in Fortaleza, Brazil, On September 22. This would be a good opportunity to use seminars for BNH, COPASA (who had hoped, you may recall, to send engineers to the UNC course last year) or other agencies. This would probably make one week in total, plus a week of preparation, travel and report writing.

March 24, 1981

- (d) Prior to the ABES meeting, I would like Mr. Guimaraes to come to UNC for about a week to ten days to become fully familiar with the work being done. This will not place a great burden on Mr. Lauria, and the dates will therefore be determined mainly by the demands of Brazil operations and by the dates when Mr. Guimaraes could also go on from UNC and Washington for briefing in England.
- (e) We have promised support to the Federal Ministry of Water Resources, Nigeria, probably in the form of a brief (two-to three-day) seminar. This might conceivably be combined with the ABES meeting or with the Thailand mission (see below).
- (f) We should in due course follow up on the PWWA workshop given last year, but that might best be towards the end of 1981 when the new adviser (Finlay) has been in place for some time. In which case, it might be combined with
- (g) the second overseas' training course under PHI/80/015, which for enthusiastic attendance, ease of administration and linkage to the Bank's lending operations should probably be at UNC, but which some people feel would be more adequately held regionally (e.g., in Bangkok or Bandung). Because of the in-country workshop has slipped to June 1981, this course could be late 1981 or January 1982.
- (h) I have repeatedly stressed to Mr. Lauria that, in order to demonstrate the usefulness of these new or improved techniques, we need a number of well-written case studies showing how their use has reduced costs, increased service coverage, or enabled better judgements on overall water/sanitation systems (e.g., Rio Casca, Brazil). It is essential to build into his workplan enough time to write up both his Water Unit and UNDP work.

When I return from mission, I shall be revising the project budget and workplan. At that time, I would like to agree with you and Mr. Lauria in detail on immediate activities, (a) - (c) and to develop a reasonably firm timetable for the remainders, (d) - (h).

RMiddleton:ba

cc: Donald T. Lauria, TAG

EL 10/78/006

Mr. Geoffrey Read, TAG

March 24, 1981

Richard N. Middleton, Project Manager

UNDP Global Project GLO/78/006: Papers for ISQG 81

Unfortunately, your memorandum of February 23 and the attached draft paper only reached me on March 23, the opening day of the Amsterdam Conference. It was therefore impractical for me to have the paper cleared (particularly as a marked-up draft subject to revision) in time. This particular paper certainly deserves a wider audience, either as a conference reprint or as a technical note, so clearly we need to pay more attention to the mechanism of getting it published. This emphasizes a point I have wanted to raise with you about several such papers: we should list the professional seminars or conferences at which we think TAG should make a presentation, then prepare materials well in advance so that they can be cleared both within TAG and externally.

I suggest that you and Duncan get together and give some serious thought to this before you come over in May.

cc: Mr. Duncan Mara, TAG

*R*

210/78/006

# OFFICE MEMORANDUM

TO: Mr. Ian Harvey, WA2

DATE: March 23, 1981

FROM Richard N. Middleton, Project Manager

SUBJECT: UNDP Global Project GLO/78/006: GUINEA

We had the report translated into French, but it was lost in the mail between the translators and us. We eventually got xeroxes, but only just before the mission, and the letters could not be translated in time. We therefore sent Ed Motte out with English letters and report, plus French copies of the report; he was going to review the quality of the translation on the flight and decide whether it was good enough to hand over in Conakry.

\*                    Herewith the translated version; let us await his report before deciding what further to do with it (if anything).

\*                    enclosure

RMiddleton:ba

*Original + Attachment -> WAIC*  
*cc: ~~Cover~~ -> Motte*



March 23, 1981

Mrs. Smedler  
United Nations Capital Development  
Fund (UNCDF)  
633 Third Avenue  
New York, N. Y. 10017

Dear Mrs. Smedler:

LESOTHO - UNCDF LES/80/C02  
Rural Sanitation Project

I confirm my telephone conversation March 20 with you about the debriefing in New York of the mission which is currently in the field (Ms. Becker and Messrs. Read and Cross).

I propose May 20 as the date for debriefing, starting about 10:00 a.m. in your offices (we will travel on the shuttle flight that leaves Washington at 8:00 a.m.). Geoffrey Read will come to report on the mission's activities, findings and recommendations, and I will probably accompany him. If Ms. Becker is available at that time I suggest that she also participates. As we discussed, I imagine that you would also invite a UNICEF representative to attend, to discuss funding of the technical assistance which is necessary to complement UNCDF's contribution.

Prior to the meeting in New York, I propose that Geoffrey Read spend some days in Washington in order to discuss general approaches to rural sanitation in Africa with a colleague who is working on similar programs in Tanzania, to explore linkages with a proposed World Bank education project that would build rural schools in Lesotho, and to liaise with USAID on their water supply and rural health activities in Lesotho. To simplify administration, we will cover his per diem costs during this time from UNDP GLO/78/006, as he will also be discussing a number of Global Project issues with myself and the World Bank staff.

The cost of Mr. Read's travel London-Washington-New York-Washington-London will, I understand, be met by UNCDF. I confirm my offer to make the necessary travel arrangements for economy class flights, and to recover the cost from you

through the inter-office voucher procedure, and shall proceed on this basis unless I hear from you to the contrary. We will similarly make travel arrangements for Ms. Becker, if she participates in the meetings.

Yours sincerely,

Richard N. Middleton  
Project Manager

cc: Mr. G. Read (TAG)  
Ms. Becker (consultant)  
Mr. Ware (EAP)  
Mr. Polak (EAL)  
Mr. Reese (EAL)  
Mr. Evans (PHN)

RNMiddleton:ph

eyw/78/006.

Mr. Geoffrey Read, TAG

March 23, 1981

Richard N. Middleton, Project Manager

Article for "Diarrhoea Dialogue"

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You have my clearance for publication in "Diarrhoea Dialogue" of the article which was attached in draft to your memorandum of March 2.

I suggest you explore with Richard Feachem the idea of having a regular TAG column in this useful new publication. We could probably contribute regular short sections on both hardware and software. I suggest a collective nom-de-plume might be "Stool Pigeon."

cc: R. Feachem, TAG

RNMiddleton:ph

Mr. Duncan Mara, TAG

March 23, 1981

Richard N. Middleton, Project Manager

Terms of Reference: UNDP Global Project GLO/78/006  
Technical Discussions in London

You should visit the Ross Institute, London, in late April for about three days. The timing and duration of your stay should be arranged so as to coincide with the visit of Dr. Roland Schertenleib, Head of the International Reference Centre for Wastes Disposal, Dubendorf. In the course of the discussions between him, Geoffrey Read and yourself, you will establish (a) the status of ongoing investigations being supported by IRCWD of interest to TAG, particularly on pit emptying and groundwater pollution; (b) IRCWD's interest in sponsoring further investigations in the sanitation sector; and (c) IRCWD's success in identifying donor financing to follow up the recommendations of the January 1981 meeting in New Delhi on groundwater pollution studies. You will also, working with Mr. Read, assemble relevant materials for the May 1981 TAG technical meetings in Washington, D. C., (covered under separate terms of reference).

No separate report on these London meetings need be prepared; the outcome will be reflected in the recommendations of the subsequent Washington meetings.

cc: Messrs. Feachem and Read, TAG

RMiddleton:ba

ans/78/006

Files

March 20, 1981

Richard N. Middleton, Project Manager

INDONESIA - Sanitation Investment Adviser

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1. During Mr. Loewen's recent mission to Jakarta, Cipta Karya expressed interest in having an expatriate Sanitation Investment Adviser on a 3-year assignment. UNDP indicated that funding for this post could be found from IPF resources. The Global Project has been urging creation of this post for some time, and has identified Mr. Gerd-Jan de Kruijff as a potential candidate.

2. However, immediately after Mr. Loewen's return, the Director General of Cipta Karya, Mr. Radinal Mochtar, who was visiting Washington, said that he was not convinced that a 3-year assignment was necessary, nor would he approve Mr. de Kruijff without an opportunity to meet him and evaluate his work. A compromise was reached, under which Mr. de Kruijff would go to Indonesia for a short reconnaissance visit to assess the situation and prepare a workplan for the Adviser's post; on the basis of this reconnaissance, Cipta Karya would decide whether to proceed with the proposal and whether Mr. de Kruijff would be acceptable.

3. On March 19, I talked to Gerd-Jan de Kruijff, currently on a HABITAT assignment in Zimbabwe, about his possible availability for this reconnaissance mission. He informed me that he was on a continuous contract until August 9, and that there was no provision for him taking intermediate leave; in fact, RR UNDP had initially reacted negatively to my telex (March 5) asking whether this would be feasible. However, it appears that there would be a slack period in his current work immediately following a tripartite review, when further funding would have to be identified and various policy decisions taken. He is now reasonably confident of being able to take 3 weeks vacation at that time, during which period he could go to Indonesia.

4. The tentative timing of future activities is as follows:

early April: Zimbabwe agency decides on location and scope of demonstration projects on which de Kruijff is to work. This will affect the date of the tripartite progress review meeting.

- end April: Middleton contacts de Kruijff to determine tripartite meeting dates in light of progress to date, probable timing of Indonesia mission, etc.
- early May: Mission timing proposed to Cipta Karya. Project document prepared in preliminary draft form and sent to WB Jakarta for informal discussions with UNDP (at this stage there would be no contact with Cipta Karya).
- mid June: de Kruijff mission begins.
- end June: Middleton visits Indonesia (coming from Philippine training course under PHI/80/015) to determine reaction to de Kruijff work. Project document revised accordingly.
- mid August/  
early September: de Kruijff (assuming that project is approved and that he is acceptable to Cipta Karya) is briefed in Washington and London.
- end September: de Kruijff takes up resident assignment.

cc: Mr. Bruestle, AEP; Ms. Duer, AEA; Ms. Husain, PHN;  
Mr. Loewen, TWE; Mr. de Kruijff (c/o UNDP Zimbabwe)

RNMiddleton:ph

## OFFICE MEMORANDUM

TO: Files

DATE: March 20, 1981

FROM: Richard N. Middleton, Project Manager

SUBJECT: INDONESIA - Sanitation Investment Adviser

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early September: de Kruijff (assuming that project is approved and that he is acceptable to Cipta Karya) is briefed in Washington and London.
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cc: Mr. Bruestle, AEP; Ms. Duer, AEA; Ms. Husain, PHN;  
Mr. Loewen, TWT; Mr. de Kruijff (c/o UNDP Zimbabwe)

RNMiddleton:ph



9/01/78/006

March 20, 1981

Mr. Luiz Carlos Martins Bonilha  
Director  
Buildings Division  
Instituto de Pesquisas Tecnologicas do  
Estado de Sao Paulo S/A  
Cidade Universitaria 05508  
Sao Paulo SP  
Caixa Postal 7141 (CEP 01000)  
Sao Paulo, Brazil

Dear Sir:

Thank you for your letter of February 13 concerning possible collaboration with TAG. I am glad to hear of your interest in developing low-cost sanitation systems, and hope that we may be able to work with you on this important subject.

Mr. Augusto Sergio Pinto Guimaraes has now been appointed as the project's resident representative in Brazil, and we have already put in hand the importation of pour-flush units from Colombia for testing and evaluation under various Brazilian conditions. I note that your letter was copied to him, and he will be in touch with you as soon as the units are delivered.

Yours sincerely,

Richard N. Middleton  
Project Manager

cc: D. Mara, TAG  
A. Guimaraes, TAG

RNMiddleton:ph

**WORLD BANK OUTGOING MESSAGE FORM (Telegram, Cable, Telex)**

IMPORTANT (PLEASE READ INSTRUCTIONS BELOW BEFORE TYPING FORM.)

Class of Service: **FULL RATE CABLE**

Date: **20 MARCH 1981**

Telex No.:

Originators Ext: **75304**

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*F338*  
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BOOK OF TWO

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SUBJECT:

DRAFTED BY:

CLEARANCES AND COPY DISTRIBUTION:

AUTHORIZED BY (Name and Signature):

DEPARTMENT:

**WORLD BANK OUTGOING MESSAGE FORM (Telegram, Cable, Telex)**

IMPORTANT (PLEASE READ INSTRUCTIONS BELOW BEFORE TYPING FORM.)

Class of Service: FULL RATE CABLE Date: 20 MARCH 1981

Telex No.: \_\_\_\_\_ Originators Ext: 75304

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FOR PROFESSOR ALBERT WRIGHT ONE COPY DIRECT ONE COPY RELAYED  
THROUGH MS. KOFI INTBAFRAD PLEASE. FURTHER MYTEL MARCH ELEVENTH  
WE NOW PLANNING READ MARA AND YOURSELF OVERLAP IN BANK FOR  
TECHNICAL DISCUSSIONS. THIS IMPLIES YOU SHOULD ARRIVE MONDAY  
MAY ELEVENTH TO BEGIN WORK TWELFTH AND LEAVE EVENING MAY  
NINETEENTH. PLEASE ADVISE SOONEST PREFERRED ITINERARY AND  
FLIGHTS. REGARDS, RICHARD MIDDLETON INTBAFRAD.

**NOT TO BE TRANSMITTED**

SUBJECT: <b>UNDP GL0/78/006</b>	DRAFTED BY: <b>RNMiddleton:ph</b>
CLEARANCES AND COPY DISTRIBUTION:	AUTHORIZED BY (Name and Signature): <b>Richard N. Middleton, Project Manager</b>
	DEPARTMENT: <b>UNDP Global Project GL0/78/006</b>



**WORLD BANK OUTGOING MESSAGE FORM (Telegram, Cable, Telex)**

IMPORTANT (PLEASE READ INSTRUCTIONS BELOW BEFORE TYPING FORM.)

Class of Service: TELEX Date: MARCH 19, 1981  
Telex No: 927 92034 DPUN Originators Ext: 75639

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UNDEVPRO

CAIRO, EGYPT

FOR PENNACCHIO. MIDDLETON HAS ASKED ME TO FOLLOW UP ON YOUR  
MISC 730 SENT BY CARROLL. PLEASED TO LEARN PROJECT BACK ON  
TRACK. WE ABLE TO PROVIDE EXPATRIATE ASSISTANCE OUT OF  
GLO/78/006. WONDERING WHETHER EGYPT IPF COULD COVER LOCAL COSTS  
MENTIONED BY CARROLL. PLEASE ADVISE. REGARDS, LOEWEN.

*ew/78/006*

END  
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**NOT TO BE TRANSMITTED**

SUBJECT: EGYPT - GLO/78/006	DRAFTED BY: MLoewen:bp
CLEARANCES AND COPY DISTRIBUTION: cc: Mr. Middleton	AUTHORIZED BY (Name and Signature): M. J. Loewen <i>MJ Loewen</i>
	DEPARTMENT: TWT

eyw/78/006

Mr. A. K. Roy, TAG

March 19, 1981

Heli Perrett, Social Science and Health Education Adviser

UNDP Global Project GLO/78/006: Evaluation Studies

1. I have tried to quickly reconstruct my oral comments to you (India: December) on the Bihar: Evaluation Report, using my notes as a guide.

General Points

2. On the whole, I found the Bihar Report superior to the other two because it has made a greater attempt to explain the findings. In fact, in my opinion the most useful parts of the report are the qualitative discussion of some of the major constraints or problems of the SSS program and what might be done about them.

3. A certain amount of overall editing is required. I think at this point it is not necessary to worry about restructuring, even though it might assist in over all presentation.

4. The limited amount of cross-tabulation of findings presented in the Annexes is useful, when it goes beyond attempting to show differences by municipalities. I would have liked to see more of it (e.g., tenant/landlord by type of latrine, income level by type of latrine, etc.), regular/irregular employment by type of latrines.

Specific Points

5. To my mind the report rightly identifies and stresses certain critical aspects in which the SSS program is deficient:

- (a) good motivation, education and information of the public to encourage acceptance, prevent abuse, make sure people know the terms of the program and the loan, ensure they know how to take care of the facilities to prolong their life span, etc., (pp 34-36);
- (b) the usefulness of a client relations unit in the organization responsible for the program (p. 13);
- (c) the need to ensure that arrangements for loan repayments are adequate (98% default on repayment is obviously not a good record, but equally clearly the blame cannot entirely be placed on the consumer (p. 34);

(d) the importance of ensuring adequate emptying arrangements (p. 49).

6. I am also pleased to note that Chief Researcher took the initiative to add the question on tenancy and ownership to the questionnaire as it added some worthwhile pieces of information.

7. At this point I think the most useful further action the researchers might take is to attempt to answer (if possible, through secondary analysis of data or further qualitative review) some important and partially dealt with questions such as:

- What exactly went wrong with the loan repayment activities and how do they need to be modified?
- Why did so many higher income people reject the program (was it solely a function of the unattractive technology as implied)?
- Why were laws encouraging conversion not enforced, and what, if anything, might be done about it, particularly in the case of those renting houses to others?
- Why was illiteracy such a good predictor of people without latrines (because of its correlation with income? because illiterates could not read the publicity? because illiteracy in turn was highly correlated with irregular employment and this precluded access to loans? several of the preceding? other)?

HPerrett:ba

cc: Mr. Middleton, UNDP Global Project GLO/73/006

epuo/78/006

Mr. Richard N. Middleton, Project Manager

March 19, 1981

Heli Perrett, Social Science and Health Education Adviser

UNDP Global Project GLO/78/006: NEPAL

Streamlining of Activities

1. I have given some quick thoughts to the question of how we might streamline our activities in Nepal, in part, as a basis for drafting my Terms of Reference, and in part, to prepare for the mission. My initial conclusions are as set forth below:

- (a) Evaluation: I suggest we might start out with a quick and essentially qualitative appraisal of past experience (step one) based on review of reports, discussions with knowledgeable people and rapid, limited field reconnaissance visits. To the extent possible, this would take place during our mission. This activity would then define those subject areas on which we shall need additional information (because of their importance, because they could not be answered on the basis of appraisal, etc.) which would in turn form the basis for the subsequent in-depth evaluation (step two). This subsequent evaluation (as contrasted with "appraisal" would be highly selective and focused. 1/ Such a two-step procedure would also avoid any other activities being held up by delays in the evaluation, and cut down on and make field data collection more cost-effective.
- (b) Testing of the Technology (to the extent it is needed to complement the India studies) would be an activity prior to and separate from "demonstrations" or "pilot testing". This can take place early on, or, as soon as step one above has been completed and a preliminary selection of technologies and design of latrines can take place. It would function purely

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1/ An example might be as follows: A quick look at one past program shows that a large fraction of the supposed beneficiaries did not use the latrine components they were given to construct latrines (or have them constructed). The appraisal does not tell us whether it was 30% or 47.32%, but that it would be "about one third to one half". In my opinion, we do not need to do a survey to establish the exact number or to test correlation with education, family size or income. What we do need to find out is why the problem occurred with considerable frequency. (Was it because people did not know how to? could not get cement? found the cost too high? encountered labor shortages? used the materials given for more urgently felt needs? other? three or four of the preceding?) This in-depth probe for problems and proposal of solutions would be the task of "evaluation" - loosely termed as such as there is no baseline information.



as a technical activity as per my earlier memorandum to you of February 17. It would not serve to assess sociocultural, financial or institutional feasibility, which would be on the basis of review of past experienced and additional studies (e.g., legal). Such technology testing then need not necessarily take place in remote places, but wherever the hydrogeological or other conditions are representative and need not wait for any detailed background information on institutional capabilities, financial feasibility or other (i.e., construction can begin earlier on).

- (c) Background Data Collection: This would be of two kinds again and take place at two distinct points in time:
- (i) First would be a rapid collection of mainly existing information on the country or region, for the purpose of making technology selection and basic design decisions;
  - (ii) the second step would occur just before implementation of the pilot projects begin, but after testing, is limited to the pilot project towns, and would serve primarily as a baseline for evaluation of the pilot tests (although it might also serve for purposes of last minute adjustment of the technology or strategy).
- (d) Pilot testing would take place in one or perhaps at the most, two or three towns and such testing would serve as a Phase I tryout of the entire strategy, for the purpose of ironing out the bugs prior to expansion. Demonstrations would exist within these pilot tests (first latrines to be built) and serve the purpose of influencing people to accept and pay for the latrines (not for the purpose of finding out if the technology works). As such they would be built in the homes of "influential" people or in publicly visible places (e.g., schools) rather like demonstration pilots in agriculture. The pilot tests themselves would attempt to cover the whole town as this would permit better assessment of rate of acceptance, institutional capabilities, etc.

ejw/78/006

Mr. Duncan Mara, TAG

March 19, 1981

Heli Perrett, Social Science and Health Education Adviser

UNDP Global Project GLO/78/006: ZIMBABWE

1. I met today with a Bank staff member in Rural Development, Mr. Bernard Woods, who described to me some interesting low-cost sanitation technology development and demonstration activities in Zimbabwe. The organization involved is the Henderson Research Institute, Salisbury, Zimbabwe. Postal Address Private Bag 222 A, and the contact person is a Mr. Ron Evans. You may already be aware of these activities, but if not, may want to look into them while you are on mission. Any information you can obtain on the points of interest from the "software" side would be appreciated.

2. It sounds to me as though the technology in question is similar to the VIP latrine, but with a ventpipe which is offset from the pit and so has to have a bend at the bottom. The superstructure is a spiral, made of precast concrete slabs so it can be dismantled and moved.

3. What interests me personally about this experience are two dimensions outside the technology design itself: (a) the fact that apparently it has met with an enthusiastic public response and the latrines are actually becoming status symbols; and (b) the fact that there appears to be a good strategy for involving small local industry (assistance with training, credit and molds).

cc: Mr. R. Middleton, UNDP Global Project GLO/78/006  
Mr. Bernard Woods, AGR

2100/78/006

Mr. Richard N. Middleton, Project Manager

March 19, 1981

Jozsef B. Buky, Acting Senior Adviser, TWTWW

Terms of Reference - UNDP Global Project GLO/78/006  
- THAILAND, NEPAL, BANGLADESH, INDIA

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1. You will arrange to arrive in Bangkok about March 27 to assess the opportunities for TAG support to the rural water supply and sanitation strategy being developed by the government in connection with the Fifth 5-Year Economic and Social Development Plan (1982-86). The timing of your visit is planned so as to overlap with the final days of a mission from the Asian Development Bank (Mr. Brian Grover) which is appraising an engineering loan (probably with UNDP co-financing) to help develop a rural water supply and sanitation master plan and prepare investment projects. It is envisaged that you will acquaint yourself with Mr. Grover's findings and recommendations, identify any potential role (particularly on piloting or demonstration activities designed to ensure that the eventual program is well conceived) for TAG and, as appropriate, participate in his wind-up meetings with governmental and non-governmental agencies. You will brief the World Bank Resident Mission and the Bangkok office of UNDP (in particular the IDWSSD Coordinator, Mr. Michael Smith) on your findings before departure.

2. Coming from Bangkok, you will arrange to arrive in Nepal about April 1. You will lead a mission consisting of Mr. A. K. Roy (Project Resident Manager, South East Asia) and Ms. Heli Perrett (Project Social Science and Health Adviser), travelling under separate terms of reference. Your particular responsibilities will be to discuss with government:

- (a) the steps to be taken to reactivate project work in Nepal, and in particular on the optimum use of Rs. 2 lakhs funding currently provided in the Department of Water Supply and Sewerage budget;
- (b) the planned scope of project activities during the next financial year (beginning July 16, 1981) and on the corresponding budget provisions; and
- (c) the potential role of longer-term technical assistance in the water supply and sanitation sector, and the preference of government and UNDP for funding sources for such technical assistance.

You will contact the World Bank Resident Mission and the Resident Representative, UNDP upon arrival and keep them fully informed of your findings and recommendations.

3. From Nepal the mission will travel to Bangladesh, arriving about April 15. Your particular responsibilities, in reviewing project work in that country, will be:

- (a) to establish the status of the feasibility study and the 10-towns sanitation project, especially the likely completion date for the draft report, the investment requirements, and government preferences on donor agencies;
- (b) to discuss with government, UNICEF and UNDP the follow-up to this feasibility study, in particular technical assistance in the implementation, monitoring and evaluation of the 10-towns project and extension of these studies to other urban areas of the country.

You will ensure that the World Bank Resident Mission and the Resident Representatives of UNDP and UNICEF are kept fully informed of your findings and recommendations.

4. You will take the opportunity of this mission for general discussions with Mr. Roy on outstanding issues on project work in India, especially the status of the preparation of the seven state sanitation feasibility studies. It is anticipated that you will spend one or two days in Delhi for this purpose towards the end of the mission.

5. Within two weeks of your return to Washington you will submit full reports on the mission's work in these countries, together with recommendations (which may be separate from the main reports, if appropriate) or TAG's future role in each; setting out objectives and budget implications.

Cleared with & cc: Ms. Loos, ASA; Messrs. Skytta, ASP; Pearce, PHN;  
Ms. Pratt, ASA; Mr. Sopher, ASP; Ms. Murphy, AEA;  
Mr. Bruestle, AEP; Messrs. Kalbermatten, Loewen, TWT

cc: Messrs. Lamson-Scribner, ASP; Dunn, ASA; Shibusawa,  
ASA; Sandstrom, ASP; Evans, PHN

RNMiddleton:ph

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 UNIV IN SEPTEMBER. LATTER TO HAVE IN-COUNTRY PREPARATION BY MY  
 CONTACTS MANSOURA UNIV. ESTIMATE LOCAL COSTS THESE ITEMS PLUS  
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Ms. Heli Perrett, Social Science and Health Education  
Adviser  
Richard N. Middleton, Project Manager

March 18, 1981

Terms of Reference: UNDP Global Project GLO/78/006  
NEPAL  
BANGLADESH

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1. You will arrange to arrive in Kathmandu, Nepal on or about April 2, 1981, for a stay of about twelve days. Other members of the mission will be Mr. A. K. Roy, (Project Resident Manager, Southeast Asia) and myself (mission leader).
2. While in Nepal, you will assist the other team members in:
  - (a) advising the Department of Water Supply and Sewerage on the best use to be made of their existing budget for sanitation;
  - (b) outlining a plan of action and budget for the next fiscal year (beginning July 16, 1981); and
  - (c) defining TAG's role in support of these activities.
3. You will pay particular attention to the following aspects of the mission's work:
  - (a) the evaluation of past programs as a basis for planning future activities and identification of any additional studies needed;
  - (b) the collection of background hydrogeological, social, economic and other information, and the methodologies and timing for doing so;
  - (c) overall social and behavioral feasibility of improving sanitation in Nepal, and ways to improve such feasibility;
  - (d) support activities which might be required, such as promotion, health education and training; and
  - (e) the design of pilot or demonstration programs to test these applications, including in particular the delivery, monitoring and evaluation aspects of such programs.

March 18, 1981

4. In carrying out these tasks, you will take account of the manpower and other resource constraints affecting Government agencies, and will advise Government on the best use to be made of non-governmental institutions (such as local universities) and in general a means for streamlining the data collection and project preparation process.

5. From Nepal the mission will travel to Bangladesh, arriving about April 15. Your particular responsibilities, in regard to ongoing project work in the country, will include review of:

- (a) the report on the background data collected, including advice on any further analyses that may be required;
- (b) progress made in contracting for and implementing the legal and administrative study;
- (c) available information on the DPHE sales centers and their operation;
- (d) plans and materials prepared for promotion and education support activities;
- (e) the plans for and progress to date in monitoring and evaluation.


6. Leaving Bangladesh, you will accompany Mr. Middleton for general discussions with Mr. Roy on outstanding issues in project work in India, with an expected stay of one or two days in Delhi. During this time, you will review progress made since your last mission to India, in drafting the report on the sanitation project in Rajasthan state, and on similar reports for the other five states where the project is active.

7. Within ten days of your return to Washington, you will submit full reports on your findings and recommendations for Nepal and Bangladesh to be incorporated into a general mission report.

cleared and cc: Messrs. Skytta, ASP; Ms. Loos, ASA; Ms. Schaengold, ASA; Pearce, PHN; Sopher, ASP

cc: Messrs. Lamson-Scribner, ASP; Dunn, ASA; Sandstrom, ASP; Evans, PHN, Shibusawa, ASA

cc: Messrs. Berna, UNDP/NY; Stevens, WHO; Boschi, WHO; RR UNDP; RR WB.

HPerrett:ba 



230/78/006

Mr. A. K. Roy, TAG

March 18, 1981

Richard N. Middleton, Project Manager

Terms of Reference: UNDP Global Project GLO/78/006  
NEPAL  
BANGLADESH

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1. You will arrange to arrive in Kathmandu, Nepal on or about April 2, 1981 for a stay of about twelve days. Other members of the mission will be Ms. Heli Perrett (Project Social Science and Health Education Adviser) and myself (mission leader). The principal objectives of the mission are:

- (a) to advise the Department of Water Supply and Sewerage on the best use to be made of existing budget provisions for sanitation;
- (b) to agree with the Department on activities to be undertaken during the next fiscal year (beginning July 16, 1981), and on the budget provision required; and
- (c) to define TAG's role in support of the Department's work.

2. In the mission's work you will be responsible for developing recommendations on particular aspects of demonstration projects to be considered for immediate implementation, including:

- (a) the technologies to be tried out;
- (b) arrangements for component manufacture or procurements;
- (c) arrangements for construction;
- (d) the institutional and legal framework; and
- (e) financing and cost recovery

3. You will also assist in developing proposals for these aspects of the Department programs to be undertaken in FY82, including defining further studies that should be undertaken (and by whom) and preparing an outline budget.

4. On about April 15, the mission will proceed to Bangladesh for a stay of about one week, for a review of project work in that country. As regional manager, you will, after discussions with project country staff, report to me on:

March 18, 1981

- (a) the current status of project work, and in particular on any additional inputs needed to ensure timely submission of the ten-towns sanitation project feasibility report;
- (b) the proposed arrangements for implementation of the ten-towns project, and for continued funding of the TAG assistance to sanitation program development in the country.

5. Your findings and recommendations, after agreement within the mission and discussions with Government and local representatives of international agencies will be set out in a draft report while in the field. The final mission report will be prepared by Ms. Perrett and myself on return to headquarters.

cleared and cc: Messrs. Skytta, ASP; Ms. Loos, ASA; Ms. Schaengold, ASA;  
Pearce, PHN; Sopher, ASP

cc: Messrs. Lamson-Scribner, ASP; Dunn, ASA;  
Sandstrom, ASP; Evans, PHN; Shibusawa, ASA

Messrs. Berna, UNDP, N. Y.; Stevens, WHO; Boschi, WHO;  
RR UNDP; RR WB

Messrs. Loewen, TWT; Buky; Acting Senior Adviser, TWT

RMiddleton:ba

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MISC703 RICHARD MIDELETON FROM HAIFAA SHANAWANY PLEASE CONVEY TO FRANK CARROL THE FOLLOWING INFORMATION ABOUT THE 6 SELECTED VILLAGES IN DAKAHLIA.

TANAH IS A VILLAGE COUNSEL COMPRISING 9 VILLAGES WITH A TOTAL POULATION OF 41,782

DARGAIN IS A VILLAGE COUNSEL COMPRISING 11 VILLAGES WITH A TOTAL POPULATION OF 35,940

MOGATA IS A VILLAGE COUNSEL COMPRISING 7 VILLAGES WITH A TOTAL POPULATION OF 39,952

YOUSSEFEYA IS 1 VILLAGE WITH A POPULATION OF 6,425

TAMAY EL ANDID IS 1 VILLAGE WITH A POPULATION OF 7,646

MIT GHARITA IS 1 VILLAGE WITH A POPULATION OF 4,259

TANA VILLAGE ONLY EXCLUDING ITS SATELLITE VILLAGE HAS A POPULATION OF 4,643

MOGATA VILLAGE ONLY EXCLUDING ITS SATELLITE VILLAGE HAS A POPULATION OF 8,995

THESE STATISTICS ARE THE RIGHT FROM CAPMAS 1976 SENSUS. TANAH AND YOUSSEFEYA AND TAMAY EL ANDID AND MIT KARITA ARE INCLUDED IN THE POPULATION AND DEVELOPMENT PROJECTS THE REST ARE NOT REGARDS

(UNDEVPRP)

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eyw/78/006

Mr. Paul Hebert, TAG

March 17, 1981

Richard N. Middleton, Project Manager

Terms of Reference: PHILIPPINES  
PHI/80/015

I confirm that prior to your departure to take up the position of resident adviser under this project, you should arrange to spend one week at the University of North Carolina, Chapel Hill, to collect the latest version of relevant computer programs, users' manuals, etc., and to test run and familiarize yourself with these programs. You should arrange the timing of this visit with Professor Lauria, to ensure that he has the materials ready for you.

cc: Donald Lauria, TAG

RMiddleton/ba

✓ 2/20/78/006  
cc. 2/20/80/004  
cc 2/20/79/010

F-338

Files

March 17, 1981

Melvin J. Loewen, TWT

UNDP Comments on Future Funding of  
Decade Projects.

In a telephone conversation on 10 March with Jim Berna, of the global projects office UNDP New York, I gathered the following "sentiments" on our projects--in the light of their present financial condition.

Water and Sanitation (GLO/78/006)

We'll have to get along in CY81 on what was budgeted last year. Any unspent funds from CY80 are ours to use in CY81. But we should not count on the extra \$200,000 anticipated in our January 29 review.

In January 1982 this will become an "interregional" project which does not require UNDP Governing Council approval. Messrs. Mashler and Berna will continue to fund this Decade project but the level of support will depend on their evaluation of the total program which we will undertake during a joint review scheduled for August/September 1981.

Resource Recovery (GLO/80/004)

The document for this new project has been circulated widely among prospective recipient countries and among UNDP donors. There is strong support all around and Mashler/Berna are forwarding a proposal to the Governing Council for our full request of \$1,966,000 over three years. This will remain a "global" project--more experimental as compared to longer-term intercountry projects which are called "inter-regional. In the meantime (the Governing Council does not meet til June) UNDP is authorizing expenditures of up to ~~\$1,000,000~~ to start the project.

\$100,000

Mr. Berna says they will forward to us copies of the comments received to date. He says that although substantial support is strong there are several suggestions which would require revising our methodology and work plan.

(cont'd.)

Handpump Testing (GLO/79/010)

UNDP remains reluctant to commit major funding beyond the current support for lab testing. They say this project should have broad bilateral support in the field testing phase and that UNDP funds should only be used for central coordination of the testing program and for purchase of pumps manufactured in developing countries. Because we need to clarify basic issues on this project we have scheduled a review meeting with Messrs. Mashler and Berna for April 15. I have invited them to come here for the day. But if not suitable to them, I said we (Kalbermatten, Arlosoroff, Loewen) would come to New York.

cc: Messrs. Kalbermatten  
Arlosoroff  
Middleton

MLoewen:bp

920/7A/006

Mr. Duncan Mara, TAG

March 13, 1981

Richard N. Middleton, Project Manager

Terms of Reference: UNDP Global Project GLO/78/006  
ZIMBABWE

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You will arrange to visit Zimbabwe for about one week commencing April 6. The principal purpose of your mission will be to discuss with the staff of the Blair Research Institute, Salisbury, recent developments in low-cost latrine construction, including in particular (a) improvements in ventilation system design to reduce odor and insect nuisance while at the same time lowering costs; (b) the development of simple latrine "kits" for rural areas.

During your mission, you will brief the Resident Representative UNDP, on the work of the Global Project (amplifying the brief description I have already given him during a visit to Washington); if he considers it appropriate, you will also brief Government agencies concerned with the sector. These discussions should lead to a decision on whether there is sufficient local interest for Government to endorse the project, following which a TAG reconnaissance mission could be organized to define sector needs and priorities more precisely, identify appropriate counterpart agencies, etc.

Within two weeks of your return to Leeds, you will submit a full report on your mission. Your findings on the latrine program should also be reflected in the TAG working paper on Ventilated Improved Pit Latrines, now under preparation.

cleared and cc: Messrs. Ware, EAP; Nkojo, EAL; Loewen, TWT

cc: Messrs. Reese, EAL; Mr. Buky (Acting Senior Adviser TWT)  
Berna, UNDP/NY; Mr. Stevens, Mr. Boschi, WHO  
RR UNDP

RMiddleton:ba

WORLD BANK OUTGOING MESSAGE FORM (Telegram, Cable, Telex)

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COMMUNICATIONS

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UNDP GL0/78/006  
CLEARANCES AND COPY DISTRIBUTION:  
cc: Messrs. Ware, LaBahn, EAP;  
Polak, EA1; O'Connor, URB;  
Schebeck, PHN

DRAFTED BY:  
RNMiddleton:ph  
AUTHORIZED BY (Name and Signature):  
*Richard N. Middleton*  
Richard N. Middleton, Project Manager  
DEPARTMENT:  
UNDP GLOBAL PROJECT GL0/78/006  
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**WORLD BANK OUTGOING MESSAGE FORM (Telegram, Cable, Telex)**

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TO INTBAFRAD

CITY/COUNTRY NEW DELHI, INDIA

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97,200 YOUR ACCOUNT WITH UNION BANK, NEW DELHI, RE MARCH  
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SUBJECT:

DRAFTED BY:

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CLEARANCES AND COPY DISTRIBUTION:

AUTHORIZED BY (Name and Signature):

*Bruno Vollmer*

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Distribution fca  
Mr. Middleton

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COMMUNICATIONS

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WASHINGTON

MISC 500 RICHARD MIDDLETON. RE OUR MISC 489 READS MISSION TO BOTSWANA. VIEW UNDERSEC LOCAL GOVERNMENT <sup>now</sup> UNEXPECTED OFFICIAL TRIP ABROAD HE REGRETFULLY SUGGESTS DELAY MISSION BY ONE WEEK VI 7 13-16 APRIL. PLEASE CABLE CONFIRMATION (ZAIDI UNDEVPRO GABORONE)

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cc Allison Ware, Labahn EAP  
Polak, EMI; Connor, URB  
Schelbeck, MWD

**WORLD BANK OUTGOING MESSAGE FORM (Telegram, Cable, Telex)**

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*NRIC F338*  
*9/10/78/006*

FOR GEORGE BEIER FOR AK ROY OF UNDP GLO/78/006. REURTEL MARCH ELEVEN ON ASSAM. YOUR MEMO NOT YET RECEIVED BUT VERY GLAD TO HEAR THIS STATE NOT ANYWHERE NEAR AS DORMANT AS EYE SUPPOSED. CONGRATULATIONS ON COLLABORATIVE EFFORT WITH UNICEF. FULLY AGREE EMPLOYMENT IS LIABLE FOR TAX ON UNDP SALARY DERIVED FROM NON-RUPEE FUNDS. PLEASE CHECK THIS. THESE TERMS AND CONDITIONS THAT IS SALARY PLUS TWENTY PERCENT DEPUTATION COULD ALSO BE GOOD STANDARD FOR PHASE TWO CONTRACTS. LETS DISCUSS. FINALLY EYE ASSUME THAT HIS SALARY AND EXPENSES COVERED BY EXISTING PROJECT BUDGET INCLUDING CONTINGENCIES. REGARDS,  
RICHARD MIDDLETON.

**NOT TO BE TRANSMITTED**

SUBJECT: <b>UNDP GLO/78/006</b>	DRAFTED BY: <b>RNMiddleton:ph</b>
CLEARANCES AND COPY DISTRIBUTION:	AUTHORIZED BY (Name and Signature): <b>Richard N. Middleton, Project Manager</b>
	DEPARTMENT: <b>UNDP GLOBAL PROJECT GLO/78/006</b>
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CHECKED FOR DISPATCH <i>[Signature]</i>	

DISPATCHED

1981 MAR 11 PM 11:13

COMMUNICATIONS SECTION

RICHARD MIDDLETON\*

PROTECT INTERESTS INCLUDING CONTINGENCIES\* BECAUSE  
EYE ASSUME THAT HIS SALARY AND EXPENSES COVERED BY EXISTING  
GOOD STANDARD FOR PHASE TWO CONTRACTS\* THIS DISCUSS\* FINALLY  
THAT IS SALARY PLUS TENTH PERCENT DEVIATION COULD ALSO BE  
NON-UNION FUNDS\* PLEASE CHECK THIS\* THESE TERMS AND CONDITIONS  
WEEK EMPLOYMENT IS FIVE FOR TAX ON OTHER SALARY DERIVED FROM  
CONTRIBUTIONS ON COLLECTIVE EFFORT WITH UNIONS\* BUTTA  
NEAR THIS STATE NOT ANYWHERE NEAR AS DOMINANT AS EYE SUPPOSED\*  
EVEN ON ASSUM\* YOUR MEMO NOT YET RECEIVED BUT VERY GOOD TO  
FOR GEORGE BATES FOR AK NOY OF OTHER STAFF\* REPLYING MARCH

928

MEM DEPT\* INDIV

INDIV

TELEX

11 MARCH 1981

Handwritten initials

gw/78/006

Mr. David Cook, URB

March 13, 1981

John M. Kalbermatten, TWT

Latrine Costs

---

1. The high cost of latrines in Lesotho and Botswana, which you mentioned in our discussion last week, continues to puzzle me. The most recent information we have is from the UNDP GLO/78/006 missions last year, which included cost estimates and were discussed with Mr. Hardy Singh at that time. These gave the following data:

Botswana REC II Substructure: materials	- \$160
Total construction cost (contractor built): - \$495	
Lesotho Double-Pit VIP Substructure: materials	- \$170
Total cost: - \$240	
Single-Pit VIP Substructure: materials	- \$105
Total cost: - \$154	

(details of the estimates and the assumptions made are in TAG/BOT/06 Annex IV and TAG/LES/08 Annex IV; both reports were issued in October 1980, but use early 1980 data).

2. These figures, unless the recent construction boom in South Africa has led to extremely rapid cost increases, suggest that the high costs which you mentioned to me (of the order of \$700 per unit) may be due either to the inclusion of relatively elaborate superstructures or to construction by contractor rather than by self-help, or both. Either option would, of course, make the unit much more expensive and would be inappropriate for low-income families.

3. Geoffrey Read will be returning to Lesotho and Botswana on behalf of the UNDP project, with a mission beginning March 20. Based on his discussions with Mr. Singh, Richard Middleton had already included in the mission's terms of reference instruction to investigate the situation and make recommendations on cost reductions. We will be able to discuss this in more detail once the mission returns (we expect Geoffrey Read to come to Washington for debriefing about mid-May).

4. You mentioned in our discussions that you were thinking of using borehole latrines as a temporary expedient if more permanent installations prove to be too expensive. I hope that this could be discussed further in May, but let me mention a few preliminary thoughts:

- (a) If a large part of present latrine costs is due to contractor costs or elaborate superstructures, there may not be major savings in changing to boreholes.
- (b) If local preference is for a solid superstructure, people will be displeased when it has to be dismantled once the borehole is full and has to be relocated (as we have seen with the non-emptiable Botswana pit latrines). Conversely, if a temporary superstructure is acceptable it would probably be better to put it over a permanent substructure (e.g., a REC II), for later upgrading. Once your plots are fully developed, I think it may be difficult to obtain access in, say five years' time, for an auger to drill another hole.
- (c) To give sufficient life while remaining stable, boreholes have to be small diameter and deep (probably 10m or more). This may lead to troubles when they reach rock (and have to be stopped at shallower depths) or groundwater (which may then be contaminated directly with pathogens and compounds such as nitrates, which are a major problem in Botswana).
- (d) If borehole latrines are used they should be ventilated in the same way as a VIP. This will be rather difficult because the vent pipe should be as nearly vertical as possible to ensure that insects are attracted to the light and to ensure ventilation efficiency. Fly- and mosquito-breeding is likely to be far more of a problem than poor ventilation. A horizontal pipe run away from the pit would therefore not be satisfactory, and a means will have to be found of accommodating both the squat plate opening and the vent pipe within a small space. Increasing the diameter of the upper section of the borehole might be satisfactory, but this would involve separate excavation and probably lining. Again, we will be in a better position to discuss this issue in May when Duncan Mara will be visiting Washington and will be able to discuss our latest thoughts on ventilation and insect-trapping (he will just have returned from meetings in Zimbabwe, where the VIP was developed).

cc: Mr. D. Mara, TAG  
Mr. G. Read, TAG

RNMiddleton:ph



ejw/18/006

1981 MAR 11 AM 8 42  
COMMUNICATIONS DIVISION

INTBAFRAD DAR ES SALAAM MARCH 11 1981

243. MIDDLETON FOLLOWING RECEIVED FROM NJAU, ARDHI  
QUOTE LOW COST SANITATION EXPERT. RYT MARCH 04 AND COPY OF CV OF  
MR ROBERT BOYDEL SENT THROUGH MR CALLEJAS. THANK YOU FOR ALL.

EYE HAVE THE FOLLOWING COMMENTS:-

AAA - HAS A GOOD ACADEMIC BACKGROUND AND PROFESSIONAL EXPERIENCE.

BBB - HAS AN ADVANTAGE OF HAVING WORKED IN A DEVELOPING COUNTRY

CCC - HIS WORK INVOLVEMENT IN BOTSWANA AND SWAZILAND ON MANAGEMENT  
OF LABOR INTENSIVE PROJECTS IS ANOTHER ADDED ADVANTAGE AND SHOULD  
MAKE HIS WORKING CONDITIONS EASIER IN TANZANIA.

DDD - WE FIND HIS SUITABLE CANDIDATE IN ALL RESPECTS. LOOKING  
FORWARD TO HEARING FROM YOU AFTER YOU HAVE INTERVIEWED HIM. ENDQUOTE

REGARDS, NOOTER

Handwritten notes and a large circular stamp on the right side of the page.

29/03/78/006

mc

1981 MAR 11 AM 9:00

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Distribution:  
Mr. Middleton ✓  
Mrs. Hamilton

NEWDELHI, MARCH 11, 1981  
WORLDBANK  
WASHINGTON DC

FOR MIDDLETON - TWT

PLEASE REFMYMEMO DATED MARCH FIFTH REPLYING YOUR OBSERVATIONS ON DECEMBER PROGRESS REPORT ON ASSAM. HOUSE TO HOUSE SURVEY AND OTHER INFORMATION OF MUNICIPAL ADMINISTRATION OF 8 TOWNS RECEIVED IN FEBRUARY AND REMAINING 7 EXPECTED SOON IF PURSUED PROPERLY. REQUESTED DIRECTOR MUNICIPAL ADMINISTRATION GOA TO MEET ME AT CALCUTTA FEBRUARY 27 TO DISCUSS DEMONSTRATION PROJECT WITH UNICEF OFFICIALS FOR WHICH A GRANT OF RS TWO HUNDRED AND SIXTY FOUR THOUSAND IS BEING PROVIDED BY UNICEF WITH A CONTRIBUTION OF RUPEES THREE HUNDRED THOUSAND FROM GOA AND THE BALANCE TO BE BORNE BY BENEFICIARIES FROM THEIR OWN RESOURCES. UNICEF AND GOVERNMENT CONTRIBUTION TO BE GIVEN TO HOUSEHOLDS ON LOAN. GOVERNMENT HAS NAMED THE DEMONSTRATION PROJECT 'UNICEF UNDP

(GLOBAL PROJECT) ON 'LOW COST SANITATION' PROVIDING 1200 UNITS  
IN 15 TOWNS. OURS INVOLVEMENT IN THIS PROJECT IS THEREFORE <sup>9/21/78/1006</sup>  
VITAL. WITH HIS UNTIRING WORK SINGH HAS COMPLETED THE DRAFT  
REPORT ON GUJARAT IN FEBRUARY AND THEREFORE ASSAM WORK HAS  
BEEN TRANSFERRED TO HIM AS GUPTA, HAS ALREADY A HEAVY LOAD  
AND TWO DIFFICULT STATES TO DEAL WITH. IT IS HOWEVER VERY  
NECESSARY THAT WE SHOULD HAVE A PROJECT MANAGER IN ASSAM WHO  
COULD ASSIST IN PROVIDING THE INFORMATION FOR THE OTHER 7  
TOWNS FOR COMPLETING FEASIBILITY REPORT AND GUIDE IN THE  
DEMONSTRATION PROJECT AS UNICEF AND GOVERNMENT NEED OUR  
ASSISTANCE. FROM INFORMAL DISCUSSION WITH COUSINS APPEARED  
UNICEF NOT DESIROUS PROVIDING SEPARATE STAFF FOR DEMONSTRATION  
PROJECTS. I SUGGEST WE EMPLOY DR B K DAS EXECUTIVE ENGINEER,  
DRAINAGE AND SEWERAGE DIVISION, TOWN PLANNING DEPARTMENT, GOA  
FOR 3 MONTHS AS PROJECT MANAGER. IT IS THROUGH HIS PERSONAL  
EFFORTS AND INTEREST IN THE PROJECT FROM ITS VERY INCEPTION  
THAT WE COULD MAKE SOME HEADWAY IN ASSAM. TERMS WOULD BE HIS  
BASIC PAY WITH GOVERNMENT PLUS 20 PERCENT DEPUTATION ALLOWANCE  
AS GIVEN BY THE GOVERNMENT AND WE SHALL PAY HIM HIS TRAVEL  
AND PER DIEM AT UN RATES, WHICH WILL BE AN INCENTIVE TO TAKE  
UP APPOINTMENT WITH US. HE WILL PAY TAXES ON HIS SALARY AND  
WE DO NOT PAY ANY INSURANCE OR OTHER CHARGES. GOVERNMENT  
SOUNDED INFORMALLY THROUGH DEKA WHO SUGGESTED A WHOLE TIME

MAN FOR OUR WORK. GOVERNMENT AGREEABLE. PLEASE LET ME KNOW  
WHETHER YOU AGREE TO THIS PROPOSAL. THIS MIGHT ENABLE US TO  
COMPLETE ASSAM PROJECT BY MIDDLE MAY GIVING US TIME TO FINALISE  
THE PROJECT END JUNE ALONGWITH OTHERS AND ALSO PROVIDE CLOSE  
SUPERVISION AND GUIDANCE FOR DEMONSTRATION PROJECT, AS THE SOIL  
CONDITIONS IN ASSAM ARE DIFFICULT DUE TO HIGH SUB SOIL WATER  
AND PREPONDERENCE OF DUG WELLS IN THE TOWNS. DESPATCHING BIO  
DATA EARLIEST BUT DUE TO EXTREME SHORTAGE OF TIME KINDLY CABLE  
YOUR DECISION TO ENABLE ME TO WRITE TO GOVERNMENT.

REGARDS

AK ROY

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Distribution; fca

1981 MAR 11 AM 10:14

Mr. Middleton

Mrs. Boskey

GLO/78/006

248423 WORLDBANK

COMMUNICATIONS

LTF

INTBAFRAD

WASHINGTON (USA)

10.03.81

MISC 441 MIDDLETON INFO BOSKEY REF GLO/78/006 PRIMO HAVE SIGNED ON BEHALF WORLD BANK SPECIAL SERVICE AGREEMENT WITH AUGUSTO SERGIO PINTO GUIMARAES TO COVER PERIOD 15/2-14/8 WITH TERMS OF REFERENCE AS PER DRAFT 24/7/80 AND FEE OF EQUIVALENT TO US\$3.200 PER MONTH . KINDLY SEND PAYMENT INSTRUCTIONS.

SECONDO KINDLY CABLE ADVISE YOUR AGREEMENT AS TO OFFICE ARRANGEMENTS IN RIO SINCE BOTH GUIMARES AND OURSELVES STRONGLY ADVISE AGAINST ALTERNATIVE ARRANGEMENT OF HAVING CONSULTANT WORKING IN FEEMA PREMISES TERTIO CONSULTANT INDICATES WORLD BANK WISHES TO IMPORT FROM COLOMBIA 12 UNITS RURAL BOWL CLF 2100. SHOULD APPRECIATE YOUR EITHER PROCESSING PURCHASE ORDER AND SENDING US AIRWAYBILL AND SHIPPING DOCUMENTS FOR CUSTOMS CLEARANCE OR OTHERWISE AUTHORIZING THIS OFFICE TO TAKE NECESSARY STEPS TO IMPORT DESIRED MATERIAL

KOENZ RES REP UNDP BSB

CTR?

OK at \$600 per month. What "extra"? Urgent - (Mend) to w/f. 3/16

Then to deal with through 10V.

Referred to Coenen

for action 3/16

further cable received 4/6 passed to Coenen -

248423 WORLDBANK

61151OPNUD BRGGGG

Mr. Richard Feachem, TAG

March 11, 1981

Richard N. Middleton, Project Manager

UNDP Global Project GLO/78/006 - TANZANIA

---

Thank you for the copy of your letter to Professor Mostertman about your proposed teaching at Delft in June. If you are going to discuss training in public health engineering with Professor Mostertman, please ensure that before you go you are fully briefed on the current status of WASH assistance in this field; you will recall that I recommended this during my November 1980 mission, and Dennis Warner, one of the two associate directors of WASH, is in Tanzania now following up, I understand, both this and the health monitoring for Dar es Salaam.

You should be cautious in offering (as your letter implies) long-term Global Project inputs into Tanzania which would be coordinated with Professor Mostertman's work. We should aim to reduce or phase out direct Global Project input into all the countries where we have been working to date, transferring the responsibility progressively to technical assistance projects funded from the country's own UNDP IPF resources. I envisage that TAG input would essentially be limited to assistance in framing the project document or identification of suitable donors (although TAG might of course be involved subsequently as executing agency).

RNMiddleton:ph

Mr. Geoffrey Read, TAG

March 11, 1981

Richard N. Middleton, Project Manager

Terms of Reference - UNDP Global Project GLO/78/006

- Bilateral Agencies' Meeting, May 1981

---

You will arrange to be in Copenhagen on May 6, 1981 to attend the afternoon session of the meeting of Scandinavian aid agencies, arranged by Mr. Loewen (TWT). You will brief them on the work of the Global Project, with particular reference to Africa, with a view to developing collaborative programs through which TAG and these agencies would work together on country projects or on applied investigations of particular relevance to TAG's current work. The outcome of your meeting should be recommendations on:

- (a) specific countries or projects on which TAG/agency collaboration appears desirable;
- (b) investigations to be undertaken; and, possibly,
- (c) arrangements for a one- or two-day follow-up meeting at which TAG could have more substantive technical and programming discussions.

To the extent possible, your recommendations under (a) and (b) should specify the details of the work to be undertaken, the proposed collaboration arrangements, and the level and timing of TAG input.

Within two weeks of your return to London, you should submit a full report on your mission, together with draft follow-up letters, project proposals, etc., as appropriate.

cc: Mr. M. Loewen

RNMiddleton:ph

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IMPORTANT (PLEASE READ INSTRUCTIONS BELOW BEFORE TYPING FORM.)

Class of Service: FULL RATE ~~CABLE~~ Date: 11 MARCH 1981

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*glo/75/006*

BOOK\_OF\_TWO

KUMASITECH, KUMASI, GHANA

INTBAFRAD, ACCRA, GHANA *#87*

END OF TEXT

**NOT TO BE TRANSMITTED**

SUBJECT:

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AUTHORIZED BY (Name and Signature):

DEPARTMENT:

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*Jay*



1981 MAR 11 PM 5:28  
COMMUNICATIONS DIVISION

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1981 MARCH 11

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4 FOR PROFESSOR ALBERT WRIGHT ONE COPY DIRECT ONE COPY RELAYED  
5 THROUGH MS. KOFI INTBAFRAD PLEASE. RE ASCE MEETING NEW YORK  
6 MAY THIRTEENTH. CONFIRM JOHN KALBERMATTEN'S DISCUSSION THAT  
7 GLOBAL PROJECT WILL PAY YOUR TRAVEL TO NEW YORK TO PRESENT  
8 PAPER. AFTERWARDS YOU SHOULD PLAN SPEND AT LEAST TWO DAYS IN  
9 WASHINGTON TO BRIEF BANK STAFF ON TANZANIA RURAL SANITATION AND  
10 TO LIAISE WITH GEOFF READ ON LESOTHO RURAL SANITATION. PLEASE  
11 ADVISE SOONEST YOUR PREFERRED ITNERARY AND FLIGHTS SO WE MAY PUT  
12 TRAVEL ARRANGEMENTS AND HOTEL BOOKINGS IN HAND. REGARDS,  
13 RICHARD MIDDLETON, INTBAFRAD.

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SUBJECT: <b>UNDP GL0/78/006</b>	DRAFTED BY: <b>RNMiddleton:ph</b>
CLEARANCES AND COPY DISTRIBUTION:	AUTHORIZED BY (Name and Signature): <b>Richard N. Middleton, Project Manager</b>
	DEPARTMENT: <b>UNDP Global Project GL0/78/006</b>
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COMMUNICATIONS DIVISION



PROJECT MANAGER

RICHARD MIDDLETON... AND HOTEL BOOKINGS... WASHINGTON TO BRITISH BANK... PROFESSOR... DIRECT ONE COPY... RETURNED

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Date: **3/10/81**

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Telex No.: **722 23312**

*VIA P-B*

Originators Ext.: **75304**

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**LWUA**

**MANILA, PHILIPPINES**

FOR GENERAL MANAGER LEANO RE PHI/80/015. AFTER DISCUSSIONS WITH SARAVANAPAVAN OPTIMUM TIMING FUTURE PROJECT INPUT IN LIGHT HIS MISSIONS FINDINGS, WE PROPOSE PAUL HEBERT ARRIVE PHILIPPINES JUNE 1 AS RESIDENT ADVISER UNDER THIS PROJECT WITH OBJECTIVE OF HOLDING INTERAGENCY WORKSHOP WEEKS OF EITHER JUNE 15 OR 22. ESSENTIAL PRECONDITIONS FOR WORKSHOP WOULD BE ALPHA YOU HAVE GOOD ACCESS TO COMPUTER FACILITIES WHICH WE NOW UNDERSTAND IS PLANNED FOR JUNE 1, LATEST. PLEASE ADVISE DETAILS THAT IS AS PART TWO OF ANNEX 1 TO MY LETTER OF FEBRUARY 3. BETA WORKSHOP PARTICIPANTS FROM ALL PARTICIPATING AGENCIES NOMINATED WHICH WE SUGGEST SHOULD BE BY END APRIL TO ALLOW ADEQUATE TIME FOR THEM TO PREPARE CASE STUDIES OR OTHER WORKSHOP MATERIALS. GAMMA YOU SHOULD NOMINATE A STAFF MEMBER TO BE RESPONSIBLE FOR ALL INTERNAL AND INTERAGENCY COORDINATION. WE SUGGEST TONY DE VERA WHO IS ALREADY COORDINATING WORLD BANK RELATED PROJECT WORK. THIS SHOULD TAKE EFFECT AS SOON AS POSSIBLE THAT IS BY APRIL 1 LATEST. PLEASE LET ME HAVE YOUR COMMENTS OR AGREEMENT ON ABOVE ITEMS SO WE CAN FINALIZE ARRANGEMENTS FOR HEBERT. GRATEFUL FOR RESPONSE BY MARCH 20 SINCE I AM LEAVING ON MISSION. REGARDS RICHARD N. MIDDLETON, INTBAFRAD.

NOT TO BE TRANSMITTED

SUBJECT: UNDP GLOBAL PROJECT  
PHI/80/015 GLO/78/006  
CLEARANCES AND COPY DISTRIBUTION:  
cleared and cc: Mr. Saravanapavan, AEP  
cc: Messrs. Bendokat, AEAE; Husain, PHN  
Sud, AEP; O'Brien, AEA; Evans, PHN  
Lauria and Hebert, TAG

DRAFTED BY:  
**R. Middleton:ba**  
AUTHORIZED BY (Name and Signature):  
*R. Middleton*  
**R. Middleton, Project Manager**  
DEPARTMENT:  
**UNDP GLOBAL PROJECT GLO/78/006**  
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UNDEVPRO

MASERU, LESOTHO

FOR CHALLONS INFORMATION PIERS CROSS OF UNCDF RURAL SANITATION  
MISSION. RE CROSS TELEX TO READ ON WORKSHOP EXPENSES. MIDDLETON  
AGREES TO MEET COSTS FROM GLOBAL PROJECT GLO/78/006 UP TO TOTAL  
ONE THOUSAND DOLLARS BUT ONLY TO EXTENT GOVERNMENT OR UNCDF CANNOT  
COVER THESE. PLEASE ADVANCE FUNDS TO CROSS AND RECOVER THROUGH  
INTEROFFICE VOUCHER. REGARDS, MELVIN LOEWEN. INTBAFRAD.

*NRIC  
GLO/78/006*

END  
OF  
TEXT

NOT TO BE TRANSMITTED

SUBJECT: **LESOTHO: Rural Sanitation**  
**Project UNCDF LES/80/C02 /UNDP GLOBAL**  
CLEARANCES AND COPY DISTRIBUTION:  
cleared and cc: Mr. Loewen PROJECT GLO/  
cc: Ms. Retiro, CTR 78/006

DRAFTED BY:  
Richard Middleton, BA  
AUTHORIZED BY (Name and Signature):  
*Richard N. Middleton*  
Richard N. Middleton, Project Manager

DEPARTMENT:  
UNDP GLOBAL PROJECT GLO/78/006

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efw/78/006

Mr. Albert Wright, TAG

March 10, 1981

Richard N. Middleton, Project Manager

Terms of Reference - UNDP Global Project GLO/78/006

- American Society of Civil Engineers Meetings, New York

---

You should arrange to attend the ASCE meetings in New York on May 13, at which you will present a paper describing the successive failures to provide conventional sewerage for Accra and the eventual adoption of a range of low-cost sanitation systems.

From New York you will visit Washington for about three days during which time you will brief programs and projects staff on the Wangingombe rural sanitation project being developed in Tanzania for UNICEF support, and discuss the potential for its extension to other areas of the country where the World Bank is funding rural development projects.

It is anticipated that your visit will overlap that of Geoffrey Read, who is preparing a rural sanitation project in Lesotho for UNICEF/UNCDF funding. You will liaise with him to ensure, to the extent appropriate to the circumstances, consistency of technical and other approaches between the two projects.

If it cannot be completed while in Washington, within two weeks of your return to Ghana you will submit a full report (in the form of a memorandum to me) on your mission.

cc: J. M. Kalbermatten  
G. Read

RNMiddleton:ph

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10 MARCH 1981



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FOR SCHWARTZ DACCA FOR HUSSAIN OF GLO/78/006 INFORMATION COPY  
BEIER DELHI FOR ROY OF GLO/78/006. WE PROPOSING PROJECT REVIEW  
MISSION COMPRISING ROY, PERRETT AND SELF ARRIVING DACCA APRIL 15,  
1300 HRS, TG312 STAYING INTERCONTINENTAL LEAVING FOR DELHI  
APRIL 21, 1915 HRS, BG494. MISSION OBJECTIVES ALPHA REVIEW  
PROGRESS ON TEN TOWN FEASIBILITY STUDY BETA OBTAIN GOVERNMENT  
VIEWS ON FUTURE TAG SUPPORT TO TEN TOWN IMPLEMENTATION OR TO  
DEVELOPMENT OTHER PROJECTS AND ON APPROPRIATE SOURCES OF FUNDS  
FOR SUCH SUPPORT. PLEASE ADVISE GOVERNMENT, UNDP AND UNICEF OF  
PROPOSED MISSION AND SET UP APPROPRIATE MEETINGS. REGARDS,  
RICHARD MIDDLETON.

END  
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**NOT TO BE TRANSMITTED**

SUBJECT: UNDP GLO/78/006	DRAFTED BY: RNMiddleton:ph
CLEARANCES AND COPY DISTRIBUTION: cc: Mr. Pettigrew, ASP; Ms. Pratt, ASA; Mr. Schebeck, PHN	AUTHORIZED BY (Name and Signature): Richard N. Middleton, Project Manager
	DEPARTMENT: UNDP GLOBAL PROJECT GLO/78/006
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1981 MAR 11 AM 7:19

CABLE SECTION

TO: MR. [illegible]  
FROM: MR. [illegible]  
SUBJECT: [illegible]

RICHARD WIDDGTON

PROPOSED MISSION AND SET OF APPROPRIATE MEETINGS. REGARDING  
FOR SUCH SUPPORT. PLEASE ADVISE GOVERNMENT AND OTHER AND OFFICE OF  
DEVELOPMENT ON THE OBJECTS AND ON APPROPRIATE SOURCES OF FUNDS  
ITEMS ON WHICH THE SUPPORT TO THE LONG-TERM IMPLEMENTATION OF THE  
PROGRAMS ON THE LONG-TERM FEASIBILITY STUDY BEING CONDUCTED  
APRIL 21 1981 HAS BEEN. MISSION OBJECTIVES UNDER REVIEW  
1200 HAS 1981 STAFFING INTENTIONAL MEETING FOR THE  
MISSION COMPARING THE BENEFIT AND SET OF MEETING DATES APRIL 12  
BEING REVIEW FOR THE OFFICE. RE PROPOSING OBJECTS REVIEW  
FOR SCHMIDT DATES FOR REVIEW OF OFFICE INFORMATION COPY

250/78/006

Mr. Geoffrey Read, TAG

March 9, 1981

Richard N. Middleton, Project Manager

Supplementary Terms of Reference: LESOTHO  
Rural Sanitation Project  
UNCDF LES/80/CO2

---

1. You will arrange to visit Lesotho from about March 20 to April 3 to lead a United Nations Capital Development Fund (UNCDF) mission to prepare the above project. It is anticipated that the project will comprise the capital elements of a reactivated primary schools' sanitation project together with demonstration and piloting of individual household or communal latrines. Substantial complementary inputs are expected to be provided through a UNICEF "noted" project, which will support the development of local institutional capability to plan, design, implement and generate rural sanitation programs. The other members of the mission, Ms. Sarah Becker and Mr. Piers Cross will already be in Lesotho on your arrival.
2. The general terms of reference for the mission are as agreed in your discussions with UNCDF in New York and are attached to UNCDF's letter to you dated February 2, 1981. The purpose of these supplemental terms of reference is to amplify your particular responsibilities and the activities which you will carry out as mission leader.
3. As mission leader of the UNCDF team, you will be responsible for:
  - (a) general coordination and direction of the work of the mission, including the distribution of tasks among its members, and in particular guiding the mission's discussions with Government, international agencies or bilateral donor officials;
  - (b) arranging and leading the District level workshops; and
  - (c) overseeing and coordinating finalization of the mission report which should be substantially completed in draft and discussed with the agencies concerned before the mission leaves Maseru.
4. You will additionally be responsible for the engineering aspects of project work and for reviewing and developing sound recommendations on the general financial and strategy questions raised in the course of developing the project. These questions, many of which are interrelated, are expected to include:

March 9, 1981

- (a) arrangements for coordination of the reactivated primary schools' sanitation program with the rural sanitation activities recommended in TAG report TAG/LES/04, with USAID's rural health and rural water programs and with the World Bank's assistance to education programs in primary schools in rural areas;
- (b) the general implementation plan for the above activities, including priority areas for initial activities, and the extent of new construction versus rehabilitation or completion of existing facilities;
- (c) the general capacity of the Government to absorb the project in financial and managerial terms (and recommendations for dealing with any institutional weaknesses);
- (d) division of work between Government, private voluntary organizations (if indicated) and private individuals or groups of local people;
- (e) the specific inputs and needed coordination between the various donors (with particular attention to IBRD, UNCDF and UNICEF) and any other additional inputs required;
- (f) selection of technology options and technology design for school latrines;
- (g) procurement and delivery of materials;
- (h) arrangements for operation and maintenance, with particular attention to emptying or relocation of latrines; and
- (i) conditions precedent to disbursement and other conditions of UNCDF financing.

5. You will ensure that the mission completes its work within the overall manpower budget allocated by UNCDF, and will be responsible for completing the mission report in draft form and forwarding it by April 10 for review to UNCDF (who will be responsible for obtaining comments from UNICEF) and to me. It is anticipated that you will visit UNCDF headquarters subsequently, to receive their comments prior to finalization of the document; this will be covered under separate terms of reference.

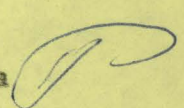
6. You shall keep the Resident Representative, United Nations Development Programme (UNDP) informed on the progress of your mission at all times and brief him prior to your departure.

March 9, 1981

7. To the extent that time permits, you will also review the following while in Maseru:

- (a) the progress made on the sanitation component of the CIDA-assisted White City Project and, in particular, the status of the health education component of that project;
- (b) the activities of the Urban Sanitation Coordinator funded under UNDP LES/80/002, in particular identifying areas in which continuing TAG technical support or assistance will be desirable;
- (c) the status of the proposed studies for the Thirteen Towns Sanitation Project; and
- (d) to examine the current trends in the cost of latrine construction, identifying particular components, materials or design features which appear to be contributing to recent rapid price increases, and making appropriate recommendations to minimize costs while ensuring safe and hygienic facilities.

8. Within two weeks of your return to London, you will submit a full report on the work of the mission. (The activities related to the UNCDF appraisal will be described only to the extent that they are not fully reported in the report already submitted to UNCDF.) This report should also contain your recommendations on future TAG sector support in Lesotho, clearly identifying the various activities which might be considered, the likely TAG inputs required, the anticipated outputs, and the priorities attached to them by Government or by donors. In particular you will estimate the budget implications (in terms of headquarters/TAG London support as well as mission involvement) of the TAG technical assistance to LES/80/002.

HPerrett:ba 

240/78/006

March 9, 1981

Distribution (see below)

Richard N. Middleton, Project Manager

LESOTHO: Rural Sanitation Project  
UNCDF Project LES/80/C02

I sent you general terms of reference for the UNCDF preparation mission for this project under cover of my memorandum dated February 26.

\* I now attach for your information the detailed terms of reference for each of the various mission members.

\* Attachments: Terms of Reference for Mr. Read, Ms. Becker and Mr. Cross  
distribution: Messrs. Ware, EAP; LaBahn, EAP; Bebhart, Polak, EAL;  
Singh, URB; Green, PHN; Reese, EAL; Madavo, URB;  
Evans, PHN, Kalbermatten, Loewen (TWT)

RMiddleton:ba

March 9, 1981

Mr. Erik S. Jensen,  
DANIDA  
Ministry of Foreign Affairs  
DK 1256 København K  
Denmark

SRI LANKA  
Planning for Rural Water Supply and Sanitation Program  
Terms of Reference

Dear Mr. Jensen:

Thank you for forwarding the Terms of Reference for the above program to Mr. Geoffrey Read, which he, in turn, has passed on to me. We have now had an opportunity to review them and Mr. Read's comments with Mr. A. K. Roy, our Regional Manager for Southeast Asia.

In general, we found the Terms of Reference to encourage a welcome multi-disciplinary approach and to be comprehensive in their focus. The comments or suggestions we have are relatively minor, and refer primarily to the sanitation component.

Overall, we found that the following aspects could usefully be strengthened:

- (a) emphasis on thorough evaluation of past programs in sanitation to identify areas for improvement and reasons why past programs did not achieve wider coverage (which might offer other suggestions for improvement in addition to raising of the subsidy);
- (b) review of sanitation practices and related behaviors to be used in definition of selection criteria and design of latrines;
- (c) attention to financial aspects, including cost-recovery, loan arrangements for sanitation (as well as water supply) and assessment of Government capability to meet the capital and recurrent costs of the project;
- (d) Consideration of various technology options (in addition to pour flush latrines), based, in part, on review of existing experience under other programs;
- (e) emphasis on monitoring of performance (in addition to evaluation) particularly in the first phase of construction, to let management know of any problems that might arise and possible solutions.

Some rather more specific comments are:

Page 5, lines 4 and 5. A project unit is mentioned at this stage, but it is not clear later in the Terms of Reference what its precise relationship with the consultant will be. It may also be useful to tie in the program with either a local university or a local consulting engineering firm, while ensuring that Government departmental personnel are intimately involved with the work.

Page 6, bottom paragraph - Sanitation. As discussed above, the existing sanitation program mentioned should be evaluated and any lessons learned used on the new program, since this existing program may have certain problems which are not mentioned in the Terms of Reference.

Page 7, Item 7a. Soils and building materials data would be useful.

Item 7d. This is quite an important issue to be examined.

Item 7e. This presumably includes the study of sanitation practices as well as water uses.

Page 8, Item 7f. Sanitation technologies should also be appraised.

Item 7i. It may be useful to consider different implementation strategies.

Item 7j. Before this item can be tackled, the education, motivation and information requirements of the program should be considered and planned in detailed.

Page 10, Paragraph 3. Among the data on water supply sources required to be collected by the consultants, wells and handpumps should also be considered.

Item 8.3, second paragraph. Existing and planned levels of service in water-supply and sanitation should be considered together.

Page 12, Item 8.5b, last line. This should include sanitation as well as water.

Page 13, Item d. This should include sanitation as well as water usage practices, since this will provide the vital input for the education, motivation and information project components.

Item h. The base-line survey should probably be undertaken very early on in the study. It is not clear why this is scheduled to be undertaken as late as this.



March 9, 1981

Page 16. After item 8.8, it would be very useful to add a monitoring and evaluation component to evaluate the program development.

Item 9a. Probably it would be useful for DANIDA to have a review mission at this stage of the report, since the initial findings and subsequent work plan have a significant impact on subsequent developments.

Page 18 - a few general points. It might be useful to consider the following:

- soils investigation;
- investigatory drilling and test pumping for groundwater source proving;
- since it appears that not much sanitation development work has been undertaken within the project area, it might be useful to consider staging the project implementation, particularly having an initial pilot stage which would test out:
  - a. program delivery models
  - b. sanitation technology options
  - c. water-supply technology options
  - d. contractor/beneficiary training methods.
- a socio-cultural pre-study would be very useful. Certainly much of the socio-cultural assessment needs to be undertaken at the early stages.

We would be interested to know about the scheduling of your next mission and whether we can be of any assistance to you either then or later on in the development of your activities in Sri Lanka.

Sincerely yours,

Richard N. Middleton,  
Project Manager  
UNDP GLOBAL PROJECT  
GLO/78/006

cc: Messrs. Shibusawa, ASA; Lamson-Scribner, ASP; Schebeck, PHN

HPerrett:ba

## OFFICE MEMORANDUM

GLO/80/004  
✓ cc GLO/78/006  
cc GLO/79/010

TO: Files  
FROM: Albert Howlett (IRD)  
SUBJECT: UNDP Global and Interregional Program for  
Water Supply and Sewerage

DATE: March 9, 1981

1. On March 9, 1981, I spoke by telephone with Mr. James Berna, Principal Program Officer, Division for Global and Interregional Projects, UNDP. He informed me that the financial status of UNDP's global and interregional program is extremely tight, and will remain so for the remainder of CY81, the final year of UNDP's second five-year programming cycle. The situation will improve in CY82 when resources from the third five-year cycle become available.

2. Concerning specific projects, he informed as follows:

a) Integrated Resource Recovery (GLO/80/004)

He said that he expects that preparatory assistance in the amount of \$100,000 for the first half of 1981 will be approved by tomorrow afternoon, March 10. I told him that the Bank is hiring personnel for this project, and it is essential that the preparatory assistance be approved without further delay. Mr. Berna promised to call me when it is signed. He said that UNDP is receiving many favorable comments from governments and other UN agencies about the project. However, some questions have been raised about the focus and methodology proposed. He said he would forward these comments as a group, and said that we (UNDP/Bank) will need to review them in some detail, and make modifications as appropriate.

b) Low-Cost Water and Sanitation (GLO/78/006)

Mr. Berna said that no additional funds would be available, for this project in CY81. He had previously indicated that this might be the case (my Note to Files dated February 26, 1981 refers).

c) Hand Pumps (GLO/79/010)

Mr. Berna said that no additional funds are available for this project in CY81 except for funds to extend the project manager for six months until the end of CY81. He said he hoped that activities could proceed with the equipment to be provided by the bilaterals.

3. I expressed some dismay at the news. I said that if UNDP funding is not forthcoming as foreseen, it would hamper the execution of the projects we are executing for UNDP. I said I would

March 9, 1981

inform appropriate staff immediately. He said he also regretted that additional funds are not available. He added that the only hope for additional funding in CY81 would be by borrowing funds from the third UNDP program cycle. He said that such borrowing will be proposed by his Division to the senior management of UNDP, and he will let me know the outcome in due course.

cc: Messrs. Riley (IRD)  
Kalbermatten (TWT) D901  
Middleton (TWT) D906  
Arloforoff (TWT) - (c/o Kalbermatten)  
Loewen (TWT) D918  
Mills (CTR) I4-146

AHowlett/smm

ejw/78/006

Mrs. Donna Ringle, PMD

March 9, 1981

Richard N. Middleton, Project Manager

UNDP Global Project GLO/78/006 - Donald Lauria, Consultant

---

With reference to your memorandum to me dated February 12:

- (a) Mr. Lauria has now terminated his one-year assignment with TWT and his future assignments will be intermittent.
- (b) I am not entirely clear why a Form 74 was issued for Mr. Lauria on March 9, 1980, since this and the equivalent Form 566 were prepared and signed in by absence. However, I understand that it was in order to comply with administrative requirements (possibly misunderstood) when Mr. Lauria undertook missions for the Global Project while on the Bank's payroll (since CTR will not reimburse expenses that are not covered by a 74, which in turn implies a 566). He was not paid by the Global Project during this period, so there is no question of double payment.
- (c) I regret that, due to an oversight, the Form 566 relating to work in calendar 1980 was not issued earlier. The delay was due to indecision over whether this work would be covered by TWT as an extension of his earlier work for them, or from Global Project funds. The amount of time involved is small (6 1/2 days over the period September 1 to December 31, 1980).

I hope that this gives you sufficient information to issue the letter of appointment for Mr. Lauria. If not, please let me know what further data you need.

RNMiddleton:ph

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IMPORTANT (PLEASE READ INSTRUCTIONS BELOW BEFORE TYPING FORM.)

Class of Service: **TELEX**

Date: **6 MARCH 1981**

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Telex No. *987-4668RH*

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SALISBURY, ZIMBABWE

FOR ONITIRI. RE GL0/78/006 LOW COST WATER SUPPLY AND SANITATION.  
WE PROPOSE THAT PROJECTS TECHNICAL ADVISER PROFESSOR DUNCAN MARA  
VISIT ZIMBABWE FOR WEEK BEGINNING APRIL SIXTH FOR DISCUSSIONS  
WITH BLAIR RESEARCH INSTITUTE ON RECENT DEVELOPMENTS IN LOW COST  
SANITARY FACILITIES. HE COULD ALSO BRIEF YOU AND GOVERNMENT  
DEPARTMENTS CONCERNED WITH THE DECADE ON THIS PROJECT AND  
DETERMINE WHETHER THERE IS INTEREST IN POSSIBLE PARTICIPATION.  
GRATEFUL YOUR CONFIRMATION SUCH A VISIT ACCEPTABLE. NEW SUBJECT  
FOLLOWING OUR MEETING JANUARY FOURTEEN WE WONDER WHETHER YOU  
HAVE MANAGED SECURE ASSISTANCE IN DEVELOPING DECADE INVESTMENT  
PLANS OR WHETHER YOU STILL INTERESTED OUR HELP IN FINDING FUNDING  
FOR AND MANAGING SUCH ACTIVITIES. PLEASE ADVISE. REGARDS,  
MELVIN LOEWEN, INTBAFRAD.

END  
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TEXT

NOT TO BE TRANSMITTED

SUBJECT: UNDP GL0/78/006	DRAFTED BY: RNMiddleton:ph
CLEARANCES AND COPY DISTRIBUTION: Cleared with & cc: Mr. M. Loewen cc: Messrs. Ware, Nkojo, EAP; Reese, EA1	AUTHORIZED BY (Name and Signature): <i>[Signature]</i> Richard N. Middleton, Project Manager
	DEPARTMENT: UNDP GLOBAL PROJECT GL0/78/006
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epuo/78/006

1981 MAR -6 AM 9/20

COMMUNICATIONS

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epuo/78/006

NEWDELHI, MARCH 06, 1981

WORLDBANK

WASHINGTON DC

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FOR MIDDLETON - TWT

URTEL 589 REGARDING NEPAL, BANGLADESH AND INDIA VISITS  
EYE WILL BE AVAILABLE APRIL SECOND THROUGH TWENTY THIRD FOR  
JOINING MISSION.

NEW SUBJECT IN DRAFT REPORT GUJARAT FEASIBILITY STUDY POUCHED  
FEBRUARY TWENTYEIGHT TO YOU PLEASE SUBSTITUTE CONVERTED IN  
PLACE OF CONSTRUCTED IN PAGE S-5 LINE 26.

REGARDS

AK ROY

*Mayone*  
*Have convert*  
*on 10/10/81*  
*Raj*

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Telex No.: **(021) 31847**

Date: **6 MARCH 1981**  
Originators Ext.: **75304**

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**FEEMA**

**RIO DE JANEIRO, BRAZIL**

**FOR FERNANDO SEIXAS (FOR AUGUSTO SERGIO). CONFIRM THAT YOU SHOULD PROCEED WITH ARRANGEMENTS TO IMPORT TWELVE COLUMBIAN PATTERN POUR FLUSH LATRINES FOR TECHNICAL EVALUATION AND TRIALS ON VARIOUS PROJECTS. GLOBAL PROJECT WILL REIMBURSE COSTS EITHER DIRECTLY TO YOU OR THROUGH FOR EXAMPLE UNDP INTEROFFICE VOUCHER. REGARDS, RICHARD MIDDLETON, INTBAFRAD.**

**NOT TO BE TRANSMITTED**

<b>SUBJECT:</b> UNDP GLO/78/006	<b>DRAFTED BY:</b> RNMiddleton:ph
<b>CLEARANCES AND COPY DISTRIBUTION:</b> cc: Ms. Retiro, CTR; Mr. Watson, LCP; Mr. Chang, LCP; Mr. Varallyay, LC2	<b>AUTHORIZED BY (Name and Signature):</b> Richard N. Middleton, Project Manager
	<b>DEPARTMENT:</b> UNDP GLOBAL PROJECT GLO/78/006
	<b>SECTION BELOW FOR USE OF CABLE SECTION</b>
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1991 MAR -7 PM 1:32

COMMUNICATIONS DIVISION



REGARDS RICHARD MIDDLETON INTERVIEW  
DIRECTOR TO YOU ON INTERVIEW FOR EXAMINE YOUR INTEROFFICE WORK  
ON VARIOUS PROJECTS. YOUR PROJECT WILL BE IMPROVE COSTS WITH  
BATTER YOUR EQUIP TRAINING FOR TECHNICAL EVALUATION AND TRAFFIC  
SHOULD PROCEED WITH ADVANCEMENTS TO IMPROVE TRAFFIC CAPACITY  
FOR REMAINING STAGES (FOR VARIOUS SERVICES). CONSIDER THAT YOU

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BETA NEW CONTRACT FOR 1981 APPROVED BY ME FEBRUARY 11 AT YOUR  
QUOTED RATE OF DOLLARS NINE HUNDRED THIRTY PER MONTH PLUS SPECIAL  
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MAY OUTSTANDING **BALANCE**. EYE HAVE MEMOED CONTROLLERS TODAY  
ASKING FOR PROMPT PAYMENT. REGARDS, RICHARD MIDDLETON. **INTBAFRAD**

**NOT TO BE TRANSMITTED**

SUBJECT:  
**UNDP GLO/78/006**

CLEARANCES AND COPY DISTRIBUTION:  
**cc: Ms. Retiro, CTR**

DRAFTED BY:  
**RNMiddleton:ph**

AUTHORIZED BY (Name and Signature):  
**Richard N. Middleton, Project Manager**

DEPARTMENT:  
**UNDP GLOBAL PROJECT GLO/78/006**

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WHOSE OUTSTANDING OBLIGATIONS ARE BEING MONITORED CONTINUOUSLY TODAY  
BY PERSONNEL DEPARTMENT. CIVIL SERVICE OFFICIALS ON BEHALF OF  
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March 5, 1981

Mr. David Williams  
OXFAM  
House 70, Road 11A  
Dhanmondi Residential Area  
P. O. Box 568  
Dacca-Bangladesh

Dear David:

We have received your request for the participation of Mr. A. K. Roy in an evaluation of the OXFAM-funded pilot sanitation project in Saidpur implemented with help from the Mennonite Central Committee.

In principle we agree, but we can discuss the details when we next come to Bangladesh. We have a mission consisting of Mr. Roy, Ms. Heli Perrett, and myself tentatively scheduled for April 15 to April 21. I shall contact you then.

Best regards,

Sincerely yours,

Richard N. Middleton,  
Project Manager  
UNDP Global Project  
GLO/78/006

cc: Mr. Roy/copy of incoming

RMiddleton/ba

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**ZIMBABWE**

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4 GRATEFUL YOU PASS FOLLOWING TO GERD JAN DE KRUIJFF, LOW-COST  
5 SANITATION ADVISER ON HABITAT PROJECT. RECENT DISCUSSIONS WITH  
6 **INDONESIAN** OFFICIALS INDICATE GOVERNMENT INTERESTED IN **POSSIBILITY**  
7 OF LOW COST SANITATION ADVISER FUNDED BY UNDP. YOUR NAME PUT  
8 FORWARD BY US AS A POSSIBLE CANDIDATE. **BEFORE** CONSIDERING  
9 LONGER-TERM COMMITMENT GOVERNMENT WOULD WISH YOU TO SPEND ABOUT  
10 ONE MONTH IN INDONESIA FOR THEM TO MEET YOU AND FOR YOU TO REVIEW  
11 EXISTING CONDITIONS AND DEVELOP PROPOSALS FOR FUTURE ACTIONS  
12 INCLUDING THE POTENTIAL ROLE OF LONG TERM ADVISER. IN THE ONE  
13 MONTH YOU WOULD MAKE AN EVALUATION OF PRESENT URBAN SANITATION  
14 SITUATION AND DEVELOP A PRIORITIZED WORKPLAN FOR IMPROVING  
15 PROGRAMS. THIS WOULD INVOLVE AN OVERVIEW OF THE NATIONAL SITUA-  
16 TION AND A MORE DETAILED LOOK AT A SPECIFIC AREA, PROBABLY EAST  
17 JAVA PROVINCE. GRATEFUL YOU TELEX ME YOUR REACTIONS AND IN  
18 PARTICULAR THE DATES SUITABLE TO YOU FOR THE PROPOSED ONE MONTH  
19 VISIT. REGARDS, RICHARD MIDDLETON, PROJECT MANAGER UNDP GLO/78/  
20 006 INTBAFRAD.

21 END  
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**NOT TO BE TRANSMITTED**

SUBJECT:  
**UNDP GLO/78/006**

CLEARANCES AND COPY DISTRIBUTION:  
cc: Mr. Sud, AEP; Mr. R. Stern, AEA;  
Mr. Adams, AEA; Ms. Duer, AEA;  
Mr. Evans/Ms. Husain, PHN;  
Mr. Loewen, TWT; Mr. D. Mara, TAG

DRAFTED BY:  
**RNMiddleton:ph**

AUTHORIZED BY (Name and Signature):  
**Richard N. Middleton, Project Manager**

DEPARTMENT:  
**UNDP GLOBAL PROJECT GLO/78/006**

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FOR ONITIRI WOULD APPRECIATE YOUR REPLY MYTEL OF JANUARY 11 ON  
SANITATION PROJECT OLD NUMBER GLO/78/006 AND NEW NUMBER  
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BEFORE WE CAN PROCEED WITH WORK IN ZIMBABWE. GRATEFUL ANY  
ASSISTANCE YOU CAN OFFER. REGARDS, LOEWEN, WORLD BANK.

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NOT TO BE TRANSMITTED

CLASS OF SERVICE: **TELEX 987-4668** TELEX NO.: DATE: **March 4, 1981**

SUBJECT: **INT/81/047**

DRAFTED BY:  
**Melvin J. Loewen:mc**  
AUTHORIZED BY (Name and Signature):  
*Melvin J. Loewen*  
DEPARTMENT:

CLEARANCES AND COPY DISTRIBUTION:  
**cc: Mr. Middleton, TWT**

**TWT**

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*Mr Singh*

MAR 05 1981

9/10/78/006

March 3, 1981

Mr. Galal Magdi  
Executive Secretary  
United Nations Capital  
Development Fund  
633 Third Avenue  
New York, N. Y. 10017

LESOTHO - LES/80/C02  
Rural Sanitation Project

Dear Mr. Magdi:

Terms of reference for the feasibility study to prepare the above project for your consideration were prepared following discussions in New York in November 1980 between UNCDF, UNICEF and Mr. Read of my staff. These terms of reference envisaged that a three-person mission would visit Lesotho for three weeks, and that the mission would comprise a public health engineer, a health economist and a social anthropologist. At your request, we subsequently agreed to provide the services of Mr. Read as the public health engineer and mission leader.

Since the November meetings, further discussions have clarified:

- (a) the likely scope of the project, which it is now envisaged would comprise the capital elements of reactivation of the primary schools' sanitation program launched under LES/74/C32 together with piloting and demonstration of household or communal latrines;
- (b) the likely availability of funding from UNICEF, either directly or through its "noting" procedure, for complementary technical assistance without which the capital project would probably not succeed; and
- (c) the potential linkages with other projects in the country, in particular USAID's assistance to rural health and rural water supply programs and the World Bank's rural education program.

In light of these discussions, we have been able to define more precisely the contributions which each of the mission members can make and the time that will be necessary for their work.

March 3, 1981

In order to keep overall costs within budget, we have assumed that the total time spent in the field should still be of the order of nine weeks. We are, however, proposing that, in order to carry out sufficient field work at the village level (to be followed by workshops at District level which will help develop a reactivation strategy which enjoys local support), the social anthropologist, Piers Cross, should arrive first, to be joined by the health economist, Sarah Becker, a week later; Geoffrey Read, who knows Lesotho well, would arrive two weeks after the social anthropologist. In our planning, we also allowed for pre-mission briefing and discussions in Washington and for discussion of the draft report with UNCDF subsequent to the mission.

On this basis, we are organizing the mission's activities according to the following general timetable:

- March 3 Social anthropologist (Cross) arrives Maseru;
- March 11 Health Educator (Becker) arrives Maseru, after briefing in Washington and briefing discussions during London stopover enroute;
- March 20 Public Health Engineer (Read) arrives Maseru;
- April 3 Mission leaves Lesotho, having discussed report (in draft) with Government;
- April 10 (Latest) Draft report sent to UNCDF for review;
- May 12 (Approximately) Review of draft report (UNCDF, UNICEF, Read) in New York.

These timings imply the following approximate staffing inputs:

	Briefing and preparation	Travel to and from Lesotho	Field Work	Report writing -----on return-----	Report review
Read	(TAG cost)	3 days	14 days	(TAG cost)	3 days
Becker	2 days	6 days	24 days	2 days	1 day
Cross	-	3 days	31 days	2 days	-

Mr. Magdi

-3-

March 3, 1981

(We will bear, from Global Project funds, Mr. Read's salary costs and the costs of our project staff based in Washington.)

I trust that these arrangements are satisfactory to you.

Yours sincerely,

Richard N. Middleton,  
Project Manager  
UNDP Global Project  
GLO/78/006

cc: Messrs. Ware, LaBahn, EAP, Polak, EAL, Singh, URB, Schebeck, PHN, Reese, EAL,  
Madavo, URB, Evans, PHN, Read, Cross, Shanawany, TAG,  
Kalbermatten, TWT, Loewen, TWT.

RNMiddleton:ba

cc: Mrs. Smedler, UNCDF  
Mr. Ignatieff, UNICEF



2100178/006

March 3, 1981

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Executive Secretary  
United Nations Capital  
Development Fund  
633 Third Avenue  
New York, N. Y. 10017

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Rural Sanitation Project

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Mr. Magdi

-3-

March 3, 1981

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I trust that these arrangements are satisfactory to you.

Yours sincerely,

Richard N. Middleton,  
Project Manager  
UNDP Global Project  
GLO/78/006

cc: Messrs. Ware, LaBahn, EAP, Polak, EAl, Singh, URB, Schebeck, PHN, Reese, EAl,  
Madavo, URB, Evans, PHN, Read, Cross, Shanawany, TAG,  
Kalbermatten, TWT, Loewen, TWT.

RNMiddleton:ba

cc: Mrs. Smedler, UNCDF  
Mr. Ignatieff, UNICEF

cc WAIT ✓  
IAH.

March 2, 1981

M. Mamady Tatidouh Dabo  
Directeur du Projet  
"Adduction d'Eau et Assainissement"  
B. P. 150  
Conakry, Guinea

Dear M. Dabo:

UNDP Global Project GLO/78/006 GUINEA TAG/GB1/01

Low-Cost Water Supply and Sanitation

Republique Populaire Revolutionnaire de Guinea

\* I enclose for your information two copies of Mr. F. Carroll's report on his mission to Guinea last September sponsored by the Global Project, GLO/78/006. A copy of the report has also been forwarded to Dr. Sultan through the Resident Representative of the United Nations Development Programme. The summary and recommendations of the mission can be found in paragraphs 3-11. You will note that it is expected that economies can be achieved in the installation of comfort stations by implementing specified modifications to the COMTEC proposals. You may also wish to explore the potential availability of WHO funds for the promotional and educational elements of the project.

Thank you for the assistance extended by you and your staff to the TAG mission. I look forward to receiving any comments you may have on the report.

Yours sincerely,

Richard N. Middleton,  
Project Manager  
UNDP Global Project  
GLO/78/006

\*enclosure

cleared and cc: Messrs. Motte, WAP; Harvey, WA2

cc: Messrs. Al-Khafaji, WAP, Palein, WA2; Husain, PHN, Evans, PHN;  
Kalbermatten, Loewen (TWT), Ms. Vaughn, IRD.

RMiddleton:ba

WAIC ✓  
2cc IAH.

March 2, 1981

Mr. Djobo,  
Resident Representative  
United Nations Development Programme  
B. P. 222  
Conakry, Guinea

Dear Mr. Djobo:

UNDP GLOBAL PROJECT GLO/78/006

Low-cost Water Supply and Sanitation

GUINEA

I enclose for your information five copies of Mr. F. Carroll's report on his mission to Guinea last September sponsored by the Global Project (GLO/78/006). I should be grateful if you would pass a copy to WHO (Dr. Camara) and to the Preventive Hygiene Services in the Ministry of Public Health (Dr. Sultan). Two copies have also been sent under separate cover to M. M. T. Dabo, Project Director, "Adduction d'Eau et Assainissement" of the Ministry of Energy and Koukoura. As you know, this Project Unit has primary responsibility for implementation of the IDA/ADB-financed first stage of the Conakry sanitation project. Mr. Carroll's discussions with your staff and the sector agencies were most valuable in preparing for the siting and installation of ten communal comfort stations under this project. The mission's summary and recommendations can be found in paragraphs 3-11 of the attached report.

The mission was conducted at the request of the World Bank, and you will recall that the Government has not as yet formally endorsed the Global Project. If further assistance is needed (and it appears to us that it may be, if the comfort station project is to be successfully implemented) then this endorsement should be obtained. Both M. Daba and Dr. Sultan were informed by the mission that any requests for future Global Project assistance should most appropriately be routed through you as Decade Coordinator in Guinea.

Thank you for the assistance given to Mr. Carroll during his visit. I look forward to receiving any comments you may have on the report.

Yours sincerely,

Melvin J. Loewen,  
Special Project Coordinator  
Transportation, Water and  
Telecommunications Department

\*Enclosures

cleared and cc: Messrs. Motte, WAP; Harvey WA2  
cc: Messrs. Al-Khafaji, WAP, Palein, WA2; Husain, PHN, Evan, PHN;  
Kalbermatten, TWT, Ms. Vaughn, IRD

WORLD BANK OUTGOING MESSAGE FORM (Telegram, Cable, Telex)

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*2/20/78/006*

START  
HERE TO  
CITY/COUNTRY  
MESSAGE NO

**WATERBOARD**

**MBABAWE, SWAZILAND**

FOR BOYDELL. ALPHA PROJECT DOCUMENT FOR UNDP FUNDED SANITATION  
ADVISER TANZANIA MAILED TO YOU MY LETTER FEBRUARY 13. BETA EYE  
EXPECT TO BE AWAY FROM WASHINGTON ABOUT MARCH THIRTY-FIRST  
THROUGH APRIL TWENTY-SIXTH. COULD YOU MEET ME IN LONDON  
AFTERNOON MARCH THIRTY (PREFERABLE) OR MORNING MARCH THIRTY-FIRST  
SECOND CHOICE COULD YOU COME THROUGH WASHINGTON FOR INTERVIEWS  
PRIOR TO MARCH TWENTY-SEVENTH AND IF SO WOULD TRAVEL BE COVERED  
UNDER YOUR REPATRIATION FROM SWAZILAND OR WOULD YOU NEED  
SEPARATE TRAVEL ARRANGEMENT. PLEASE ADVISE. IF THESE NOT  
FEASIBLE INTERVIEWS WOULD HAVE TO BE LATE APRIL. GAMMA CANNOT  
GIVE YOU RELIABLE ADVICE ON SHIPMENT PERSONAL EFFECTS BUT IF  
YOU ARE PREPARED TO DO WITHOUT THEM FOR SOME TIME UNTIL  
TANZANIA SITUATION CLARIFIED BEST SOLUTION WOULD SEEM TO BE TO  
PACK THEM BUT LEAVE IN STORAGE IN SWAZILAND UNTIL YOU KNOW  
WHETHER FINAL DESTINATION UNITED KINGDOM OR DAR ES SALAAM.  
REGARDS, RICHARD MIDDLETON. INTBAFRAD.

END  
OF  
TEXT

NOT TO BE TRANSMITTED

SUBJECT: <b>UNDP GLOBAL PROJECT GLO/78/006</b>	DRAFTED BY: <b>RNMiddleton:ph</b>
CLEARANCES AND COPY DISTRIBUTION:	AUTHORIZED BY (Name and Signature): <i>R. Middleton</i> <b>RICHARD N. MIDDLETON</b>
	DEPARTMENT: <b>UNDP GLOBAL PROJECT GLO/78/006</b>
	SECTION BELOW FOR USE OF CABLE SECTION CHECKED FOR DISPATCH <i>[Signature]</i>

40178/006

March 2, 1981

Dr. Radinal Mochtar  
Director General  
Cipta Karya  
Department of Public Works  
Jl. Pattimura No. 20  
Jakarta, Indonesia

Dear Dr. Mochtar:

SANITATION INVESTMENT ADVISER

I was glad to learn, in the meeting with yourself and Mr. Bruestle on February 25, of your interest in strengthening Cipta Karya's activities in sanitation, through the provision of an expatriate sanitation investment adviser. As I mentioned to you, we have heard from Mr. Loewen, who has just returned from Jakarta and who, while there, met Messrs. Soesanto and Hendropranoto of Cipta Karya, Hasigawa (UNDP) and Mr. Zincir (World Bank resident staff) that UNDP funding would probably be available for this technical assistance. I am setting out below some preliminary ideas on how this work might be organized.

*This letter given in  
draft to Mochtar; his  
comments were received,  
and it was decided by  
Bruestle not to give letter  
formally to  
him.*

*A Bruestle*

From our discussions, the work which the adviser would undertake would probably fall into the following categories:

- review and evaluation of all aspects of ongoing sanitation programs;
- agreement on priorities for the introduction of modified or new approaches;
- development, implementation and monitoring of pilot or demonstration programs;
- development of larger sanitation projects suitable for inclusion in your own investment program or for submission to external donors.

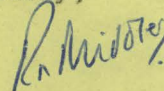
In the course of this work the adviser would be responsible for training your own counterpart staff.

I attach some preliminary estimates for both the UNDP contribution and the counterpart commitments which Cipta Karya would need to make. These will need to be refined in discussion between yourself, UNDP and ourselves but may serve as a useful indication of the level of input we anticipate will be necessary to achieve results in a scale relevant to the size of the problem.

I believe that the next steps to be taken are as follows:

- (a) I will draft a project document for this UNDP assistance. This document will be sent to you via Mr. Zincir of our Bank office in Jakarta for your review and comment. In particular, we will require your assistance in defining the terms of reference for the adviser.
- (b) I will plan to visit Indonesia in connection with a mission to Asia tentatively planned for mid-April, in order to finalize the project document with you and give you any assistance I can in moving it through government clearance channels and UNDP.
- (c) I would appreciate your comments on the acceptability of Mr. Gerd Jan de Kruijff, who we would recommend for the adviser's post. His curriculum vitae is attached. He is currently in Zimbabwe advising on low-cost sanitation, an assignment which he will finish in about August. Allowing for resettlement and briefing and orientation (we would cover a period of briefing in London out of Global Project funds; it would not be charged to the Indonesia budget), he could be Jakarta by about October/November.

Yours sincerely,



Richard N. Middleton  
Project Manager

Enclosures

cc: Messrs. Sud, Bruestle, AEP; R. Stern, Ms. Duer, AEA; Evans, Ms. Husain, PHN;  
Mr. Loewen, TWT

RNMiddleton:ph



DISCUSSION DRAFTINDONESIA - SANITATION INVESTMENT ADVISERUNDP CONTRIBUTION

	<u>US \$</u>
Social Sciences and Health Education Specialist (3 years) (locally recruited) <sup>1/</sup>	50,000
Monitoring and Evaluation Specialist (3 years) (locally recruited)	50,000
Sanitation Investment Adviser (3 years)	240,000
Short-Term Consultants	80,000
Special studies <sup>2/</sup>	35,000
Training, seminars, training materials	25,000
Construction of pilot and demonstration units <sup>3/</sup>	<u>140,000</u>
Total (3 years)	\$620,000

---

<sup>1/</sup> The responsibilities and functions of the two locally-recruited advisers will depend on the specific skills of each. One will be designated as National Project Coordinator. Overall, they will cover background data collection; community organization; education and promotion; and monitoring and evaluation.

<sup>2/</sup> For example: evaluation of past or ongoing programs; review of laws, codes, and practices relevant to the project; specific investigations contracted to local technical institutions; assistance in collection and analysis of basic data; short-term engagements of local engineers to assist in feasibility studies.

<sup>3/</sup> Unit costs will depend on location, technology selected and material chosen. It is anticipated that these funds will provide approximately 1400 household units.

DISCUSSION DRAFT

INDONESIA - SANITATION INVESTMENT ADVISER

COUNTERPART COMMITMENTS

Staff

Counterpart to National Project Coordinator and to Adviser (preferably a Sanitary Engineer)

Administration Assistant

4 Sanitary Inspector

1 Skilled workman (concrete and carpentry)

1 Unskilled workman

Provision of survey teams, etc., as needed for the project from time to time

Transportation

1 truck with driver

1 personnel carrier with driver

Internal air travel as required

Per diem and cost reimbursements for national staff and the Adviser while on duty travel in Indonesia

Offices, etc.

Office space in Jakarta for National Coordinator, Adviser and staff (including sufficient extra space for short-term consultants, local special study teams, etc.)

Secretarial, drafting and general support for the above

Telex, telephone, mail, copying and similar facilities

1 office, shed and yard in areas selected for pilot trials or demonstration installation, utilities and facilities for above with janitorial services and watchman, if needed



# Record Removal Notice



<b>File Title</b> UNDP/GLO/78/006 - Low Cost Water Sanitation Techniques - 1981 / 1983 Correspondence - Volume 2		<b>Barcode No.</b>  30192357		
<b>Document Date</b> N/A	<b>Document Type</b> CV / Resumé			
<b>Correspondents / Participants</b> Gerd Jan De Kruijff				
<b>Subject / Title</b> Personal History				
<b>Exception(s)</b> Personal Information				
<b>Additional Comments</b>		<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><b>Withdrawn by</b> Shiri Alon</td><td><b>Date</b> May 20, 2016</td></tr></table>	<b>Withdrawn by</b> Shiri Alon	<b>Date</b> May 20, 2016
<b>Withdrawn by</b> Shiri Alon	<b>Date</b> May 20, 2016			

2500/78/006

Mr. Edouard Motte, WAP

March 2, 1981

Richard N. Middleton, Project Manager

UNDP Global Project GLO/78/006 - GUINEA  
- Conakry Comfort Stations

*ntalt*  
I attach a copy of a memorandum addressed to me by Frank Carroll, presenting various options which could be considered by the engineering consultant who is now developing detailed plans and specifications (the sketches to which he refers have been incorporated in his mission report, as Annex III). There are also a set of the original engineering designs for these facilities, marked up to indicate where economies might be made.

Attachments

RNMiddleton:Ph

eguo/78/006

Mr. Geoffrey Read, TAG

March 2, 1981

Richard N. Middleton, Project Manager

Terms of Reference: UNDP Global Project GLO/78/006  
BOTSWANA

- 
1. Coming from Lesotho (under separate terms of reference) you will arrange to arrive in Botswana about April 6, 1981, for a stay of about three days.
  2. The principal objective of your mission is to review with the Ministry of Local Government and Lands the technical assistance being provided through UNDP BOT/79/003. In particular, you will follow up on our concerns already expressed to the Ministry, and will:
    - (a) determine the reasons for the non-submission of progress reports and of a workplan for the Public Health Engineer, and obtain assurances that future reports and workplans will be submitted promptly;
    - (b) review the work actually undertaken by the Public Health Engineer since his appointment, and the extent to which he has achieved the objectives set out in his terms of reference;
    - (c) develop a workplan for his future activities, clearly establishing the priority activities that should be undertaken within the funding horizon of BOT/79/003. These activities should be as specific as possible and should have defined outputs and implementation programs. They should generally concentrate on problem areas already known to require attention, on which considerable initial work has already been done, (e.g., Urban II implementation; pit emptying; non-use/abuse problems) and for which resources are already well identified (e.g., World Bank, IRCWD) rather than initiating new activities;
    - (d) identify any additional external inputs that may be required to ensure satisfactory completion of the agreed workplan, and determine what assistance Government desires from TAG or TWT in securing these inputs.

It is important that your findings and recommendations on this part of your mission, after discussion and agreement with both MLGL and RR UNDP, be set out in writing prior to your departure from Botswana.

3. To the extent that time permits, you will also:
  - (a) review the progress and findings of the IDRC-supported sanitation monitoring program, and its implications for sanitation programs both in Botswana and elsewhere;
  - (b) assist Mr. Arlosoroff (Project Manager, UNDP GLO/79/010) in his initial contacts with Government in connection with this new project; and
  - (c) discuss with the Water Utilities Corporation their possible interest in undertaking pilot water conservation programs, and the potential role for TAG in the preparation, funding and implementation of such programs.
4. You will keep the RR UNDP closely informed on the progress of your mission and will debrief with him before your departure.
5. Within two weeks of your return to London, you will submit a full report on your mission. To this report you should attach recommendations on TAG's future role in Botswana, establishing priorities and distinguishing between technical assistance and supervision of BOT/79/003, development of future Decade projects, and general assistance in sector development. The budget implications, timing and anticipated outputs of each of these categories should be clearly set out.

Cleared with and cc: Messrs. Ware, EAP; Polak, EAL; H. Singh, URB;  
Jones, PHN

cc: Messrs. Reese, EAL; Madavo, URB; Evans, PHN;  
LaBahn, EAP; Kalbermatten, Loewen,  
Arlosoroff, TWT; Berna, UNDP/NY; Stevens,  
WHO; Boschi, WHO; RR UNDP, Botswana

RNMiddleton:ph

81 20/78/006

March 2, 1981

Mr. Djobo,  
Resident Representative  
United Nations Development Programme  
B. P. 222  
Conakry, Guinea

Dear Mr. Djobo:

UNDP GLOBAL PROJECT GLO/78/006

Low-cost Water Supply and Sanitation

GUINEA

Feb. 81.

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The mission was conducted at the request of the World Bank, and you will recall that the Government has not as yet formally endorsed the Global Project. If further assistance is needed (and it appears to us that it may be, if the comfort station project is to be successfully implemented) then this endorsement should be obtained. Both M. Dabo and Dr. Sultan were informed by the mission that any requests for future Global Project assistance should most appropriately be routed through you, as Decade Coordinator in Guinea.

Thank you for the assistance given to Mr. Carroll during his visit. I look forward to receiving any comments you may have on the report.

Yours sincerely,

Melvin J. Loewen,  
Special Project Coordinator  
Transportation, Water and  
Telecommunications Department

\*Enclosures

cleared and cc: Messrs. Motte, WAP; Harvey WA2  
cc: Messrs. Al-Khafaji, WAP, Palein, WA2; Husain, PHN, Evan, PHN;  
Kalbermatten, TWT

RMiddleton:ba

efw/78/006

TAG/GUI/01

PROGRAMME DES NATIONS UNIES POUR LE DEVELOPPEMENT

PROJET GLOBAL GLO/78/006

PROJETS DE DEMONSTRATION POUR L'ALIMENTATION  
EN EAU ET L'ASSAINISSEMENT A FAIBLES COUTS

RAPPORT DE MISSION

A L'ATTENTION DE  
LA REPUBLIQUE POPULAIRE REVOLUTIONNAIRE  
DE GUINEE

(8-12 Septembre 1980)

Par Frank P. Carroll  
Groupe des Conseillers en  
Technologie

Février 1981



LISTE DES SIGLES

RPRG	République Populaire Révolutionnaire de Guinée
AID	Association Internationale pour le Développement
BAD	Banque Africaine de Développement
EP	Entité du projet d'alimentation en Eau potable et d'Assainissement, du Ministère de l'Energie et du "Konkouré"
RR/PNUD	Représentant Résident/Programme des Nations Unies pour le Développement
GCT	Groupe des conseillers en technologie établi à la Banque mondiale dans le cadre du Projet Global GLO/78/006
OMS	Organisation mondiale de la santé
E&M	Entretien et Maintenance
MSP	Ministère de la santé publique
PRL	Pouvoir révolutionnaire local
COMTEC	Comagnia Tecnica di Progettazione S.p.A. (Consultant OMS)
PC	Service régional de la protection civile (Ministère de l'intérieur)
BM	Banque mondiale
SHP	Services de l'hygiène préventive du Ministère de la santé publique

1. Conformément aux termes de référence en date du 20 août 1980, je me suis rendu en République Populaire Révolutionnaire de Guinée (RPRG) du 3 au 12 septembre. La mission, entreprise à la demande du Département régional d'adduction d'eau potable de la Banque mondiale, avait pour objectif d'aider le gouvernement à examiner des propositions concernant les toilettes publiques communales pilotes à Conakry (l'une des quatre composantes d'un crédit Association Internationale de Développement / Banque Africaine de Développement - AID/BAD).

2. Nous avons toujours gardé des relations étroites avec la contrepartie de la RPRG, l'Entité chargée du Projet d'Alimentation en Eau Potable et d'Assainissement (EP) dépendant du Ministère de l'énergie et du "Konkouré" (cette dernière partie du titre renvoyant à un projet hydro-électrique sur le fleuve Konkouré). Les Services d'hygiène préventive du Ministère de la santé publique ont été étroitement impliqués dans les discussions. Leur contribution et leur coopération seront essentielles pour la réussite du projet. Cette partie spécifique du projet ainsi que les activités générales du Projet global ont été exposées aux responsables du service du Résident Représentant du Programme des Nations Unies pour le Développement (RR/PNUD), au début et à la fin de la mission. Le gouvernement a été informé que toute demande ultérieure pour une assistance du Groupe des Conseillers en Technologie (GCT) devrait être adressée au RR/PNUD, en tant que coordinateur, pour la décade, des programmes de l'agence internationale. Une liste des responsables rencontrés figure dans l'Annexe I. L'aide-mémoire adressé au gouvernement résumant le travail de la mission est reproduit dans l'Annexe II.

### Résumé et Recommandations

3. L'AID et la BAD co-financent la première phase (jusqu'à 1983) d'un projet destiné à améliorer l'alimentation en eau potable et l'assainissement urbain à Conakry. La composante assainissement, dont le coût s'élève à environ 2.5 millions dollars E.U., comprend:

- (a) dix toilettes publiques communales;
- (b) des travaux de drainage des eaux pluviales;
- (c) une structure d'exploitation et de maintenance (E&M) pour le drainage des eaux pluviales; et
- (d) la maintenance et l'amélioration de l'état hygiénique des puits creusés manuellement.

Ces éléments reflètent les besoins immédiats, les implications techniques des améliorations à apporter à l'alimentation en eau potable, ainsi que la nécessité d'avoir des services d'assainissement efficaces et intervenant à faible coût.

4. La mission a examiné l'état d'avancement de la réalisation de la composante (a) du projet (voir para. 3 ci-dessus) et a aidé la RPRG à élaborer des propositions quant à la construction, l'exploitation et la maintenance des toilettes publiques communales. Elle a conclu à la nécessité non seulement de faire appel à la contribution d'ingénieurs, mais aussi de lancer des activités de promotion et d'éducation sanitaire (impliquant la participation active du Ministère de la santé publique (MSP), de l'Union des femmes, et de l'Organisation Mondiale de la santé (OMS)), afin d'assurer une utilisation sûre et rentable de ces toilettes. Ce programme doit être concentré sur la création et le renforcement de la demande des usagers à tous les niveaux.

5. Le schéma proposé par la COMTEC apparaît excessivement cher et inadapté aux conditions existantes d'alimentation en eau et de fourniture d'énergie. Les coûts d'investissement pour une unité servant 750 personnes est en moyenne de 320 dollars E.U. per capita, soit des coûts d'investissement d'environ 2.4 millions de dollars E.U. pour dix unités, alors que le rapport d'évaluation de novembre 1978 a consacré 40.000 dollars E.U. pour la totalité des dépenses en génie civil pour cette composante (AID: 32.000 dollars E.U.; RPRG: 8.000 dollars E.U.). (Nous disposons de données insuffisantes concernant les procédés de maintenance proposées pour pouvoir faire une estimation des coûts d'E&M).

6. Les coûts d'investissement ne devraient pas dépasser 50 à 100 dollars E.U. par usager, si l'on veut que les infrastructures communales soient plus économiques que les latrines privées familiales qui sont en général préférées aux toilettes publiques. Ce niveau pourrait être atteint à l'aide de schémas améliorés et grâce à l'utilisation de technologies permettant de conserver l'énergie et l'eau. Les changements à apporter devraient inclure:

- (a) le remplacement du béton armé par des briques locales et du mortier, sauf pour les dalles couvrant les fosses septiques;
- (b) l'utilisation de toitures en tôle aluminium ondulée;
- (c) le remplacement du réseau électrique par des modifications dans l'architecture des bâtiments permettant de profiter de la lumière du jour;
- (d) le remplacement des citernes de chasses à flotteur sphérique par des systèmes à chasse faite au sceau et/ou de fosses septiques simplifiées;
- (e) des modifications dans la géométrie des dalles à la turque et du dispositif d'étanchéité par siphon hydraulique afin d'améliorer le confort et minimiser les souillures;
- (f) la consolidation des tuyaux de drainage des eaux des toilettes et la réalisation d'un nettoyage adéquat;
- (g) la réalisation de caniveaux adéquats.

Les critères de base de cette conception et les commentaires détaillés sur les propositions de la COMTEC figurent dans les paragraphes 32-34 ci-dessous.

7. La construction peut être probablement plus efficace si elle est effectuée par voie de contrat plutôt qu'en régie. Les possibilités de fabrication locale, selon les spécifications à faible coût, élaborées ailleurs et qui ont réussi, devraient être totalement explorées. (Par exemple, les dalles à la turque indiennes avec siphon; le GCT diffusera les plans-types correspondants quand de meilleures conceptions seront mises au point à mi-1981). La prochaine mission de la Banque mondiale devrait essayer d'identifier les entreprises locales en bâtiments, capables de construire ce type de toilettes publiques.

8. Pour assurer une utilisation optima de ces toilettes publiques, plusieurs plans de construction pourraient être envisagés en fonction des conditions sociales. La mission recommande donc deux plans de base qui seront proposés au niveau local pour un choix définitif: l'un avec une infrastructure intégrée de W.C. et de lavabots, l'autre avec des installations distinctes comprenant lavoirs et/ou bains (en particulier pour les femmes). Des esquisses de plans sont présentées dans l'Annexe III. Dans les deux cas, les parties réservées aux douches ou aux bains devraient offrir aux hommes âgés le moyen de s'isoler. Les deux différentes options devraient être exécutées à une échelle pilote et soigneusement suivies sous les angles social et technique.

9. L'EP devrait demander à ses ingénieurs consultants d'élaborer les esquisses figurant dans l'Annexe III en vue de revoir la conception et le coût des installations recommandées dans la proposition du Bloc Sanitaire de la COMTEC en date de janvier 1980. L'objectif serait de fournir des plans détaillés, des spécifications techniques et des documents d'appel d'offre d'ici juin 1981. Il faudrait toutefois remarquer que même si tous ces changements sont effectués, le budget de la composante existante, d'un montant de 40.000 dollars E.U. (qui équivaut seulement à environ 5 dollars E.U. per capita), sera de façon évidente insuffisant pour la construction de dix blocs pilotes. Il peut être suffisant pour un ou deux blocs; la mission recommande de les construire à une échelle pilote et d'étudier soigneusement leurs performances, puis d'en construire davantage au fur et à mesure de l'expérience acquise et de la disponibilité des fonds.

10. Les dispositions concernant l'exploitation et la maintenance (E&M) (paragraphes 35-38) demanderont d'être étudiées conjointement, par l'EP et les autorités politiques locales. La mission pense qu'il existe une infrastructure organisationnelle adéquate pour qu'une responsabilité directe quant à l'E&M de routine soit assurée par l'unité politique au niveau du quartier, le Pouvoir révolutionnaire local (PRL). Cependant, un support matériel suffisant devra être assuré, dans les délais requis, par les unités des niveaux supérieurs. A cet égard, il sera impératif, à long terme, d'assurer un approvisionnement plus régulier en matériaux renouvelables, d'améliorer les procédures d'E&M, d'accroître l'appui technique et de déléguer l'autorité de façon plus efficace. A court terme, les contraintes existantes

exigent qu'un critère fondamental pour la conception des installations et du choix de leur emplacement soit fixé de façon à faciliter l'exploitation et la maintenance, dans le cadre du potentiel des ressources (à la fois directes et indirectes) du PRL. Les deux alternatives suivantes sont recommandées, à l'échelle pilote, pour la mise en place de l'E&M:

- (a) Le recrutement par le District d'un gardien à temps plein, à qui seront fournis outils et matériaux renouvelables. Les coûts y afférents seraient recouverts par les usagers.
- (b) L'organisation, par un comité de maintenance du PRL, d'un nettoyage auto-assisté régulier (au moins deux à trois fois par semaine).

Il serait nécessaire également de demander aux consultants d'examiner les spécifications relatives au véhicule de vidange qui sera utilisé pour ces toilettes publiques, et en particulier d'optimiser la capacité du véhicule et la fréquence des vidanges. Un large éventail de capacités est actuellement proposé ou effectivement en service (de 3 m<sup>3</sup> à 24 m<sup>3</sup>). Celles-ci ont des incidences très différentes sur l'entretien, les pièces détachées, le nombre de véhicules et par conséquent le coût total d'E&M.

11. La RPRG manifeste un vif intérêt dans l'élaboration d'un projet de promotion intégré qui initie les usagers aux pratiques correctes et les incite à adopter ces types de comportement qui leur sont peu familiers. Les Services d'hygiène préventive du Ministère de la Santé Publique (MSP) sont habitués à utiliser les média disponibles pour sensibiliser les masses et influencer les comportements touchant à la santé des individus et de la communauté. Néanmoins, il est nécessaire de développer des mécanismes permettant d'améliorer l'accès de la RPRG aux fonds disponibles auprès des agences spécialisées opérant dans le pays, et destinés à être utilisés pour ce type d'action /1.

12. Il est recommandé que l'EP tienne avec le Gouverneur de la Région autonome de Conakry (chef politique), une réunion à laquelle devront assister neuf Commandants de district ainsi que leur personnel technique chargé des secteurs de la santé et des travaux publics. Cette réunion devrait se tenir lors de la prochaine mission de la Banque mondiale (premier trimestre 1981), pour essayer de résoudre les problèmes liés à l'édification de toilettes communales, dans le contexte de la composante assainissement urbain du premier projet d'alimentation en eau potable et d'assainissement. En particulier, les points suivants devraient être abordés au cours de cette réunion:

- (a) la mise en relief de la nature intersectorielle des activités de conception, de santé, d'éducation et de promotion (para. 40-50);

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/1 Par exemple, le Budget National OMS pour 1980/81 a retenu 200.000 dollars E.U. (sur les 1.163.300 dollars E.U. totaux) pour des actions sanitaires de base, comprenant la formation et la fourniture de matériel éducatif. Un budget préliminaire pour 1981/82 propose 33.000 dollars E.U. (sur les 1.209.800 dollars E.U. totaux) pour des buts similaires. Aucune partie de ces fonds n'avait été utilisée ni engagée au moment de la mission.

- (b) la nécessité d'engager une participation locale dans la programmation et la réalisation des opérations (par exemple la sélection des emplacements - para. 20-21; le choix entre les deux options possibles de plans - Annexe III; ainsi que pour l'E&M - para. 35-38); et
- (c) l'identification de l'autorité la plus habilitée à contrôler l'utilisation des installations et la collecte des données quantitatives et qualitatives qui permettront d'évaluer ces installations (para. 40-44).

13. Si la RPRG souhaite obtenir davantage d'assistance pour cette partie du projet et les autres activités d'Alimentation en Eau Potable et d'Assainissement de la décade, il lui faudrait approuver le Projet Global PNUD GLO/78/006 (Projets de Démonstration d'Alimentation en Eau Potable et d'Assainissement à faible coût), par l'intermédiaire des services du Résident Représentant du PNUD. A notre avis, le Ministère de l'Energie et du "Konkouré" constituerait la contrepartie la plus appropriée. Actuellement, une telle approbation n'impliquerait pas un engagement financier de la part du gouvernement.

#### Historique du Projet

14. L'OMS a demandé à la Banque Mondiale en 1978 d'étudier la proposition d'un plan directeur d'assainissement pour les Réseaux d'évacuation des eaux usées de Conakry, préparé par la Compagnie Technica di Progettazione S.p.A. (COMTEC), et d'en faire la critique. A partir des discussions ultérieures qui ont eu lieu entre la Banque, l'OMS et la RPRG, il s'est dégagé une stratégie de développement par étapes, lancée grâce au crédit AID/BAD, comme cela a été indiqué au para. 3 ci-dessus. La première phase consisterait essentiellement à répondre aux besoins urgents de Conakry I et Conakry II (les cinq quartiers Ouest), avec une seconde phase centrée sur les quartiers restants de Conakry II et Conakry III.

15 Les services de la Banque mondiale travaillant sur le Projet de Conakry ont demandé au GCT d'étudier les plans existants et de fournir son assistance au Gouvernement pour les phases de pré-exécution de l'une des composantes de la première étape des travaux, à savoir le projet d'installation de dix toilettes publiques communales dans la Région Autonome de Conakry. Cette composante devra être structurée de telle façon que les schémas initiaux puissent être évalués et adaptés, si nécessaire, pour une phase ultérieure d'extension du réseau d'assainissement. L'interlocuteur principal de la mission a été l'EP (Ministère de l'Energie et du Konkouré), qui a la responsabilité totale du Projet. Les Services d'hygiène préventive du Ministère de la Santé Publique ont été étroitement associés aux discussions; leur contribution et leur coopération seront essentielles pour la réussite du Projet.

Les Structures Existantes d'Alimentation en Eau Potable et d'Assainissement de Conakry

16. La mission a noté un certain nombre de points particulièrement pertinents touchant à l'installation en cours des toilettes communales. Les insuffisances dans l'alimentation en eau potable de la ville constituent un point de première importance. En ré-exploitant un champ de puits abandonnés à Conakry III, le premier projet devrait atteindre environ 150 litres/seconde (l/s), ce qui ne sera pas suffisant pour satisfaire les demandes de pointe. Les alternatives en matière d'assainissement doivent donc s'appuyer sur des technologies utilisant peu d'eau (des comptes exhaustifs relatifs à l'état actuel d'alimentation en eau et d'assainissement de Conakry figurent dans les études de la COMTEC).

17. Selon ces études, il existe huit blocs sanitaires publics à Conakry I; cela n'a pas pu être vérifié par la mission. Beaucoup moins d'unités ont été installées à Conakry II et III; en réalité, l'EP signale que la seule latrine publique à Conakry II a été transformée en magasin, et les deux de Conakry III (au marché M'Balea, dans le quartier Madina) qui ont été visitées par la mission, restent fermées pendant la plus grande partie de la journée sous l'ordre des autorités locales; elles datent d'avant l'Indépendance, et sont aménagées de sièges de toilette en céramique, avec des réservoirs de chasse d'eau suspendus, de 15 litres. Aucune des chasses d'eau que nous avons vues n'était en état de marche. Partout les chaînes à bascules, les robinets-vannes sphériques et les sièges manquaient. Seuls les lieux verrouillés sont apparus relativement propres, et c'est seulement dans le marché signalé plus haut qu'on a pu noter la présence d'un gardien.

18. Le schéma typique utilisé est celui d'un bloc rectangulaire, d'environ 5,3 m de large sur 15 m de long et 4 m de haut, divisé en deux sections égales pour hommes et pour dames. Les murs sont en maçonnerie et le toit en tôle aluminium ondulée. L'éclairage et la ventilation se font au moyen de parpaings espacés laissant passer la lumière du jour et placés en haut du mur. Une unité moyenne comprend 24 toilettes et deux robinets d'eau ordinaires. Les sols sont recouverts de carrelages en céramique sans drainage. Les portes de chaque toilette individuelle sont en général en fer, à part certaines qui sont en bois. Il y a souvent un emplacement pour un poste de gardien à l'entrée. Toutes les latrines publiques visitées étaient reliées aux égouts publics se déversant dans une décharge marine non traitée.

19. Des espaces communaux sont parfois aménagés pour les bains et la lessive, situés à proximité des toilettes publiques (mais pas attenants). Ils sont également divisés en deux sections, pour hommes et pour dames; ils sont ouverts, et couverts d'un toit de tôle aluminium ondulée; les unités sont raccordées séparément au réseau d'eau, et semblent être intensément utilisées. Les jeunes gens sont assidus pour venir faire la lessive et chercher de l'eau, de même que les femmes. Une telle unité occupe environ 80 m<sup>2</sup>, avec des équipements minima pour le drainage des eaux usées. La mission n'a pu obtenir aucun tirage de plans ni autres schémas, des lavoirs ou des latrines publiques; apparemment, il n'en existe pas depuis l'Indépendance.

20. Une description détaillée des égouts existant à Conakry est faite dans les études de la COMTEC. En général, les installations sanitaires publiques ont été construites seulement là où une connection avec un égout public était possible. Les méthodes de traitement des eaux usées des toilettes, par infiltration, ne semblent pas avoir été utilisées. C'est pourquoi la plupart des unités ont été construites à Conakry I, qui est la seule partie de la ville à être desservie par des égouts conventionnels. Il arrive souvent que le système se bloque, en raison d'une protection insuffisante contre le dépôt des gros objets et d'un écoulement des eaux usées trop bas pour assurer des vitesses de curage correctes, malgré un taux relativement élevé de branchements domestiques.

#### L'Organisation des services chargés de l'Assainissement

21. Les services municipaux comme celui de l'Assainissement sont assurés à différents niveaux de hiérarchie par les autorités politiques dépendants du Ministère de l'intérieur. L'Administrateur en chef de la Région autonome de Conakry (le Grand Conakry) occupe le poste de Gouverneur, désigné par le Président de la République. La Région est sub-divisée en trois Communes, qui sont elles-mêmes sub-divisées en Districts, au nombre de neuf. L'autorité politique, Chef du District (Commandant), devant lequel tous les techniciens de la RPRG à ce niveau sont responsables, est désigné par le Ministre de l'intérieur. L'organigramme d'un District particulier (Conakry II, District 5) figure dans l'Annexe IV. Le PRL constitue la plus petite unité de l'organisation politique, et comprend plusieurs milliers d'habitants. Le maire (le fonctionnaire en chef du PRL) préside une Assemblée Générale hebdomadaire de chaque PRL, pour laquelle l'ordre du jour est préparé conjointement par les trois services représentatifs: le bureau général du PRL, celui des femmes, et celui des jeunes. La mission a été convenue à assister à une Assemblée Générale par les services du Commandant du District I (Conakry I), mais notre emploi du temps ne nous en a pas laissé le temps pour le faire. La prochaine mission de la Banque devrait profiter de cette opportunité.

22. Il a été rapporté qu'un Chef des Travaux publics locaux et des Services de télécommunication est responsable de chaque PRL; il dirige les opérations d'exploitation et de maintenance de routine pour l'alimentation en eau potable et l'assainissement du quartier. Il semble qu'il n'y ait aucun personnel permanent; tous les besoins seraient satisfaits grâce à une mobilisation volontaire, comme pour les campagnes de nettoyage du quartier. Les problèmes persistants (comme celui de la basse pression dans le réseau de distribution des eaux) sont traités par l'Assemblée Générale dans la limite des moyens disponibles. Pour ce qui est de la basse pression des eaux dans un PRL du District 1, un agent a été désigné comme responsable devant le Chef des Travaux publics locaux, pour contrôler l'utilisation des fontaines publiques, qui sont ouvertes seulement à deux moments de la journée. La solution paraît efficace, et personne n'a essayé d'endommager les verrous cadenas installés pendant les heures de fermeture.



23. En théorie, une récente décentralisation de la RPRG a placé l'autorité budgétaire chargée des travaux publics d'entretien et de maintenance, au niveau de la Commune, dans le but de poursuivre la décentralisation de ces responsabilités au niveau du District. Selon ce schéma, la Région autonome serait essentiellement responsable de la programmation, l'exécution des travaux neufs, et la coordination entre les Communes. En réalité, le développement de l'infrastructure n'a pas encore atteint ce stade, et les diverses responsabilités ont été difficiles à identifier par la mission; en fait, la politique actuelle des institutions de prêts paraît devoir renforcer l'infrastructure des travaux publics au niveau régional, de façon à développer un modèle pour un éventuel transfert au District. Il n'y a pas de budget régulier pour de tels services sous l'autorité des PRL.

24. Des installations sanitaires privées doivent être conformes aux directives et aux plans approuvés par le Ministère du logement, des terres et de l'urbanisme (MLTU) qui délivre tous les permis de construire. Le MSP serait également impliqué dans l'approbation finale des nouvelles installations. Comme il n'existe pas de plans de construction pour les latrines à fosse, le MLTU fournit un schéma (qui n'est pas à l'échelle) pour une fosse septique - drainagé par infiltration, pour 4 à 50 personnes. Ce schéma comporte une fosse à trois compartiments, dont le dernier sert de filtre gravitaire. En supposant une accumulation combinée d'écumes et de boues de 60 l par an et par capita et un écoulement moyen des effluents de 50 l/j et par capita, les volumes indiqués permettraient un cycle de vidange de trois ans, la période de rétention diminuant de cinq jours initialement à un jour, juste avant la vidange. Ces chiffres impliquent une marge de sécurité de 8 à 9%, pouvant représenter le volume d'ensemencement.

25. La taille des fosses septiques, telles que supposées précédemment n'est pas déraisonnable, bien qu'il n'y ait pas d'accord très net sur des critères adéquats et qu'il y ait peu de données disponibles concernant l'exploitation en climat tropical sous des conditions variées de régime alimentaire de ce type de fosses. Néanmoins, plusieurs aspects du schéma du MLTU pourraient être améliorés comme suit:

- (a) L'enterrement de l'accès à la fosse empêcherait que s'y introduisent des eaux de surface et des corps étrangers.
- (b) Il serait possible d'améliorer les conditions de décantation dans le premier compartiment en en réduisant la profondeur et la largeur et en augmentant la longueur. La longueur devrait être 2 ou 3 fois la largeur, avec une profondeur minima de 1 mètre.
- (c) Le tuyau de chute devrait avoir une forme en T, avec la branche inférieure (submergée) ne descendant pas plus bas qu'à un tiers de la profondeur du liquide. Ce type de construction réduira aussi bien l'obturation par les écumes que la remise en suspension, à l'occasion des nettoyages, des boues décantées.

- (d) Le bout de la conduite d'arrivée au second compartiment (brèche dans le mur) devrait être au moins à un tiers de la profondeur du liquide au-dessus du niveau du radier de la fosse, et à un maximum de deux tiers cette distance. Cela réduira le risque que les écumes et les boues passent au second compartiment.
- (e) Il faudrait installer un pare-écume à la sortie du second compartiment. Le siphon hydraulique d'étanchéité actuellement installé n'a pas de grande utilité. Pour les schémas à préconiser là où existe une faible population, les effets de pointe pourraient être réduits en incorporant à la sortie, une chicane à la place d'une conduite unique.
- (f) Le filtre gravitaire du troisième compartiment est de valeur discutable. Il crée une perte de charge inutile (un mètre minimum) qui implique un espace mort (une surface d'infiltration non utilisée) au sommet du puisard. Dans la mesure où l'effluent se décharge dans un puisard selon le schéma recommandé (et non dans un drain à ciel ouvert), on ne voit pas tellement pourquoi un BOD supplémentaire et un déblayage des solides en suspension est nécessaire; mais s'il existe un ratio valable pour l'infiltration, un filtre entraînerait une perte de charge moins importante et permettrait d'assurer plus aisément la maintenance.
- (g) La ventilation de la fosse septique devrait être située du côté admission plutôt que du côté sortie.
- (h) En l'absence de données plus satisfaisantes sur les taux d'infiltration à long terme pour l'effluent déposé, les dimensions du puisard devraient être basées sur un taux d'infiltration de 10 l/jour par mètre carré de surface de mur.

26. Le service régional de protection civile (PC) du Ministère de l'intérieur dispose d'un réseau de camions de vidange à travers toute la ville. Le parc en service comprend cinq nouveaux Ford 8000 S (175 CV, diesel, 3 axes, 10 roues), chacun avec un réservoir d'une capacité d'environ 24 m<sup>3</sup>, ainsi qu'un vieux Saviem, de deux ans, SM8 (Renault 150 CV diesel, 2 axes, 6 roues) avec un réservoir d'une capacité de 6 m<sup>3</sup>. Les spécifications disponibles pour cet équipement figurent dans l'Annexe V. Bien que la mission n'ait pas pu vérifier l'importance du personnel d'appui, il a été rapporté que le PC a recruté trois mécaniciens (deux mécaniciens et un aide-mécanicien) pour l'entretien de ces véhicules. Les principaux problèmes d'exploitation semblent liés aux insuffisances de la maintenance (une formation des chauffeurs pourrait réduire ce problème) et au manque de pièces de rechange.

emplacements possibles, dans le cadre de la juridiction de chacun. Des réponses préliminaires ont indiqué que, dû au manque de place à Conakry I, on devrait mettre l'accent sur la rénovation et la reconstruction des latrines publiques et lavoirs existants. L'absence d'une telle infrastructure à Conakry II et III et l'existence d'espaces suffisants conduisent à considérer avec plus de précision les critères d'emplacement de ces installations dans ces Communes. La mission pense qu'il sera nécessaire dans un future proche d'engager des relations plus formelles avec les autorités politiques locales dont la participation devra être plus importante, pour accélérer le démarrage des travaux.

31. Après avoir consulté les autorités de la RPRG et après avoir effectué un tour de reconnaissance préliminaire de la ville, la mission propose d'utiliser les critères suivants pour déterminer les dispositions particulières relatives à l'emplacement de ces installations:

- (a) Le manque d'installations sanitaires privées, comme alternative possible. Ceci peut être déterminé par une identification approximative des zones à population à revenus faibles (c'est-à-dire le tiers le plus pauvre de la population), si, bien sûr, de telles zones homogènes existent. Le type d'informations recueillies dans une "analyse de pauvreté urbaine", s'il en existe une, s'avérerait très utile pour mener à bien cette tâche. Si ces données ne sont pas facilement disponibles, une analyse séparée ne serait pas justifiée pour l'installation initiale de dix unités pendant le premier stade des opérations, bien que soit primordiale la connaissance de telles données, pour la poursuite éventuelle d'un programme à plus grande échelle.
- (b) Le manque relatif de branchements d'eau des particuliers. Ce critère est semblable au critère (a) ci-dessus.
- (c) La densité de population. Des toilettes publiques devraient être installées en priorité dans les zones où la densité de population rend l'installation des réseaux individuels impossible. Bien qu'aucun schéma ne puisse tenir compte de la variété des emplacements et des caractéristiques des sols, on suggère que les toilettes publiques soient installées seulement là où la densité de population atteint au moins 200 capita/ha. Elles devraient être également installées là où le niveau de revenus ou les structures d'habitat rendent impossible la construction de latrines privées.
- (d) Les places publiques. Bien que l'entretien et la maintenance présentent en général de plus gros problèmes dans de tels endroits, il y a un besoin fondamental d'améliorer les installations sanitaires, par exemple, à proximité des marchés publics. Il est recommandé que les premières installations sur des places publiques soient limitées à certaines places de

marchés, où il existe déjà une infrastructure d'E&M (Comités de surveillance des marchés). Selon le succès qui va en dépendre, on pourra, ultérieurement, envisager leur installation à proximité des stations de transport en commun et des principaux croisements routiers. (Il n'est pas prévu d'équiper les écoles de toilettes, dans la mesure où elles ne seraient pas ouvertes au public; la nécessité d'équiper en même temps les écoles est évidente, tout comme l'amélioration des toilettes des particuliers, mais cela sort du cadre des termes de référence de cette mission).

- (e) Raccordement au réseau d'eau potable. Les toilettes devraient être construites là où il y a une possibilité de raccordement au réseau existant et là où il y a une pression suffisante pour assurer une alimentation en eau continue, toute la journée.
- (f) Amélioration du potentiel. Les toilettes devraient être placées, dans la mesure du possible, en tenant compte des possibilités futures de raccordement au réseau d'égouts. Les différents responsables de la RPRG ont exprimé leur scepticisme quant à l'applicabilité des systèmes de fosses septiques à drainage par infiltration pour de vastes installations publiques, et cela s'est traduit par la proposition d'un critère selon lequel de telles installations devraient être placées à moins de 200 mètres du rivage pour faciliter la décharge marine. La mission pense que, en l'absence de données sur les sols susceptibles de démontrer le contraire, il ne serait pas opportun de poser à priori une telle contrainte qui pourrait interdire le recours à des options d'évacuation sur place, techniquement possibles. Etant donné la capacité d'infiltration des sols à long terme, des schémas valables sont possibles, sans qu'il soit nécessaire d'excaver excessivement pour atteindre le volume approprié des fosses.
- (g) L'intérêt local. Un certain poids devrait être donné, dans le choix des emplacements, à l'intérêt relatif exprimé par les PRL pour assurer les responsabilités requises. Cela peut être déterminé en évaluant (i) l'expérience de certains PRL dans des activités similaires, (ii) le temps de réponse des responsables du projet pour réagir aux communications, et (iii) le bien-fondé des propositions de maintenance formulées par les PRL. Il incombe donc à l'EP de communiquer clairement l'étendue et les objectifs du projet aux responsables locaux.

32. Parmi les critères fondamentaux, indépendamment des considérations d'emplacement, on doit citer également:

- (a) La facilité de la maintenance. Les installations publiques devraient dépendre le moins possible des technologies avancées, comme les réservoirs de chasse d'eau équipés de flotteurs et vannes sphériques. Les surfaces sujettes à de fréquentes

souillures devraient être conçues de façon à minimiser ces souillures (par exemple, par des drains placés à des endroits critiques, des dalles à la turque correctement inclinés), et être construites à l'aide de matériaux faciles à entretenir (par exemple, des céramiques vernissées, au lieu de ciment rugueux).

(b) La dépendance par rapport aux ressources locales. Dans le choix du mode de construction, on devrait prendre en considération, en premier lieu, l'applicabilité des techniques et l'utilisation des matériaux locaux. Quand deux alternatives se présentent, l'une sur le marché local, l'autre sur le marché extérieur, et sont comparées en termes de coûts financiers et de disponibilité, il est nécessaire de déterminer les différences significatives dans le coût et le temps pouvant affecter le choix entre les alternatives. Par exemple, l'utilisation des sables des fleuves locaux peut convenir pour la fabrication de briques de ciments par les artisans locaux, si le projet a également pour objectif la promotion de l'infrastructure économique locale. La balance économique, dans ce cas, tient compte des coûts engendrés par les pénuries saisonnières (pendant la saison des pluies) et des baisses possibles dans la qualité, (coefficient d'uniformité et distribution de la taille des particules). Le niveau auquel ces compromis engendreraient un coût inacceptable varierait alors selon l'importance accordée par les responsables politiques à cette infrastructure économique.

(c) Le reflet des préférences sociales. Le plan des installations devrait tenir compte de facteurs sociaux spécifiques à la communauté. Par exemple, des interviews, menés par la mission, ont indiqué l'importance accordée par les différents groupes d'âge et de sexes à une utilisation individuelle de ces installations. Il a été rapporté que les hommes âgés seraient moins enclins à utiliser les bains publics si les vestiaires étaient collectifs plutôt qu'individuels. Les femmes (bien organisées à Conakry et dont le rôle est déterminant pour la réussite du projet) trouveraient un avantage à avoir des bains séparés, où elles auraient moins de risques d'être dérangées par les hommes. Des lavoirs devraient être incorporés dans les installations destinées aux hommes, qui s'adonnent quotidiennement et en grand nombre à la lessive.

33. La mission n'a pas eu accès aux données de morphologie du sol dans la zone du projet. Bien qu'apparemment il n'existe pas d'études générales systématiques, le Ministère des mines et de la géologie pourrait bien posséder quelques données, résultant de recherches antérieures faites à l'occasion du projet. L'histoire géologique active de la Côte Ouest Africaine (qui a commencé avec des intrusions volcaniques) a contribué à créer des formations superficielles diverses qu'il est important de différencier pour déterminer les

sites possibles pour l'évacuation des eaux. Les formations superficielles de latérite (aluminium durci et hydroxyde de fer résultant d'une désagrégation rapide) non seulement augmentent les coûts des excavations mais aussi, en l'absence de zones à fissures suffisamment larges, rendent impossible un traitement par simple infiltration. Les zones en relief de Conakry II et III sont caractérisées par la présence de grandes étendues de latérite. Les argiles superficielles sont répandues à travers toute la péninsule de Conakry. Les substrata, situés parfois à quelques mètres de la surface, seraient constitués essentiellement de dunite: un dérivé de silicate ferro-magnésique, dur, à grains grossiers, apparenté à la fois à la serpentine et au talc. En général, les capacités d'infiltration à long terme devraient être relativement faibles; mais pour choisir des sites spécifiques, il est nécessaire de rechercher les anomalies éventuelles.

34. Les propositions actuelles relatives aux toilettes publiques intégrées (para. 29 ci-dessus) font partie d'un dossier comprenant neuf plans de construction. Alors que certaines propositions de la RPRG ont été prises en considération, la mission pense que des modifications significatives sont souhaitables pour définir une conception adaptable aux réalités économiques, technologiques et sociales. Parmi les problèmes essentiels de cette conception, on peut citer:

- (a) Le coût d'investissement. Une unité pour 750 personnes, à un coût estimé à environ 240.000 dollars E.U. (comprenant une fosse septique à un seul compartiment) dépasse de loin un niveau raisonnable de dépenses. Une ventilation des coûts indique que les facteurs qui contribuent le plus à ce coût d'investissement sont (i) le ciment de fondation et de dallage (20%), (ii) les armatures de fer (17,5%), (iii) les installations électriques, essentiellement l'éclairage (20%), ainsi que (iv) les équipements sanitaires et la plomberie (6%). Rien que pour la plomberie, la moyenne est de 20 dollars E.U. per capita servie pour un ratio de 31 personne par dalle à la turque. La fosse septique de 130 m<sup>3</sup> (sans cloisons) a été estimée à environ 40.000 dollars E.U., avec plus de béton armé qu'il n'en faudrait.
- (b) Le choix des matériaux. Il est évident qu'on n'a pas beaucoup fait confiance aux pratiques indigènes en matière de construction, de matériaux de construction, et des conditions locales, dans le choix des matériaux et des plans architecturaux recommandés. Par exemple, alors que la plupart des bâtiments de petite à moyenne dimension de Conakry sont couverts de toits en tôle aluminium ondulée, l'étude de la COMTEC proposé du béton armé. La question de l'éclairage naturel a tout d'abord été minimisée dans l'étude, et ensuite, selon la spécification du contrat, un système électrique de 30.000 dollars E.U. a été proposé. Il est apparent qu'aucune analyse n'a été faite quant à l'utilisation dans le temps de l'électricité, plus spécialement pendant la nuit. Le béton armé n'est pas nécessaire pour les murs et le radier de la fosse septique. Une construction en maçonnerie locale sera suffisante.

- (c) L'inflexibilité du projet. L'intérêt d'une phase pilote réside dans le fait qu'elle fournit des données comparatives qui devraient contribuer à l'extension ultérieure du programme. Dans cette perspective, il serait important d'exécuter au moins deux modèles de plans: l'un avec des services intégrés (comme cela a été recommandé); l'autre avec des lavoirs et/ou des bains construits séparément (au moins pour les femmes), pour tenir compte de la spécificité des préférences sociales (voir les esquisses de l'Annexe III). Les eaux usées des installations séparées pourraient être mélangées dans une fosse à plusieurs compartiments pour une première décantation et une première bio-dégradation, avant de se déverser dans les égouts ou les puits. Dans tous les cas, le plan de 20 m x 20 m pourrait nécessiter des modifications selon l'espace disponible; le choix du site ne devrait pas être essentiellement déterminé par cette contrainte possible.
- (d) Le choix du type possible d'installations sanitaires. Des équipements à forte utilisation d'eau (chasse de 15 l), tels qu'ils ont été recommandés, ne nous semblent pas cohérents avec les projections d'alimentation en eau de Conakry. Les vannes à flotteurs sphériques ne devraient pas être utilisées. Les unités à nettoyage fait au sseau et/ou à fosse septique simplifiée avec des tuyaux de chute vertical rendent leur exploitation facile. La conception des toilettes à la turque devrait tenir compte des facteurs d'anatomie humaine et de confort. Les dimensions indiquées dans le croquis No. 2 de l'étude du consultant entraînent souillures et mauvaise usage. Par exemple, les repose-pieds devraient être agrandis de 250 mm à 340 mm et installés de telle façon que leurs axes forment un angle de 30°. La distance entre l'arrière des repose-pieds et l'axe du trou d'évacuation devrait être réduite de 165 mm à 100 mm. Le diamètre du trou lui-même devrait être réduit de 115 mm à 75 mm. Le siphon hydraulique de chasse devrait pouvoir éliminer les corps solides non hydrauliques, et être tourné de 180° de façon à pouvoir drainer la partie arrière de la dalle à la turque. Les angles amont et aval devraient être réduits d'environ 60° et 45° à environ 45° et 15°, respectivement. Le siphon hydraulique d'étanchéité devrait être augmenté de 10 mm à 20 mm (ces dimensions ne conviennent pas au siphon des toilettes à la turque simplifiée, qui devrait avoir 100 mm ou 150 mm de diamètre). La cuvette de WC devrait être inclinée beaucoup plus en direction du trou, à près de 90° à l'arrière. Le projet devrait s'intéresser à la possibilité d'importer d'Inde les modèles de plans de fabrication système de chasse directe adéquats, en vue d'une production locale. Les tuyaux de drainage des toilettes devraient être raccordés quand c'est possible, de façon à ce que, par exemple, deux rangées de cabinets disposés dos à dos se déversent dans un collecteur

tertiaire au lieu de deux. Les tuyaux d'écoulement des eaux usées devraient être séparés de façon à permettre un écoulement dans le second ou le troisième compartiment d'une fosse septique à compartiments multiples. Il faudrait installer des caniveaux adéquats. Si on fixe le volume d'une fosse à 130 m<sup>3</sup>, comme cela avait été indiqué dans l'étude, une vidange bi-hebdomadaire serait nécessaire, si elle est exploitée comme une simple voute (écoulement de 50 l d'eaux usées/capita et par jour). Ce taux implique environ 11 voyages par unité - semaine de gros camions de vidange Ford 8000 fonctionnant par CP. Si cependant, la fosse fournit un premier traitement, avec une possibilité de décharge vers un système d'infiltration en série ou un égout de petit calibre (au lieu d'une décharge directe dans des égouts conventionnels, comme l'a recommandé la COMTEC), un dévasement serait nécessaire une fois tous les deux ans, avec une rétention d'une journée juste avant la vidange (boues/écumes = .06 m<sup>3</sup>/cap-année, débit des eaux usées = .05 m<sup>3</sup> /cap - jour). La première rétention serait d'environ 3.5 jours. Les éléments d'un schéma de fosse sont discutés dans le para. 25 ci-dessus. Dans le cas d'une fosse simplifiée, la compartimentalisation serait faite selon un schéma différent de façon à tenir compte des débits des points individuels. Des courts-circuits à travers les compartiments devraient être évités. Dans tous les cas, la compartimentalisation est souhaitable pour réduire les effets de sur-pression. La filtration par le sable dans le dernier compartiment n'est pas recommandée.

#### Consignes d'Entretien et de Maintenance

35. L'infrastructure de base de l'E&M publics pour l'assainissement est discutée dans les para. 22 et 23 ci-dessus. La mission a remarqué une certaine confusion concernant l'échelle administrative - Région, Commune, ou District - habilitée à gérer le budget E&M et les équipements de service (à savoir les camions de vidange). Cette confusion résulte probablement des directives récentes de décentralisation et de l'existence d'un fossé entre les buts visés et les pratiques en vigueur. La mission est d'accord avec l'objectif du Premier Projet de la Banque selon lequel, au moins pour le futur proche, les responsabilités quant aux principaux travaux D'E&M doivent être maintenues et renforcées au niveau régional. Le fond du problème est d'intégrer les capacités D'E&M des niveaux régional et local (PRL), dans la mesure où ils doivent chacun jouer un rôle important dans le système.

36. L'EP a initialement présenté deux alternatives pour les mesures à prendre au niveau local en matière d'E&M:

- (a) Le District pourrait recruter un gardien à plein temps et lui fournir outils et produits renouvelables adéquats, en lui donnant l'autorité de fermer les locaux aux heures non-ouvrables.



- (b) Les PRL pourraient être responsables de l'organisation de séances de nettoyage volontaire à un rythme régulier et fréquent (par exemple deux fois par semaine). Il serait probablement plus commode d'avoir plus d'accès aux installations pendant les heures non-ouvrables que dans le cas (a) ci-dessus.

Dans les deux cas, c'est la Région qui se chargera des opérations de dévasement et des principales réparations.

37. L'implantation d'installations sanitaires en priorité sur les places des marchés doit être maintenue (selon les clauses énoncées dans le para. 36 (a)), avec un gardien directement responsable devant le Comité de surveillance du marché.

38. Il est recommandé, par conséquent, de mettre en oeuvre les deux options présentées dans le para. 36, dans des proportions quasi-égales, dans les dix unités de démonstration. La Banque mondiale/AID devraient suivre d'assez près cette partie du projet et assister le gouvernement dans l'application de ces mesures.

#### Le Suivi de la Performance

39. Comme nous l'avons mentionné plus haut (para. 10 et 34), la présentation de deux schémas de base permettra des évaluations comparatives des installations, du point de vue social et technique. De même, des différences entre les dispositions prises en matière d'E&M permettront de juger de l'efficacité relative de chacune de ces alternatives. Alors que des variations dans la construction et l'E&M peuvent rendre possibles des comparaisons utiles pour la future conception, on doit prendre soin de ne pas développer excessivement les nombres des permutations. Une telle situation obscurcirait et gênerait le processus d'évaluation. Il ne faudrait donc pas encourager plus de trois ensembles de dispositions pour l'E&M au niveau local.

40. Avec l'assistance de l'agence de prêt, l'EP devrait mettre au point les variables techniques et sociales importantes dont on devrait tenir compte pour les études futures. Devraient être pris en considération aussi bien des critères objectifs (tels que le taux d'accumulation des vases et des écumes; le degré d'utilisation selon l'âge et le sexe; la qualité de l'effluent de la fosse; la performance du puisard), que des critères subjectifs (tels que les attitudes des usagers; les attitudes du gardien/de l'équipe de maintenance; les problèmes de souillage, de nettoyage, d'entretien; l'éclairage; la ventilation). Une appréciation mensuelle de ces critères est recommandée.

41. Les Services d'hygiène préventive du MSP sont en outre intéressés par une évaluation, à travers des études, de l'impact potentiel de l'implantation de toilettes communales sur la fréquence et l'incidence des maladies causées par l'eau. Alors que de tels impacts seraient normalement très difficiles à détecter dans une population urbaine mobile (étant donné les problèmes d'hétérogénéité des groupes expérimentaux et groupes de contrôle), des suites devraient être données à cette proposition, même si la RPRG devait demander un appui épidémiologique à l'autorité appropriée, par exemple l'OMS.

42. Il sera important de montrer les avantages du suivi aux autorités politiques. Les arrangements devraient être spécifiques et explicites. Ils devraient être communiqués à tous les niveaux de leadership, de même qu'à la population (à travers l'Assemblée Générale des PRL), et compris par tous.

#### La Promotion, l'Education et la Formation

43. Le gouvernement apporte son support à l'éducation et à l'information de la population, comme étant essentielles pour assurer l'utilisation et la maintenance des installations sanitaires. Le Directeur général a proposé que les Services d'hygiène préventive (SHP) du MSP prennent la responsabilité de la planification et de l'exécution de la composante promotion et formation. La contrainte immédiate la plus importante semble être l'insuffisance du budget pour le matériel éducatif. Il peut se poser des problèmes de personnel, s'il faut plus d'une équipe mobile, qui devraient être évalués par la prochaine mission de la Banque mondiale.

44. La prochaine mission devrait également examiner dans quelle mesure les média et matériaux existants peuvent être utilisés en tant qu'activités de support. Par exemple, les SHP ont une expérience en matière de production de films, ayant réalisé ces dernières années deux films 16 mm, l'un intitulé "L'Homme et l'Environnement" et l'autre "A propos de l'Education Sexuelle". Le tournage, la réalisation, le mixage, le script et la narration sont dirigés par des équipes de la RPRG, avec des moyens techniques venant de France. La Production de ces films a bénéficié de l'assistance de l'UNESCO et le Fonds de Population des Nations Unies. Le coût de nouvelles productions, avec des arrangements techniques similaires, est estimé à environ 2.000 dollars E.U. la minute. Un film produit au Zaïre, de 5 1/2 minutes, est également disponible; ce film a pour titre "Construire une Toilette" (il a été produit avec l'assistance de l'Ecole Londonienne d'Hygiène et de Médecine Tropicale). Il pourrait être modifié et adapté aux conditions locales, ce qui reviendrait moins cher que produire un nouveau film. Les SHP maintiennent une unité mobile de projection de film.

45. Les SHP utilise aussi, dans les écoles, des cartes commentées pour l'éducation sur les maladies infectieuses. Le quotidien français "Horoya" publie occasionnellement des articles relatifs aux problèmes de santé dans les quatre langues nationales. Enfin, la télévision nationale produit chaque lundi soir, durant une demi-heure, une émission en langue française intitulée "Rencontre avec le Médecin". Cette émission est reproduite les mardi et vendredi soirs dans les quatre langues nationales.

46. Les SHP ont proposé qu'une série d'émissions comprenant l'utilisation de tous les média ci-dessus soit organisée autour du thème des toilettes publiques. Dans la mesure où les installations sanitaires utiliseraient dans certains cas des technologies quelque peu étrangères (telles que les cuvettes de WC à chasse d'eau), la formation des usagers sera essentielle.

47. Simultanément, le projet assurera une formation sur le tas en génie sanitaire, aux techniciens du gouvernement. La planification et l'exécution des toilettes communales illustreront la détermination et l'application des critères techniques de conception, de façon à ce que les bases d'évaluation des processus de traitement puissent être compris et appliqués aux problèmes futurs avec différentes caractéristiques. La mission pense qu'une telle formation concomitante sera extrêmement précieuse pour l'extension du programme, et que devraient donc être attribués des fonds d'assistance technique.

48. Nous avons noté, dans le résumé de ce rapport, que l'OMS dans son Programme pour le Pays, avait des fonds disponibles pour le type d'activités décrites dans les para. 43-36. A l'heure actuelle, l'OMS n'a reçu aucune demande de la part du gouvernement pour l'utilisation de son budget 1980/81 de 200.000 dollars E.U. (17% du total du Programme pour le Pays), consacré aux "Mesures Sanitaires de Base" (comprenant la formation d'ingénieurs, d'inspecteurs sanitaires et la fourniture de matériel). Dans la mesure où ces fonds restent inutilisés, l'estimation préliminaire pour 1982/83, pour cette catégorie, a été réduite à 33.000 dollars E.U. (3% du total).

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Organizations Not Visited

Laboratoire de la Santé Publique,  
Section des Maladies Transmissibles

Service National des Sols  
(FAO Assistance)

Ministère de l'Industrie

Technology Advisory Group      UNDP Global Project GLO/78/006

Demonstration Projects in Low-cost Water Supply and Sanitation

## OFFICE MEMORANDUM

TO: M. Mamady T. Dabo

DATE: September 12, 1980

FROM Frank P. Carroll, TAG

SUBJECT: COMMUNAL COMFORT STATIONS, CONAKRY

Je voudrais vous remercier beaucoup pour vos soins d'aider ma mission. Au sommaire, nous avons discuté les plans détaillés pour les blocs sanitaires d'être installés a Conakry sous votre project. J'ai suggéré quelques modifications aux plans, qui, à mon avis, sont surdimensionnés. Le coût d'investissement, considerant une population desservie de 750 habitants, serait US\$320/personne (\$240,000/bloc). En employant des matières locales et en faisant d'autres modifications, on croit que les frais a pourraient être faissés vers le moyen global (c.a.d. moins de \$100/personne). Je suis d'accord avec votre avis pour une programme énergique de promotion et d'éducation liée aux travaux physiques. J'ai noté aussi vos recommandations pour la fonctionnement et l'entretien des facilites.

Je transmettrai mon rapport aux autorités dirigeantes du project, et vous recevrez une copie de synthese. Je suis obligé de constater encore que nos accords de principe sont sujet dans l'exécution à la consideration de la Banque Mondiale. Si vous désirez encore d'assistance du Project Global, s.v.p. dirigez votre demande au Représentant Résident à la PNUD. Je reste à votre disposition.

F. Carroll.

Technology Advisory Group      UNDP Global Project GLO/78/006  
Demonstration Projects in Low-cost Water Supply and Sanitation

## OFFICE MEMORANDUM

TO: Dr. Gabriel Sultan

DATE: September 9, 1980

FROM Frank P. Carroll, TAG

SUBJECT: COMMUNAL COMFORT STATIONS, CONAKRY

Je vous remercie pour votre temps et conseil pendant ma visite à Conakry. Je vais passer mes préconisations concernant l'utilité d'une programme d'éducation et de promotion pour la santé publique, liée avec les travaux technics aux autorités dirigeantes du projet. Vous recevrez une copie d'un rapport de synthese de la Banque Mondiale en temps voulu. En ce cas, nos discussions jusqu'au present doivent être considerées comme recommandations exigeant la ratification de la Banque.

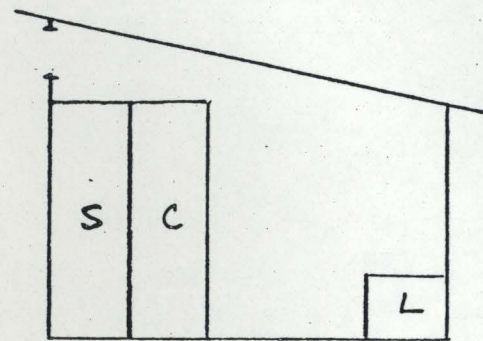
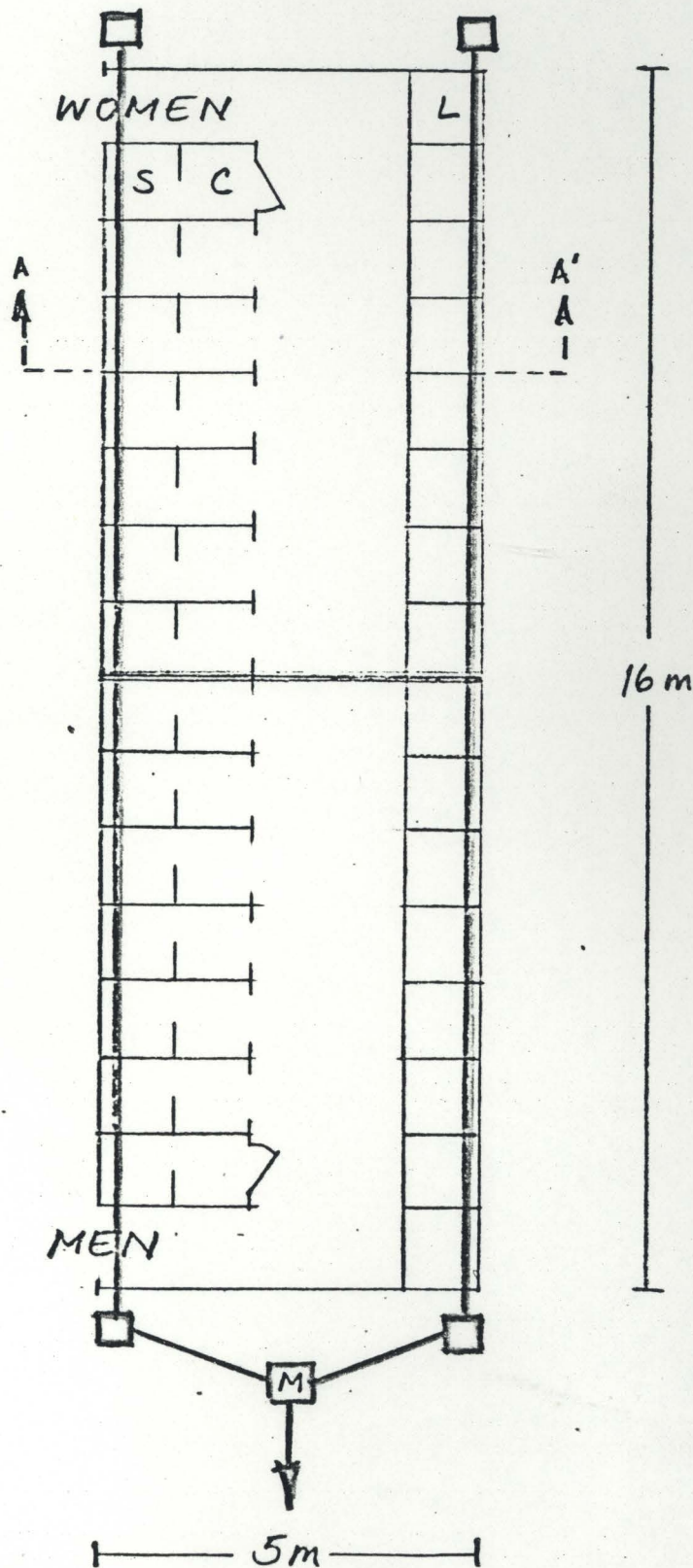
Je vous souhaits de bon travail et espère d'encore nous rencontrer bientôt. Je reste à votre disposition.

F. Carroll

## SEPARATED TOILET AND BATHING FACILITIES

OPTION A: RECTANGULAR PLAN, SUITABLE FOR BOULEVARD MALLS  
APPROXIMATELY 80 m<sup>2</sup>, 800 CAPITA

BATHING AND LAUNDRY BLOCK:



VIEW AA'

- | = Drainage system
- M = Manhole
- S = Shower
- C = Changing area
- L = Laundry

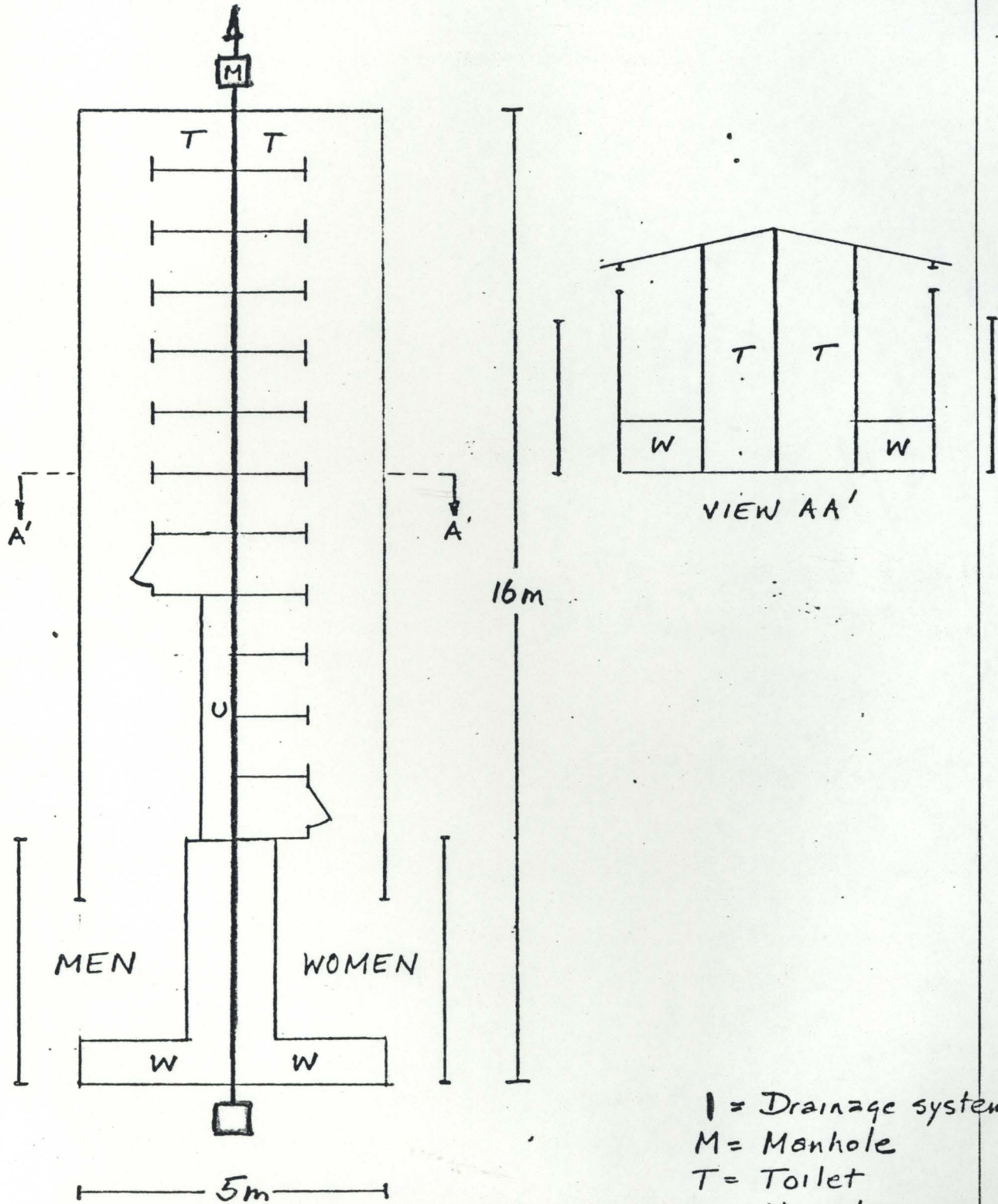
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# SEPARATED TOILET AND BATHING FACILITIES

OPTION A : RECTANGULAR PLAN, SUITABLE FOR BOULEVARD MALLS  
APPROXIMATELY 80 m<sup>2</sup>, 800 CAPITA

TOILET BLOCK :



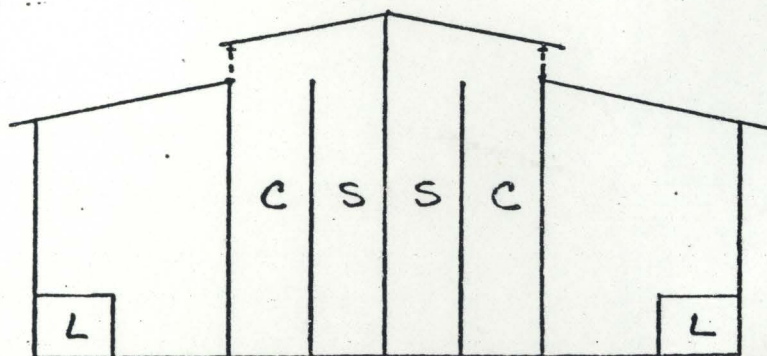
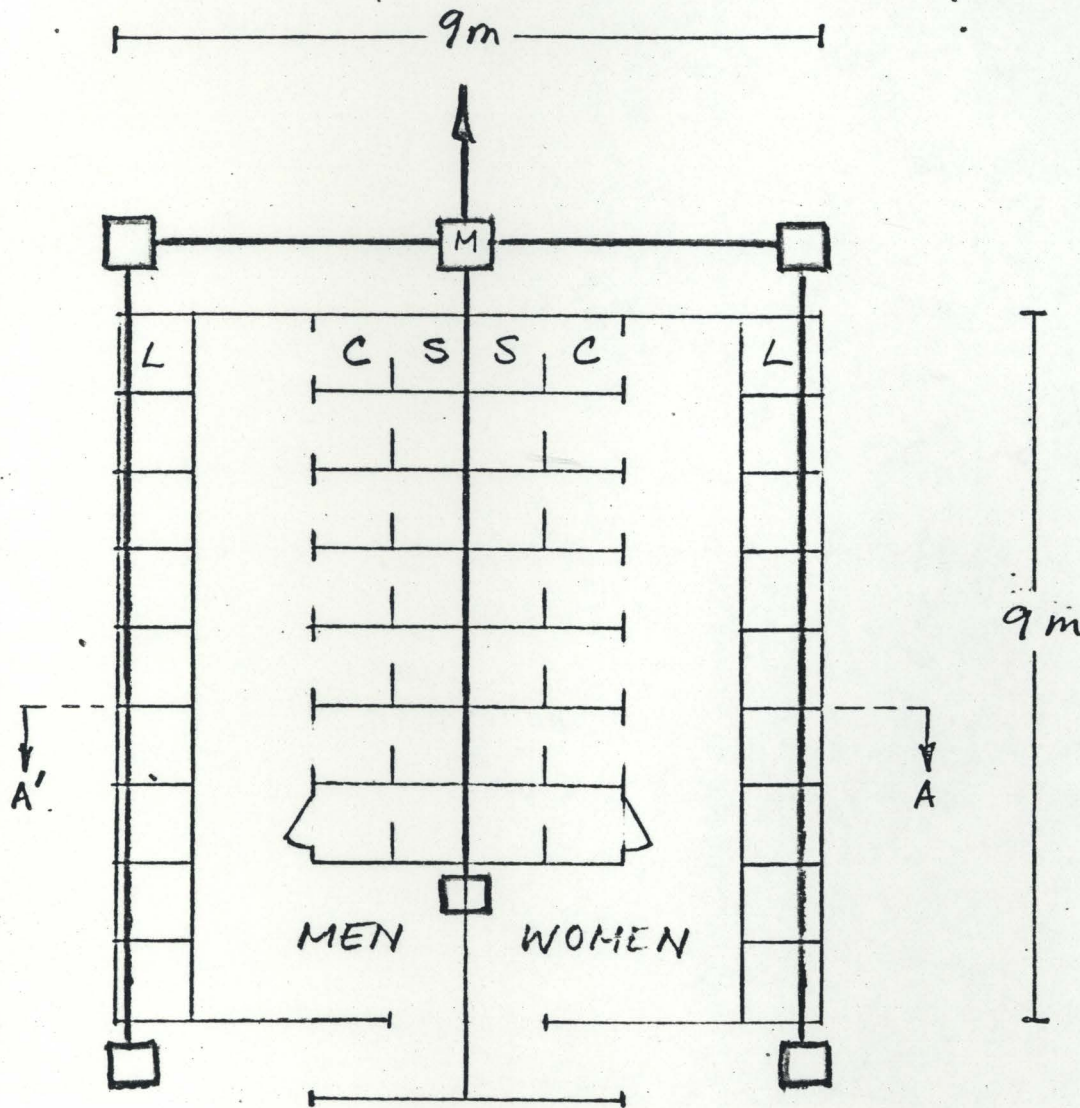
- | = Drainage system
- M = Manhole
- T = Toilet
- U = Urinal
- W = Wash basin

Scale 1:100

## SEPARATED TOILET AND BATHING FACILITIES

OPTION B : SQUARE PLANAPPROXIMATELY 80 m<sup>2</sup>, 800 CAPITA

## BATHING AND LAUNDRY BLOCK :



- I = Drainage system
- M = Manhole
- S = Shower
- C = Changing area
- L = Laundry

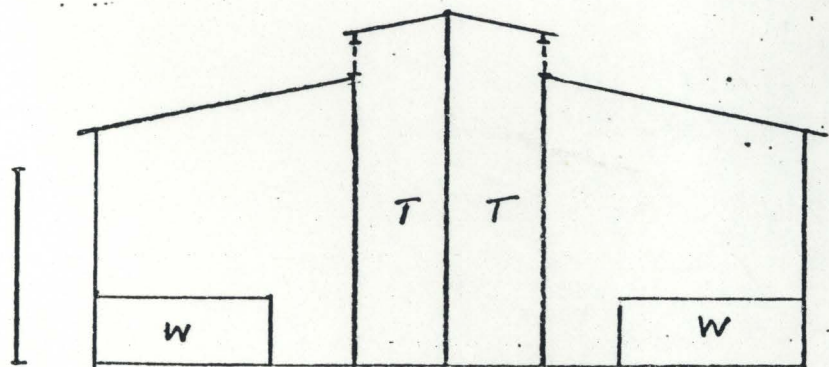
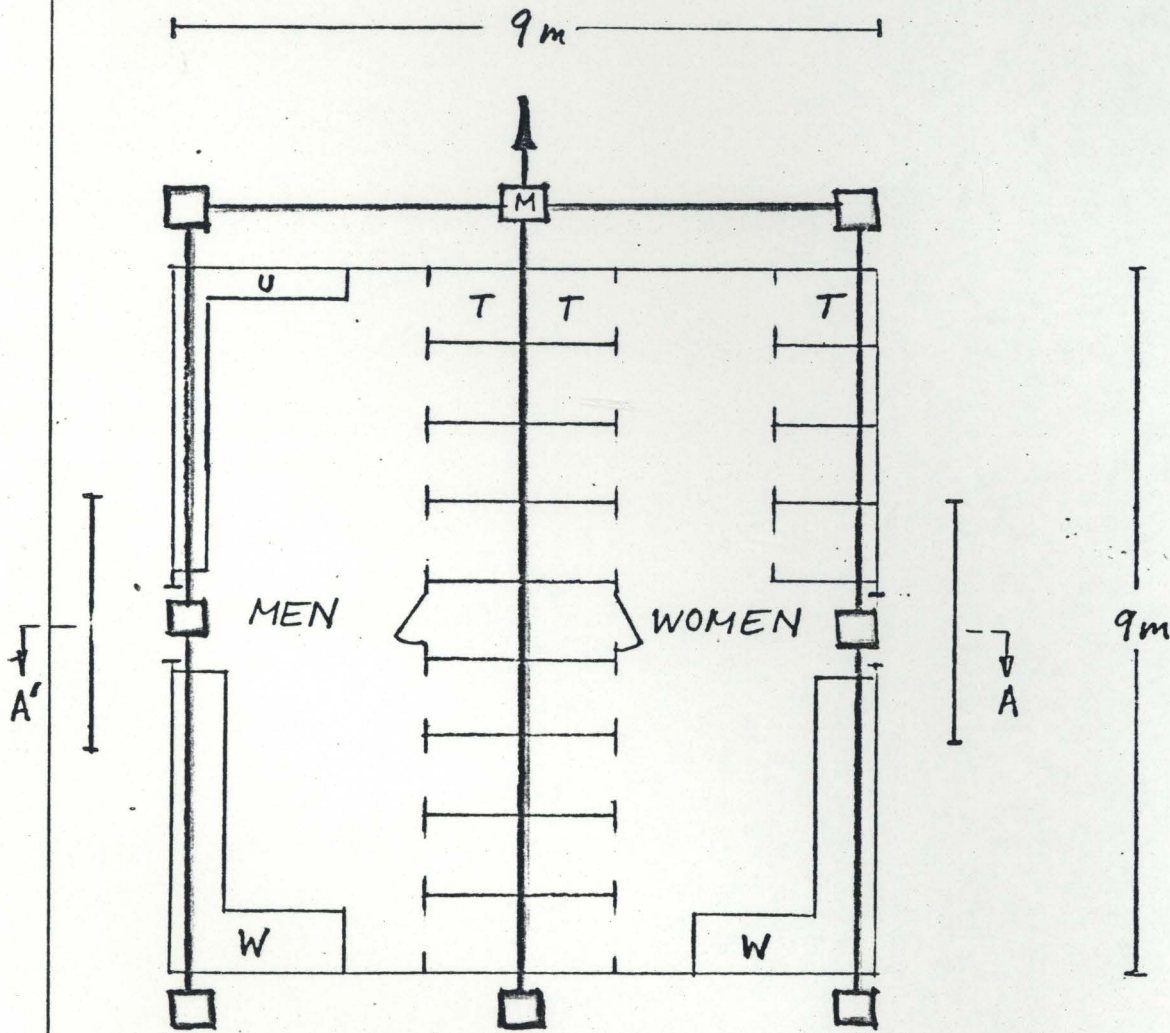
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# SEPARATED TOILET AND BATHING FACILITIES

## OPTION B: SQUARE PLAN

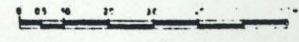
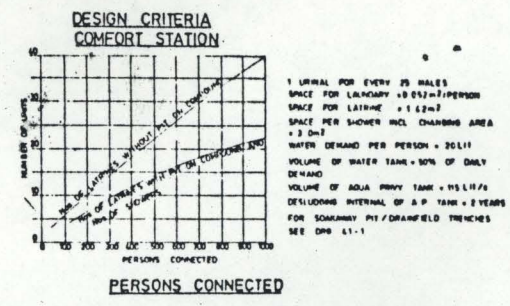
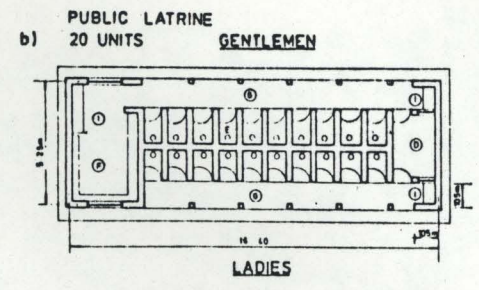
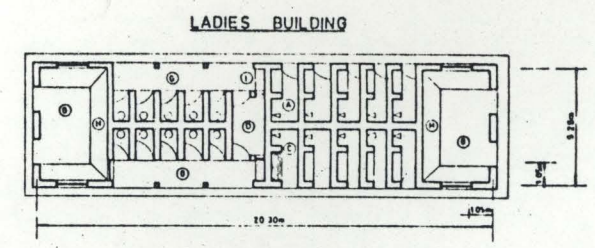
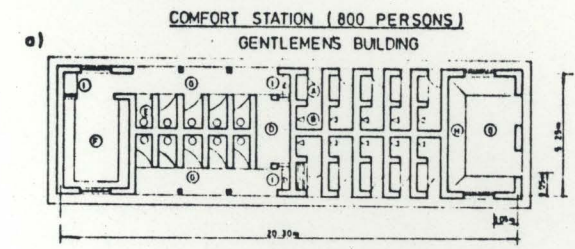
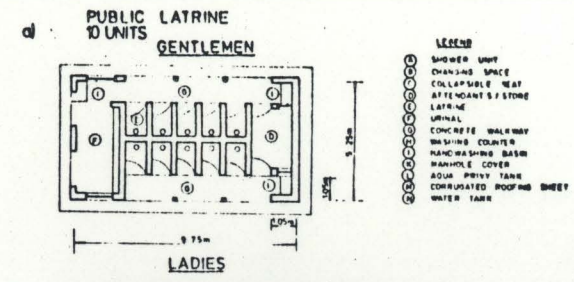
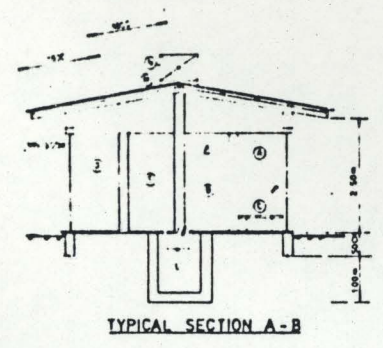
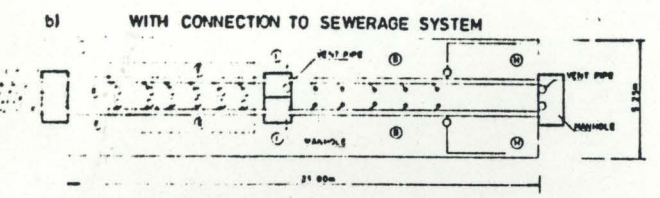
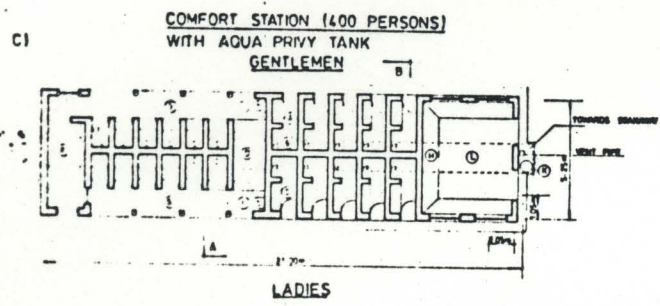
APPROXIMATELY 80 m<sup>2</sup>, 800 CAPITA

### TOILET BLOCK:



- I = Drainage system
- M = Manhole
- T = Toilet
- U = Urinal
- W = Wash basin

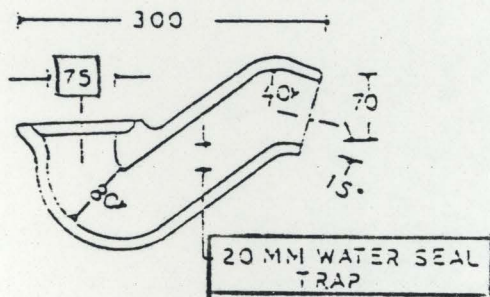
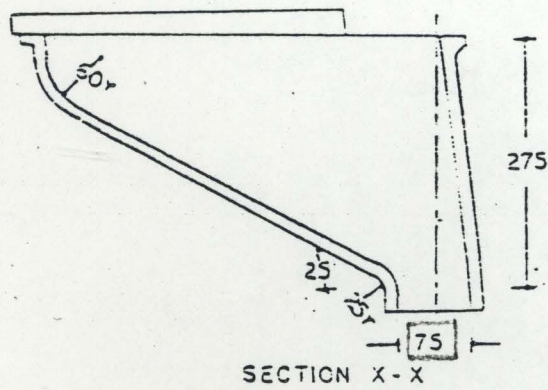
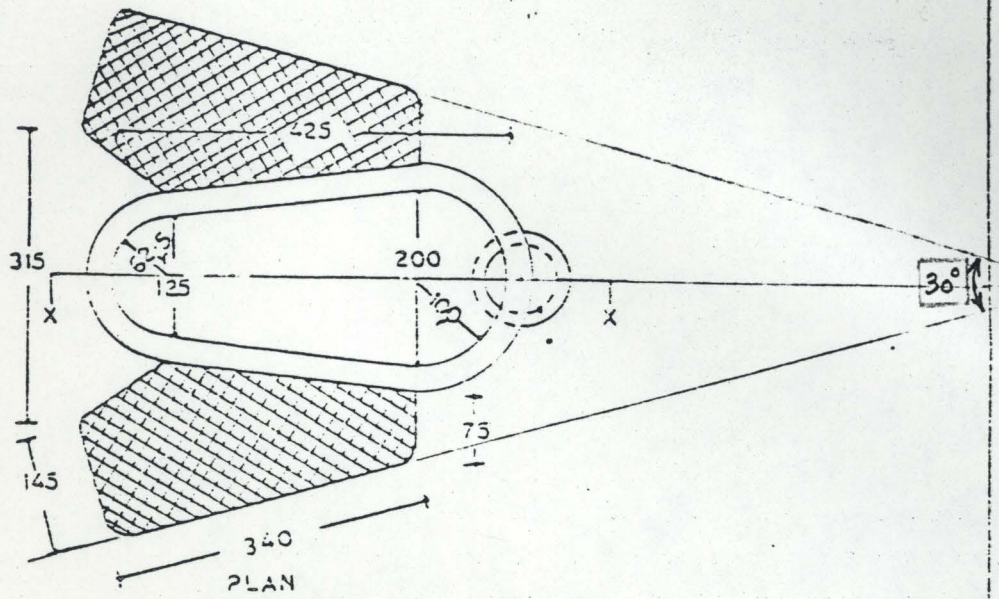
Scale: 1:100



DRG No 2-9

CONSULTANTS  
ENPLAN / GWK PLANNING GROUP

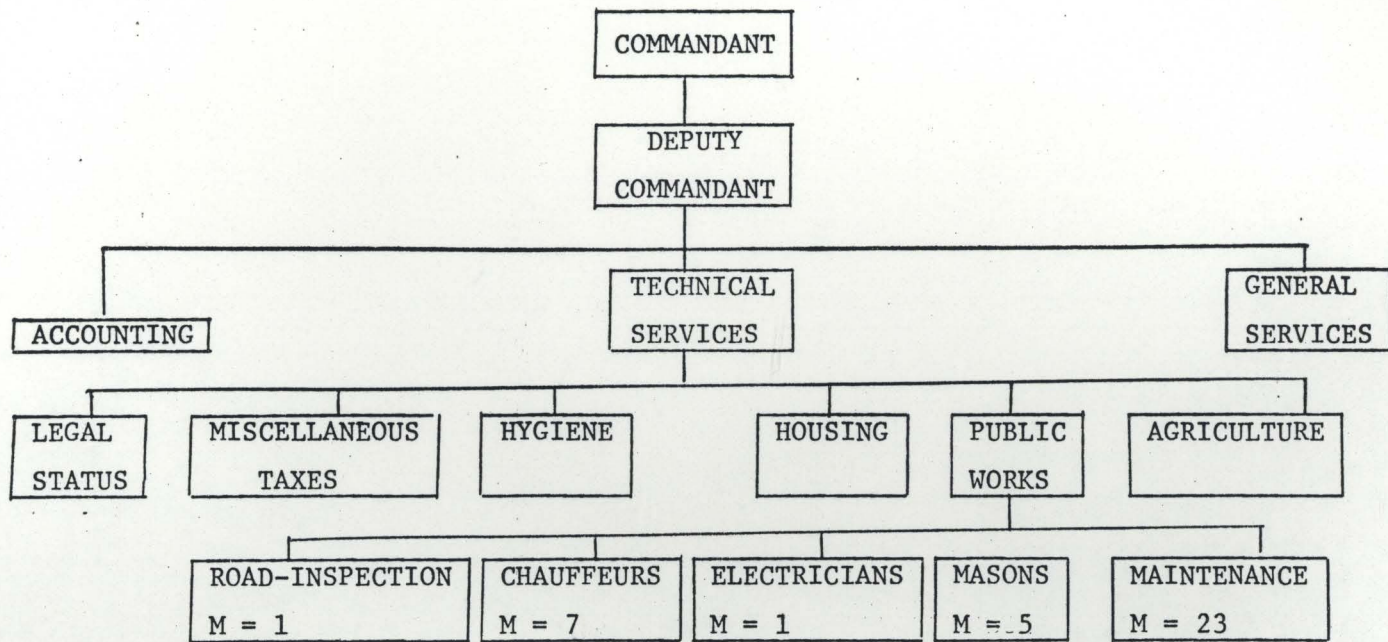
ENPLAN GROUP CONSULTING ENGINEERS AND PLANNERS ENJOU / NIGERIA  
CONSULTING ENGINEERS IN SANITARY ENGINEERING MANNHEIM & GERMANY



UNDP GLOBAL PROJECT GLO/73/006  
DESIGN OF SQUATTING PAN AND TRAP DEVELOPED  
BY INDIAN STANDARD INSTITUTION INDIA  
ALL DIMENSIONS IN M.M.  
SCALE - 1:300

A. K. ROY 3-5 80  
RESIDENT MANAGER SOUTH EAST ASIA

DISTRICT 5 (CONAKRY III) ORGANIZATION CHART



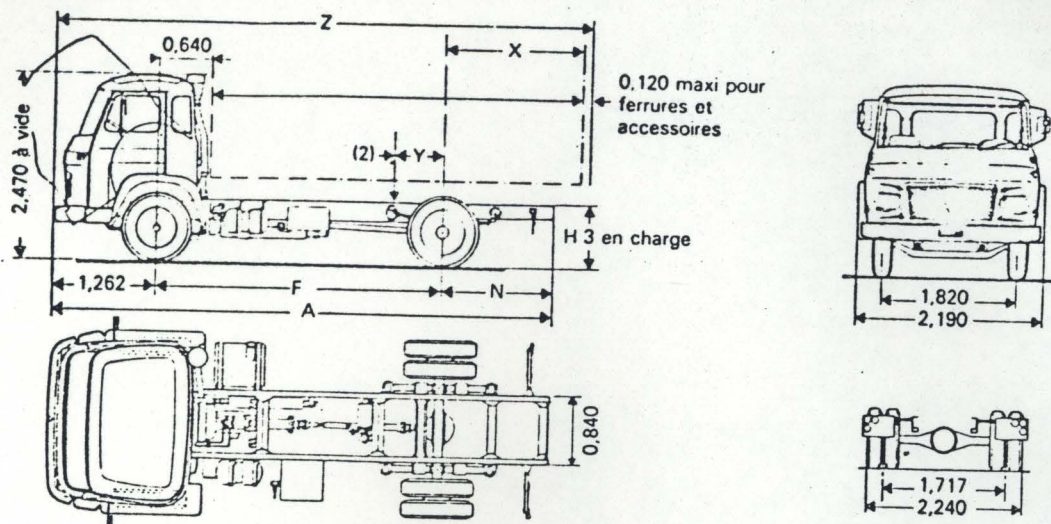
VARIOUS SPECIFICATIONS OF CONAKRY VACUUM TRUCKS

<u>TRUCK</u>	<u>NUM- BER</u>	<u>TYPE</u>	<u>HORSE POWER</u>	<u>TANK VOLUME (m3)</u>	<u>AXLES</u>	<u>WHEELS</u>	<u>LENGTH (m)</u>	<u>WIDTH (m)</u>
Ford 8000	6	DIESEL	175	24	3	10	7 1/2	2 1/4
Saviem SM8 (see next page)	1	DEISEL	150	6	2	6	7 1/4	2 1/4

<u>VACUUM PUMP</u>	<u>MODEL</u>	<u>TRUCK</u>	<u>HOSE DIAM. (mm)</u>	<u>POWER SOURCE</u>	<u>RPM</u>
Supersucker <u>1/</u>	2000	FORD	150	Take Off	1000-2200 (depending on viscosity)
DEMAG-SPIROS <u>2/</u>	Z7A13N	SAVIEM	100	Take Off	-

1/ Super Products  
P. O. Box 27225  
Milwaukee, Wisc. 53227

2/ Demag-Spiros  
75 Mie Denis Papin  
93507 Pantin, France  
TELEX: 210692 F  
TEL: 8436100



(2) Centre de gravité de la charge

Type		N	L	
POIDS (t)*	PTAC			
	Charge totale	13,000	13,000	
	Châssis-cabine (poids moyen indicatif)	9,145	9,100	
	Répartition			
	AV	2,285	2,255	
	AR	1,570	1,645	
	PTRA	21,500	21,500	
DIMENSIONS (m)*	A	6,112	7,262	
	F	3,500	4,000	
	H3	0,858	0,918	
	N	1,350	2,000	
	W	Maxi	4,658	5,474
		Mini	4,504	5,296
	X	Maxi	1,798	2,114
		Mini	1,644	1,936
	Y	Mini	0,531	0,623
		Maxi	0,608	0,712
	Z	Maxi	6,680	7,496
Mini		6,526	7,318	
R 3 (1)		7,050	7,960	

(1) Rayon virage hors tout

Limite maxi par essieu : AV : 4,0 t  
AR : 9,2 t

\* Poids et dimensions du type SM8-13

## Equipements optionnels

- Chapes d'attelage AV et AR;
- Siège central pour 2<sup>e</sup> passager.
- Ralentisseur électrique CA 135, ou sur échappement à commande pneumatique.
- Tension 24 volts et 2 batteries 12 V 95 Ah sur les 4 x 2.
- Réservoir 200 l, sauf sur SM 8 4 x 4.
- Porte-roue de secours derrière cabine et latéral.
- Ensemble remorquage.

## L'après-vente Renault Véhicules Industriels International : une garantie et une sécurité pour l'utilisateur

Renault Véhicules Industriels International est présent dans tous les grands centres et son organisation de Service repose toujours sur des concessionnaires et agents spécialisés dans le Poids Lourd.

Le constructeur se réserve le droit de modifier sans préavis ses modèles. Les côtes, les caractéristiques et les équipements ne sont donnés qu'à titre indicatif.



LOCAL COSTS OF VARIOUS CONSTRUCTION MATERIALS

<u>ITEM</u>	<u>UNIT</u>	<u>UNIT COST</u> <u>(SYLIS <math>\frac{1}{2}</math>)</u>
Portland cement	Ton	3,500
Gravel	M <sup>3</sup>	437
Sand	M <sup>3</sup>	500
Steel reinforcing rod (diameter unspecified)	Ton	21,000
Corrugated aluminum	90cm x 200 cm sheet	280
Laterite blocks	M <sup>3</sup>	300
Ordinary cement bricks		
(20cm x 40cm x 15cm)	Brick	25
(20cm x 40cm x 10cm)	Brick	18
Earthenware tile (basic grade)	M <sup>2</sup>	180
Earthenware tile (improved grade)	M <sup>2</sup>	290
Wood rafters/joists	M <sup>3</sup>	5,825
Wood shoring	M <sup>3</sup>	5,842
Excavation (normal ground)	M <sup>3</sup>	89
Excavation (rocky ground)	M <sup>3</sup>	160

1 - one Sylis = US \$0.053

Source: Ministry of Housing, Lands and Urbanism

900/78/006

sd 5338

FEBRUARY 27, 1981

Distribution: Mr. Middleton  
KATHMANDU NEPAL  
Mr. Shibusawa  
Mr. Yucer

102 FOR MIDDLETON INFO SHIBUSAWA, YUCER  
NEPAL - UNDP GLO/78/006, LOW COST SANITATION  
MET TODAY WITH H J MALLA, D G DWYR, AND SARA (WHO)  
WHO INDICATED THAT MARCH MSN WOULD BE MOST WELCOME. THERE  
DOES NOT APPEAR TO BE JURISDICTIONAL DISPUTE AND PROJECT  
IS FIRMLY UNDER SWSS // DWSS WHICH AS 2 LAKHS IN THIS YEARS  
BUDGET FOR PROJECT. BUDGET PROCESS FOR NEXT FISCAL YEAR  
NOW STARTED AND EUR MSN (NO LATER END MARCH) WOULD BE  
MOST HELPFUL IN DETERMINING ACCURATE FORCAST OF BUDGET  
NEEDS.

REGARDS  
ABBOTT

EXTERNAL  
NRIC F-338

ERIC-WHO

February 27, 1981

Dear Sir:

I refer to your letter of January 22 (ICP/EHP 005) inviting the World Bank to be represented at the WHO Working Group on Basic Sanitation Operators, Professional Profiles and Training Requirements, to be held in Delft from March 30 to April 3, 1981.

I am please do inform you that the World Bank will be represented by Mr. Johan Van Beuzekom, Engineer, Water Supply Division, Europe, Middle East and North Africa Projects Department, from April 1 to 3, 1981.

Sincerely yours,

Callie B. Boucher *C.*  
Deputy Special Representative for  
United Nations Organizations

Regional Director  
World Health Organization  
Regional Office for Europe  
8, Scherfigsvej  
DK-2100 Copenhagen, Denmark

Cleared in substance and cc: Mr. Thys  
cc: Mr. Van Beuzekom  
Files with incoming

PAizenman

OFFICIAL FILE COPY

## OFFICE MEMORANDUM

E12  
E.S.  
R/LG  
HTW  
WDP

TO: Mr. John M. Kalbermatten, Sr. Adviser TWT

DATE: February 26, 1981

FROM: S. Niaz, Senior Irrigation Engineer, AGR *mu*SUBJECT: UNDP Global Project - GLO 79/010

1. I refer to your memorandum of February 23, 1981 announcing the appointment of Mr. Arlosoroff as the manager of above project.

2. Presently a project for installation of 180,000 hand tubewells (hand pumps) for irrigation in Bangladesh is being processed (present stage green cover). This project also includes a research and testing component with the objective of finding and developing design improvements to increase the efficiency of manually operated tubewells. Apparently there should be a very close cooperation between UNDP GLO 79/010 and the proposed project in Bangladesh. Also the quickly expanding use of hand tubewells for irrigation in Bangladesh qualifies Bangladesh as one of the countries where the UNDP project should conduct field trials. ?

cc: Messrs. Pickering (AGR), Arlosoroff (TWT), Parsons, Hayward (ASP),  
Dunn (ASA)

SN:mm

## OFFICE MEMORANDUM

gwo/78/006

TO: Distribution (See below)

DATE: February 26, 1981

FROM Richard N. Middleton, Project Manager

SUBJECT: UNDP Global Project GLO/78/006: LESOTHO  
Rural Sanitation Project

Following discussions with UNCDF and UNICEF headquarters in New York on potential funding for this project,<sup>1/</sup> UNCDF has agreed to fund the capital elements of the rural sanitation project developed through GLO/78/006 and of a reactivation of the primary schools' sanitation program (LES/74/C32). This new UNCDF project will be numbered LES/80/CO2. Funding of the non-capital elements is expected from the Government, UNICEF, and possibly another donor brought in through UNICEF's "noting" procedures.

The first members of the UNCDF appraisal mission for LES/80/CO2 will start their preliminary field work shortly, and the full team (Geoffrey Read (TAG); Piers Cross and Sarah Becker, Consultants) will be in Lesotho from about March 20 to April 3. A copy of the mission terms of reference are attached for your information. If you have any comments or information which would be useful in the mission's work, I would appreciate receiving them by c.o.b. Thursday, March 5.

Distribution: Messrs. Ware, EAP; LaBahn, EAP; Gebhart, Polak, EA1; Singh, URB; Schebeck, PHN; Reese, EA1; Madavo, URB; Evans, PHN; Kalbermatten, Loewen (o/r) TWT

\*attachment

RMiddleton:ba

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<sup>1/</sup> See Mr. Geoffrey Read's mission report of January, 1981 a copy of which has already been sent to you under cover of my memorandum dated January 15, 1981.

20/28/006

Distribution (See below)

February 26, 1981

Richard N. Middleton, Project Manager

UNDP Global Project GLO/78/006: LESOTHO  
Rural Sanitation Project

Following discussions with UNCDF and UNICEF headquarters in New York on potential funding for this project,<sup>1/</sup> UNCDF has agreed to fund the capital elements of the rural sanitation project developed through GLO/78/006 and of a reactivation of the primary schools' sanitation program (LES/74/C32). This new UNCDF project will be numbered LES/80/CO2. Funding of the non-capital elements is expected from the Government, UNICEF, and possibly another donor brought in through UNICEF's "noting" procedures.

\* The first members of the UNCDF appraisal mission for LES/80/CO2 will start their preliminary field work shortly, and the full team (Geoffrey Read (TAG); Piers Cross and Sarah Becker, Consultants) will be in Lesotho from about March 20 to April 3. A copy of the mission terms of reference are attached for your information. If you have any comments or information which would be useful in the mission's work, I would appreciate receiving them by c.o.b. Thursday, March 5.

Distribution: Messrs. Ware, EAP; LaBahn, EAP; Gebhart, Polak, EAL; Singh, URB; Schebeck, PHN; Reese, EAL; Madavo, URB; Evans, PHN; Kalbermatten, Loewen (o/r) TWT

\*attachments

RMiddleton *ba*

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<sup>1/</sup> See Mr. Geoffrey Read's mission report of January, 1981 a copy of which has already been sent to you under cover of my memorandum dated January 15, 1981.

## OFFICE MEMORANDUM

TO: Distribution (See below)

DATE: February 26, 1981

FROM Richard N. Middleton, Project Manager

SUBJECT: UNDP Global Project GLO/78/006: LESOTHO  
Rural Sanitation Project

Following discussions with UNCDF and UNICEF headquarters in New York on potential funding for this project,<sup>1/</sup> UNCDF has agreed to fund the capital elements of the rural sanitation project developed through GLO/78/006 and of a reactivation of the primary schools' sanitation program (LES/74/C32). This new UNCDF project will be numbered LES/80/C02. Funding of the non-capital elements is expected from the Government, UNICEF, and possibly another donor brought in through UNICEF's "noting" procedures.

The first members of the UNCDF appraisal mission for LES/80/C02 will start their preliminary field work shortly, and the full team (Geoffrey Read (TAG); Piers Cross and Sarah Becker, Consultants) will be in Lesotho from about March 20 to April 3. A copy of the mission terms of reference are attached for your information. If you have any comments or information which would be useful in the mission's work, I would appreciate receiving them by c.o.b. Thursday, March 5.

Distribution: Messrs. Ware, EAP; LaBahn, EAP; Gebhart, Polak, EAL; Singh, URB; Schebeck, PHN; Reese, EAL; Madavo, URB; Evans, PHN; Kalbermatten, Loewen (o/r) TWT

\*attachment

RMiddleton:ba

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<sup>1/</sup> See Mr. Geoffrey Read's mission report of January, 1981 a copy of which has already been sent to you under cover of my memorandum dated January 15, 1981.

UNITED NATIONS CAPITAL DEVELOPMENT FUND

Feasibility Study of a Project Requested by the Government of Lesotho  
entitled "Rural Sanitation (LES/80/C02)"

Terms of Reference

1. The Government of Lesotho has requested the United Nations Capital Development Fund for capital assistance amounting to \$784,000 to finance a portion of Phase I of a long-term phased rural sanitation project. The total costs of Phase I are estimated to be some \$1.5 million. The objective of the project is to develop institutions, expertise, community participation, health education and experience in rural sanitation to enable adequate sanitation to be cost-effectively provided for the rural inhabitants in the long-term.
2. In order to provide sufficient appraisal information for consideration of the project by the UNCDF Project Committee, a feasibility study is required to prepare a definitive description of the project, the objectives thereof and all relevant factors bearing on its evaluation and implementation.
3. For the above purpose, a feasibility mission comprising a public health engineer, a health economist and a social anthropologist is required to visit the country in early 1981 for 3 weeks in order to review and appraise the project in the light of:
  - (a) the UNCDF main objective of financing only capital expenditures (up to a maximum of \$2 million per project) in projects providing direct and immediate benefits to the poorest segments of the population;
  - (b) the implementation capacity of the Government agencies and institutions, particularly with respect to their ability to meet the managerial, technical, material and financial requirements of the project;
  - (c) the integration and coordination of UNCDF assistance with other projects or institutions;
  - (d) the experience to date and any conclusions which can be drawn from the UNCDF-assisted Primary Schools Sanitation Project (LES/74/C32);
  - (e) the proposals made by consultants to UNCDF for the reactivation of Project LES/74/C32; these are contained in a report dated August 1979.
4. More specifically, the mission is required to collect basic data relevant to the appraisal of the project as follows:

/...



A. GENERAL

(a) review the Government's development programme in the sector or sub-sector concerned and determine whether the project meets a vital development need at the national, regional or target group level;

(b) determine the need for the project in terms of local economic and/or social conditions and demonstrate the extent to which the project will improve these conditions;

(c) determine whether the measures selected and the choice of technologies preferred constitute the most effective and profitable method of achieving the objectives;

(d) assess, wherever possible, by means of an economic evaluation (cost/benefit analysis, internal rate of return, cash flows), the cost-effectiveness of the project;

(e) determine the number, location (urban, semi-urban, rural) and economic condition (income level) of the direct beneficiaries of the proposed project and assess the value of direct and immediate benefits expected to accrue to the (i) least privileged sections of population (ii) other beneficiaries and (iii) economy in general;

(f) determine the total capital cost of the project, and provide detailed listing of inputs (buildings, machinery and equipment, vehicles, building materials, technical assistance, etc.) to be financed by (i) the Government, (ii) UNCDF, (iii) UNDP, (iv) other agencies, and (v) project beneficiaries;

(g) obtain and review the detailed plan of implementation including, as applicable, the role and function of proposed implementing and cooperating organisations; schedule of construction; phasing of project costs by year of expenditure; organization chart including manning tables, budgets and schedule of activities relative to the project; long-term operation and maintenance of the facilities constructed under the project;

(h) identify the technical specifications of equipment which needs to be procured under the project with the assistance. Such technical specifications should:

- be fully responsive to the particular conditions obtaining in the recipient country: Government standardization, if any, availability of maintenance services, spare parts, previous experiences and related factors;

- be complete so that the procurement action could follow immediately upon project approval;

(i) estimate the availability and levels of recurrent expenses (personnel, supplies, spare parts, power, water, fuel, transport and other resources needed) for the operation and maintenance of the proposed project;

- (j) determine the output of the project;
- (k) state realistic and measurable achievement indicators for monitoring and evaluating the project during its construction and operational phases;
- (l) assess the organizational, managerial and financial capabilities of the governmental and other national organization(s) entrusted with the implementation and operation of the project; and to make specific recommendations for any assistance which would appear required to ensure that the proposed UNCDF project will be successfully implemented and effectively operated;
- (m) assess the need for and recommend, as appropriate, technical assistance to complement the project; determine whether provision of expatriate technical personnel should be on a resident and/or consultancy basis;
- (n) indicate and suggest measures to minimize project risks; and
- (o) propose conditions precedent to disbursement and other conditions of UNCDF financing.

B. SPECIFIC

The mission shall in particular address the following:

- (a) Consider and evaluate the existing UNCDF Project "Sanitation for Rural Schools (LES/74/C32)" together with the proposals by Government for reactivation of the project. The adequacy and relevance of these proposals shall be evaluated, together with the need for any complementary inputs such as technical assistance, institutional strengthening and training.
- (b) Undertake a socio-cultural survey and evaluation of Project LES/74/C32, drawing from this any conclusions and recommendations which should be incorporated into the project; detailed Terms of Reference for ..... this survey are attached in Annex I.
- (c) All heads of project expenditure shall be itemized, showing source of finance (bilateral or multilateral donors, Government, project beneficiaries) including where relevant provision for cost contingencies and price escalation.
- (c) The implementation capacity of Government and respective Ministries to implement the project, together with recommended institutional and technical strengthening, technical assistance, and training to ensure effective project implementation.
- (e) The capacity of Government to absorb the project.
- (f) Coordination between the executing Ministry and the Ministry of Health and Social Welfare for public health and hygiene; the relationship of the project to the Water and Sanitation Steering Committee.

- (g) Project requirement for beneficiary-oriented information systems including health education.
  - (h) Project extension and replicability.
  - (i) Cost recovery requirements and possible mechanisms and models, together with mechanisms and recommendations for dealing with recurrent costs.
  - (j) The need for socio-cultural pre-assessment and testing of all technical proposals.
  - (k) Prepare recommendations for project monitoring and evaluation.
  - (l) Give particular attention to project proposals (including those for the Primary Schools Sanitation Project) for the operation, maintenance, emptying and treatment of facilities constructed under the project.
  - (m) Consider in particular the basic health needs (percieved and real) of women and children, and males compared to females
  - (n) The relevance and specific project requirements of implementation by self-help or other community-participation methods.
  - (o) Project design and evaluation shall include integral consideration of socio-cultural, technical and economic factors.
5. The mission will maintain close liaison with the UNDP Resident Representative (who is also the UNCDF Representative) in the country who will facilitate the work of the mission and guide it in its official contacts with the Government. The mission will debrief with the Resident Representative before departure.
6. Within the limits presented by the duration of the study, the mission may pursue and propose, with the agreement of the Government, any improvement to the project request, which it deems suitable to make the project more likely to succeed, either by altering the inputs or by adding new elements.
7. The mission will inform the Government authorities in a timely manner of the need for data or visits which it deems important or essential to properly appraise the project.
8. Although the mission should feel free to discuss with authorities concerned any subject relevant to its assignment, it is not authorized to make any commitments on behalf of UNCDF.
9. To the extent practicable, the mission should complete its draft report(s) while in the field. The final report should be typed and reflect the mission's assessment and recommendations, and should be submitted to UNCDF within 10 days of the date of completion of the mission in the field. The report will not be released until a decision regarding the project has been taken by the UNCDF Project Committee.
10. The mission will prepare a separate Summary of Feasibility Study, which must contain the information in the form specified in the attached Summary Outline for submission to the UNCDF Project Committee. Consultancy fees shall be paid only after confirmation by UNCDF that the feasibility report as well as its summary have been received at UNCDF Headquarters and found satisfactory.

11. Should the mission find that the main feasibility elements in the project are lacking and therefore the project is unlikely to be viable, it should immediately bring the matter to the attention of the Resident Representative with a view to preparing an abridged negative report, and devoting its time to finding a viable alternative project, with the agreement of the Government, on which a feasibility study should, if possible, be prepared by the mission in accordance with these Terms of Reference.

Socio-Cultural Evaluation of Primary Schools Sanitation Programme (PSSP) with Specific Reference to UNCDF Project LES/74/C32 - Sanitation for Rural Schools

Terms of Reference

1. In conjunction with the National University of Lesotho (NUL-Department of Sociology and Social Anthropology), an analysis of the social and cultural aspects of the PSSP shall be undertaken, and recommendations made on the extent of and approaches to the socio-cultural issues which will need to be addressed in rural sanitation in Lesotho in general and specifically for the reactivation of the LES/74/C32.

2. In particular, the following will be undertaken:

(a) Conduct a rapid survey of selected schools which have already received sanitation facilities through the PSSP to determine the level of use of facilities; constraints to usage; children, parents and teachers' attitudes towards the use of the facilities; children's attitudes to, and standards of, hygiene; male and female differences.

(b) Prepare case histories of the implementation to date of the PSSP in select schools, in order to evaluate the effectiveness of the self-help strategy adopted during the course of construction of the facilities, and maintenance and cleaning.

(c) Examine the social feasibility of combining, in certain instances, rural and primary school sanitation facilities, and examine the acceptability and need for extending sanitation facilities to include communal facilities for clothes, body and utensil washing.

(d) On the basis of these studies, make recommendations on the design and implementation for the reactivation of the LES/74/C32, including: detailing the extent of the support required at local, district and central level; the most appropriate social organisation and framework for beneficiary inputs to the project (in the form of cash, personal time, etc.) maintenance, cleaning, health education and beneficiary-oriented information systems; identifying social factors which affect programme design, implementation and impact and in particular the design of sanitation facilities.

(e) Design and commence implementation through NUL or other appropriate body, a programme to monitor and evaluate relevant socio-cultural factors on the existing facilities in the primary schools.

2/26/81

Mr. E. P. W. Cross, Consultant

February 26, 1981

Geoffrey Read, TAG

Supplementary Terms of Reference: LESOTHO  
Rural Sanitation Project - UNCDF LES/80/CO2

1. You will arrange to visit Lesotho from about March 3 to April 3 to participate in the preparation mission for the above project, which will, probably comprise the capital elements of a reactivated primary schools' sanitation project undertaken in conjunction with demonstration and piloting of individual household or communal latrines. Other members of the mission will be myself (leader) and Ms. Sarah Becker, who will join you in the field on about March 20 and March 12, respectively.

2. The general terms of reference for the mission are attached to UNCDF's letter to you dated February 2, 1981. The purpose of these supplemental terms of reference is to amplify your particular responsibilities and the activities which you should carry out prior to my arrival in Lesotho.

3. During the first two weeks of your mission, you will carry out a field evaluation of the UNCDF project "Sanitation for Rural Schools" (LES/74/C32), from the point of view of construction, use and maintenance. To do this, it is anticipated that you will make field visits to primary schools in the districts of Buthe Buthe, Thaba Tseka and Maseru and will hold discussions with local officials, teachers and parents. It is anticipated that you will be assisted by a staff member of the Department of Sociology and Social Anthropology of the National University of Lesotho. Ms. Becker will accompany you during the second week of this field work, and you will assist her in orientation, introductions and data collection.

4. Based on your previous review of the proposals for reactivation of the schools' sanitation program, and on the result of your field evaluation, you will prepare preliminary findings and recommendations on a revised strategy for the reactivated programs, to be discussed in workshops in each of the three districts concerned. You will be responsible for assisting the Government in making arrangements for these workshops, which should be timed for February 21 - 23. It is expected that these workshops will explore the arrangements for construction/rehabilitation of school latrines; financing and cost recovery, including coverage of operation and maintenance costs; institutional and community responsibilities for implementation (including PSC - program support communication), operation and maintenance; priority areas for reactivation, taking into account potential linkages with other programs (such as those for rural water supply and rural health); and the interface with the other components of the project which will provide individual household or communal latrines.

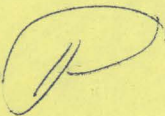
Mr. Cross

-2-

February 26, 1981

5. You will then work with the other team members in preparing, and agreeing in outline with local agencies, the mission report. This report will define the project which the mission recommends to UNCDF for financing and also the complementary inputs required from the Government, UNICEF or other donors without which the UNCDF investments would not be justified. You will be particularly responsible for the socio-cultural aspects of this report, including those aspects of the monitoring and evaluation of the project. This work must be substantially completed prior to your departure from Lesotho.

GRead:ba

A handwritten signature or set of initials, possibly 'P', written in dark ink. It is located to the right of the typed name 'GRead:ba'.

28/01/78/006

Ms. Sarah Becker, Consultant

February 26, 1981

Geoffrey Read, TAG

Supplementary Terms of Reference: LESOTHO  
Rural Sanitation Project UNCDF LES/80/CO2

1. You will arrange to visit Lesotho from about March 10 to April 3 to participate in the preparation mission for the above project, which will probably comprise the capital elements of a reactivated primary schools sanitation program undertaken in conjunction with demonstration and piloting of individual household or communal latrines. Other members of the mission will be myself (leader) and Mr. Piers Cross, who will arrive in Lesotho about March 3.
2. The general terms of reference for the mission are attached to UNCDF's letter to you dated February 2, 1981. The purpose of these supplementary terms of reference is to amplify your particular responsibilities and the activities which you should undertake.
3. On arrival in Lesotho, Mr. Barry Jackson (Sanitation Adviser, UNDP LES/80/002) will assist you in general orientation and in necessary introductions.
4. You will then accompany Mr. Cross on the field visits which he will be undertaking to evaluate the past school sanitation program (LES/74/C32). During these visits, it is anticipated that you will pay particular attention to:
  - (a) The justification on environmental sanitation and health grounds, for undertaking the project;
  - (b) local interest in improved household sanitation or in installation of school latrines;
  - (c) likely direct and indirect project beneficiaries (for which you will take into account such features as school attendance and the effect on acceptance of factors such as migrant labor, and, the resulting additional burdens placed on female heads of households);
  - (d) affordability, taking account of both ability and willingness to pay;
  - (e) institutional capabilities for implementation and operation and maintenance at the local level;



- 1 (f) the feasibility of undertaking sanitation activities through complete or partial self-help and the supportive institutional arrangements and complementary inputs that would be required to ensure that local inputs actually materialize as intended.
5. After due consultation with the other mission members, you will present your preliminary findings and recommendations on these aspects in the district workshops which will be organized in order to refine project strategy.
6. On return to Maseru, you will assess the organizational, managerial and financial capabilities of the Government (or other agencies) to implement and operate the project, and so develop recommendations on:
- (a) institutional framework and management structures;
  - (b) institutional strengthening and technical assistance requirements;
  - (c) Flow of funds from Government and donor agencies through the beneficiaries or local implementing agencies, and cost recovery policies and mechanisms (including remedies for default) as appropriate.
7. You will then work with the other team members in preparing, and agreeing in outline with local agencies, the mission report. This report will define the project which the mission recommends to UNCDF for financing and also the complementary inputs required from Government, UNICEF or other donors without which the UNCDF investments would not be justified. This work must be substantially completed prior to your departure from Lesotho.

GRead:ba 

9/10/78/006

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COMMUNICATIONS DIVISION

*[Handwritten signature]*

.GABORONE (WORLD BANK) 72 25 1630Z

WORLD BANK

WASHINGTON

MISC 387 FOR MIDDLETON TWT DEPT. FROM WILSON. HAVE HAD MEETING WITH HECHTENBERG CAN ASSURE YOU FUNDING OF PHE POST IS JUSTIFIED AS WILL BE SEEN IN REPORTS BEING CLEARED BY GOB. EYE ORIGINALLY EXPECTED INFORMAL COMMENTS ON WORKPLAN AS PER MY TELEX OF 18 DEC. BARCHART FORMAT WAS SUGGESTED BY GHR. IDENTIFICATION OF SUITABLE COUNTERPART IS A PROBLEM AND HAS BEEN TAKEN UP WITH DIRECTORATE OF PERSONNEL. TECHNICIAN LEVEL TRAINING HAS COMMENCED MEANWHILE. ACTIVITY PRIORITIES ARE BEING DISCUSSED WITH P.S. MLG AND L. REGARDS (ZAIDI UNDEVPRO GABORONE)

COL: MISC 387 18

NNNN

esw/78/006

Mr. Geoffrey Read, TAG

February 26, 1981

Heli Perrett, Social Science & Health Education Adviser

UNDP Global Project GLO/78/006: BOTSWANA: A Manual of Health Services  
Information Relevant to TAG Activities

\*

1. I am attaching for your information a copy of the above document published by the Ministry of Health, Gabarone, Botswana. If you have not seen it, you may want to glance at parts of it prior to your next mission there. It is particularly useful in providing background information on health patterns and in outlining existing Health education activities.

2. To save you time during this busy pre-mission period, I have noted below the relevant information and where it can be found in the document.

(a) Environmental Conditions and Disease Patterns:

- There is due emphasis on the role of inadequate sanitation facilities and unhealthy personal practices (pp 22-23).
- Communicable diseases prevalent in Botswana are noted in some detail (pp 70-82).

(b) Reference made to Relevant Institutional Structures and Responsibilities:

- It is noted that there is no separate unit for environmental health and sanitation in the Ministry of Health, but that prime responsibility at the central level lies with the Chief Health Inspector and the Principal Medical Officer of Health (p 18) and at the Regional Level with the Regional Health Inspector (p 49).
- The Department of Social and Community Development within the Ministry of Local Government and Lands (staffed with Community Development Officers) may be relevant in promotion of sanitation programs (p 18).
- Responsibility for health education within the Ministry of Health lies with the Health Education Unit of the Division of Family Health (p 16).

(c) Environmental Sanitation Programs:

- The report defines the problem and outlines past and expected future programs (pp 92-96).

(d) Pertinent Public Health Regulations and Health Bye-Laws:

- Mention is made of the fact that existing legislation provides for the safe disposal of human and animal waste, but no details are given (p 113).

(e) Health Education Activities:

- Organizational responsibilities are as specified in (b) above.
- Activities and staffing are noted (pp 26, 57-60, 67, 68). These suggest that staff are spread very thin indeed (or, that most of the activities are only on paper or very intermittent. The emphasis on increased decentralization seems good (p 57).
- The role of family welfare educators is worth noting since these may be the only staff actually doing anything outside Gabarone. Their activities apparently include advising communities on simple measures for hygienic disposal of refuse and giving health and hygiene talks to primary school children (pp 45-47).
- Reference is also made to Voluntary Community Service organizations (p 20) and their activities in water supply, but not sanitation.

3. A few comments on the Report's discussion of health education may be in order. First, it is, of course, focused on the activities of the Ministry of Health and may therefore not be comprehensive. Secondly, I find it to be a fairly "political" rather than technical account, with no mention of weaknesses or problems - and they are bound to exist. For instance, if Botswana is at all typical, very few of the primary school health education activities may materialize. Family welfare educators may be spending most of their time in health clinics rather than out on field visits. When visits do take place they may be dominantly occupied with follow-up and information collection duties and have little time to give to promoting sanitation. Ms. Nontuse Mberere may be able to say whether the preceding is, in effect, the case.

4. Attached to the Report is a copy of a letter from the Government requesting a Health Sector "Appraisal" Mission. This is a misnomer. Activities in the Bank Health Sector are only at the early reconnaissance stage (the mission is presently in the field). I shall check with them on their return (February 26) on any needed coordination between PHN and TAG.

Mr. Read

-3-

February 26, 1981

5. The following additional reports on Botswana appear to be relevant:

Blackmore, M. et al.: Low Cost Sanitation Research Project, Ministry of Local Government and Lands, July 1978.

Botswana Extension College: Report of the Primary Health Care Workshop, Gaborone, December 1977.

Darity, W. A.: A Report to the Ministry of Health on Health Education.

Fako, T. T.: Traditional Medicine and Organizational Issues in Botswana. National Institute for Research, University of Botswana and Swaziland, July 1978.

HPerrett:

\*attachment

cc: RMiddleton, Project Manager

2/20/78/006

## OFFICE MEMORANDUM

TO: Files

DATE: February 26, 1981

AK

FROM: Albert Howlett, Technical Assistance Officer (IRD)

SUBJECT: GLOBAL: Low-Cost Water and Sanitation (GLO/78/006)

On February 24, 1981, I received a telephone call from Mr. James Berna, Principal Program Officer, Division for Global and Interregional Projects, UNDP. He said that Mr. Loewen (TWT) had informed him that the preliminary final expenditures for the above mentioned project for 1980 were \$699,000. He asked if I had more recent information. I said I did not. He then advised me that the expected savings from other projects for 1980 has been less than expected, and he is no longer sure if the additional \$200,000 which UNDP expected to be able to provide to this project in 1981 will be available. I expressed dismay and said that this was contrary to what he had told Mr. Loewen previously. I said I would inform Messrs. Kalbermatten (TWT) and Middleton (TWT) as the Bank was proceeding on the assumption that an additional \$200,000 would be available in 1981. Mr. Berna said that no decision has been made, and that he would be back in touch with me.

cc: Messrs. Riley (IRD) o/r  
Kalbermatten (TWT) D901  
Middleton (TWT) D906  
Loewen (TWT) D918 o/r  
Ms. Retiro (CTR) I4-146

AHowlett/smm

Mr. Geoffrey Read, TAG

February 26, 1981

Richard N. Middleton, Project Manager

UNDP Global Project GLO/78/006 - Lesotho: Assistance to UNDP Global  
Project GLO/79/010

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I am glad to hear that, thanks largely to your initiative, handpump testing under GLO/79/010 will be undertaken in Lesotho, and that the British government is shipping a consignment of pumps for installation and testing. I hope that TAG staff will continue to bear in mind, in their field work, the opportunities of supporting Decade projects through GLO/79/010 and, in due course, the resource recovery project (GLO/80/004).

However, in order to ensure clear lines of communication and to avoid confusing our government counterparts, please ensure that you clear your activities in relation to these projects with both myself and the GLO/79/010 project manager, Mr. Arlosoroff. In general, this clearance should be in principle in relation to field discussions, but specific when it concerns London-based activities (such as cables, correspondence, verbal instructions, etc.).

Cleared with & cc: Mr. Arlosoroff

RNMiddleton:ph

2/20/78/006

February 25, 1981

Mr. Ole Bo Hansen  
Innovative Design Adviser  
Third Floor  
Producers Bank Building  
Buendia Avenue Ext.  
Makati, Metro Manila  
Philippines

Dear Mr. Hansen:

Mr. Roy has sent me a copy of your letter to him dated January 6 about low-cost sewerage for Metro Manila. (His own work is primarily concerned with non-sewered sanitation alternatives, and I do not think he is closely acquainted with the conditions in Manila.) I myself am not entirely sure, from your description, of the exact proposals on which you need advice, and given the extensive study and discussions which have preceded your project, am rather reluctant to give advice as an outsider, but perhaps I can make some general comments.

(a) No drainage system will work effectively unless solid wastes are kept out of the drains. If they are not, canal rehabilitation will be ineffective, ponding of polluted effluent will occur, and mosquito breeding will be encouraged. I imagine that PROGRESS work will therefore have to be closely integrated with the solid wastes project now being developed.

(b) Laying piped sewers to flat grades solely to reduce costs seems likely to be self-defeating. Although sewers carrying only effluent from septic tanks or pour-flush latrine vaults can be laid to falls of 1:150 or even 1:300, then sewers will probably choke if solids are introduced from other sources (e.g., yard or street drainage). To have combined sewers which are self-cleaning only in the wet season, as you suggest, seems to carry the real risk that they choke completely during the dry season.

(c) I do not understand exactly what is proposed in areas where you say that houses do not have running water or flush toilets (I presume you mean cistern-flush toilets; pour-flush units are, I believe, common in Manila). The openings in the canal covers would presumably be for surface water drainage (again, provided solid wastes were excluded); what would happen to sillage and excreta?

(d) I imagine that a useful point of departure for identifying possible low-cost solutions for your project in Manila would be a critical review of the sanitation and drainage systems currently being adopted under the various urban development projects in the country. Has this been done, and what was the outcome?



The foregoing may not, I am afraid, be of very much help to you, but I hope we may have a chance to discuss more specific problems when I next visit the Philippines. I also expect to discuss with the Bank's project engineer, Mr. Saravanapavan, the technical issues which you are facing.

You are probably aware of the research which the World Bank carried out on low-cost sanitation; some of the publications in draft were given to members of your joint venture when we organized a seminar for the Philippines Society of Sanitary Engineers. The final publications are now becoming available from our printers, and I enclose the first volumes for your information (I have also added your name to our mailing list so that you will in due course receive the further volumes in this series).

Please give my warm regards to Mr. Hinker and your counterparts in MWSS.

Yours sincerely,

Richard N. Middleton  
Project Manager

Enclosures

cc: Mr. Saravanapavan, AEP  
Ms. Bendokat, AEA  
Ms. Husain, PHN  
Mr. Roy, TAG

RNMiddleton

aw/10/806

Mr. Geoffrey Read, TAG

February 25, 1981

R. N. Middleton, Project Manager

UNDP Global Project GLO/78/006 - BRE Note N/147/80 - Affordable  
Sanitation for Developing Countries

Thank you for the copy of this note prepared by Ron Carroll. I am not sure whether this is a final document or a draft, but since you invite comments I presume the latter. I have not reviewed the text in detail, but some immediate reactions are:

(a) It is about time Carroll gave some acknowledgement to the work the Bank and others have been doing on low-cost sanitation -- at least inclusion in his list of references. I am not sure how much his designs owe to the Bank (and later TAG) (see also (e) below; you may be able to clarify this), but you will recall that as long ago as 1978, in Egypt, he was using Bank graphics (without clearance and unacknowledged) as lecture material, passing them off as his own. This was not well received here.

(b) Twin vent pipes for the PIP add substantially to the cost; the REC II Botswana design (alternating vents) seems better. Also, by locating them as shown in Figure 1, one at least tends to be shaded. Are we satisfied that 100 mm pipes are adequate?

(c) To specify emptying of dry pits by Vactor-type machine seems a mistake. I think the report should be more frank on the possible cultural taboos against reuse (so no emptying by owners in rural areas) and the exorbitant costs of the Vactor-type machines (which we are not yet convinced will do the job in any case).

(d) Have trials been carried out on the RIP to ascertain whether the bottom gravel/sand layer allows adequate long-term vertical percolation? Surely this design could be made cheaper and simpler by omitting the media; it would then function as a wet pit for some of the year and as a dry pit for the remainder (see field manual, Fig. 5-5). The lateral sandpacks should ensure adequate percolation capacity during seasons when the water table is low.

(e) The DIP is surely an Indian design, and not BRE's? (See TAG working paper on PF latrines, CBRI's optimization of shapes, etc.)

(f) Vent pipes have been found in India to be unnecessary with PF latrines.

(g) The DIP appears to be emptied through the superstructure. This would be unacceptable in many situations (i.e., where a PF is installed in the house). In principle, the double offset pit appears to be a far better design, but the design in Figure 7 is more complex than necessary (twin squat slabs and twin pipes); one slab and a Y-branch are all that are required.

(h) I do not believe that a 12 mm waterseal is feasible with local standards of fabrication and construction; 20 mm would be nearer the mark.

(i) Are we to assume from the acknowledgement to John Lewis that these designs are guaranteed not to pollute groundwater? That is what might be assumed by some readers.

Overall, while I know that Carroll has to be seen by ODA to be making a valuable contribution to sanitation development, I would like to reiterate my first point; I cannot help feeling annoyed that he seems intentionally to ignore the very considerable amount of work done by other people on these subjects. This attitude (if I have interpreted it correctly) will make the planned collaboration between TAG and BRE rather difficult. I do not intend to follow this up with Carroll myself. Perhaps you could persuade him to:

- (a) moderate his claims;
- (b) reflect more closely the design improvements arising from the Bank/TAG work;
- (c) give due acknowledgement.

RNMiddleton:ph

**WORLD BANK OUTGOING MESSAGE FORM (Telegram, Cable, Telex)**  
IMPORTANT (PLEASE READ INSTRUCTIONS BELOW BEFORE TYPING FORM.)

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NEW DELHI, INDIA

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FOR GEORGE BEIER FOR A K ROY OF UNDP GLO/78/006. REURTEL  
FEBRUARY 13 ON NEPAL. WE HAD PREPARED PROJECT DOCUMENT FOR  
POSSIBLE UNDP IPF FUNDING OF SANITATION ADVISER BUT LAST WEEK  
DECIDED NOT TO PROCEED BECAUSE ALPHA PROGRAMS DIVISION ADVISE  
THAT FOLLOWING GOVERNMENT REORGANISATION LDD AND DWSS  
RESPONSIBILITIES FOR SANITATION UNCLEAR BETA PROJECTS DIVISION  
OBJECTED TO DETAILS OF DOCUMENT. WE HAVE TELEXED ABBOTT  
INTBAFRAD KATHMANDU ASKING HIS VIEWS ON INSTITUTIONAL POSITION  
AND WHETHER MISSION END MARCH TO DISCUSS PROJECT REACTIVATION  
WOULD BE APPROPRIATE. WILL TELEX YOU AGAIN ONCE ABBOTTS REPLY  
RECEIVED. WILL ALSO TELEX FOR YOUR COMMENT SOME IDEAS ON  
REACTIVATION AND BEST USE TWO HUNDRED THOUSAND REPEES EARMARKED  
IN DWSS BUDGET. REGARDS, RICHARD MIDDLETON

**NOT TO BE TRANSMITTED**

SUBJECT: UNDP GLO/78/006 - INDIA	DRAFTED BY: RNMiddleton:ph
CLEARANCES AND COPY DISTRIBUTION: cc: Messrs. Lamson-Scribner, Skytta, ASP; Shibusawa, Loos, ASA; Evans, Schebeck, PHN	AUTHORIZED BY (Name and Signature): <i>Richard N. Middleton</i> , Project Manag.
	DEPARTMENT: UNDP GLOBAL PROJECT GLO/78/006
SECTION BELOW FOR USE OF CABLE SECTION	
CHECKED FOR DISPATCH <i>W</i>	

государств БНН  
всех стран мира, в том числе СССР  
с: Москва, Лондон, Париж, Нью-Йорк, Вашингтон, Бразилия, Мадрид

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INDIA - GOVERNMENT

1981 FEB 23 PM 9:02

CABLE SECTION

IN 1980 BUDGET... REACTIVATION AND BEST USE TWO HUNDRED THOUSAND... RECEIVED... WOULD BE APPROPRIATE... AND WHETHER MISSION END MARCH TO DISCUSS PROTECT REACTIVATION... OBJECTED TO DETAILS OF DOCUMENT... RESPONSIBILITIES FOR SANITATION... THAT FOLLOWING GOVERNMENT REORGANIZATION... DECIDED NOT TO PROCEED BECAUSE... POSSIBLE UNDER THE FUNDING OF SANITATION... FEBRUARY 23 ON MEXICO... FOR GEORGE BATES FOR A K BOX OF INDIA GOVERNMENT

ADD

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February 23, 1981

Mr. Johnny A. Chemfor  
AFRICARE  
B.P. 10534, Niamey  
Niger

Dear Mr. Chemfor:

Thank you for your letter. I am glad to hear that you have settled in satisfactorily and started work.

As you request, I enclose some brief brochures on the GLO/78/006 project. If the Government wants to receive assistance from the project, an application should be made in the first instance to the Resident Representative of UNDP. He then channels this to UNDP headquarters in New York, and they in turn inform me. This initial expression of interest does not entail any financial or other obligations on the part of the Government, so it can be informal and brief (but if it originates in one of the technical ministries it will normally need to be channelled through the ministries dealing with planning or overseas aid; I am not sure what the procedure is in Niger).

Following this initial Government enquiry, we would normally arrange a reconnaissance mission to discuss exactly what form of assistance we could give (which in the past has been almost entirely technical assistance in project development, followed by assistance in identifying donors to finance project implementation). That mission would also need to identify appropriate counterpart agencies and the input that they could provide, so that we could have some idea of the scope of the project. In the past we have worked mainly with Government or municipal agencies responsible for the water supply and sanitation sector, but, given Government approval and backing, we could work equally well with non-Governmental organizations. Our major concern is that the Government wants our help and that there is some counterpart institution with which we can work; after that the rest is merely a matter of detail.

I am enclosing the first three volumes of the World Bank publications on water supply and sanitation. I have added your name to our computerized mailing list, so you should receive the rest as they become available. Please let me know if there are other people in Niger who you think should be included in this list. (At the moment I am afraid that these documents are only available in English.)

You ask about seminars for sanitary engineers, but this is such a broad topic that I am not sure where to start. Perhaps you can give me a more precise idea of what form of seminars you are interested in, and we may be able to give you some advice (your local WHO representative should, of course, have general information on training opportunities in the region).

You also ask about forming an African Society of Sanitary Engineers, because most of the designs which you see are clearly inappropriate to the real world. From our conversations, you will know that I absolutely agree with your insistence on designing to suit local traditions and practices, but I doubt whether a society such as you envisage would necessarily improve the situation very fast. There are, as you know, very few professional sanitary engineers at all in Africa, and few of those that exist are likely to pay much attention to low-cost sanitation (and there is a strong case that their scarce expertise would be better employed on the more complex technical problems, leaving low-cost sanitation largely to others). I think we are more likely to make the necessary improvements by working with a wide range of disciplines, and then presenting well-conceived and executed projects to convince the engineering profession to change its ways. I suggest that you discuss this further with your professional colleagues; in particular, I would strongly recommend talking with Professor Albert Wright, Kumasi University, Kumasi, Ghana who is deeply concerned with the development of more appropriate sanitary engineering in Africa and who has worked with our project quite extensively.

Yours sincerely,

Richard N. Middleton  
Project Manager

Enclosures

GLO/78/006

Mr. J. M. Kalbermatten, Senior Adviser, TWTWW

February 23, 1981

R. N. Middleton, Project Manager

UNDP Global Project GLO/78/006 - Potential Ground Water Pollution and  
On-Site Sanitation

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For some time, TAG has been collaborating with IRCWD on a study of this important aspect of low-cost sanitation projects. In preparation for the international meeting on the topic, held in Delhi last month, three basic documents were prepared:

- (a) A literature review;
- (b) A typical project proposal for field investigation work; and
- (c) A report on ground water quality monitoring methodology.

I understand from your latest mission report that responsibilities for document distribution have not yet been finally allocated between IRCWD and IRC (The Hague). In due course, I hope these publications will be acceptable for distribution either through one of these reference centers as part of the basic Decade literature, or through the Bank's own distribution system. Meanwhile, I would be grateful for your comments or clearance of the drafts so that we may, in consultation with IRCWD, finalize the texts.

Enclosure

2 copies of each document

cc: Read, TAG  
Schertenlieb, IRCWD



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Telex No.: 953313 150 Originators Ext: 75304

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*gl0/78/006*

INTBAFRAD  
NEW DELHI, INDIA  
503

FOR GEORGE BEIER FOR A K ROY OF UNDP GL0/78/006. RE POUR FLUSH  
LATRINES EYE UNDERSTAND DANISH ENGINEER COLLEAGUE OF FEACHEM  
AND READ IS VERY INTERESTED IN UNDERTAKING THREE MONTH FIELD  
STUDY TOUR IN INDIA TO COLLECT FIELD DATA ON POUR FLUSH LATRINE  
DESIGN AND PERFORMANCE WITH A VIEW TO PRODUCING AGREED DESIGN  
CRITERIA STOP HE IS DRAFTING PROPOSAL FOR RESEARCH FUNDING  
WHICH MUST BE SUBMITTED 7 MARCH STOP WOULD YOU POSSIBLY BE ABLE  
TO ASSIST IN MAKING NECESSARY INTRODUCTIONS FOR HIM AND GIVING  
ADVICE AND GENERAL SUPPORT STOP HE WILL PAY HIS OWN WAY AT ALL  
STAGES STOP HE PROPOSES VISIT SINGHUR PATNA AHMEDABAD AND  
POONAMALEE STOP BELIEVE GEOFF READ MENTIONED THIS YOU BRIEFLY  
IN DELHI AND ALSO DISCUSSED IT WITH PROF SUBA RAO CALCUTTA  
WHO PROMISED ENTHUSIASTIC SUPPORT STOP RESEARCHER WOULD  
PROBABLY START MAY OR JUNE 1981 IF HE OBTAINS FUNDING STOP  
PLEASE ADVISE YOUR COMMENTS SOONEST. REGARDS, RICHARD MIDDLETON

NOT TO BE TRANSMITTED

SUBJECT: <b>UNDP GL0/78/006</b>	DRAFTED BY: <b>RNMIDDLETON:ph</b>
CLEARANCES AND COPY DISTRIBUTION:	AUTHORIZED BY (Name and Signature): <b>Richard N. Middleton, Project Manager</b>
	DEPARTMENT: <b>UNDP Global Project GL0/78/006</b>
	SECTION BELOW FOR USE OF CABLE SECTION CHECKED FOR DISPATCH

DISPATCHED

UNDE PROJECT STATION

PROJECT MANAGER

UNDE PROJECT

UNDE PROJECT

1981 FEB 24 PM 10: 39

COMMUNICATIONS SECTION

PLEASE ADVISE YOUR COMMENTS SOONEST. REGARDING RICHARD WIDDGELON  
 PROBABLY START MAY OR JUNE 1981 IF HE OBTAINS FUNDING STOP  
 WHO PROMISED ENTHUSIASTIC SUPPORT STOP RESEARCHER WOULD  
 IN DELHI AND ALSO DISCUSSED IT WITH YOUR SIBY AND COLLEGA  
 BOOKMATE STOP BELIEVE GEORGE WOULD MENTIONED THIS AND BELIEVE  
 STATES STOP HE PROPOSES VISIT SINGAPORE EARLY MARCH AND  
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 STUDY TOUR IN INDIA TO COLLECT FIELD DATA ON BOTH FRESH WATER  
 AND WOULD BE VERY INTERESTED IN UNDERTAKING THREE MONTH FIELD  
 VISITS ARE UNDERSTAND FINISH ENGINEER COLLEGE OF RESEARCH  
 FOR GEORGE WELSH FOR A K BOX OF UNDE PROJECT STOP HE BOTH FRESH

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WORLD BANK OUTGOING MESSAGE FORM (Telegram, Cable, Telex)

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*glo/78/006*

TO INTBAFRAD

CITY/COUNTRY NEW DELHI. INDIA

MESSAGE NO 483

FOR VINCENT RILEY. RE PROPOSALS FOR LOW COST SANITATION PROJECT  
IN NEPAL, BANGLADESH, LAO PDR AND MALDIVES AND PROPOSAL FOR  
SANITATION ADVISER FOR NEPAL CONTAINED LOEWEN'S MEMO FEB 14.  
WE CONFIRM THAT AT REQUEST OF REGIONAL WATER SUPPLY DIVISION  
TWT AGREES NOT TO PROCEED FURTHER WITH THESE PROJECTS AT THIS  
TIME. TWT RECOMMENDS PROCEEDING WITH PRESENTATION PROPOSALS FOR  
RESOURCE RECOVERY AND MULTIPURPOSE PUMPS FOR POSSIBLE INCLUSION  
UNDP'S REGIONAL PROGRAM FOR ASIA. REGARDS, ALBERT HOWLETT.

NOT TO BE TRANSMITTED

SUBJECT: <b>UNDP GLO/78/006 - INDIA</b>	DRAFTED BY: <b>RNMiddleton/AHowlett:pn</b>
CLEARANCES AND COPY DISTRIBUTION: cleared with and cc: Mr. Howlett, IRD; Mr. Kalbermatten, TWTWW cc: Messrs. Loewen, TWT; Yucer, IRD; Panfol, ASP	AUTHORIZED BY (Name and Signature): <i>[Signature]</i> <b>Richard N. Middleton, Project Manager</b>
	DEPARTMENT: <b>UNDP GLOBAL RROJECT GLO/78/006</b>
	SECTION BELOW FOR USE OF CABLE SECTION CHECKED FOR DISPATCH <i>[Signature]</i>

1981 FEB 27 10 50 AM  
COMMUNICATIONS SECTION  
cc: Messrs. Goehri INT: Ansel INT: [unclear]  
ML: Kappelmann INT: [unclear]  
created with and cc: ML: [unclear] INT: [unclear]  
INDY EG0224009 - INDIA

INDY'S REGIONAL PROGRAM FOR ASIA. REGARDING RICHARD WIDD...  
RESOLVE RESOLVE AND MULTIPROPOSE FORMS FOR POSSIBLE INCLUSION  
TIME. INT RECOMMENDS PROCEEDING WITH PRESENTATION PROPOSALS FOR  
INT AGREES NOT TO PROCEED FURTHER WITH THESE PROPOSALS AT THIS  
RE CONFIRM THAT AT REQUEST OF REGIONAL WATER SUPPLY DIVISION  
SANITATION ADVISE FOR MEMO CONTAINED GOEHRI'S MEMO FEB 14  
IN MEMO BANGALORE. TWO FOR AND MULTIPROPOSE AND PROPOSAL FOR  
FOR LICENSE WIDE. RE PROPOSALS FOR FOR COST SANITATION PROTECT

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GLO/78/006

1981 FEB 20 AM 7:53

COMMUNICATIONS DIVISION

NEWDELHI, FEBRUARY 20, 1981

WORLDBANK  
WASHINGTON DC

Distribution:

Mr. Middleton

Mr. Dunn

FOR MIDDLETON - TWT

URTELEX 448 REGARDING BANGLADESH

SINCE GOVERNMENT HAD NOT PROPOSED ANY EXPANSION OF THE CURRENT PROGRAMME UNDER UNDP IPF FUNDS FOR BANGLADESH EYE DID NOT HAVE ANY DISCUSSION ON THIS ISSUE AT DACCE. EYE HAD PRESUMED THAT CURRENT PROJECT PREPARATION OF 10 TOWNS AND GUIDANCE FOR 500 DEMONSTRATION PROJECTS AND MONITORING OF THE SAME HAVE TO BE COMPLETED WITH UNDP GLO/78/006 FUNDING AND WHAT EVER ASSISTANCE AVAILABLE FROM UNICEF. HOWEVER EYE AM NOW ENQUIRING FURTHER IN THE MATTER FROM HUSSAIN. IN VIEW OF THE DIFFICULTIES EXPERIENCED IN GETTING GOVERNMENTS ACCEPTANCE OF PROPOSAL OF

500 DEMONSTRATION UNITS, EYE DID NOT THINK IT PRUDENT TO RAISE  
FURTHER EXPANSION OF THE PROGRAMME DURING MY DISCUSSION WITH  
THE SECRETARY TO GOVERNMENT AT DACCA. REGARDING LEGAL AND  
ADMINISTRATIVE STUDY, MR HASSAN HAD SUGGESTED THE DEPARTMENT <sup>2/20/78/006</sup>  
OF PUBLIC ADMINISTRATION FOR THIS STUDY AS HE CONSIDERED THAT  
IT HAD THE REQUIRED CAPABILITY. ON CONTACTING THEM HE LATER  
FOUND THAT THEIR CARGES WERE VERY HIGH AND THEY NEEDED MORE  
TIME WHICH WE COULD NOT AFFORD. HE THEREFORE SUGGESTED WHEN  
EYE WAS LEAVING DACCA THAT PRIVATE FIRMS IN WHICH UNIVERSITY  
PROFESSORS WERE WORKING PART-TIME COULD CARRY OUT THE STUDIES  
EFFICIENTLY AND AT A LESSER COST. EYE AM AWAITING THE RESULT  
OF HIS INVESTIGATION. AWAITING GIBBS REACTION TO MY LETTER  
DATED JANUARY 20 FOR FUNDING THE STUDY.

NEW SUBJECT EYE INFORMED BY ASRANI JOING SECRETARY DEA GOI  
THAT MEETING FOR CONSIDERING ALL UNDP IPF FUNDED PROGRAMMES  
OF INDIA IS LIKELY TO BE HELD IN SECOND WEEK OF MARCH.

REGARDS

AK ROY

**WORLD BANK OUTGOING MESSAGE FORM (Telegram, Cable, Telex)**  
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Class of Service: TELEX Date: 20 FEBRUARY 1981  
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INTBAFRAD  
KATHMANDU, NEPAL  
161

FOR ABBOTT RE UNDP GLO/78/006 LOW COST SANITATION. WE WOULD WELCOME YOUR VIEWS ON WHETHER LATE MARCH MISSION WOULD BE APPROPRIATE TO REACTIVATE THIS PROJECT AND TO AGREE ON MOST EFFECTIVE USE OF COUNTERPART FUNDING IN DWSS BUDGET WHICH WE WOULD EXPECT TO USE ON BUILDING AND MONITORING DEMONSTRATION LATRINES IN SELECTED URBAN COMMUNITIES. ALPHA WE CLEARLY WOULD LIKE TO RESTART PROJECT SINCE PAST LONG PERIOD OF INACTIVITY MUST HAVE HAD SEVERE IMPACT ON OUR CREDIBILITY ALTHOUGH EVENTUALLY IT WILL BE TO BENEFIT OF NEPAL WHICH WILL BE ABLE TO LEARN FROM INDIA EXPERIENCE. BETA HOWEVER PROGRAMS DIVISION ADVISE DIVISION OF RESPONSIBILITIES BETWEEN LDD AND DWSS STILL FAR FROM CLEAR. GAMMA GIVEN BANK PROBLEMS WITH MINISTRY WATER RESOURCES AND EFFECTIVENESS ISSUE ANY MISSION EVEN ON UNDP PROJECT MAY BE UNDESIRABLE. DELTA WE EQUALLY DO NOT WANT TO TRY RESTARTING IF COUNTERPART AGENCIES DISORGANIZED OR UNREADY. REGARDS, RICHARD MIDDLETON

**NOT TO BE TRANSMITTED**

SUBJECT:  
**UNDP GLO/78/006 - NEPAL**  
CLEARANCES AND COPY DISTRIBUTION:  
cc: Messrs. Lamson-Scribner, ASP;  
Ms. Loos, ASA; Evans, PHN  
Mr. Shibusawa, ASA; Mr. Roy, TAG

DRAFTED BY:  
**RNMiddleton:pn**  
AUTHORIZED BY (Name and Signature):  
*Richard N. Middleton*  
**Richard N. Middleton, Project Manager**  
DEPARTMENT:  
**UNDP GLOBAL PROJECT GLO/78/006**  
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1981 FEB 24 AM 3: 21  
COMMUNICATIONS SECTION

OF UNIVERSITY... RICHARD MIDDLETON  
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FOR... BE... FOR... EVALUATION... HE...

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glo/78/006

20 February 1981

Mr. Peter G. Bourne,  
Coordinator,  
United Nations Development Programme,  
1750 New York Avenue,  
Washington, D.C. 20006

Dear Peter,

UNDP Global Project GLO/78/006  
MOZAMBIQUE

A As we discussed on the telephone, I plan to include a visit to Mozambique when either I myself or Richard Feachem is next in that part of Africa; at present May seems a likely date, although much depends on progress on the Dar-es-Salaam sanitation project, on the posting of our new resident adviser (under URT/80/017), and on the World Bank's timetable for appraisal.

I thought you would be interested to know that I talked by telephone with Sandy Cairncross when he was in England recently. I gave him some details of the low cost pvc well screens which were developed by Professor Sternberg (with World Bank funding), and when he returns to Mozambique he will look into the opportunities for installing them in wells or infiltration galleries. We have a certain amount of material we could let him have free of cost, together with advice on its use, and I hope this may develop into a pilot project. I will let you know what comes out of this.

Yours sincerely,

Richard N. Middleton  
Project Manager  
UNDP Global Project  
GLO/78/006

RNMiddleton:pn

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F338

MR. MIDDLETON

1991 FEB 20 PM 4:51

MR. WILLOUGHBY

CABLE SECTION

240/174/006

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MIDDLETON OR MRS BIRD C/O WORLD BANK

WASHINGTONDC

FOR RICHARD MIDDLETON TWT RE POUR FLUSH LATRINE EVALUATION  
PROPOSED CABLE TO AKROY RE POUR FLUSH LATRINES EYE UNDERSTAND  
DANISH ENGINEER COLLEAGUE OF PEACHEM AND READ IS VERY INTERESTED  
IN UNDERTAKING 3 MONTH FIELD STUDY TOUR IN INDIA TO COLLECT  
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LFE974 PLF477 MIDDLETON PAGE2/51

DATA ON POUR FLUSH LATRINE DESIGN AND PERFORMANCE WITH  
A VIEW TO PRODUCE AGREED DESIGN

CRITERIA STOP HE IS DRAFTING PROPOSAL FOR RESEARCH FUNDING WHICH  
MUST BE SUBMITTED 7 MARCH STOP WOULD YOU POSSIBLY BE ~~ABLE~~ <sup>174/006</sup>  
TO ASSIST IN MAKING NECESSARY INTRODUCTIONS FOR HIM AND  
GIVING ADVICE AND GENERAL SUPPORT STOP

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LFE974 PLF477 MIDDLETON PAGE3/50

HE WILL PAY HIS OWN WAY AT ALL STAGES STOP PROPOSE  
VISIT SINGUR PATMA AHMADABAD AND POONA MALEE STOP GEOFF  
REID MENTIONED THIS YOU BRIEFLY IN DELHI EYE THINK ALSO HE  
DISCUSSED IT WITH PROF SUBA RAO CALCUTTA  
WHO PROMISED ENTHUSIASTIC SUPPORT STOP HE WOULD  
PROBABLY START MAY OR JUNE

COL NIL

LFE974 PLF477 MIDDLETON PAGE4/17

1981 IF FUNDING OBTAINED STOP PLEASE ADVISE SOONEST

WARM REGARDS RNM ETC THANKS

GEOFF REID HYGOWER LONDONWC1

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19 February 1981

Mr. M. P. Sejanemane  
Permanent Secretary, Planning & Statistics  
Central Planning and Development Office  
P.O. Box MS 630  
Maseru, 100  
Lesotho

Dear Mr. Sejanemane,

Rural Sanitation Project

Thank you for your letter CPO/56/01/2 of January 22 requesting the World Bank, through TAG, to assist in identification of donors for this project. We have held discussions with UNICEF and UNCDF in New York, as a result of which we hope that these two organisations will be able to fund the project (or, if their resources are inadequate, UNICEF hopes to meet any shortfall through its "noting" procedure). A UNICEF appraisal mission (to be led by Geoffrey Read, of my staff) is now planned for mid-March, and I will ask this mission to brief you on its findings and recommendations before it leaves Lesotho.

Sincerely yours,

Richard N. Middleton  
Project Manager  
UNDP Global Project  
GLO/78/006

cc: Mr. G. Read, TAG, with incoming.

cc: Messrs. Ware, LaBahn, EAP; Reese, Polak, EAL;  
Madavo, Singh, URB; Evans, Schebeck, PHN.

RNMiddleton:pn

gwo/78/006

TAG Engineers (see below)

February 18, 1981

Richard N. Middleton, Project Manager

UNDP Global Project GLO/78/006 - Planning and Design Tools Developed  
by Donald Lauria

---

As most of you know, Donald Lauria (and his students at the University of North Carolina, Chapel Hill) have been developing a number of tools to assist in the planning and design of low-cost water systems. This research and development work has been supported financially by the World Bank and its application by TAG (and now by country IPF budgets, such as PHI/80/015). I attach for your information a copy of a paper prepared by Donald Lauria for an ASCE meeting in New York last May, which summarizes the work that has been done. If you have any comments or questions, please let me know.

*n/att*

Attachment

Distributions

Messrs. F. Carroll; R. Feachem; S. Guimaraes; M. Hussain; D. Mara;  
G. Read; A. K. Roy; A. Wright

cc: D. Lauria  
P. Hebert

7

## OFFICE MEMORANDUM

✓ GLO/78/006  
 cc GLO/78/004  
 cc GLO/80/004  
 cc GLO/79/010  
 DATE: February 18, 1981  
 cc INT/80/009

TO: Files

AH

DATE: February 18, 1981

FROM: Albert Howlett, Technical Assistance Officer, IRD

SUBJECT: GLOBAL and INTERREGIONAL PROJECTS: Briefings With UNDP

During my visit to UNDP Headquarters on February 11, I met with Mr. James Berna, Principal Programme Officer, Division for Global and Interregional Projects. We went over the following:

1. Low-Cost Water and Sanitation (GLO/78/006). Mr. Berna said that he would recommend that UNDP approve an additional \$200,000 for this project, to carry it through until the end of the year. He confirmed that a new large-scale interregional project would start January 1, 1982.
2. Small-Scale Solar Pumping Station (GLO/78/004). I hand delivered my letter dated February 10 containing the financial requirements for the second half of 1981 for the follow up to GLO/78/004. Mr. Berna and I reviewed the figures. He said that 1980 expenditures were much higher than he had expected, and the savings under the present project much lower than expected. He said that UNDP funds for global projects were extremely limited in 1981, but that he thought that the additional \$330,000 required for the second half of 1981 would be approved.
3. He said that the draft project document for Phase II had been reviewed by UNDP and that they would have only minor comments. These would be transmitted in about two weeks. He said that one substantive comment is that since it is proposed that Phase II be expanded to cover technologies in addition to solar pumps, if the entire project is to be executed by the Bank, the Bank would have to be willing to subcontract relevant parts to other agencies when and if appropriate. UNDP would want a statement to this effect in the project document. When selecting consultants for the various project activities, the Bank would consider whether some UN agency has the required expertise, and if so, the Bank would contract the UN agency to carry out that part of the project. The UN agency involved would become an associated agency for the project. Mr. Berna mentioned UNIDO for biogas as a possible example. I said that I did not foresee any particular problem with such an arrangement.
4. Integrated Resource Recovery (GLO/80/004). Mr. Berna informed me that UNDP would sign and forward to the Bank Preparatory Assistance for \$100,000 for this project within the next two weeks. Signature of the full project document would take place after the project's approval by UNDP's Governing Council in June 1981. The full project document would provide for an additional \$100,000 in 1981, with full-scale activities to start in January 1982.

5. Mr. Berna repeated his request for additional information on integrated resource recovery in addition to that contained in the project document and in the two reports forwarded together with Mr. Loewen's letter of January 30, 1981 ("WHG Activities in the Field of Solid Waste Management" and "Town Refuse for Vegetable Production"). He said he needs additional supporting information for UNDP's Governing Council. He said he would welcome something on the state of the art of integrated resource recovery, and something on the importance of integrated resource recovery to developing countries. He said an indication of which are the most important benefits expected to result from the project would be helpful. He added that comments are coming in from the various UN agencies on the project, which he will forward to the Bank. He said that ILO is of the view that the energy aspect is overdone.

6. Mr. Berna said that the project document has been sent to all UNDP field offices and that the first countries to endorse the project were Ethiopia and China. He also said that requests had been received for the French version of the project document. I said that I had so informed the appropriate Bank staff, and the document would be translated and sent to UNDP.

7. Testing and Selection of Hand Pumps (GLO/79/010). Mr. Berna said that funding to start Phase II of this project in 1981 is extremely limited. He said that only after reviewing the results of expenditures on all global projects for 1980 some two months hence will it be possible for UNDP to inform the Bank how much money is available to begin Phase II in 1981. I said that we would want to review this matter with them to ensure that sufficient funds are available for this project during the second half of 1981.

8. Energy Assessments (INT/80/009). Mr. Berna said that UNDP funding for this project in 1981 would come from UNDP's Energy Account. He said that UNDP would inform the Bank officially in due course. He said that Mr. Bruce A. Harland, Director, Bureau for Programme Policy and Evaluation, is in charge of UNDP's Energy Facility.

Distribution: Messrs. Kalbermatten (TWT) D901 o/r  
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Loewen (TWT) D918  
Middleton (TWT) D906  
Mills (CTR) I4-146  
Arloforoff (TWT) - (c/o Mr. Kalbermatten)

AHowlett/smm



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*epu/78/006*

INTBAFRAD

NEW DELHI, INDIA

448

FOR GEORGE BEIER FOR AK ROY OF UNDP GLO/78/006. RE BANGLADESH  
 AND URLET TO GIBBS JANUARY 20 ENCLOSING REVISED BUDGET.  
 ALPHA WE NEED FUNDING FOR ALL TAG OPERATIONS IN BANGLADESH  
 AFTER MID 1981 THAT IS AFTER SUBMISSION INITIAL TEN TOWNS  
 FEASIBILITY REPORT. TRUST HUSSAIN IS WORKING ON THIS WITH  
 GOVERNMENT AND UNDP AS LEAD TIME BECOMING VERY SHORT AND  
 EYE SEE NO MENTION IN UNDP'S COUNTRY PROGRAMME MANAGEMENT  
 PLAN THROUGH DECEMBER 1981. BETA TOP PRIORITY IN CURRENT  
 WORK IS LEGAL/ADMINISTRATIVE STUDY. IF UNICEF STILL UNDECIDED  
 ABOUT FUNDING THIS THEN TAG SHOULD DO SO AS PER MYTEL TO  
 YOU JANUARY 9. WE WONDER IF NAZROL ISLAM EX-HEAD OF NOW  
 DEFUNCT INSTITUTE FOR URBAN STUDIES COULD STILL PLAY LEAD  
 ROLE BUT WE NOTE THAT MOST OF HIS CO-WORKERS IN THE INSTITUTE  
 WERE DRAWN FROM DEPARTMENT OF GEOGRAPHY OF DACCA UNIVERSITY  
 NOT DEPARTMENT OF PUBLIC ADMINISTRATION. DO WE KNOW REALLY  
 GOOD PERSON IN THE LATTER? PLEASE ADVISE ON FUNDING AND  
 LEGAL/ADMINISTRATIVE STUDY SITUATION. REGARD, RICHARD MIDDLETON.

**NOT TO BE TRANSMITTED**

SUBJECT: UNDP GLO/78/006 - INDIA	DRAFTED BY: RNMiddleton:pn
CLEARANCES AND COPY DISTRIBUTION: cc: Ms. Pratt, ASA; Mr. Pettigrew, ASP; Messrs. Dunn, ASA; Lamson-Scribner, ASP; Mr. Sandstrom, URB; Evans, PHN; Melder, ASA; Loewen, TWT.	AUTHORIZED BY (Name and Signature): <i>R.M.</i> RICHARD N. MIDDLETON, PROJECT MANAGER
	DEPARTMENT: UNDP GLOBAL PROJECT GLO/78/006
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TO: DIRECTOR, IAS  
FROM: SECRETARY, IAS  
SUBJECT: ...

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COMMUNICATIONS SECTION

ADMINISTRATIVE STAFF ...  
GOOD PERSON IN THE PAST ...  
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NEW DELHI, FEBRUARY 17, 1981

1981 FEB 17 AM 8-11

COMMUNICATIONS SECTION

WORLD BANK

WASHINGTON DC

D-20P

FOR MIDDLETON - TWT

D 906

INFORMED BY ADVISER PLANNING COMMISSION THAT PHASE TWO PROJECT  
HAS BEEN CLEARED BY COMMISSION AND FORWARDED TO DEA FOR  
CONSIDERATION AND SUBMISSION TO UNDP.

REGARDS

ROY

**WORLD BANK OUTGOING MESSAGE FORM (Telegram, Cable, Telex)**

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Class of Service: **TELEX 953313150**

Date: **FEBRUARY 13, 1981**

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Telex No.:

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*950178/006*

**INTBAFRAD**

**NEW DELHI, INDIA**

**MESSAGE NO 440**

FOR ROY UNDP GLO/78/006 HAVE CABLED DEPOSIT RUPEES 94,800 YOUR  
ACCOUNT WITH UNION BANK, NEW DELHI, FOR FEBRUARY LOCAL EXPENSES  
INCLUDING SALARY LOCAL CONSULTANTS. JONES, INTBAFRAD

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SUBJECT:

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DRAFTED BY:

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AUTHORIZED BY (Name and Signature):

**BRUNO VOLLMER**

*Bruno Vollmer*

DEPARTMENT:

**CONTROLLER'S**

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*Jad*

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ACCOUNT WITH UNION BANK NEW DELHI FOR FEBRUARY GOVT EXPENSES  
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NEW DELHI INDIA  
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REF ID: A62242420

FEBRUARY 13 1981

## OFFICE MEMORANDUM

TO: Mr. Albert Howlett, IRD

FROM: Mr. Richard N. Middleton, Project Manager

SUBJECT: Proposed UNDP Technical assistance projects:  
Low-cost sanitation in Least-Developed Countries  
in Asia and in Nepal

DATE: 13 February 1981

1. You have already received from Mr. Loewen draft copies of the briefing note on the LLDCs project and of the Nepal project document. However, following further discussions with regional projects and programs staff I have come to the conclusion that it would be a mistake to proceed with these proposals at the present time.
2. In Nepal the institutional arrangements for the sector are apparently in a transitional state. It is not clear whether DWSS, the most appropriate counterpart agency for the project, will be absorbed within LDD or will maintain either a separate or semi-autonomous existence. There is no point in proceeding further until institutional structure and commitment to this project are more clearly established.
3. The Country Programs Division has questioned whether, at a time when there appears to be a shortage of UNDP funding for projects already identified, we should introduce further projects; on the other hand, the division recognizes that allocation of UNDP resources is strictly a matter for the country to decide. (The regional Energy and Water Supply division has also expressed its misgivings over the design of the project, but these comments are based largely on misconceptions of what is proposed and can, I am sure, be resolved in due course.)
4. I therefore propose to proceed with technical assistance to Nepal through existing UNDP GLO/78/006 funds, and raising the issue of country IPF-funded assistance later in 1981.
5. The Least-Developed Countries project, with Nepal eliminated temporarily, reduces to Bangladesh, Laos and Maldives. It appears that, at least in the immediate future, there is ample technical assistance through KfW and UNCDF to sector operations in the Maldives, and so in my view it would be more appropriate to drop this project entirely and instead fund operations in Bangladesh, once the current feasibility work under GLO/78/006 funds is completed from country IPF resources. This would in any case make project management simpler, by linking country-specific resources clearly to country operations. Neither ourselves nor regional sector staff have much information on the sector or possible receptivity in Laos, and we will probably arrange a reconnaissance visit through GLO/78/006 later this year to explore the situation.

6. Would you please brief Mr. Riley accordingly; if possible, during this mission, he should alert the RR UNDP for Bangladesh about the likely need for IPF funding in Bangladesh in mid-1981, and the RR UNDP Nepal about a possible application towards the end of the year. We will be writing to them about these projects in due course.

cc: Mr. Schebeck, PHN; Mr. Evans, PHN

cc: Messrs. Kalbermatten, Loewen, TWT; Ms. Sato, AEA; Mr. Sud, AEP; Shibusawa, AS.  
Ms. Loos, ASA; Mr. Lamson-Scribner, ASP; Mr. Graham, AEP.

RNMiddleton:pn

GLO/78/006

Mrs. Donna Ringle, PMD

13 February 1981

Mr. Richard N. Middleton, Project Manager

UNDP Global Project GLO/78/006 - BRAZIL  
- Mr. Guimaraes

Mr. Guimaraes' current appointment as a consultant to the project has now expired, but his long-term contract has, for various reasons, not yet been finalised. I should be grateful if you would ensure that whatever bridging arrangements are necessary are put in hand, so as to ensure that he receives appropriate salary and benefits (such as insurance coverage) during this interim period. I have already telexed his current employers, FEEMA, asking for a continuation of his leave of absence while contract details are worked out.

cc: Mr. D. Dalmat, GLO/78/006

RNMiddleton:pn

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glo/78/006

Mr. M. A. Hussain, TAG

12 February 1981

Ms. Heli Perrett, GLO/78/006

UNDP Global Project GLO/78/006 - BANGLADESH

You will recall that when we met in Delhi we touched briefly on the report on "Sanitation Promotion in Bangladesh: An Appraisal of Agencies and Users" (January 1980) and its probable relevance to our project. Since my return I have read the report once more, and I would appreciate very much knowing what you and Mr. Hassan think of some of the points it raises and the extent to which they could affect our project design.

The first point is the question of ablution materials. As you will recall, we discussed this in February, 1979. The report states at one point that 58.8% of households, irrespective of religion, use water and mud-balls for ablution and self-cleansing. Is this in rural areas only, or also in some urban? What is your view now in regard to the project towns - is use of mud-balls prevalent now and, if so, is this likely to persist even after water-seal latrines are introduced?

Second, the report implies that there is widespread non-use of latrines among children (although the presentation of the data is somewhat confusing). Do you know what age definition of "children" was used? Is this only a rural or also urban problem? Do you have any ideas about specific causes and what we might do about them under the Global Project?

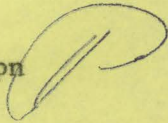
Thirdly, the report mentions that two seer to six seer of water are normally required for flushing purposes. How large is a "seer"? The most probable definition we have is that a seer is equivalent to about 2.06 lb., or about 0.92 kg. This implies that, in volumetric terms, a seer is a little less than a litre. Is this correct for the areas surveyed? Also, on the question of flushing - there is reference to the fact that people are unwilling to carry more water for flushing (Radda Barnan program) and complain about water requirements most frequently as a problem. How serious a problem is this? To what extent will it be a factor in our project towns, particularly where people only have standpipes? Do you have any ideas on solutions?

Fourthly, the report underlines in the introduction that "prohibitive costs" are a major constraint. However, the report provides no data on ability or willingness to pay. To what extent are we able to answer such questions in our projection on the basis of data collected in the household surveys? On this question, I also note that most of these ongoing sanitation programs in Bangladesh have provided latrines free of cost, and the rest are heavily subsidized. Are such precedents likely to affect the project, in that people will resent having to pay when they know that their cousin or brother-in-law and so on did not have to do so? Or, are most of these other programs nowhere near the project towns?

At a more general level, there is the question of coordination and cooperation. Obviously there is a great deal of scattered activity in sanitation in Bangladesh. Do we overlap with any other programs in the project towns? To what extent should we coordinate with any of these other programs and how?

The above are some of the concerns triggered by the report. Please do not limit your comments to these as there well may be other points made that are also relevant to our activities. A handwritten note will be fine.

I look forward to hearing from you or Hassan and to also receiving the report on the background data. I trust that you have placed emphasis on drawing concrete recommendations for action from the finding. Did Hassan also have a chance to draft a short memorandum on the sales centres as we discussed in June? Please send me drafts of software reports wherever possible - before going into final.

HPerrett: pn 

12 February 1981

Mrs. Smelder  
United Nations Capital Development Fund  
One United Nations Plaza  
New York, N. Y. 10017

Dear Mrs. Smelder,

LESOTHO - Rural Sanitation Projects

Following receipt of Ms. Francis' letter of February 2, 1981, I discussed these projects with yourself and with Messrs. Mayrides and Ignatieff of UNICEF Headquarters. I thought it would be useful to summarise the present position, as I understand it:

- The rural sanitation project set out in Annex III to Mr. Read's report on his November 1980 discussions with UNCDF and UNICEF (which for convenience I am going to refer to as the TAG/LES/04 project) is primarily aimed at institution-building. It has a very large technical assistance component which would be outside the scope of UNCDF funding. It is therefore appropriate that UNICEF play the lead role in TAG/LES/04 (providing funding either from their own resources or through the "noting" procedure). This would not of course preclude in any way UNCDF funding of the capital components of TAG/LES/04, and both UNICEF and the government would, I am sure, welcome such a collaborative effort.

- The appraisal mission which UNCDF is currently planning (Messrs. Read and Cross, Ms. Becker) should therefore identify the best way in which UNCDF can contribute to sector development, including financing of the capital works of TAG/LES/04 and of the works necessary to reactivate and complete successfully the primary schools sanitation program.

- UNICEF is confident of funding the technical assistance component of TAG/LES/04, either from their own resources or through the "noting" process. This funding should be approved in their May 1981 Board meeting. I am suggesting to Mr. Ignatieff that UNICEF allocate a project number as soon as possible, so that we could then clearly distinguish between capital works (your LES/80/CO2) and UNICEF's technical assistance.

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\* As I mentioned in our conversation, we have not yet received formal government clearance of the final draft (October, 1980) of our TAG/LES/04 report. I am enclosing a copy for your own use, but I should be grateful if you would treat it as an internal document until we receive clearance.

Please call me if you want to discuss any of these points further.

Sincerely yours,

Richard N. Middleton,  
Project Manager  
UNDP Global Project  
GLO/78/006

\* enclosure

cc: Messrs. Ware/LaBahn, EAP; Reese/Polak, EAI;  
Madavo/Singh, URB; Evan/Schebeck, PHN

RNMiddleton:pn

guo/78/006

Mr. E. LaBahn, EAP

February 12, 1981

Richard N. Middleton, Project Manager

UNDP Global Project GLO/78/006 - SOMALIA  
- Linkage to Second Mogadishu  
Water Supply Project

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At your request, I have reviewed the yellow cover SAR on this project, paying particular attention to the possible involvement of the Global Project.

Provided that the government endorses the Global Project and designates an appropriate counterpart agency, I would be happy for us to provide the technical support which is envisaged. The counterpart agency issue is critical; I am unclear from the report whether eventual institutional responsibility for planning, implementing, and operation and maintenance of sanitation facilities will be with MWA or the City Council. Nor am I clear whether either agency is interested in a sanitation project or could provide counterpart facilities.

Assuming that this is resolved satisfactorily, then a resident adviser, funded from Water II and given technical support by the Global Project, could make a valuable contribution. As I understand it, he would have three main objectives:

- (a) on the basis of a review of the ongoing sewerage and drainage project, to determine priority areas to be served by low-cost sanitation;
- (b) to design and implement demonstration low-cost sanitation projects in these areas;
- (c) to prepare, for possible financing through Water III or another donor, a longer-term sanitation project for Mogadishu.

It would be useful to have outline terms of reference for this work developed prior to negotiations, for discussion with the delegation.

I suggest that the foreign exchange element of the budget for this technical assistance should allow for two man-years of an expatriate expert, four man-months of a social scientist (visiting on four occasions), plus contingencies for some special studies that may be necessary. Local costs would include a counterpart engineer (preferably), local staff for surveys and investigations, support staff, offices and local transport. The capital budget should allow for the construction of a reasonable number of

OFFICIAL FILE COPY

February 12, 1981

demonstration latrines, probably by local contractors (so serving the dual purposes of demonstration and training). Without knowing Mogadishu I am not clear how many neighborhoods, types of latrine, or total numbers might be involved. However, the overall budget in the SAR of So. Sh 1,4 million (US \$225,000) appears low, unless some contingencies or other unallocated sums can be transferred to this heading.

My only other concern at this stage is with the emphasis on "health education." I do not envisage that health education in the classical sense would be undertaken in connection with the sanitation program, although it will, of course, be essential to provide all the promotional training and other activities needed to ensure success; these are more precisely referred to as PSC (program support communications) or IME (information, motivation and education).

I suggest that your future steps should be:

- (a) clarify institutional responsibility and commitment;
- (b) obtain government's endorsement of the project;
- (c) prepare outline terms of reference for the technical assistance component;
- (d) refine the budget accordingly.

We will be able to assist you in (c) and (d).

cc: Messrs. Reese/Polak, EA1; Ware, EAP; Evans, PHN

RNMiddleton:pn

12 February 1981

Mr. Paul Ignatieff  
Program Funding Office  
UNICEF Headquarters  
866 United Nations Plaza  
New York, N. Y. 10017

Dear Mr. Ignatieff,

LESOTHO - Rural Sanitation Project

\* Following our telephone conversation yesterday (February 11), I enclose copies of my letter to Mrs. Smelder of UNCDF and of my memorandum to Geoffrey Read setting out the current position as I understand it.

\* \* I am also enclosing, for your own use, a copy of the final draft (October 1980) of our report TAG/LES/04. This has not yet been formally cleared by Government, so please treat it as an internal document.

\* \* \* The UNCDF appraisal mission is tentatively scheduled for mid to late-March, and is awaiting Government clearance. I enclose the CVs of the three proposed participants, Messrs. Cross and Read and Ms. Becker.

You will note in my letter to Mrs. Smelder that I mention the need for UNICEF to allocate a project number to this Lesotho operation, in order to avoid confusion between TAG/LES/04, UNCDF LES/80/CO2, and your own project. I would appreciate your comment.

As I mentioned to you, the World Bank is using part of its UNDP overhead funds to provide a staff member who will be directly concerned with liaison with donors in connection with Decade projects. His name is Melvin Loewen and, since your work and his have much in common, I have suggested he contact you on his return from mission.

Please call me if you would like to discuss these operations further.

Sincerely yours,

Richard N. Middleton  
Project Manager  
UNDP Global Project  
GLO/78/006

\* enclosures

cc: Mr. Melvin Loewen, TWT; Ware/LaBahn, EAP; Reese/Polak, EA1;  
Madavo/Singh, URB; Evans/Schebeck, PHN

RNMiddleton:pn

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WORLD BANK OUTGOING MESSAGE FORM (Telegram, Cable, Telex)  
IMPORTANT (PLEASE READ INSTRUCTIONS BELOW BEFORE TYPING FORM.)

Class of Service: **TELEX**  
Telex No: **927-348 GAFEC UN**

Date: **FEBRUARY 12, 1981**  
Originators Ext: **74731**

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TO **MINISTRY OF ECONOMY**

**CAIRO, ARAB REPUBLIC OF EGYPT**

**MR. M. SAMIR KORAIEM, UNDERSECRETARY FOR INTERNATIONAL FINANCE. RE UNDP GLOBAL PROJECT GLO/78/006 DEMONSTRATION PROJECTS IN LOW COST WATER SUPPLY AND SANITATION BEING EXECUTED BY WORLD BANK. HAVE REQUESTED UNDP/CAIRO TO NOTIFY YOU OF ENGINEER CARROLL MISSION COMMENCING FEBRUARY 16. MINISTRY OF HOUSING (GOPW) IS GOVERNMENT EXECUTING AGENCY BUT MISSION PLANS TO DISCUSS POSSIBILITY OF SHIFTING EXECUTIVE AUTHORITY TO GOVERNORATE LEVEL WITH GOPW, MINISTRY OF HEALTH AND OTHER INTERESTED PARTIES. CARROLL IN ALEXANDRIA FEBRUARY 17 TO 21 FOR W.H.O. WORKSHOP ON WATER DECADE AND THEN IN CAIRO THROUGH MARCH 6 IN ORDER TO FINALIZE PROTOCOL FOR RURAL WATER SUPPLY AND SANITATION PROJECT IN DAQAHLIYA PROVINCE. USAID HAS EXPRESSED INTEREST AS PRIMARY DONOR. HOWEVER, THEY AWAIT OFFICIAL GOVERNMENT REQUEST. GRATEFUL YOUR ASSISTANCE TO MISSION IN INTRODUCTIONS TO APPROPRIATE CENTRAL GOVERNMENT AND LOCAL OFFICIALS. BEST REGARDS, KOEPP, WORLD BANK**

NOT TO BE TRANSMITTED

SUBJECT: <b>EGYPT: UNDP Global Project</b>	DRAFTED BY <i>MWZ</i> <b>RWZaborski:orp</b>
CLEARANCES AND COPY DISTRIBUTION: <b>Cl. with and cc: Messrs. Carroll, MacWilliam cc: Mr. Middleton</b>	AUTHORIZED BY (Name and Signature): <i>Hans-Eberhard Kuepp</i> <b>Hans-Eberhard Kuepp, Div. Chief</b>
	DEPARTMENT: <b>Country Programs Dept. 1, EMENA</b>
	SECTION BELOW FOR USE OF CABLE SECTION CHECKED FOR DISPATCH <i>[Signature]</i>



gwo/78/006

Mr. Geoffrey Read, TAG

12 February 1981

Mr. Richard N. Middleton, Project Manager

UNDP Global Project GLO/78/006 - LESOTHO  
- Rural Sanitation Project

\* I enclose for your information copies of a letter I have received from UNCDF and of my replies to UNCDF and UNICEF following telephone conversations with Mrs. Smelder (UNCDF) and Messrs. Mayrides and Ignatieff (UNICEF). The key points which we have clarified are:

(a) Although UNICEF decided during your November discussions to "note" the whole of the rural sanitation project as set out in TAG/LES/04, this certainly does not preclude UNCDF participation in this project. The appraisal mission which you are about to undertake for UNCDF should consider how UNCDF can best contribute to the sector, including both the capital elements of the project defined in TAG/LES/04 and the works necessary to reactivate and complete the primary schools sanitation program successfully.

(b) Since your November discussions, UNICEF has secured some additional funding of its own. As a result, the combination of UNCDF funding for the capital elements in TAG/LES/04 and UNICEF funding of technical assistance components may be sufficient, without recourse to additional donors. Decisions on funding recommendations will have to be taken by UNICEF, prior to its May 1981 Board meeting (and these recommendations will obviously depend, in part, on the fundings of your appraisal and UNCDF's decisions on its own participation), but you should proceed on the assumption that, one way or another, full funding will be approved in mid-1981.

\* enclosure

cc: Ms. Smelder UNCDF; Mr. Ignatieff, UNICEF  
Messrs. Ware/LaBahn, EAP; Reese/Polak, EAL; Madavo/Singh, URB;  
Evans/Schebeck, PHN.

RNMiddleton:pn

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*GLO/78/006*

## OFFICE MEMORANDUM

TO: Mr. Albert Howlett, IRD  
FROM: R. N. Middleton, Project Manager  
SUBJECT: UNDP Global Project GLO/78/006 - Investment Projects

DATE: February 12, 1981

In response to your recent inquiry, I attach a schedule listing investment projects with which the Global Project is currently concerned. The total of \$66 million for sanitation projects alone is higher than the initial figure of \$44 million I gave you, mainly because we have made better estimates of the value of sanitation components included in integrated projects, and we have included some physical and price contingencies in older estimates.

As I explained to you, it is a matter of judgement what to include in such a schedule. TAG is included not only in the development of new projects (e.g., Bangladesh and India) but also in helping government agencies implement sanitation components for which donor financing already exists (e.g., Brazil, Botswana), in providing design tools to be used on large sector loans (Philippines), and in providing general technical assistance. In some cases (e.g., Lesotho rural) our projects aim at developing sector institutions so that investments being made through several NGOs can be efficiently utilized, but I do not have figures for these investments. Some of this work is funded from the Global budget and some through country IPF funds but with Global Project technical support. For all these reasons, I would treat these figures as indicative rather than firm.

The figures also clearly underestimate the value of the Global Project in encouraging governments to make major changes in the policies affecting their Decade program. The most dramatic of these is, of course, India, where Decade sanitation investments of the order of \$1 billion in Class II and III cities, and \$2.5 billion for sewerage/sanitation in Class I cities are now being seriously considered by government. Much of the credit for this policy change should go to the TAG (India) team.

cc. Messrs. Kalbermatten, Loewen, Hughes (TWT)  
Attachment

RNM:ph

UNDP Global Project GLO/78/006 -  
Investment Projects In Hand At 2/81

COUNTRY	PROJECT	COST US \$M	COMMENTS
<u>Sanitation</u>			
Bangladesh	10 - Towns	6.8	Plan provision. TAG report mid-1981.
Botswana	Urban II (Component)	2.4	World Bank funded. TA through BOT/79/003. Excludes USAID's ESPP.
Brazil	Medium Size Cities (Component)	14.3	Appraisal report estimates including contingencies. May include some water supply.
Egypt	Daqahliya rural	5.9	Project document submitted to government. To be reviewed by mission 2/81.
India	6 States urban	19.8	1980 costs plus 20% contingencies. TAG reports due first half 1981. World Bank financing likely for some projects (e.g., Gujarat). Full coverage these 6 states plus Assam would cost an extra \$54M at 1980 prices.
Lesotho	Urban I (Component)	0.9	CIDA and World Bank funded. TA through LES/80/002.
	Rural Sanitation	2.5	UNCDF and UNICEF funding likely.

Tanzania	Wangingombe rural	1.5	First stage. UNICEF funded.
	Urban II		
	(Component)	0.5	
	Dar-es-Salaam	11.5	Per consultants' report. Likely to be revised by Bank mission 3/81. TA through CRT/80/017.
	Sub-total, Sanitation	<u>66.1</u>	

Water Supply

Philippines	LWJA	100.0	TA through PHI/80/015 to assist better design of these projects, to be submitted for World Bank financing.
	RWDC	50.0	
	Sub-total, Water Supply	<u>150.0</u>	

*yellow*

*Cud/78/006*

## OFFICE MEMORANDUM

TO: Messrs. Shibusawa, ASA, Lamson-Scribner, ASP,  
Schebeck, PHN

DATE: February 12, 1981

FROM Richard N. Middleton, Project Manager *R.N.*

SUBJECT: UNDP Global Project GLO/78/006 - Sri Lanka - DANIDA

*nl/att*

We have been requested to collaborate with DANIDA on a rural water supply and sanitation project in Sri Lanka. I attach for your review a copy of the ToR prepared by DANIDA, together with a draft of a letter to them.

Please let me have your comments or clearance by Friday, February 20, 1981.

Attachment

RN:ph

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DEPARTMENT OF HEALTH

17/10/78

INTBAFRAD DAR ES SALAAM

147. MIDDLETON FOLLOWING RECEIVED FROM NJAU QUOTE

LOW COST SANITATION EXPERT.

GRATEFUL FOR KEEPING US INFORMED OF PROGRESS. AAA -

FORMAL REQUEST HAS BEEN SENT TO UNDP TO ALLOW MR ASHWORTH TO

PARTICIPATE IN APPRAISAL AND PROPER HANDING OVER TO HIS

SUCCESSOR.

BBB REGARDING ITEM DELTA MINISTRY IS LOOKING FORWARD TO GETTING

APPROPRIATE CANDIDATE DEDICATED TO THIS TYPE OF WORK AS SHOWN <sup>1/006</sup>

BY MR ASHWORTH. UNFORTUNATE MR ASHWORTH UNABLE TO CONTINUE DUE

TO FAMILY COMMITMENTS. HOWEVER WE HAVE CONFIDENCE IN YOUR

RECRUITMENT. REGARDS, FREDERICK NJAU END QUOTE

REGARDS, NOOTER

WORLD BANK 440098

41273 INTBAFRAD

1981 FEB 12 AM 9:54

250/78/006

INTBAFRAD DAR ES SALAAM

147. MIDDLETON FOLLOWING RECEIVED FROM NJAU QUOTE

LOW COST SANITATION EXPERT.

GRATEFUL FOR KEEPING US INFORMED OF PROGRESS. AAA -

FORMAL REQUEST HAS BEEN SENT TO UNDP TO ALLOW MR ASHWORTH TO

PARTICIPATE IN APPRAISAL AND PROPER HANDING OVER TO HIS

SUCCESSOR.

BBB REGARDING ITEM DELTA MINISTRY IS LOOKING FORWARD TO GETTING

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BY MR ASHWORTH. UNFORTUNATE MR ASHWORTH UNABLE TO CONTINUE DUE

TO FAMILY COMMITMENTS. HOWEVER WE HAVE CONFIDENCE IN YOUR

RECRUITMENT. REGARDS, FREDERICK NJAU ENDQUOTE

REGARDS, NOOTER

WORLD BANK 4400989

41273 INTBAFRAD



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<b>Document Date</b> February 11, 1981	<b>Document Type</b> Telex	
<b>Correspondents / Participants</b> To: Beier From: Jones		
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		<b>Date</b> May 20, 2016



ERIU-General  
LCC INT/80/006

February 10, 1981

Dear Joan:

Thank you for your letter of January 30 (which, given the speedy mails, did not arrive until last Friday).

Since you wrote, the meeting between representatives of your Department and Mr. Rovani and his staff has been postponed until a date in March to be agreed among the participants. I agree with your suggestion that that meeting might be viewed as one step toward the more general objective of improving the pre-investment and investment linkages, which are of interest and concern to both the United Nations and the Bank. To that end, we shall be suggesting to Mr. Rovani that a member of the International Relations Department staff participate in the discussions.

My only comment at this stage is that I would hope that agreement on a formal, pre-determined schedule of meetings would not be a primary objective of the discussions. It has been our experience, and I dare say it has been yours, that all too often exchanges organized to comply with a pre-agreed schedule produce little of value; it is preferable, given goodwill on both sides, to arrange meetings when there is something of importance to discuss and when the appropriate participants are available. I would agree in principle that discussions of the kind you contemplate should be held twice or three times a year, beginning with the specific sectors you have identified, but I should prefer, at the outset at least, to go no further than that.

With kind regards,

Sincerely,

M. P. Benjenk  
Vice President  
External Relations

Miss Margaret Joan Anstee  
Assistant Secretary-General  
Department of Technical  
Cooperation for Development  
United Nations  
New York, N.Y. 10017

cc: Mr. Rovani, Director, Energy Department

SEBoskey:di

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GLO/78/006

Mr. A. K. Roy, TAG

February 10, 1981

Richard N. Middleton, Project Manager

UNDP Global Project GLO/78/006: India  
December 1980 Progress Report

I have a few minor points on this progress report, forwarded under cover of your letter 3076 of January 18, 1981.

Assam - Given the continuing internal problems in this state, wouldn't it be more sensible to show all activities as in abeyance and omit figures relating to Assam from all project documentation?

Bihar - Heli Perrett commented on the evaluation of the on-going latrine program; I was not proposing to make future comments, unless there are some issues you want to clarify further.

The report does not state who will resolve the "major outstanding issue" - the installation of demonstration units - nor by when.

My own impression was that the biggest problems were those of institutional framework and satisfactory cost recovery, rather than the installation of demonstration units.

Gujarat - The evaluation has slipped a further two months since the last report a month ago. This makes one question whether adequate data will be available for Bank approval of the proposed sanitation component. There also seems to be some confusion on data availability from the house-to-house survey; will it be ready by January (p. 2) or February (p. 1)? If the latter, it may be rather late for appraisal.

Rajasthan - The legal study was discussed (particularly with Mr. Singh) during Heli's mission. I do not propose any further comments, but would of course be happy to discuss any particular outstanding issues with you.

I hope you will soon let us have the revised Rajasthan draft (as well as the annexes, which we have not seen yet).

Special Studies - We have already commented on CBRI's draft report (my memo dated November 13, 1980).

RMiddleton:ba

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gwo./78/006

Mr. John M. Kalbermatten, Senior Adviser

10 February 1981

Mr. Richard N. Middleton, Project Manager

UNDP Global Project GLO/78/006 - GUINEA

\*

I attach for your information a copy of Mr. Carroll's report on his mission to Guinea to review the proposals for comfort stations to be built in Conakry under the IDA/AfDB-financed water supply and sanitation project. This report has been cleared by appropriate Bank staff, and is now being distributed. Production of the report has been given relatively low priority (the mission was in September 1980) as the mission was undertaken at the request of the World Bank and the report will be taken to the field by a Bank mission in early March as a basis for discussions with Government.

The September mission could be undertaken inexpensively as Mr. Carroll was already in West Africa on another assignment. Further technical assistance will probably be necessary to ensure successful implementation of the comfort station component, but I am not planning a follow-up mission until government endorsement of the Global Project is received.

\*

attachment

RNMiddleton:pn

OFFICIAL FILE COPY

GLO/78/006

10 February 1981

Mr. James Berna  
Senior Project Officer  
Global Programs  
UNDP  
866 U.N. Plaza  
New York, New York, 10017

UNDP Global Project GLO/78/006 - GUINEA

\* I attach for your information three copies of the report by Frank Carroll on a mission to Conakry in September 1980. This mission, undertaken in connection with another assignment in West Africa, was at the suggestion of the World Bank, to assist government in improving the design of communal latrines to be installed under a project financed jointly by the World Bank and African Development Bank.

We believe that, by simplification of design and increased use of local materials the cost of the facilities could be substantially reduced. However, the funding currently available will still be insufficient to instal all ten units originally planned. We are therefore proposing building a limited number of units initially, and using these to test both different physical layouts and different systems for operation and maintenance.

This report will be taken to Guinea for discussions by a World Bank mission in early March; we have indicated our willingness to provide further technical assistance once formal government endorsement of the Global Project is received.

Sincerely yours,

Richard N. Middleton  
Project Manager  
UNDP Global Project  
GLO/78/006

\* attachment

RNMiddleton:ipn

**WORLD BANK OUTGOING MESSAGE FORM (Telegram, Cable, Telex)**

IMPORTANT (PLEASE READ INSTRUCTIONS BELOW BEFORE TYPING FORM.)

Class of Service: **TELEX** Date: **2/10/81**  
Tele. No: **927-92034 DP UN** Originators Ext: **75304**

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*NRIC*  
*gwo/78/006*

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**UNDEVPRO**  
**CAIRO, EGYPT**  
  
WE CONFIRM CARROLL MISSION COMMENCING FEBRUARY SIXTEEN DETAILS AS FOLLOWS COLON ARRIVING CAIRO AF 487 STAYING AT SHEPHEARDS HOTEL. PROCEEDING ALEXANDRIA BY MORNING TRAIN FEBRUARY SEVENTEEN. PLEASE INFORM CONFERENCE ORGANIZERS DELIGHTED JOIN PARTICIPANTS AT HOTEL SAN STEFANO AND AT SAME TIME CANCEL REQUEST FOR ACCOMMODATION AT HOTEL CECIL. RETURNING CAIRO PROVISIONALLY FEBRUARY TWENTY ONE BY TRAIN STAYING AT HOTEL PRESIDENT. AVAILABLE IN CAIRO THROUGH MARCH SIX FOR COMPLETION NECESSARY PROJECT DOCUMENTATION. WOULD APPRECIATE YOU NOTIFYING GOVERNMENT OFFICIALS INCLUDING SAMIR KOHARINE. REGARDS, RICHARD MIDDLETON, INTBAFRAD

12  
10

**NOT TO BE TRANSMITTED**

SUBJECT:  
**UNDP GLOBAL PROJECT GLO/78/006: EGYPT**

DRAFTED BY:  
**RMiddleton:ba**

CLEARANCES AND COPY DISTRIBUTION:  
**cc: Messrs.Thys, MacWilliam Seragelden,  
EMP; Kopp, Zaborski, EM1**

AUTHORIZED BY (Name and Signature):  
**R. N. Middleton, Project Manager**

DEPARTMENT:  
**UNDP GLOBAL PROJECT GLO/78/006**

SECTION BELOW FOR USE OF CABLE SECTION  
CHECKED FOR DISPATCH

gco/72/006

Mr. Donald T. Lauria, Senior Consultant

16 February 1981

Mr. Richard N. Middleton, Project Manager

Terms of Reference: PHILIPPINES: UNDP PHI/80/015: Planning and Design of Low Cost Water Supply Systems

1. These terms of reference cover the work which it is envisaged should be accomplished in the period up to December 31, 1981, during which you will act as Senior Consultant to the project.

You will be responsible to me for the overall planning, implementation and monitoring of project activities; for ensuring the technical excellence of the methodologies employed; and for providing professional supervision and technical support to the Resident Adviser. Within this general framework, you will undertake the specific tasks described in the following paragraphs.

2. You will arrange for revision of the computer program called Linear Programming for Branched Networks (LPBN) to make it more suitable for use by the water supply planning agencies in the Philippines. Two modifications of this program are required: the first is to give users the option of specifying the diameters of some of the lines in the water network, and the second is to give users the option of treating the hydraulic gradient at water supply sources either as knowns or unknowns. This work should be completed by February 1981.

3. For this program, you will arrange for preparation of suitable documentation including: (1) a tape or card deck of the program, (2) a listing of the program, (3) a set of user instructions, and (4) a sample test problem and solution. A description of how the program works should be included, with references to appropriate published articles in the technical literature.

4. In close liaison with LWUA, and assuming that this work is not being done by LWUA with the assistance of the Resident Adviser or their consultants, you will arrange for an investigation to determine whether LPBN and FLOW can be modified to run on the minicomputer to be purchased by LWUA. If converted from mainframe to minicomputer, it is important that these programs be able to handle problems of the size routinely encountered by LWUA and the Rural Waterworks Development Corporation (RWDC).

5. You will investigate the efficiency of the mathematical model that recently appeared in the European Journal of Operations Research for use by LWUA and RWDC for optimizing the staged design of branched water systems. If this model proves suitable (with or without modification) you will arrange for purchase or development of a computer program that can be delivered to the Philippines, together with appropriate documentation. Alternatively, you should incorporate the innovative features of this program in the staged development models which you are already developing. This work should be completed in time for the next short course (August 1981).

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6. You will investigate the possibility of modifying LPBN so that it can be applied to looped networks for producing near optimal designs based on the approach of Bhava that appeared in a recent journal of the Environmental Engineering Division of ASCE. If this approach seems promising, you will arrange for developing a computer code together with appropriate documentation. This work should also be completed by August 1981 in time for the short course.
7. In general, you will review recent developments in design techniques relevant to the objectives of this project, and will recommend to me any changes in approach which appear desirable in the light of current developments.
8. You will coordinate with the water supply planning agencies in the Philippines to help plan the workshop that is described in the UNDP project plan and which is now tentatively scheduled for early May 1981. You will plan on attending the workshop, the duration of which is expected to be one week, and delivering the lectures that pertain to the theory of low-cost water supply planning. The tasks outlined above should be completed prior to this time, with the exception of that described in para 4, as LWUA's minicomputers purchase appears likely to be delayed.
9. One of the needs that emerged from the recent UNC short course was collection and analysis of data from completed water projects in the Philippines. This task is an important part of strengthening the information base required for water supply planning. During the workshop referred to in para 8, you will coordinate with the water supply agencies in the Philippines to plan a program for this work.
10. You will plan the next 1-month short course for Filipino staff, tentatively scheduled for August 1981. Agreement regarding the principal topics to be covered should be reached with LWUA and RWDC during your mission for the workshop described in para. 8. Also at that time, you should assist with selection of candidates for the short course and give briefings to assist their planning. Prior to the short course, you will prepare notes, handouts, and other pertinent documents for instruction. The actual conduct of the short course will be subject of separate terms of reference.
11. Much of the work described above will be undertaken by graduate students of the University of North Carolina (UNC), under your direction, supported by the Transportation, Water and Telecommunication Department of the World Bank. You will assess the extent of this support and will, at an early stage of each of the studies, advise me of any additional external input that will be required (from UNC or elsewhere), and will submit proposals for my approval before contracting such additional support.
12. You will report to me monthly, in the form of a brief informal memorandum, on project progress. In addition, you will submit quarterly reports on your work, in particular setting out actual achievements compared to planned goals, recommending any necessary amendments to the workplan, and highlighting any consequential changes to the project budget. In addition, you will submit separate reports on the workshop to be held in the Philippines in May 1981 and on the next short course, in late 1981.

cleared with and cc: Messrs. Saravanapavan, Iizuka, URB;

cc: Ms. Long, ASA

RNMiddleton:pn

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ejw/78/006

Distribution below

9 February 1981

Mr. Richard N. Middleton, Project Manager, UNDP Global Project GLO/78/006

Proposed UNDP Technical assistance projects;  
Low-cost Sanitation Projects in Least-Developed Countries  
in Asia and Nepal

You have already received copies of the draft project documents for these proposed UNDP projects, copied to you at the same time as I forwarded them to Mr. Loewen (TWT). I understand that these will be presented for consideration by UNDP during a mission by Mr. Riley (IRD) which starts of February 13. I would, therefore, appreciate receiving your comments or clearance of these documents as soon as possible.

Distribution: Ms. Sato, AEA; Mr. Sud, AEP; Mr. Shibusawa, ASA;  
Ms. Loos, ASA; Mr. Lamson-Scribner, ASP; Mr. Sandstrom, AEP

cc: Mr. Schebeck, PHN; Mr. Evans, PHN.

RNMiddleton:pn



**WORLD BANK OUTGOING MESSAGE FORM (Telegram, Cable, Telex)**

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Class of Service: 391 **TELEX** Date: 2/10/81  
Telex No.: 021 31847 Originators Ext: 75304

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**FEEMA**  
**RIO DE JANIERO, BRAZIL**

*glo/78/006*

FOR FERNANDO SEIXAS. MOST GRATEFUL YOU RELAY FOLLOWING TO  
PRESIDENT EVANDRO RODRIGUES DE BRITO. AS YOU KNOW WE ARE  
MOST ANXIOUS FOR AUGUSTO SERGIO GUIMARAES TO JOIN UNDP GLOBAL  
PROJECT ON LOW COST SANITATION. UNEXPECTED DIFFICULTIES IN  
FINALIZING HIS CONTRACT WITH US. WOULD BE GRATEFUL YOUR  
AGREEMENT TO EXTEND HIS CURRENT LEAVE OF ABSENCE FOR TWO  
TO THREE WEEKS UNTIL UNDP CONTRACT CAN BE SIGNED. REGARDS,  
RICHARD MIDDLETON, PROJECT MANAGER, INTBAFRAD.

**NOT TO BE TRANSMITTED**

SUBJECT: <b>UNDP GLOBAL PROJECTS GUIMARAES</b>	DRAFTED BY: <b>RMiddleton:ba</b>
CLEARANCES AND COPY DISTRIBUTION:  <b>cc: Donnar Ringle</b>	AUTHORIZED BY (Name and Signature): <i>R. Middleton</i> <b>Project Mgr.</b>
	DEPARTMENT: <b>UNDP Global Project, GLO/78/006</b>
SECTION BELOW FOR USE OF CABLE SECTION CHECKED FOR DISPATCH <i>[Signature]</i>	

Technology Advisory Group UNDP Global Project GLO/78/006

Demonstration Projects in Low-cost Water Supply and Sanitation

OFFICE MEMORANDUM

oh - File: *hous*  
*JWP*

*Water Supply + Sewerage - la*  
*Sector*

*cc SAIC*

DATE: 9 February 1981

TO: Distribution below

FROM Mr. Richard N. Middleton, Project Manager, UNDP Global Project GLO/78/006

*glo/78/006*

SUBJECT: Proposed UNDP Technical assistance projects;  
Low-cost Sanitation Projects in Least-Developed Countries  
in Asia and Nepal

You have already received copies of the draft project documents for these proposed UNDP projects, copied to you at the same time as I forwarded them to Mr. Loewen (TWT). I understand that these will be presented for consideration by UNDP during a mission by Mr. Riley (IRD) which starts of February 13. I would, therefore, appreciate receiving your comments or clearance of these documents as soon as possible.

Distribution: Ms. Sato, AEA; Mr. Sud, AEP; Mr. Shibusawa, ASA;  
Ms. Loos, ASA; Mr. Lamson-Scribner, ASP; Mr. Sandstrom, AEP

cc: Mr. Schebeck, PHN; Mr. Evans, PHN.

RNMiddleton:pn

LOW-COST SANITATION PROJECT IN  
LEAST DEVELOPED COUNTRIES OF ASIA  
(Nepal, Bangladesh, Lao PDR; Maldives)

This project is designed to provide assistance to some of the countries of Southeast Asia (Nepal, Bangladesh, Lao PDR, and Maldives) classified as "least developed". Its objective is to assist each country in the preparation of projects, suitable for financing by external agencies, which would assist the country in meeting its Decade Water and Sanitation objectives. Specifically, the project would be concerned with the provision, in priority areas of each country, of facilities for the sanitary disposal of human body wastes.

Over a three-year period, this project would also assist in defining the resources, approaches, and actions to be taken to establish the national program of each country at a level of activity which, if sustained, would lead to the realization of the national sanitation goals.

The project would provide for a full-time regional manager (probably based in Dacca, Bangladesh) assisted by other full time staff stationed in Bangladesh and Lao PDR. (Complementary projects are under consideration for Nepal, one of which would provide similar inputs, and the second, assistance in developing that country's Decade water and wastes programs.) Additional inputs funded by the project would include short-term specialists as necessary (including some national staff to reinforce the counterpart agencies), specialist studies undertaken by local institutions, and the construction of a total of approximately 1400 demonstration latrines in selected locations in each country. These experts would assist the responsible agency or agencies in each country to:

decide on the types of facilities suited to varying conditions in the areas concerned; translate goals and related requirements into operational plans; explore and refine policies to be employed. Cultural, health, environmental and sociological factors affecting design, acceptance, use location, construction and maintenance of sanitary facilities will receive attention at all stages of the project. The project packages finally developed will reflect the means most appropriate to each country (or each locality) for best incorporating these findings into operational actions and policies.

This project would provide estimates of cost and financing requirements; the World Bank would assist participating countries to locate sources for funds for the investment projects finally prepared. In most cases it is expected that each investment project will represent a three or four-year construction operation plan.

The project would be managed and given technical support by the World Bank through UNDP's Global Project GLO/78/006 (Demonstration Projects in low-cost Water Supply and Sanitation). Supplementary assistance would be given by regional staff funded by UNDP's Regional Asia budget as well as by advisers to be funded out of country IPFs.

Evaluation of this project will be made during its last year, to determine justification for termination or extension. Major criteria employed in this evaluation shall include the following: the receptivity and reaction of the country and its people to the program; the number of sanitation project packages prepared for submission to donor agencies; the number of such packages accepted to be financed; and the feasibility of the approach being taken to permit the country to reach its goal for sanitation by 1990. An indicative budget for project activities is Annex I.

PROJECT COSTS  
UNDP CONTRIBUTION

Project Manager, 3 years, International	\$240,000
Project adviser, 3 years, local, Bangladesh	45,000
Project adviser, 1 year, international, Lao PDR	70,000
Social Scientist, 3 years, local	42,000
Short term consultants	35,000
Support staff	20,000
Travel (short-term consultants)	25,000
Travel (manager, adviser)	22,000
Special studies	30,000
Training & seminars	22,000
Manuals, educational expenses	3,000
Construction supplies & equipment <u>1/</u>	<u>135,000</u>
	\$689,000

COUNTRY CONTRIBUTIONS

To be defined; (will include, for example: counterpart staff, office accomodation and support facilities, local transport, services of local institutions).

---

1/ Construction costs split as follows:

Maldives	\$ 5,000
Bangladesh	65,000
Lao PDR	25,000
Nepal	40,000
	<u>\$135,000</u>

The cost of individual latrines will vary, depending on the site conditions, materials and specific designs finally selected as most likely to be appropriate to each locality; it is anticipated that a total of about 1400 units may be built.

BASIS OF PROJECT COST ESTIMATES  
SANITATION IN LEAST DEVELOPED COUNTRIES OF ASIA

1. Project life-three years.
2. Countries involved - Bangladesh, Nepal, Lao PDR and Maldives)
3. Personnel - Project managers and resident adviser (Lao PDR) to be internationally recruited. All contracts three years unless otherwise stated. Bangladesh adviser and project social scientist to be staff already recruited under ongoing Global project and based in Dacca.
4. Construction materials - these would not be divided equally among countries, but would be concentrated in those where specific options or approaches need to be tested prior to larger project development.
5. Special studies - these have not been fully identified at present.

Two typical studies might be:

(a) Maldives - Study concerned with hydrogeology and potential groundwater pollution, taking into account past experiences, current sanitation practices, socioeconomic factors, and beneficiary preferences with the objective of defining feasible sanitation alternatives.

(b) Bangladesh - Evaluation and monitoring of the ten-town sanitation program developed under the ongoing Global Project and adapting strategies and technologies as necessary for extending these programs to other areas of the country.

## OFFICE MEMORANDUM

TO: Richard N Middleton

DATE: February 9 1981

FROM: Duncan Mara, TAG *DM*

DDM:jlw

SUBJECT: UNDP Global Project GLO/78/006: BRAZIL  
Workplan for Mr Augusto Sergio P Guimarães

1. As requested in my TOR of 12/19/81, Augusto Sergio and I have discussed his workplan for the 12 month period commencing February 15, 1981 (this date was chosen as it is the first Monday after the conclusion of the seventh TAG mission to Brazil).
2. The agencies active in the Low Cost Sanitation sector in Brazil, and to which Augusto Sergio will provide technical assistance, are the following:
  - Group A: (a) CNDU, Brasília - responsible for MSC project in 8 cities (Campina Grande, Natal, Florianópolis, Pelotas, Vitória, Montes Claros, Petrolina and Juazeiro) and also for the Greater Recife Urban Development Project; technical assistance to CNDU also includes working with all the local (state and municipal) authorities involved in these two projects. The Recife project is likely to be duplicated in the two other northeastern metropolitan regions (Fortaleza and Salvador) and there will probably be an MSC II project covering a greater number of medium sized cities.
  - (b) FUNDREM, Rio de Janeiro - responsible for all aspects of urban planning in Greater Rio; FUNDREM is about to initiate a pilot scale low cost sanitation project in part of Baixada Fluminense and has requested technical assistance from TAG.
  - (c) COHAB-ACRE, Rio Branco - the Acre State Housing Company has been active in the low cost sanitation sector for 2 years and has been receiving technical assistance from FEEMA (i.e. Augusto Sergio); COHAB-ACRE is about to implement a VIP or PF program for 2000 households in the Industrial Zone of the state capital, Rio Branco (Acre is the poorest state in Brazil).

- (d) POLONORDESTE/SUDENE, Recife - POLONORDESTE is a "programa especial" of the Federal Ministry of the Interior for rural development in the northeast; there are at present 42 POLONORDESTE projects, 7 of which have or are receiving Bank financing; almost all POLONORDESTE projects have water supply and sanitation components. TAG will provide technical assistance to the SUDENE division responsible for the POLONORDESTE program, initially concentrating on new projects in Bahia and Ceará.
- (e) SMD/UNICEF, Rio de Janeiro - SMD has committed Cr\$ 400,000,000 for favela upgrading in fiscal year 1981, of which approximately half is for basic sanitation improvements.

- Group B:
- (a) IPT, São Paulo
  - (b) CETESB, São Paulo
  - (c) BNH/COSAN & DEPEs, Rio de Janeiro
  - (d) CEDAE, Rio de Janeiro
  - (e) INT, Rio de Janeiro
  - (f) UNICEF, Brasilia
  - (g) F/SESP, Rio de Janeiro

TAG's assistance to these agencies will be of a general nature, supporting and encouraging development of the low cost basic sanitation. As discussed with COSAN during the sixth mission, work with CEDAE will include a water distribution optimization workshop, probably in late 1981. TAG will work with UNICEF/Brasilia to define possible UNICEF programs in monitoring and evaluation in low cost sanitation.

Group A agencies are thus project oriented, Group B agencies less so but they are potentially important to the sector (in the case of BNH/COSAN at present very important to, but not yet active in, the sector).

WORKPLAN

- 3. At this point in time it is not possible to provide exact dates for field visits (i.e. internal missions), but an approximate schedule is as follows:





2/20/78/006

6 February 1981

Mr. Samuel Mpuchane  
Permanent Secretary  
Ministry of Local Government and Lands  
Private Bag 006,  
Gaborone, Botswana

Dear Mr. Puchane,

BOT/79/003 - Public Health Engineer

In our telex to you dated February 5th, we set out our general comments on the informal workplan submitted by Mr. Wilson and suggested that you might review the proposals in detail and set priorities to be completed within the duration of this project. We could then discuss these further and reach final agreement during a follow-up mission, tentatively in mid-March.

We have some difficulty in commenting in detail on the workplan, since it is itself only a bar chart and so does not give details (most particularly, of expected outputs and opportunities for additional donor support to the sector), and also because it extends beyond the duration of the project and so will clearly have to be curtailed. However, I thought it would be useful for me to send you, in advance of the March mission, a copy of Geoffrey Read's internal memorandum to me setting out his comments based on his understanding of the current status of the project.

Yours sincerely,

Richard N. Middleton  
Project Manager  
UNDP Global Project  
GLO/78/006

cc: Mr. G. Read, TAG

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90/78/006

Mr. Melvin Loewen, TWT

6 February 1981

Mr. Richard N. Middleton, Project Manager

UNDP Global Project GLO/78/006 - INDONESIA  
- Low-cost Sanitation Project

\*

I attach five copies of a brief setting out in general terms, as a basis for further discussion with Government and UNDP, a proposal for technical assistance in low-cost sanitation. This brief has been discussed with Messrs. Bruestle, Prevost and Ramani, and reflects their comments. We are now preparing a draft implementation plan and a schedule setting out Government counterpart commitments.

You may recall that we have already suggested to Government that they consider Mr. Gerd-Jan de Kruijff for this post; he is currently on a six-month assignment in Zimbabwe and, after orientation and briefing by TAG, could be available in Jakarta about October/November this year.

\*

attachments

cc: Mr. Stern/Ms. Duer, AEA; Mr. Bruestle/Mr. Sud, AEP;  
Mr. Evans/Ms. Husain, PHN; Mr. Roy, TAG.

RNMiddleton;pn

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INDONESIA - Low-cost Sanitation Project

The general objective of this technical assistance project is to lay the groundwork for action, nationally, which can lead to a sound, greatly intensified program for the sanitary disposal of human body wastes. Specifically, the project will aim to develop a number of investment projects suitable for financing by external donor agencies. In developing these projects, it is expected that attention will be focused on four separate, but closely inter-related, elements:

- strengthening institutional capability to plan, design and execute low-cost sanitation projects;
- introduction of improved technologies which also take account of social, cultural, economic, financial and management factors;
- development of complementary information, motivation and education programs;
- improved operation and maintenance practices.

Because of the geography and size of Indonesia, preparation of a program which is feasible for application in all areas of the country is particularly difficult. Probably not one but several separate programs will be required, tailored to the specific needs of urban, urban fringe, and rural populations. Decentralization of programs to provincial, kabupaten, kecamatan or municipal levels of government, consistent with Government's decentralization policy, is to be considered when addressing the institu-

tional arrangements for planning and implementing projects and for operating and maintaining completed facilities. Attention will also be given to those areas of Jharta where low-cost approaches can be incorporated in the urban sewerage project now under development. It is also anticipated that considerable reliance will need to be placed on the private sector, and the project will examine the division of responsibilities between the public and private sectors in such areas as fabrication of components, latrine construction, and servicing of latrines (including potential resource recovery possibilities).

As a preliminary step, existing and past projects and programs of latrine construction, both public and private, in as many areas of the country as possible require study and evaluation. Particular attention will be given to the latrine components of the urban project financed by the World Bank. Because of the more acute public health problems encountered in poor and congested areas of the major cities, particular attention will be given, in the initial stages of this project, to finding feasible approaches to the excreta disposal problems of these areas. While many of the less dense fringe areas would be included in this early effort, it can be anticipated that basic facilities suited for application in crowded kampung areas will demand priority.

Through this initial review, priority areas for project work will be identified. For example it is already known that there is an opportunity for financing, by IBRD, of sanitary facilities in twenty-five cities of East Java, provided that a well-conceived proposal can be developed which gives reasonable assurance that the criteria applied to the financing of such projects can be met. The UNDP-financed project would,

therefore, have as one of its responsibilities assistance to the Government in the preparation of a sanitation component for these twenty-five cities. Funds are provided in the project budget for construction of demonstration latrines in order to examine the acceptability of particular technologies, approaches to construction, etc.

Work under this project would be under a project manager stationed in Indonesia and recruited internationally. He would be assisted by one local engineering adviser and by one local social scientist.

The project would be established within Cipta Karya because, among other reasons, initial activities will be directed at urban areas where this department carries responsibility for sanitation. The Ministry of the Interior will be consulted on all institutional issues.

To the extent possible, personnel of the City Health Department as well as the Ministry of Health will be involved at all appropriate points in the planning and execution of the project since policies and procedures involving both personnel and health regulations require attention and utilization.

COST ESTIMATE - INDONESIAN SANITATION PROJECTThree Year Project

Project Manager (3 years)	\$240,000
Project Adviser - locally recruited (3 years)	45,000
Community organizer - locally recruited (3 years)	45,000
Short term consultants - 10 mm	80,000
Short time consultants - travel	60,000
Other travel	25,000
Special studies <u>1/</u>	25,000
Training & seminars	20,000
Training aids and publications	6,000
Construction materials <u>2/</u>	<u>140,000</u>
	\$686,000

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1/ Studies would be as follows:

- (a) a review and evaluation of past and present programs, designs, policies and practices;
- (b) preparation of a project for international financing - actual field study and feasibility report actions.

2/ The cost of the latrines to be built as demonstration units will depend on their location, the technology selected and the materials chosen. It is anticipated that these funds will provide approximately 1400 household units.

INDONESIA  
LOW COST SANITATION PROJECT  
COMMITMENTS OF GOVERNMENT

Staffing Plan

Sanitary Engineer - Project Co-Director (counterpart to UNDP Advisers)

Administration Assistant

4 Sanitary Inspectors

1 Skilled workman (concrete and carpentry)

2 Unskilled workmen

Transportation

1 truck with driver

1 personnel carrier with driver

Air travel to Islands as required

Land transport on islands as required

Per diem and cost reimbursements for national staff and

the Advisers while on duty travel (assume 180 days/year)

(3 x 2 x 30)

1 office, Djakarta for Adviser

1 office, Djakarta for Project Co-Director

1 office, shed and yard in area selected for field testing

Utilities and facilities for above janitorial services and  
watchman, if needed.

1 house-residential, for Adviser including utilities.



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(Telex NO.)

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1981 FEB -5 AM 8 23  
COMMUNICATIONS DIVISION

Distribution:

Ms. Vaughn

Mr. Middleton

GABORONE (WORLD BANK) 41 3 *no objection req. from*  
0002 *cc: [signature]*

WORLD BANK

WASHINGTON

MISC 214 ANN VAUGHN INFO MIDDLETON BOT/79/003 - PUBLIC HEALTH  
ENGINEER WILSON'S WORKPLAN COVERS PERIOD BEYOND EXPIRATION  
PROJECT DURATION WE FEEL WORKPLAN SHOULD BE RELATED TO WHAT CAN  
BE ACHIEVED WITH APPROVED PERIOD AND AVAILABLE FUNDS. GRATEFUL  
YOUR COMMENTS (ZAIDI UNDEVPRO GABORONE)

COL: MISC 214 BOT/79/003

NNNN

Mr. Melvin Loewen, TWT

5 February 1981

Mr. Richard N. Middleton, Project Manager

UNDP Global Project GLO/78/006 - Financial Control and  
Project Supervision

*-Dalmat-*  
I attach for your review the final draft of these proposals, which have been developed in discussions between TWT and CTR. I suggest that we put these into effect as soon as feasible after you return from mission, and after Mr. Dalmat transfers to your administration (March 1, 1981).

cc: Ms. Retiro, CTR;  
Messrs. Kalbermatten, TWTWW; Issa, Dalmat, UNDP GLO/78/006.

RNMiddleton:pn

**OFFICIAL FILE COPY**

5 February 1981

Dr. Vithya Pienvichitr  
Governor,  
Provincial Water Works Authority  
Bangkok, Thailand

Dear Dr. Vithya,

UNDP Global Project GLO/78/006  
Demonstration Projects in Low cost  
Water and Sanitation Planning and  
Implementation

\* With this letter, I wish to draw your attention to our earlier mutual efforts to provide technical assistance to Thailand in the field of low-cost water supply systems. You will remember that under UNDP Global Project GLO/78/006 there were two missions to Thailand in 1980, one of which involved a week-long seminar and workshop to train engineers in low-cost water distribution system design. My letter of July 17, 1980 (copy attached) proposed developing a UNDP-financed technical assistance project in this field, to provide further training to Thai engineers.

\* The Bank has recently been asked by UNDP Thailand to suggest projects for inclusion in UNDP's IPF program for 1981-85. Given this opportunity, we prepared a proposal for submission to UNDP (copy attached). The proposal is along the lines of the discussions that were held between your staff and Mr. Lauria and myself, and is generally in agreement with the contents of my letter to you in July 1980.

The proposal is quite short and general; yet it captures, I think, the sense of what we discussed. It proposes a resident technical adviser who would coordinate and provide direct assistance to PWWA on low-cost water system design; it identifies PWWA as the lead agency; and provides for the possible involvement of MWWA, Chulalongkorn University and/or other agencies.

I have discussed the role of the resident adviser with Messrs. Lauria and Hebert (who taught the workshop) and others in the Bank including Mr. Bruestle. Basically, the adviser would further the work initiated under the seminar and workshop. He would be thoroughly knowledgeable with the computer programs which will speed and ease PWWA's water supply planning work, thereby making it possible to apply these tools upon commencement of the project and free some of PWWA's scarce engineering manpower for more creative tasks. The kind of person we are thinking of should be young (say in his 30s), energetic, and not need special attention or consideration by PWWA and other Thai agencies.

5 February 1981

I, of course, cannot foresee if the proposal would be accepted by UNDP, although informal indications from UNDP during last year's missions suggested it would be favorably received if it is something PWWA wants. I would like to propose that you raise the matter with UNDP and that Mr. Lauria and/or myself plan a mission to Thailand about mid-May this year to pursue this matter further. At that time, we would like to (1) discuss your exact desires and requirements for a technical assistance project; (2) draft project document for UNDP based on these discussions; and (3) meet with UNDP and relevant Thai agencies to secure approval of the document, insofar as possible.

I would appreciate having a letter or telex from you as soon as possible indicating whether a mission in mid-May is acceptable; this is needed for our planning since travel schedules for this year are already tight. I would further appreciate hearing from you by about March 1 on the following items, which will help us plan our mission:

1. Please let me know your experiences in using the computer tools that were introduced to your staff at last year's workshop. If they have not been used at all, there are obviously no problems; but it would be useful to know why (e.g., no interested staff member, or insufficient time, or too complicated, or too inaccessible, etc.). If they have been used, but unsuccessfully, it would be helpful to know the problems.
2. Please try to identify the specific services PWWA would like to receive from a technical assistance project, within the framework of what we can offer as indicated by last year's workshop.
3. Finally, please explore the interest of other Thai institutions that might cooperate with this project, and identify their respective roles insofar as possible.

We continue to be optimistic about technical assistance to PWWA and are looking forward to hearing from you and discussing this matter with you in the near future. Meanwhile, please let me or Arthur Bruestle know if you need any additional information from us.

Yours very sincerely,

Richard N. Middleton,  
Project Manager  
UNDP Global Project  
GLO/78/006

\*\* attachments

cleared with and cc: Mr. Bruestle, AEP.  
cc: Messrs. Singh, URB; Ms. Murphy, AEA; Smeltzer, AEP; Sud, AEP; Madavo, URB.

RNMiddleton:pn

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GLO/78/006

NRIC

R2

Technology Advisory Group UNDP Global Project GLO/78/006  
Demonstration Projects in Low-cost Water Supply and Sanitation

clear with  
Kwame?

# OFFICE MEMORANDUM

TO: Mr. Frank Carroll, TAG

DATE: 5 February 1981

FROM: Mr. Richard N. Middleton, Project Manager

SUBJECT: Terms of Reference: UNDP Global Project GLO/78/006:  
EGYPT

*File*  
*An advisory*  
*title went up*  
*about a month*  
*ago to UNDP*  
*will be*  
*pending*  
*a team*  
*Can we*  
*discuss*  
*something*  
*about*  
*this*  
*when you*  
*get a*  
*chance?*  
R2

You will arrange to arrive in Egypt about February 16 for a stay of approximately two weeks. The objective of your mission is to discuss with representatives of Government, international and bilateral donor agencies, the steps to be taken to reactivate the South Daqahliya project. In particular, you will review with them the appropriate institutional arrangements for the project and whether some agency, other than the General Organization for Potable Water (GOPW), should be the lead counterpart agency.

During the period February 17 - 21, you will attend a workshop organized by the World Health Organization in Alexandria, the purpose of which is to review the national strategy for the Decade. You will use the opportunity of the workshop to describe TAG's work to the participants and to have preliminary discussions on the Daqahliya project. On completion of the workshop, you will return to Cairo and will, to the extent possible, complete and leave with Government and Resident Representative UNDP a revised project protocol setting out the agreements raised during your mission, identifying the next actions to be taken and by whom, and listing the financial and other resource inputs required from each of the participating institutions. Should it prove impossible to agree on what, in your judgement, appears to be a workable institutional framework, or if Government or donor commitment appears uncertain, you may at your discretion, recommend TAG abandon its efforts to promote the Daqahliya project.

En route to Cairo, you will stop in Washington for two days of briefing discussions with staff of the World Bank and USAID, and en route from Washington to Cairo you may travel via Paris for discussions with SAFEGE on the Bamoko sanitation project; costs associated with this stopover will be borne by SAFEGE. In Cairo you will meet Ms. Shanawany, TAG Health Educator working on Lesotho projects, and will review with her any proposal which you may develop for health education associated with the Daqahliya project.

You will ensure that Resident Representative UNDP, GOPW, Ministry of Health, Governor of Daqahliya, and the Ministry of Economic Affairs are fully informed on the findings and the recommendations of your mission. Within two weeks of your return to United States, you will submit a full report on your mission work.

cleared with and cc: Messrs. MacWilliam, EMP; Zaborski, EML; Schebeck, PHN  
cc: Messrs. Thys, EMP; ~~Kopp~~, EML; Seragelden, EMP; Evans, PHN.

RNMiddleton:pn

glo/78/006

Mr. Frank Carroll, TAG

5 February 1981

Mr. Richard N. Middleton, Project Manager

Terms of Reference: UNDP Global Project GLO/78/006:  
EGYPT

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You will arrange to arrive in Egypt about February 16 for a stay of approximately two weeks. The objective of your mission is to discuss with representatives of Government, international and bilateral donor agencies, the steps to be taken to reactivate the South Daqahliya project. In particular, you will review with them the appropriate institutional arrangements for the project and whether some agency, other than the General Organization for Potable Water (GOPW), should be the lead counterpart agency.

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You will ensure that Resident Representative UNDP, GOPW, Ministry of Health, Governor of Daqahliya, and the Ministry of Economic Affairs are fully informed on the findings and the recommendations of your mission. Within two weeks of your return to United States, you will submit a full report on your mission work.

cleared with and cc: Messrs. MacWilliam, EMP; Zaborski, EMI; Schebeck, PHN  
cc: Messrs. Thys, EMP; Kopp, EMI; Seragelden, EMP; Evans, PHN.

RNMiddleton:pn

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ejw/78/006

February 4, 1981

Mr. Suratmo Notodipuro,  
Chief of Sub-Directorate of Planning  
Directorate of Sanitary Engineering  
Cipta Karya  
Ministry of Public Works and Electric  
Power  
Jl. Pattimura No. 20 - Kebayoran Baru  
Jakarta, Indonesia

Dear Mr. Suratmo:

It has now been about six months since you and Mr. Harjoko participated in the workshop on low-cost water supply in Bangkok, so I thought I should follow up to get your thoughts about whether our UNDP Global Project (GLO/78/006) might render similar technical assistance to Cipta Karya. Mr. Lauria, who conducted the workshop, informed me that you and Mr. Harjoko would be thinking about such assistance after you returned home and that we would discuss the matter with you after you have had sufficient time to consider it.

I would like very much to know whether you think Cipta Karya would benefit from using the computer programs and planning tools we are prepared to make available through GLO/78/006. More specifically, might Cipta Karya be interested in sponsoring a workshop in Indonesia like the one we organized for PWWA at Chulalongkorn University? If so, has any thought been given to where it might be held? (I think Mr. Lauria discussed the possibility of Bandung University) and when?

In May Mr. Lauria and I have tentative plans to visit Bangkok and Manila to offer continuing technical assistance. The Manila mission will include a workshop as follow-up to a one-month short course held last fall for about twelve engineers from the Local Water Utilities Administration at the University of North Carolina, and the Bangkok mission will attempt to finalize plans for UNDP support of an assistance project to PWWA; I am enclosing a brief summary of this project for your information since this is typical of what might be forthcoming should Indonesia be interested in this sort of assistance. During this mission, Mr. Lauria and/or myself would be pleased to try to schedule a visit to Indonesia if this seems to Cipta Karya to be the appropriate time for further discussions.

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Mr. Suratmo

-2-

February 4, 1981

We are starting to make our travel plans and are already finding that time is tight. Consequently, I would appreciate hearing from you this month about whether we should include Indonesia in our itinerary. Also, I am anxious to know whether it has been possible to make any use of the materials and information introduced in the Bangkok workshops.

Mr. Lauria joins me in sending regards.

Sincerely yours,

Richard N. Middleton,  
Project Manager  
UNDP Global Project  
GLO/78/006

\*enclosure

cleared and cc: Mr. Bruestle, AEP;  
cc: Messrs. Stern, Ms. Duer, AEA;  
Sud, AEP; Evans, Ms. Husain, PHN;  
Roy, Lauria, TAG

RMiddleton:ba

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210/78/006

Mr. Melvin J. Loewen, TWT

4 February 1981

Mr. Richard N. Middleton, Project Manager

UNDP Global Project GLO/78/006 - NEPAL

Following several rounds of discussions involving yourself, myself, and Messrs. Shipman and Skytta on future UNDP-funded technical assistance to the water and wastes sector in Nepal, I thought it would be useful to set out my conclusions as a basis for your discussions during your upcoming mission.

Basically, two distinct forms of assistance have been identified. The first requirement, identified as a result of our past two years of Global Project operations, is for a Low-cost Sanitation Adviser, located within the Department of Water Supply and Sewerage, corresponding broadly to the Water Adviser already in that Department (Mr. Saravanapavananthan, a WHO expert). His function would be to assist in implementation of demonstration sanitation projects in the towns already selected by government and, on the basis of this experience, to develop a number of investment projects in other towns (including parts of the major cities where consulting engineers have found conventional sewerage to be impractical). Being within DWSS, this adviser will be well placed to ensure that water supply and sanitation improvements are undertaken in a coordinated manner, and that Decade strategies reflect water/sanitation/health linkages. This adviser should be recruited as soon as possible; a suitable candidate has been identified and interviewed, and a draft project document for the position is attached.

As you know, the Global Project has been inactive in Nepal for some time; I telexed RR UNDP about this in November 1980 explaining that we were anxious to complete some more of our preinvestment work in India before mounting the next Nepal mission, as it appeared that we could streamline the approach originally suggested in Nepal based on the lessons we were now learning in India. However, I know that government has allocated a budget for construction of demonstration latrines in the current fiscal year, and I am anxious not to disappoint them. We are just finalising a proposal to reactivate this work, (possibly with a short-term consultant stationed in Nepal if a suitable candidate can be recruited immediately), and I expect to send this forward to RR UNDP shortly.

The second, more senior technical assistance would be provision of an Investment Adviser for Water and Sanitation. From discussions with Bank staff, it seems that the main constraint in the sector may be absorptive capacity rather than lack of well-prepared projects at this time. The exact functions and location within government of such an adviser probably need

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better definition before we can proceed much further (for example, we do not at present know whether we are looking for someone with a rural water bias, or a conventional water/wastes expert to supervise consulting firms working on projects in urban areas). I propose that one of the early responsibilities of our Bangkok Regional office for Water and Sanitation should be to discuss with UNDP Resident Representative in Nepal the assistance he envisages as necessary for the Nepal Technical Support Team (TST) (which would, of course, include the Low-cost Sanitation Adviser); that this assistance should then be finalized in discussions with government.

We are, as you know, working on the development of a low-cost sanitation project to serve the least developed countries in Asia (Nepal, Bangladesh, Laos and Maldives). Once this second project is approved and staff are recruited, I would expect it to provide substantial support to the adviser posted in Nepal, in particular in the provision of short-term consulting inputs, in technical support on common concerns (such as design optimisation or avoidance of groundwater pollution) and in the broader policy issues of sanitation projects.

enclosure

cc: Messrs. Lamson-Scribner/Skytta, ASP;  
Shibusawa/Ms. Loos, ASA;  
Evans/Schebeck, PHN.

RNMiddleton:pn

90/7A/006

Distribution:

Mr. Middleton ✓

Mrs. Hamilton

NEWDELHI, FEBRUARY 04, 1981

WORLDBANK

WASHINGTON DC

FOR MIDDLETON - TWT

YOUR TELEX 321 GRATEFUL FOR THE PERMISSION GRANTED. SINCE 25TH AND 26TH ARE THE TWO DAYS WHEN LOW COST SANITATION WILL BE DISCUSSED I AM NOT ATTENDING THE CALCUTTA CONFERENCE NOR PRESENTING PAPERS. INFORMED AMIPH, DIRECTOR. EYE FEEL THAT PUSHING PHASE III PROGRAMME IS MORE IMPORTANT AT THIS STAGE. HOPEFULLY LOWEN BE HERE 24 TO 26TH AS I PROPOSE LEAVING FEB. 27 FOR PATNA IF POSSIBLE. DEA MEETING FOR UNDP PROGRAMME PROPOSED END FEB OR EARLY MARCH. HAVE BEEN ABLE TO GET A FAVOURABLE NOTE PREPARED BY PLANNING COMMISSION TO DEA FOR PHASE III AND ONE FROM WH MINISTRY. HOPING THINGS WILL MOVE SMOOTHLY NOW. MEETING THE ADVISER PLANNING COMMISSION, WH MINISTRY FOR EARLY DESPATCH OF THEIR VIEWS TO DEA. NEW SUBJECT CLASS + CITY IN ALL THE STATES INCLUDING DELHI ARE KEEN FOR THIS TYPE OF LATRINES. IT IS ONLY CPHEEO'S DECISION THAT THESE WILL BE SERVED WITH SEWERAGE DURING THE DECADE AND WE SHOULD NOT INCLUDE THEM MADE US FRAME OUR POLICY ACCORDING TO THEIR WISHES. ALTHOUGH I KNOW COMPLETE SEWERAGE WILL NOT BE ACHIEVED AND DELHI MUNICIPAL COMMITTEE IS ALREADY ADOPTING OUR DESIGN THROUGH HARIJAN SEWAK

SANGH WHO ARE PROVIDING SUCH LATRINES IN DELHI CORPORATION AREA  
FOR RS. 550 EACH. MANY PEOPLE HAVE ADOPTED OUR DESIGN. NEW  
SUBJECT WE HAVE BEEN ABLE TO GET GLASS FIBRE REINFORCED POLYESTER  
SQUATTING PANS MANUFACTURED ACCORDING TO OUR DESIGN. SEVERAL  
THOUSANDS HAVE BEEN PURCHASED BY CONTRACTORS ENGAGED IN THIS  
FIELD. THIS COST RS. 56 EACH FOR THE SQUATTING PANS AND WOULD  
BE REDUCED TO RS. 52 IF THE ORDER IS ABOVE 5000 FURTHER  
REDUCTION IN COST POSSIBLE. THE FIBRE GLASS HAS BEEN PREFERRED  
TO PVC OR HDP BY THE NATIONAL BUILDING ORGANISATION GOI AND ISI.  
BANGLADESH TEAM WAS SHOWN SAMPLE. OXFAM BANGLADESH AND READ HAVE  
TAKEN SAMPLES. YOUR TELEX 302 COPIES SENT TO KALBERMATTEN, WRIGHT,  
READ, MARA, ILLUSTRE, SACHERTENLEIB, MALA, SEKARAJESEKARAN  
SOEBENO HADIMIDJOJO, GIBBS, FEACHAM, HUSSAIN, HOADLY ALONG WITH  
5 COPIES SENT TO YOU AND TO ALL INTERESTED PERSONS INCLUDING  
INTERNATIONAL ORGANISATION IN INDIA WHO WE FELT WILL BE  
INTERESTED. TOTAL OF 250 COPIES PRINTED 100 COPIES HAVE BEEN  
SENT TO UNICEF INDIA FOR DISTRIBUTION.

REGARDS

AK ROY

GLO/78/006

February 4, 1981

Mr. Richard Feachem,  
Senior Lecturer in Tropical  
Public Health Engineering  
London School of Hygiene and  
Tropical Medicine  
Keppel Street  
London WC1E 7HT  
United Kingdom

Dear Richard:

Thank you for your letter of January 20 and for your comments on the Dar-es-Salaam report. I have given Peter Callejas all our comments (yours, Geoff's, Heli's and Marilyn's) in unconsolidated form; I expect to sit down with him in the near future when he puts together a letter summarizing all the reviewers' comments and identifying rewriting priorities. He will follow up with a mission in early March, which will attempt to define the project package to be considered for Bank financing.

I am, of course, extremely concerned about the further extension of your work on the book, as this places us in a very weak position on the Dar appraisal; I obviously do not want to bring in someone new, and Geoff is already heavily committed. When we talked earlier, you said that there was a chance of breaking away from the book in mid-year, and I hope that this may still be possible. Appraisal is now unlikely before May/June (we will know the dates more firmly when Peter returns from the March mission), so an immediately-past-Part 2-rewrite break might be appropriate.

With best wishes,

Sincerely yours,

Richard N. Middleton,  
Project Manager  
UNDP Global Project  
GLO/78/006

cc: Mr. Callejas, EAP; Heli Perrett, Global Project GLO/78/006

RMiddleton:ba

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GLO/78/006

Mr. Geoffrey Read, TAG

February 4, 1981

Richard N. Middleton, Project Manager

UNDP Global Project GLO/78/006 - Soils Identification Charts

We have been in touch with Munsell Color (your draft letter of November 26, 1980) about their identification charts. They advise us that they give no complementary copies or discounts to anyone. As the price is about \$80 for the basic chart, it hardly looks the right piece of equipment for widespread use in developing countries. Apparently, there is a cheaper Japanese version but USDA does not recommend it. Do you want us to do anything further?

RMiddleton fba

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COMMUNICATIONS DIVISION

Cuo/18/006

RICHARD

MIDDLETON INTBAFRAD

WASHINGTON DC

40/81 UNICEF ADVISES THAT WANGING OMBE PROJECT SEMINAR  
RESCHEDULED FOR 17 AND 18 FEBRUARY AND PARTICIPANTS ALREADY  
INVITED HENCE ALPHA CANNOT ATTEND DELHI MEETING BETA MUST ARRIVE  
DAR-ES-SALAAM ABOUT 10 FEBRUARY FOR PREPARATORY WORKS REGARDS

ALBERT WRIGHT KUMASITECH

COL 40/81 17 18 10

WORLD BANK 440098

Distribution; fca

8121410TPH BR

Mr. Hogg

2/10/78/006

8121410TPH BR

Mr. Willoughby

RECIFE 03/02/81 (BRAZIL)

Mr. Skillings

FEB -3 PM 12 04

PARA BANCO MUNDIAL - WASHINGTON-DC

TO RICHARD MIDDLETON, TWT

ALPHA. AUGUSTO SERGIO SLIGHTLY WORRIED RE CONTRACT. WOULD LIKE TO RESOLVE BEFORE MY DEPARTURE THIS FRIDAY. PLS ALSO KEEP UNDP BRASILIA INFORMED RE LATEST SITUACAO.

BETA. UNDP BRASILIA TELL ME RENT OFFICE ONLY (NO SEC, PHONE, ' TELEX) IN UNDP RIO SIX HUNDRED USD PER MONTH. LUDICROUS. YOUR REACTIONS? (ANY CHANCE PRESSURE FROM UNDP NY FOR FREE?) AUGUSTO EXAMINING FEASIBILITY USING SEIXAS OFFICE FOR LESS.

GAMMA. AUGUSTO WILL STAY RECIFE SECOND WEEK. URBAN PROJECT VERY COMPLICATED. ALSO MET DOWSETT MONDAY RURAL PROJECTS VERY INTERESTING.

REGARDS

DUNCAN MARA, OTHON HOTEL, RECIFE

WORLD BANK 440098

8121410TPH BRGGG

2/10/78/006



Dar Es Salaam

Distribution: fca

FEBRUARY 03 1981

Mr. Hogg  
Mr. Wällogghby  
Mr. Sandberg

gwo/128/006

F338

114. MIDDLETON

RE DAR ES SALAAM SANITATION PROJECT, WE RECEIVED FOLLOWING TODAY  
QUOTE ARDHI LOW COST SANITATION ENGINEER

IN YOUR TELEX OF DECEMBER 17 1980 YOU MENTIONED THE POSSIBLE  
EXTENSION OF JOHN ASHWORTH'S CONTRACT FROM 10TH MARCH FOR  
TWO MONTHS. ON FINANCIAL GROUNDS, THE MINISTRY DOES NOT WISH TO  
DO THIS. NOW THAT THE UNDP 'TECHNICAL ASSISTANCE TO THE LOW COST  
SANITATION UNIT' (PROJECT NUMBER URT/80/019 LOW COST  
SANITATION) HAS BEEN APPROVED, CONTINUITY OF THE LOW COST  
SANITATION UNIT'S MANAGER WILL BE MAINTAINED UNTIL A SUITABLE  
TANZANIAN COUNTERPART IS ABLE TO TAKE OVER THE ROLE. TWO  
ASPECTS, FOR WHICH THE SECOND EXTENSION TO JOHN ASHWORTH'S  
CONTRACT WOULD HAVE BEEN BENEFICIAL ARE: (AAA) HANDING  
OVER TO HIS UNDP REPLACEMENT. HOWEVER, WE WOULD ESTIMATE THAT  
TAG WILL NOT COMPLETE THE RECRUITMENT AND PLACING OF THE  
ADVISER IN ARDHI WITHIN 3 MONTHS (SAY 1ST MAY). THIS WOULD  
BE A FEW DAYS BEFORE THE COMPLETION OF ASHWORTH'S 'SECOND'  
EXTENSION, BY WHICH TIME HE WOULD NOT BE ABLE TO GIVE THE ADVISER  
HIS UNDIVIDED ATTENTION. (BBB) SUPPORTING ARDHI DURING THE  
WORLD BANK 'PROJECT APPRAISAL MISSION' (THE DAR ES SALAAM  
SEWERAGE AND SANITATION PROJECT). THE CONCEPTS OF LOW COST  
SANITATION AND HEALTH EDUCATION FOR AN URBAN SANITATION PROJECT ARE  
DIFFICULT TO GRASP, AS SHOWN BY HOWARD HUMPHREYS FEASIBILITY REPORT.  
ASHWORTH WOULD BE USEFUL HERE. AGAIN, TIMING IS THE FACTOR.  
MR CALLEJAS TENTATIVELY PUT FORWARD A MISSION PERIOD FROM  
15TH APRIL TO 18TH MAY. WE ANTICIPATE A DELAY OF A FEW WEEKS,  
BY WHICH TIME, ASHWORTH WOULD HAVE BEEN PACKING UP TO LEAVE  
(MAY 10TH). BECAUSE OF THE ABOVE UNCERTAINTIES, NEITHER  
THE MINISTRY NOR ASHWORTH SEE THE BENEFIT OF A SECOND TWO MONTH  
EXTENSION TO ASHWORTH'S CONTRACT. YOURS SINCERELY F Z NJAU  
ENDQUOTE

1981 FEB -3 AM 8-51  
Handwritten initials and a circular stamp.

REGARDS, NOOTER

FEBRUARY 03 1981

3 February 1981

Colonel Leano  
General Manager  
Local Water Utilities Administration  
Quezon City, Philippines

Dear Colonel Leano,

UNDP Project PHI/80/015  
Improved Planning and Design of  
Low-cost Water Supply and Sanitation Schemes

You will recall that the intention in this project is that overseas training courses, during which your staff would learn these improved techniques, would alternate with in-country workshops, organized by your own staff, during which case studies would be examined and which would be used mainly for dissemination.

During the course held here in August, on which I attach Professor Lauria's report, it was agreed that the inter-agency coordinator for the next Philippines workshop be the most senior participant, Mr. Espiritu of the Ministry of Public Works, and that agency staff responsible would be Messrs. Establicida (LWUA Planning Section), Molano (RWDC), Rama (MLGCD, Barangay Water Project), and Roncesvalles (LWUA, Design Section).

It had been hoped that this next workshop would be held early in 1981, but it seems likely that the complications inevitably resulting from your recent office move make a brief postponement desirable. This has, in fact, some compensating advantages, as we would now propose that the workshop be timed so that it occurs after Mr. Hebert has taken up his position as resident adviser, thus saving the expense and inconvenience of multiple visits. We would now suggest that Mr. Hebert begin work in the Philippines about May 1, 1981, and that the one-week course start about May 18 (because of other commitments, it seems likely that neither myself nor Professor Lauria would be available in Manila prior to this latter date). I would be grateful if you would let me know whether these proposed dates are convenient to yourselves and the other agencies concerned, and for comments on the attached draft terms of reference for Mr. Hebert's resident assignment.

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You will see from the report (para. 6) that the course location was undecided. Good access to computing facilities and freedom from outside interference are essential, and the University of the Philippines, Baguio, and LWUA's own training center were suggested as possible sites. Decisions need to be made soon on sites, the participants to be invited, and the case studies to be presented.

In the time since the August course, technical software development has continued, with funding from the World Bank. We have not, however, proceeded with further work on a loan ceiling computer program nor on rough financial screening systems; following meetings with Bank staff, it appears that the need for and scope of such programs should be further reviewed in discussions between yourselves and the Bank. In particular, the Bank mission timed for mid-1981 will provide an opportunity to review the effectiveness of present project preparation procedures, and, if additional assistance is needed, Mr. Hebert will by then be in a position to help you.

Please let me know if there are any particular problems you are experiencing in the application of these programs, so that we may have the opportunity prior to the workshop to consider suitable remedial action.

So that we may plan our own program development, and the transfer of these programs on to your facilities, I should be grateful if you would let me have information on a number of items listed on the annexed sheet.

I am copying this letter to the heads of the other two agencies concerned, Major General Dumol of RWDC and Director Teodoro Encarnacion of MPW.

Sincerely yours,

Richard N. Middleton  
Project Manager  
UNDP Global Project  
GLO/78/006

cleared with and cc: Mr. Saravanapavan, AEP; Ms. C. Long, AEA:  
cc: Locsin; NEDA,  
cc. Major General Dumol, RWDC and Director Teodoro Encarnacion of MPW.

RNMiddleton:pn

The items of information requested below concern computer facilities currently being used by LWUA and facilities which are anticipated or planned to be used in the near future.

1. The status of LWUA's plans for purchase of a mini-computer for in-house use.
  - 1.1 What is time frame for purchase and installation of a new mini-computer system?
  - 1.2 What manufacturers, models, and, more importantly, core capacities are being specified?
  - 1.3 What are the other key specifications of the planned mini-computer system?
  - 1.4 Is it planned to share computing facilities with MWSS? If so, what are the specifications of the facilities? Are these the same as those described above, or separate? What are the details of any sharing arrangement?
2. What computing facilities are currently being used by LWUA for planning, engineering, and feasibility studies? Specify for each facility:
  - 2.1 location;
  - 2.2 manufacturer and model (e.g., IBM 370-148);
  - 2.3 operating system (e.g., if IBM, OS or DOS);
  - 2.4 type of input devices (e.g., punched cards, magnetic tape, CRT, floppy disk);
  - 2.5 whether programs can be transferred via floppy disk for loading onto other computers LWUA is using, or copying onto tape, cards, etc.;
  - 2.6 languages that can be used (e.g., FORTRAN IV, COBOL, PL-1);
  - 2.7 type of tape drive (e.g., IBM may have 9 TRK 1600 BPI, standard label IBM);
  - 2.8 type of compiler (e.g., PL-1 optimizing compiler);
  - 2.9 which division or department uses the system, and for what purpose? (e.g., LWUA Planning Section for running CDM network analysis program);
  - 2.10 major problems;
  - 2.11 availability of linear programming package, whether it is operational, and, if so, on what computer?
  - 2.12 availability of multiple linear regression program.

250/78/006

Mr. A. Saravanapavan, AEP

February 3, 1981

Richard N. Middleton, Project Manager, UNDP GLO/78/006

PHILIPPINES: UNDP PHI/80/015

As you requested, I have deleted from the terms of reference for this technical assistance project all mention of financial analysis. I am also instructing the project staff, by copy of this memorandum, that they should not discuss with their counterparts the merits or demerits of the ECOFI program which you have installed in LWUA and MWSS. In particular, we will not encourage LWUA or MWSS to believe that the UNDP project will introduce a rival system of analysis. However, I think it is also important to record other aspects of my conversation with you. We have repeatedly been told by LWUA staff at the working level that they do not fully understand the ECOFI program and have received insufficient help in applying it, and that they do not regard it as a useful tool for preliminary screening of projects (especially for smaller systems).

In view of the importance which you attach to prompt preparation of the next group of sub-projects for Bank financing, I trust that in your upcoming mission you will examine the time taken and labor involved in the financial prescreening of alternatives using the ECOFI system, and ensure that LWUA receives any necessary technical assistance to undertake this work within your timetable for project preparation.

cc. Messrs. Iizuka, URB; Sud, AEP; Long, AEA; Buky, TWTWW;  
Lauria/Hebert, TAG

RNM:mfb

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# Record Removal Notice



<b>File Title</b> UNDP/GLO/78/006 - Low Cost Water Sanitation Techniques - 1981 / 1983 Correspondence - Volume 2	<b>Barcode No.</b>  30192357
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<b>Document Date</b> March 3, 1981	<b>Document Type</b> Telex
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**Correspondents / Participants**  
To: George Beier, A.K. Roy of UNDP  
From: Richard Middleton

**Subject / Title**  
Rau, Gupta and Singh

**Exception(s)**  
Personal Information

**Additional Comments**

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.

<b>Withdrawn by</b> Shiri Alon	<b>Date</b> May 20, 2016
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2/20/78/006

#338  
R

ad

MUMBAI, FEBRUARY 2, 1980

WORLD BANK  
WASHINGTON, DC

Distribution:  
Mr. Middleton  
Mrs. Hamilton

FOR RICHARD MIDDLETON - TWT

URTLX 105 GOVAVITRANE DID NOT CONTACT ME. URTLX 291 I WAS SEEKING YOUR PERMISSION FOR ATTENDING THIRD INTERNATIONAL CONGRESS OF THE WORLD FEDERATION OF PUBLIC HEALTH ASSOCIATIONS GENERA TO BE HELD IN CALCUTTA FROM FEBRUARY 23 TO 26. AS IN THOSE THREE DAYS THE ENVIRONMENTAL SANITATION WILL BE DISCUSSED. THE DIRECTOR AIIPH CALCUTTA HAD SEEN ME AT DELHI AND EXTENDED SPECIAL INVITATION TO ME SAYING QUOTE WE EXPECT A LARGE GATHERING OF INTERNATIONALLY RENOWNED EXPERTS FROM DIFFERENT DISCIPLINES OF PUBLIC HEALTH. ENVIRONMENTAL INCLUDING WATER SUPPLY BEING ONE OF THE PRIME COMPONENTS OF HEALTH WILL CONSTITUTE ONE OF THE KEY-SUBJECTS IN THE CONGRESS. I UNDERSTAND THAT YOU ARE CONDUCTING AN IMPORTANT PROJECT ON HUMAN EXCRETA DISPOSAL IN DIFFERENT STATES IN INDIA, ON BEHALF OF THE WORLD BANK. DISPOSAL OF EXCRETA, BEING THE PRINCIPAL CONSTRAINT FOR THE IMPROVEMENT OF STANDARDS OF ENVIRONMENTAL SANITATION IN OUR COUNTRY I WOULD LIKE TO SOLICIT YOUR HELP FOR ORGANISING A ROUND TABLE CONFERENCE FOR SELECT AUDIENCE ON THIS SUBJECT DURING THE CONGRESS. SINCE SOME SENIOR PUBLIC HEALTH ENGINEERS AND DIRECTORS OF HEALTH SERVICES FROM VARIOUS STATES OF INDIA WOULD BE ATTENDING THIS WOULD GIVE US AN OPPORTUNITY TO GET THEM TOGETHER AND TO DISCUSS THE PROBLEM AND SHARE EXPERIENCES. YOUR PROJECT WOULD FORM THE FOCAL PAPER FOR THE DISCUSSIONS WHICH SHOULD OBVIOUSLY BE CHAIRED BY YOU. THE THEME FOR THIS SPECIAL SESSION COULD BE "LOW COST SANITATION" AN APPROACH FOR DEVELOPING COUNTRIES. IN ADDITION, WERE IT POSSIBLE AT THIS LATE HOURS, I WOULD ALSO REQUEST YOU TO KINDLY PRESENT A

PAPER ON YOUR PROJECT AT THE WORKSHOP ON "IMPLEMENTATION OF FIELD PROJECTS IN SANITATION". I AM EXTREMELY SORRY WE ARE GIVING YOU A RATHER SHORT NOTICE, BUT I SINCERELY HOPE THAT YOU WILL KINDLY AGREE TO OUR REQUEST UNQUOTE. I HAVE NOT REPLIED TO THE DIRECTOR BUT IF LOWEN COULD ADVANCE HIS VISIT TO 21 THROUGH 24 OR COME AFTER FEBRUARY 28, IT WOULD BE POSSIBLE FOR ME TO TAKE THE OPPORTUNITY OF PROMOTING OUR PROGRAMME TO THE VARIOUS COUNTRIES WHO WILL BE ATTENDING THIS CONFERENCE. HOWEVER IF HE CANNOT I WILL PREFER TO FOLLOW UP PHASE II WITH HIM AT DELHI AND ABSTAIN FROM ATTENDING CALCUTTA CONFERENCE. THE PRESENT POSITION OF PHASE II PROJECT IS THAT THIS HAS BEEN RETURNED TO WH MINISTRY AND PLANNING COMMISSION TO EXAMINE IT FROM THE FINANCIAL INVOLVEMENT AND PLAN PRIORITY. WE HAVE MET AUTHORITIES OF BOTH DEPARTMENTS AND THEIR REACTION SEEMED OPTIMISTIC. PLEASE CABLE DECISION IMMEDIATELY AS VERY LITTLE TIME AVAILABLE. URTLX CONVEYED GEOFFREY YOUR MESSAGE. NEW SUBJECT I SUPPLIED SOME MATERIAL ON LOW COST LATRINES TO GEORGE BEIER FOR HIS ADDRESS HYDERABAD CONFERENCE HE HAS WRITTEN QUOTE I USED THE MATERIAL FROM YOUR STUDIES AND SEMINAR FOR EDI DISCUSSION IN HYDERABAD. IT WAS A ROARING SUCCESS THANKS YOU MADE ME LOOK LIKE A GOOD TEACHER. GEORGE BEIER UNQUOTE REGARDS

MEL?

AK ROY

*for sanitation in class 2 + 3 terms*

*Richard:*

*Not only follow-up on "phase II" proposal but we want to sketch and discuss w/ Govt.*

*H. super's suggestion for major input on class 1 cities.*

*I would much appreciate AK being with me on Feb. 25 + 26.*

*-Mel*

64145 WORLDBANK  
31 3150 IDRD IN

.....



LES/80/C 02  
?

UNITED NATIONS  
DEVELOPMENT PROGRAMME



PROGRAMME DES NATIONS UNIES  
POUR LE DEVELOPPEMENT

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

GLO/78/006

TELEPHONE: 754-1234

CABLE ADDRESS: UNDEVPRO • NEW YORK

REFERENCE: LES/80/002

2 February 1981

Rec'd 2/10/81

Pl. note LES Rural  
Sanitation

(NOT 80/002)

Dear Mr. Middleton,

Subject: Project Preparation Mission to Lesotho  
"Rural Sanitation", LES/80/002

Reference is made to our forthcoming project preparation mission to Lesotho to be carried out by Ms. Sarah Becker and Mr. Edward Cross, whom you kindly recommended to us, under the leadership of Mr. Geoffrey Read of your Group.

Both Ms. Becker and Mr. Cross have been contacted and they have formally agreed to undertake the above CDF mission. We have therefore submitted their candidatures to the Government of Lesotho for clearance and hope that their mission will commence mid-March, as scheduled.

.... As requested, we are enclosing copies of our letters to the above two consultants, as well as a copy of the Terms of Reference. As soon as we receive a reply from Lesotho, we shall advise you of the mission status, including arrangement for authorization of Mr. Read's travel and per diem.

We take this opportunity to thank you and the TAG Group for providing the services of Mr. Read to CDF.

Yours sincerely,

*Ann E. Francis*

Ann E. Francis  
Deputy Executive Secretary  
United Nations Capital Development Fund

Mr. Richard Middleton  
Project Manager, UNDP GLO/78/006  
Technology Advisory Group  
World Bank  
1818 H Street, N.W.  
Washington, D.C. 20433

① xerox of entire package to  
ENR for info and for him to  
expedite GOC reaction, if possible

② package to Heli for review of TOR  
and for her to comment on, brief  
Cross and Read by telephone, etc.

③ wife xeroxes to Bank staff when  
mission timing settled. R 2/10/81

LR/ps

Cleared in draft by Mrs. Smedler  
cc: Mr. Middleton, TAG/World  
Bank

CDF/COF  
LES/80/COF

2 February 1981

Dear Mr. Cross,

Subject: Project Preparation Mission to Lesotho  
'Rural Sanitation', LES/80/COF

.....  
Further to your telephone conversation with Mrs. Reno of this office, enclosed please find the Terms of Reference for the above mission and the relevant project documents. Also included is a summary information on UNCDF and its activities in selected LDC countries.

Please note that the mission, which is scheduled for mid-March, is subject to clearance by the Government of Lesotho of your candidature. The mission will comprise of Mr. Geoffrey Read, Team Leader, Ms. Sarah Becker, Health Economist, and yourself. As soon as we received a reply from Lesotho, we shall inform you of the mission status. Should your candidature be cleared, the UNDP Personnel Division will also contact you regarding your fee and other contractual arrangements.

Should you have any query regarding the project, please do not hesitate to contact us via UNDP Headquarters.

Yours sincerely,

Ann E. Francis  
Deputy Executive Secretary  
United Nations Capital Development Fund

Mr. Edward Cross  
106 Belmont road  
Portswood  
Southampton SO 9 1GF  
England

LR/ps

Cleared in draft by Mrs. Smedler  
cc: Mr. Middleton, TAG/World  
Bank

ODF/CON  
LES/80/CO:

2 February 1981

Dear Ms. Becker,

Subject: Project Preparation Mission to Lesotho  
"Rural Sanitation", LES/80/CO:

..... Further to your telephone conversation with Mrs. Reno of this office, enclosed please find the Terms of Reference for the above mission and the relevant project documents. Also included is a summary information on UNCDF and its activities in selected LDC countries.

Please note that the mission, which is scheduled for mid-March, is subject to clearance by the Government of Lesotho of your candidature. The mission will comprise of Mr. Geoffrey Read, Team Leader, Mr. Edward Cross, Social Anthropologist, and yourself. As soon as we received a reply from Lesotho, we shall inform you of the mission status. Should your candidature be cleared, the UNDP Personnel Division will also contact you regarding your fee and other contractual arrangements.

Should you have any query regarding the project, please do not hesitate to contact us.

Yours sincerely,

Ann E. Francis  
Deputy Executive Secretary  
United Nations Capital Development Fund

Ms. Sarah B. Becker  
905 Prince Street  
Alexandria, Virginia 22314

UNITED NATIONS CAPITAL DEVELOPMENT FUND

Feasibility Study of a Project Requested by the Government of Lesotho  
entitled "Rural Sanitation (LES/80/C02)"

Terms of Reference

1. The Government of Lesotho has requested the United Nations Capital Development Fund for capital assistance amounting to \$784,000 to finance a portion of Phase I of a long-term phased rural sanitation project. The total costs of Phase I are estimated to be some \$1.5 million. The objective of the project is to develop institutions, expertise, community participation, health education and experience in rural sanitation to enable adequate sanitation to be cost-effectively provided for the rural inhabitants in the long-term.
2. In order to provide sufficient appraisal information for consideration of the project by the UNCDF Project Committee, a feasibility study is required to prepare a definitive description of the project, the objectives thereof and all relevant factors bearing on its evaluation and implementation.
3. For the above purpose, a feasibility mission comprising a public health engineer, a health economist and a social anthropologist is required to visit the country in early 1981 for 3 weeks in order to review and appraise the project in the light of:
  - (a) the UNCDF main objective of financing only capital expenditures (up to a maximum of \$2 million per project) in projects providing direct and immediate benefits to the poorest segments of the population;
  - (b) the implementation capacity of the Government agencies and institutions, particularly with respect to their ability to meet the managerial, technical, material and financial requirements of the project;
  - (c) the integration and coordination of UNCDF assistance with other projects or institutions;
  - (d) the experience to date and any conclusions which can be drawn from the UNCDF-assisted Primary Schools Sanitation Project (LES/74/C32);
  - (e) the proposals made by consultants to UNCDF for the reactivation of Project LES/74/C32; these are contained in a report dated August 1979.
4. More specifically, the mission is required to collect basic data relevant to the appraisal of the project as follows:

/...

A. GENERAL

(a) review the Government's development programme in the sector or sub-sector concerned and determine whether the project meets a vital development need at the national, regional or target group level;

(b) determine the need for the project in terms of local economic and/or social conditions and demonstrate the extent to which the project will improve these conditions;

(c) determine whether the measures selected and the choice of technologies preferred constitute the most effective and profitable method of achieving the objectives;

(d) assess, wherever possible, by means of an economic evaluation (cost/benefit analysis, internal rate of return, cash flows), the cost-effectiveness of the project;

(e) determine the number, location (urban, semi-urban, rural) and economic condition (income level) of the direct beneficiaries of the proposed project and assess the value of direct and immediate benefits expected to accrue to the (i) least privileged sections of population (ii) other beneficiaries and (iii) economy in general;

(f) determine the total capital cost of the project, and provide detailed listing of inputs (buildings, machinery and equipment, vehicles, building materials, technical assistance, etc.) to be financed by (i) the Government, (ii) UNCDF, (iii) UNDP, (iv) other agencies, and (v) project beneficiaries;

(g) obtain and review the detailed plan of implementation including, as applicable, the role and function of proposed implementing and cooperating organisations; schedule of construction; phasing of project costs by year of expenditure; organization chart including manning tables, budgets and schedule of activities relative to the project; long-term operation and maintenance of the facilities constructed under the project;

(h) identify the technical specifications of equipment which needs to be procured under the project with the assistance. Such technical specifications should:

- be fully responsive to the particular conditions obtaining in the recipient country: Government standardization, if any, availability of maintenance services, spare parts, previous experiences and related factors;
- be complete so that the procurement action could follow immediately upon project approval;

(i) estimate the availability and levels of recurrent expenses (personnel, supplies, spare parts, power, water, fuel, transport and other resources needed) for the operation and maintenance of the proposed project;

(j) determine the output of the project;

(k) state realistic and measurable achievement indicators for monitoring and evaluating the project during its construction and operational phases;

(l) assess the organizational, managerial and financial capabilities of the governmental and other national organization(s) entrusted with the implementation and operation of the project; and to make specific recommendations for any assistance which would appear required to ensure that the proposed UNCDF project will be successfully implemented and effectively operated;

(m) assess the need for and recommend, as appropriate, technical assistance to complement the project; determine whether provision of expatriate technical personnel should be on a resident and/or consultancy basis;

(n) indicate and suggest measures to minimize project risks; and

(o) propose conditions precedent to disbursement and other conditions of UNCDF financing.

B. SPECIFIC

The mission shall in particular address the following:

(a) Consider and evaluate the existing UNCDF Project "Sanitation for Rural Schools (LES/74/C32)" together with the proposals by Government for reactivation of the project. The adequacy and relevance of these proposals shall be evaluated, together with the need for any complementary inputs such as technical assistance, institutional strengthening and training.

(b) Undertake a socio-cultural survey and evaluation of Project LES/74/C32, drawing from this any conclusions and recommendations which should be incorporated into the project; detailed Terms of Reference for ..... this survey are attached in Annex I.

(c) All heads of project expenditure shall be itemized, showing source of finance (bilateral or multilateral donors, Government, project beneficiaries) including where relevant provision for cost contingencies and price escalation.

(c) The implementation capacity of Government and respective Ministries to implement the project, together with recommended institutional and technical strengthening, technical assistance, and training to ensure effective project implementation.

(e) The capacity of Government to absorb the project.

(f) Coordination between the executing Ministry and the Ministry of Health and Social Welfare for public health and hygiene; the relationship of the project to the Water and Sanitation Steering Committee.

- (g) Project requirement for beneficiary-oriented information systems including health education.
- (h) Project extension and replicability.
- (i) Cost recovery requirements and possible mechanisms and models, together with mechanisms and recommendations for dealing with recurrent costs.
- (j) The need for socio-cultural pre-assessment and testing of all technical proposals.
- (k) Prepare recommendations for project monitoring and evaluation.
- (l) Give particular attention to project proposals (including those for the Primary Schools Sanitation Project) for the operation, maintenance, emptying and treatment of facilities constructed under the project.
- (m) Consider in particular the basic health needs (percieved and real) of women and children, and males compared to females
- (n) The relevance and specific project requirements of implementation by self-help or other community-participation methods.
- (o) Project design and evaluation shall include integral consideration of socio-cultural, technical and economic factors.

5. The mission will maintain close liaison with the UNDP Resident Representative (who is also the UNCDF Representative) in the country who will facilitate the work of the mission and guide it in its official contacts with the Government. The mission will debrief with the Resident Representative before departure.

6. Within the limits presented by the duration of the study, the mission may pursue and propose, with the agreement of the Government, any improvement to the project request, which it deems suitable to make the project more likely to succeed, either by altering the inputs or by adding new elements.

7. The mission will inform the Government authorities in a timely manner of the need for data or visits which it deems important or essential to properly appraise the project.

8. Although the mission should feel free to discuss with authorities concerned any subject relevant to its assignment, it is not authorized to make any commitments on behalf of UNCDF.

9. To the extent practicable, the mission should complete its draft report(s) while in the field. The final report should be typed and reflect the mission's assessment and recommendations, and should be submitted to UNCDF within 10 days of the date of completion of the mission in the field. The report will not be released until a decision regarding the project has been taken by the UNCDF Project Committee.

10. The mission will prepare a separate Summary of Feasibility Study, which must contain the information in the form specified in the attached Summary Outline for submission to the UNCDF Project Committee. Consultancy fees shall be paid only after confirmation by UNCDF that the feasibility report as well as its summary have been received at UNCDF Headquarters and found satisfactory.

11. Should the mission find that the main feasibility elements in the project are lacking and therefore the project is unlikely to be viable, it should immediately bring the matter to the attention of the Resident Representative with a view to preparing an abridged negative report, and devoting its time to finding a viable alternative project, with the agreement of the Government, on which a feasibility study should, if possible, be prepared by the mission in accordance with these Terms of Reference.



Socio-Cultural Evaluation of Primary Schools Sanitation Programme (PSSP) with Specific Reference to UNCDF Project LES/74/C32 - Sanitation for Rural Schools

Terms of Reference

1. In conjunction with the National University of Lesotho (NUL-Department of Sociology and Social Anthropology), an analysis of the social and cultural aspects of the PSSP shall be undertaken, and recommendations made on the extent of and approaches to the socio-cultural issues which will need to be addressed in rural sanitation in Lesotho in general and specifically for the reactivation of the LES/74/C32.

2. In particular, the following will be undertaken:

(a) Conduct a rapid survey of selected schools which have already received sanitation facilities through the PSSP to determine the level of use of facilities; constraints to usage; children, parents and teachers' attitudes towards the use of the facilities; children's attitudes to, and standards of, hygiene; male and female differences.

(b) Prepare case histories of the implementation to date of the PSSP in select schools, in order to evaluate the effectiveness of the self-help strategy adopted during the course of construction of the facilities, and maintenance and cleaning.

(c) Examine the social feasibility of combining, in certain instances, rural and primary school sanitation facilities, and examine the acceptability and need for extending sanitation facilities to include communal facilities for clothes, body and utensil washing.

(d) On the basis of these studies, make recommendations on the design and implementation for the reactivation of the LES/74/C32, including: detailing the extent of the support required at local, district and central level; the most appropriate social organisation and framework for beneficiary inputs to the project (in the form of cash, personal time, etc.) maintenance, cleaning, health education and beneficiary-oriented information systems; identifying social factors which affect programme design, implementation and impact and in particular the design of sanitation facilities.

(e) Design and commence implementation through NUL or other appropriate body, a programme to monitor and evaluate relevant socio-cultural factors on the existing facilities in the primary schools.

GLO/78/006

February 2, 1981

To: Files

From: Heli Perrett Social Science and Health Education Adviser

Subject: BANGLADESH: UNDP Global Project GLO/78/006: Schedule of Activities

1. I have checked the January 29, 1981 cable of Mr. A. K. Roy against the revised project development schedule which I based my talk with Mr. Hussain in Delhi on December 13. Overall, there appears to have been a further slippage of only one week, due to delay in the Dacca orientation meeting for local staff.
2. Mr. Roy's visit to Bangladesh appears to have proved timely and accomplished everything we hoped it would. Most important, he has managed to get the Secretary's clearance and the final approval for go-ahead for construction.
3. The only point that still somewhat concerns me is funding of the administrative legal study. Mr. Roy says that he "feels" that "UNICEF would agree to finance it". This goes against what Ken Gibbs wrote to us, namely that UNICEF would not finance it.
4. Mr. Hussain also intimated that the procedure for approval of such funding would be a lengthy one, perhaps taking months, since the money had to come out of UNICEF's existing allocation for the Village Sanitation Project. This study is not on the critical path for construction of the demonstration latrines. However, if we do not have access to some of this information by early June, at the latest, it would seriously weaken any recommendation of the June Feasibility report on institutional arrangements and expected coverage.

If we do not hear in the affirmative from Ken Gibbs in the next couple of weeks, my preference would still be for TAG to finance it. After all, this has now been going on since March 1980. It may already be too late for the Institute of Urban Studies, University of Dacca to fit the study into its busy schedule and I know of no other local entity as capable of undertaking it.

cc: Mr. Middleton, UNDP Global Project GLO/78/006

HPerrett:ba

GLO/78/006

Mr. Geoffrey Read, TAG

February 2, 1981

Richard N. Middleton, Project Manager

UNDP Global Project GLO/78/006: Botswana

I have now discussed the proposed Third Water Supply Project with Peter Ware, Division Chief of the Bank's Regional Power and Water Supply Division. He advises me that, because of serious unresolved issues concerning international water rights, the project may be delayed for a considerable period; in his view TAG would be unwise to rely on linkages with the Bank-funded project. However, he was very much in favor of proceeding with a pilot water conservation project and of continuing our work in the sanitation field; in fact, both of these could provide valuable input to the design assumptions for the water project. You should therefore continue to encourage Jim Wilson to develop these components, for which TAG will seek separate funding.

RMiddleton:ba

GLO/78/006

Messrs. Mara, Feachem, Read; Ms. Perrett; Mr. Carroll

February 2, 1981

Richard No Middleton, Project Manager

UNDP Global Project GLO/78/006: Low-cost Sanitation Projects  
Beneficiaries' Attitudes

In Brazil UNICEF has declared that sanitation should be based on a "bottoms up" approach. I have already expressed my reservations on physiological grounds; moreover, the attached photograph suggests that beneficiaries, in the absence of proper instructional material, may tend to become confused by the catch-phrase and may misapply the technology. To avoid similar interface problems in future, I strongly recommend that promotional slogans be pretested before general application.

enclosure

RNMiddleton:ba

GLO/78/006

2 February 1981

Mr. Sandy Cairncross  
Ministerio das Obras Publicas,  
C.P. 268  
Maputo  
Mozambique  
Africa

Dear Sandy,

Many thanks for your letter about pvc wellscreens. I enclose two copies of our original report on these screens, formed by extruding a modified pipe section and then cutting a spiral up it. Unfortunately, we have not been able to proceed beyond laboratory fabrication; we have had field trials on the verge of being launched in half a dozen countries but at the last minute they have invariably fallen through. We do know that a substantial amount is now being manufactured in the Philippines, and probably some in India, but we are unable to extract performance data from the users. We are now trying to move ahead with properly monitored trials as part of a handpump testing program we are managing (UNDP GLO/79/010). We may also use a slightly modified technology, as it seems that adequate stiffness can be obtained using standard pipe which has been "broached" (cut away internally to form ribs).

Meanwhile, we have several hundred feet of unslotted ribbed extrusion sitting here, which we rotate regularly to avoid ovality. This is three-inch material and may be too large for your program; however, if you can make good use of it in wells or infiltration galleries, and can undertake to report on its performance, I would be happy to let you have some free of cost. Please let me know if this would be of interest.

After many vicissitudes with editors and printers, the World Bank is at last producing the sanitation documents which you received in draft at the December 1978 conference. I enclose an Index and the first two to be issued; if you would like to be put on the mailing list, and if there are other people who you think should receive them, please let me know.

I hope we may meet later this year. We have heard from UNDP that Mozambique is very interested in being included in the sanitation project I am running, and I hope to be able to arrange a mission some time in the summer.

With best wishes.

Sincerely yours,

Richard N. Middleton  
Project Manager  
UNDP Global Project  
GLO/78/006

enclosure

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**WORLD BANK OUTGOING MESSAGE FORM (Telegram, Cable, Telex)**

IMPORTANT (PLEASE READ INSTRUCTIONS BELOW BEFORE TYPING FORM.)

Class of Service: **TELEX** Date: **2/2/81** *wf*  
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**INTBAFRAD**

**NEW DELHI, INDIA**

**321**

FOR GEORGE BEIER FOR A. K. ROY OF UNDP GLO/78/006. REURTEL  
FEBRUARY SECOND. ALPHA AGREE YOU SHOULD ATTEND PUBLIC HEALTH  
ASSOCIATIONS CALCUTTA MEETING AND PRESENT PAPERS PROVIDED THAT YOU  
CAN BE BACK IN DELHI EARLY MORNING FLIGHT WEDNESDAY TWENTY FIFTH  
TO SPEND NEXT TWO DAYS WITH LOEWEN. BETA FOR YOUR INFORMATION  
HUYSER OF UNDP INDIA BRIEFED LOEWEN AND SELF ON POSSIBLE TECHNICAL  
ASSISTANCE PROJECT FOR WATER AND SEWERAGE PLUS SANITATION IN CLASS  
ONE CITIES. PROBABLY EXPATRIATE TEAM SUPERVISING CONSULTING  
FIRMS AND TRAINING LOCAL STAFF. DETAILS VERY VAGUE AT PRESENT BUT  
LOEWEN WILL FOLLOW UP DURING VISIT. REGARDS, RICHARD MIDDLETON,  
INTBAFRAD.

*glo/78/006*

**NOT TO BE TRANSMITTED**

SUBJECT:  
**UNDP GLOBAL PROJECT GLO/78/006: INDIA**  
CLEARANCES AND COPY DISTRIBUTION:  
cl and cc: Mr. Loewen  
cc: Ms. Hamilton, Mr. Melder, ASA  
Messrs. Lamsom/Scribner, Sandstrom, ASP  
Schebeck, Evans, PHN

DRAFTED BY:  
**RMiddleton:ba**  
AUTHORIZED BY (Name and Signature):  
*Richard N. Middleton*  
**Richard N. Middleton, Project Mgr.**  
DEPARTMENT:  
**UNDP GLOBAL PROJECT GLO/78/006**  
SECTION BELOW FOR USE OF CABLE SECTION  
CHECKED FOR DISPATCH

schereck Evans BIM  
Messala Gansom VSC  
cc: Mr. Hamilton, Mr. Helgel, VSA  
of and cc: Mr. Goble

DISPATCHED

INDIA GLOBAL PROJECT GLOV18V008

Richard M. Middleton Project Man

RMiddleton:ra

INDIA GLOBAL PROJECT GLOV18V008 INDIA

1981 JAN 33 PM 10: 29  
COMMUNICATIONS SECTION

INITIATED

GOVERN WILL FOLLOW UP DURING VISIT. RECORDS RICHARD MIDDLETON  
FIRMS AND TRAINING LOCAL STAFF. DETAILS VERY AHEAD AT PRESENT BUT  
ONE CITY. PROBABLY EXHAUSTIVE TEAM SUPERVISING CONSULTING  
ASSISTANCE PROJECT FOR WATER AND SEWERAGE PLANT CONSTRUCTION IN CLASS  
HOUSE OF INDIA BRIEFED GOVERN AND SET ON POSSIBLE TECHNICAL  
TO SPEND NEXT TWO DAYS WITH GOVERN. BEAT FOR YOUR INFORMATION  
CAN BE BACK IN DEHRI EARLY MORNING FLIGHT WEDNESDAY JUNE 11  
ASSOCIATIONS CONSULTA MEETING AND PRESENT PAPERS PROVIDED THAT YOU  
REVEREND SECOND. ALTHOUGH WOULD YOU SHOULD ATTEND PUBLIC HEARING  
FOR GEORGE BATES FOR A K. BOY OF INDIA GLOV18V008. REPHRASE

251

HEM DEHRI INDIA

INITIATED

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