PROCEEDINGS AND RESOLUTIONS

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List of Abbreviations

DDF	District Development Fund
DERUDE	Department of Rural Development
EHT	Environmental Health Technician
ESA	External Support Agency
IDWSSD	International Drinking Water Supply and Sanitation Decade (1981 - 1991)
MCCD	Ministry of Community and Co-operative Development
MEWRD	Ministry of Energy and Water Resources and Development
MFEPD	Ministry of Finance, Economic Planning and Development
MoARR	Ministry of Agriculture and Rural Resettlement
MLGRUD	Ministry of Local Government, Rural and Urban Development
MOH	Ministry of Health
MPA	Ministry of Political Affairs
MPCNH	Ministry of Public Construction and National Housing
NAC	National Action Committee
NCU	National Co-ordination Unit
NMPRWSS	National Master Plan for Rural Water Supply and Sanitation
NORAD	Norwegian Agency for International Development
VIDCO	Village Development Committee
WADCO	Ward Development Committee
WHO	World Health Organization
DDC	District Development Committee
NRWSSP	National Rural Water Supply and Sanitation Programme
VCW	Village Community Worker
DA	District Administrator

Currency Equivalents

ZW$1 = US$0.38

INTRODUCTION

The first decade of Zimbabwe's Independence coincided with the International Drinking Water Supply and Sanitation Decade (IDWSSD) (1981-1990). It has been a decade in which . . Zimbabwe has made considerable progress in addressing inherited problems and developing national programmes for the supply of improved water and sanitation services to the whole nation.

The 1990 Decade Consultative Meeting (DCM) provided an opportunity to assess progress made and, learning from past experiences, for Government to confer with its present and future sector supporters regarding ways of meeting the challenges of the new decade.

The objectives of the DCM were:

* To review the present status of water and sanitation development in all administrative sectors: Communal Lands, Resettlement Areas, Commercial Farming Areas and Urban Areas.

* To have detailed discussions on the principal challenges of programme development (see list of group topics in the programme) to ensure the sustainability and continued development of the programme.

* To provide a forum for discussion with External Support Agencies to obtain their views on the future development of the programme, to identify new projects and to secure their continued support.

The meeting, held from 26 to 30 November, 1990 in Harare, was attended by 90 participants drawn from External Support Agencies (ESAs) - from abroad and within Zimbabwe; invited guests from neighbouring African countries with special experience of relevance to Zimbabwe; and representatives from Zimbabwean public sector agencies, including local authorities and Governmental agencies. The meeting was hosted by the Ministry of Local Government, Rural and Urban Development (MLGRUD) on behalf of the Government of Zimbabwe and funded with assistance from the World Health Organization and the Norwegian Agency for International Development (NORAD). The DCM programme is attached in Appendix 1, the Field Trip Programme and Report in Appendix 3 and the list of DCM participants in Appendix 4.

The meeting was opened by the Senior Minister of Local Government, Rural and Urban Development, Comrade J W Msika who drew attention to the achievements made in Zimbabwe in recent years in the sector and outlined the challenges that lay ahead. The World Health Organization (WHO) Representative, Dr Z Dlamini read a message on behalf of Dr G L Monekosso, Regional Director of the WHO for Africa which reviewed the achievements of the IDWSSD as a whole and the directions for improving environmental health in the 1990s. The full text of these speeches is presented in Appendix 6.

Representatives from different Governmental agencies presented papers reviewing the current status of the water and sanitation sector in both rural and urban areas[1]. A brief summary of the sector position papers is presented in Appendix 5.

The main work of the meeting comprised discussions in four groups:

Group 1: Programme Planning, Coordination and Management
Group 2: Community Participation and Health Education
Group 3: Financing and Cost Recovery
Group 4: Technology Choice and Operations and Maintenance

Each group discussion was initiated by presentations by facilitators drawn from the relevant Government agencies. An international presentation was made to each group on the experience of invited guests from African countries which had made especially good progress with respect to the group topic[2]. The report of group findings and recommendations is presented in Appendix 2. The conference statement, which forms the main text of this report, contains the main resolutions of the meeting as a whole and was derived in plenary discussion after a detailed review of the group reports.

The meeting was closed by the Minister of State (Local Government) Comrade S. Mombeshora who reviewed the meeting's major findings, commended it's achievements and assured participants of follow-up action. The text of this speech is presented in Appendix 6.

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[1] Five main papers were distributed at the meeting:
Sector Paper on Water Supply and Sanitation in Zimbabwe
Sector Paper on Water Supply and Sanitation in Communal Lands
Sector Paper on Water Supply and Sanitation in Resettlement Areas
Sector Paper on Water Supply and Sanitation in Commercial Farming Areas
Sector Paper on Water Supply and Sanitation in Urban Areas.

[2] Group 1: Mr B Mulunes, Ethiopia - Programme Planning, Coordination and Management.
Group 2: Mrs M Mwangola and Ms J Waterkeyn, Kenya - Community Participation and Health Education.
Group 3: Ms M Ramonaheng and Mr S Theko, Lesotho - Financing and Cost Recovery: Lesotho's Rural and Urban Experience.
Group 4: Mr Y Mhone and R Kafundu, Malawi - Technology Choice Operation and Maintenance in Water and Sanitation: the Malawi Experience.

DECADE CONSULTATIVE MEETING CONFERENCE STATEMENT

Recognizing the Government's endorsement of the following international declarations - Health for All by the Year 2000, the United Nations Fourth Development Decade, the Global Strategy for Shelter to the Year 2000, Safe Water 2000 and the World Declaration on the Survival, Protection and Development of Children - the meeting reaffirms its commitment to the common objective of universal access to clean water and safe sanitation, and calls for an intensification of efforts to this end in the decade of the 1990s.

The meeting adopted the following resolutions:

1. The future responsibility and authority for planning, financial control, implementation and operation and maintenance of rural water supply and sanitation, including decisions relating to technology choice, must be increasingly borne by the local authorities and community members, ultimately leading to complete management through established local structures.

2. In order to accomplish this, particular attention needs to be placed on human resource development, especially at district, ward and village levels.

3. The financial responsibility for direct operations and maintenance should, in future, be borne by communities and local authorities.

4. The existing duplication of functions within the sector, particularly in the areas of borehole drilling, well sinking, community mobilisation and operation and maintenance, need to be resolved as a matter of urgency.

5. Government's role in the promotion of improved water supplies and sanitation for the previously neglected commercial farming sector should be strengthened.

6. The main thrust of central government's role should focus on overall sector guidance and promotion, training, information dissemination and support to communities and local authorities.

7. The contribution of the private sector and non-governmental organizations in the sector, will in the future assume greater importance and should be encouraged and co-ordinated.

8. Existing plans covering various parts of the water and sanitation sector should be supplemented by development of an overall plan to set out a policy framework for the entire sector.

9. Health and hygiene education within the sector must be strengthened through the participation of community members in the identification of problems, messages and target groups and in the development of training and promotional materials.

10. Recognizing that community mobilization and health and hygiene education are essential components of the programme, all agencies need to support these activities. Village Community Workers have an essential role in hygiene education and all efforts should be made to encourage their involvement in this activity.

11. Recognizing the central role of women in water supply and sanitation, their active and full involvement in all community activities, and at all levels of programme management, must be achieved.

12. Additional emphasis needs to be placed on measurement of less quantifiable activities, such as behaviour change.

13. The range of technology options recommended for water supply and sanitation must be expanded to provide sustainable and affordable options for all areas of Zimbabwe. Where feasible, family facilities should be promoted.

14. The success of the rural programme is largely due to the development of standardized, indigenous technologies, and this policy should continue to be followed.

15. The technical and policy issues delaying further provision of services in District and Rural Service Centres need to be resolved as a matter of urgency to ensure continued development of a sustainable water and sanitation infrastructure in these areas.

16. In recognition of the high urban growth rate, increased attention should be paid to provision in these areas. Standards for urban areas need to be reviewed.

This meeting resolved that the National Action Committee for Water and Sanitation should follow up these resolutions and formulate a strategy for their implementation.

APPENDIX 1

PROGRAMME FOR DECADE CONSULTATIVE MEETING

Harare, 26-30 November 1990

DAY ONE: Monday 26th November
(All sessions in plenary)

08.30	Registration	
		Chair: Dr D M Mandaza, MLGRUD
09.00	Opening Address by Minister of Local Government, Rural and Urban Development Cde J Msika.	
09.15	Message from WHO Regional Director for Africa (WHO Country Representative Dr Z Dlamini)	
09.30	Objective of the meeting and keynote address (Chairman of the National Action Committee of Rural Water Supply and Sanitation - Mr Matumbike)	
11.00	Presentation of Sector Paper and discussion: Communal Lands (NCU/MLGRUD)	**Chair: Mr Matumbike, MLGRUD**
11.40	Presentation of Sector Paper and discussion: Resettlement Schemes (DERUDE/MLGRUD)	
14.00	Presentation of Sector Paper and discussion: Commercial farming Areas (MOH)	
15.30	Presentation of Sector Paper and discussion: Urban and Peri-Urban Areas(Dept Urban Councils/MLGRUD + MEWRD)	**Chair: Mr Nhunhama, MEWRD**
16.10	Open discussion	
18.30	Reception for participants	

DAY TWO: Tuesday 27th November

08.30	*Plenary:* Presentation of conceptual framework and outline for group work on the following topics:	
	Group 1.	Programme Planning, Coordination and Management
	Group 2.	Community Participation and Health Education
	Group 3.	Financing and Cost Recovery
	Group 4.	Technology Choice and Operations and Maintenance
09.00	*Group Work:* *(Break into working groups on one of the above topics)* Presentation of paper on topic area outlining group issues for Zimbabwe	
10.00	*Group Work:* Presentation of cooperative paper on group topic	
	Group 1.	Ethiopia
	Group 2.	Kenya

	Group 3. Lesotho Group 4. Malawi
11.00	*Group Work:* Analysis and discussion of issues raised by topic papers for Zimbabwe
14.15	*Group Work:* Analysis and discussion continues
16.00	*Group Work:* Consolidation of analysis and findings in preparation for report back to plenary

DAY THREE: Wednesday 28th November

08.30	*Group Work:* Completion of Group Report
11.00	*Plenary:* **Chair: Mr Proudfoot, MOH** Report-back and discussion on "Programme Planning, Coordination and Management"
12.00	*Plenary:* Report-back and discussion on "Community Participation and Health Education"
14.15	*Plenary:* **Chair: Mr Fellows, DDF/UNICEF** Report-back and discussion on "Technology choice and Operations and Maintenance"
16.00	*Plenary:* Report-back and discussion on "Financing and Cost Recovery"

DAY FOUR: Thursday 29th November

08.30	Field trip Visit to Water and Sanitation Projects in Communal Lands, Resettlement Areas and Commercial Farming Areas and a District Service Centre. Meeting Secretariat draft statement of findings and recommendation from group work.

DAY FIVE:Friday 30th November
(All sessions in plenary)

08.00	Distribution of draft statement on Meeting Findings and Recommendations **Chair: Mr Matumbike, MLGRUD**
09.00	Presentation of Statement of Meeting Findings and Recommendations
09.30	*Plenary:* Discussion and amendments to meeting statement
11.00	Finalization of Meeting Statement and summing up of Decade Consultative Meeting
12.00	Official Closing Address by Minister of State for Local Government Rural and Urban Development, Dr S Mombeshora.

GROUP 1: PROGRAMME PLANNING, COORDINATION AND MANAGEMENT

RECOMMENDATIONS

1. Role of the District Council should be strengthened, eventually assuming responsibility for project planning and implementation.

2. A programme of training for local authority staff should be initiated.

3. The community must be more fully involved in project planning through the existing structures and the plans incorporated into the District Development Plans.

4. The existing plans in the sector should be supplemented by an overall plan to set out a policy framework for all parts of the sector.

5. There is a need to remove duplication of responsibility between sector agencies particularly in borehole drilling community mobilisation and operations and maintenance.

6. Where duplication exists, one agency should take a lead role and be assisted by the other.

7. NGO activities to be coordinated through DDCs and be incorporated into District Development plans.

8. Financial Management capacity within local authorities should be strengthened, so they may play a more effective role in project planning and implementation.

9. The programme should rapidly move towards the user communities assuming ownership and full responsibility for operations and maintenance of all rural water supplies. This principle should be incorporated at the project inception.

10. The increase in community responsibility for operations and maintenance, the proposed reduction in the civil service and the confirmed loss of technical staff will bring about a greater reliance on the private sector.

11. Government agencies at district level will need change their emphasis to supporting and training the community to strengthen its ability to take over the tasks of operation and maintenance.

GROUP 2: COMMUNITY PARTICIPATION AND HEALTH EDUCATION

INSTITUTIONAL STRUCTURES FOR HEALTH EDUCATION AND COMMUNITY PARTICIPATION

The organizational and management structures for the NRWSS programme in Communal Lands was analyzed and an organogram developed.

OBSERVATIONS

1. The structure itself is appropriate and adequate for the programme.

2. The effectiveness of the VIDCO at the moment is not enough although water point committees seem active.

3. At WADCO and VIDCO levels there is no properly outlined guideline as to the limitations of the number of committees to be created. This has had a tendency of indiscriminate establishment of subcommittees thereby reducing the effective function of the mother committee resulting into some confusion and duplication e.g. Ward Health Teams(WHTs).

4. The 3 tier maintenance - system - was analyzed and noted as satisfactory.

5. The present functions of the VCW was seen as to too thinly spread that inadequate attention is given to health education

6. The VCWs were not well trained in communication skills to properly impart Health messages and information.

7. The VCWs do not have appropriate health education training materials.

RECOMMENDATIONS

1. There is no need to change or modify the present structure. However the development committees need to have properly well outlined guidelines as to their functions and the rationale for establishing sub or ad hoc committees. This could go a long way in invigorating the VIDCOs especially. The Ministry of Community and Cooperative Development should shoulder this responsibility.

2. The present 3 tier maintenance system is satisfactory and should be consolidated by enhancing the role of the VIDCO and increasing communication across the board.

3. There is great need to evaluate the portion of the time spared by the VCW for health education since she became a multi-purpose cadre. It is important to note that since then health education has suffered and this situation has to be remedied by reallocation of the time of VCWs.

4. The Ministry of Health has to develop promotional material for use by VCWs in their daily activities. The Kenyan experience shows that these materials should be developed with enough community participation. It is hoped that with concrete aids for health education the VCWs would be more effective. Ministry of Health should undertake this responsibility.

5. The communication skills of the VCW have to be developed to improve their health education.

6. It was noted that the improvement of health education requires a great amount of financial and other resources. During this past decade less emphasis has been given to health education as compared to water and sanitation components. A serious consideration and balance of financial resources has to be taken in the next decade. It is suggested that community participation education and health education should be accorded more resources. As a result Government and donors should be prepared to spend much more on these components so that the programme is based on a strong foundation of conscious implementation by the communities.

ROLE OF THE RURAL DISTRICT COUNCIL

The role of the council was viewed with mixed feelings. However it was apparent that the level of council participation was not adequate.

OBSERVATIONS

1. The National Master Plan for Rural Water Supply and Sanitation did not specify the exact role of the District Council and this was an anomaly.

2. The District Council as an institution participated less than the lower tier VIDCOs and WADCOs in the programme.

3. To a great extent the bureaucracy has stifled the function of the Councils in the programme.

4. The Council has the potential to effectively participate. It has the appropriate legal authority (Town and Regional Act, Communal Land Act; Rural District Council Act). It also has the responsibility and authority to delegate, refer and monitor the lower tier local authority structures. It has the necessary skills and manpower - the executive officers.

RECOMMENDATIONS

1. There is need to amend the National Master Water Plan by including the specific role of the Council so that it fully participates as the major representative of communities in the programme.

2. The Council should have a more direct role in planning, controlling, monitoring and evaluation of the programme through its lower tier organs. This calls for much greater training of Councils by MCCD/MPA.

3. Specific amendments to functions were suggested:

   - Council Executive below Chief Executive Officer should be part of the technical team to increase information flow to Council.

   - Council should have responsibility to follow up the lower tier roles.

   - Council should be given criteria guidelines to determine approval of W&S plans and should exercise more consciously its planning responsibility in this area.

   - The Rural District Council should have the responsibility of formulating cost recovery policies and the management strategies.

   - The D.A. should ensure that Rural District Councils are involved as layed down by station.

HEALTH EDUCATION, COMMUNITY PARTICIPATION AND THE IMPACT ON THE CULTURAL BEHAVIOUR OF COMMUNITIES.

The nature of the programme was such that targets were set and evaluated specifically on the criteria of projected figures. Little consideration has been placed on non-quantifiable constraints such as the effective attitudinal changes of communities. In some cases toilets are built and water protected, but traditional behaviour continues irrespective of that.

OBSERVATIONS

1. The communities have not fully participated in deciding on methods of resolving their problems. They have not participated in the technological designs of W&S at least to a meaningful level.

2. Some strong cultural feelings of certain communities have not been adequately considered due to inadequacy of community participation in the initial stages of the projects especially in the identification made of technology and planning (e.g. mixing faeces of in-law in single latrines).

3. The time period between health education and community participation education on one hand and the physical technical commencement of the projects has been too short a period for communities to properly consider and absorb the programme so that it has meaningful cultural impact on the community.

4. Less emphasis has been given to studying of community behaviour and social patterns so as to make the programme much more effective.

RECOMMENDATIONS

1. Communities should play a very significant part in the initiation, planning, and control of the projects. They should not just be made to feel to be responsible, but they should indeed be fully responsible and have authority in the project.

2. Communities should participate in identifying suitable technology for themselves and determine necessary modifications for that to be compatible with cultural beliefs and behaviour.

3. Health education itself should be strictly and immediately followed by community participation so the theory and knowledge imparted and gained is transformed into practice by the communities. This will provide strong foundation for sustainability since the people will be directly acquiring knowledge to transform their ways of life concretely.

4. There is need to increase the time period for community participation education and health education so that enough behavioural patterns of the communities are understood and there is time for communities to absorb the programmes aims and objectives. This requires patience by donors and implementing agencies, as well as early funding of health education and community participation education.

5. It was noted that if health education and community participation education focused on the cultural impact through changing behaviour and attitudes of communities, sustainability of the programmes is more likely to be achieved. This presupposes that an irreversible cultural development will be established thereby creating self sustenance of the water supply and sanitation programme.

THE KENYAN EXPERIENCE WAS INVALUABLE!

GROUP 3: FINANCING AND COST RECOVERY

The group had the task of reviewing issues of financing and cost recovery in the water and sanitation programme.

PROBLEMS

Three problems identified:

1) Government allocation to recurrent finance has increased but not to the required level to match capital investments.

2) The heavy subsidization in rural water and sanitation sector particularly in communal lands and resettlement areas is not sustainable.

3) While capital investment has increased through the last decade, it was noted that the rural water and sanitation programme was increasingly dependent upon donor funds.

RECOMMENDATIONS

The group made the following recommendations:

1) To shift the responsibility of direct operation and maintenance costs to the consumer in the communal lands and resettlement areas.

2) The community receiving assistance from Government in water provision would be required to establish a maintenance fund in order to meet maintenance costs. The manner and level of collection is the prerogative of each community.

3) Government's responsibility will continue to be training and support, information dissemination and back up to community authorities (beneficiaries).

4) Adoption of this system will result in the phasing out of Government responsibilities in paying the pump minders, but will in the short term require additional training and technical support.

5) The emphasis on community responsibility for management was seen to be a first stage towards the long term objective of local authority responsibility for operation and maintenance costs.

6) The group recommended that this policy initiative once approved by Cabinet, would be implemented across the board giving consumers adequate warning of the policy change and allowing Government sufficient time to explain the policy change to the community.

7) Group recommended that in order to improve cost effectiveness and financial efficiency the following steps should be taken.

- Technology selection according to cost effectiveness
- Greater consumer awareness of maintenance cost implications in different technologies.
- Selection of Blair latrine options that will limit Government material subsidy.

8) In addition to the measures outlined above the group recognized the need for reducing recurrent expenditure by institutional reforms and limiting areas of duplication.

9) With regards to capital financing, the group concluded that while all efforts should be made to increase Government contribution to the sector, it was likely that the growth of the sector would have to remain dependant upon donor assistance in the short and medium term. In the longer term, it was envisaged to increase mobilization through consumer contribution to capital costs in the sector.

GROUP 4: TECHNOLOGY CHOICE & OPERATIONS AND MAINTENANCE

RECOMMENDATIONS

TECHNOLOGY

1. Affordable and sustainable technologies should be chosen.

2. Wherever family based units are technically and socially feasible, they should be chosen as a priority.

3. Technologies should be standardized. This should include pumps and boreholes so that inter changeability is possible.

4. Indigenous technologies should be chosen whenever possible, and complete local manufacture ensured.

ENVIRONMENTAL PROTECTION

1. Environmental factors need to be considered in choice of water and sanitation technologies. Wood use and erosion patterns around boreholes and catchment should be considered. Development of land use plans should be accelerated.

WATER SOURCES

Priorities

1. Sources of water should be chosen in the following order of priority subject to technical feasibility and cultural acceptability.

a) Family wells
b) Community Gravity schemes (including spring protection)
c) Shallow community wells and tubewells
d) Deep community wells
e) Boreholes
f) Surface water (dams)
g) Subsurface water (dams)

Other Sources

1. Rainwater catchment should also be seriously considered, where the potential for this exists.

2. Infiltration dams and other conservation measures should also be considered as a means of reducing run-off and replenishing the underground aquifers.

WATER LIFTING TECHNOLOGY

Technology Range

1. There was agreement that the current water lifting technologies as already endorsed by the NAC should be retained. These are:

a) Bucket and Windlass (for upgraded family wells)
b) Bucket Pump (for small community tubewells/wells)
c) Zimbabwe Bush Pump (for all deep and heavy duty settings)
d) The most appropriate motorized pump (for larger supplies)

Research and Development

1. Research and development of more user friendly Bush Pumps should continue. This includes the ongoing development of extractable down the hole systems, and other systems which make maintenance of the Bush Pump easier.

2. It also includes the development and testing of simpler tools for maintenance. An example of such a development, the Siwil, for lifting pipes, was developed in Masvingo province by the DDF. Such development is to be encouraged.

Other Technology

1. Windmill technology should be re-evaluated in the light of earlier work and more recent technological development.

2. Solar Powered technologies should also be considered in special situations.

Matters Requiring Attention

1. Water losses in bulk supplies should be better evaluated.

2. Some District Service centres are currently without improved water supplies. This needs urgent attention.

OPERATION & MAINTENANCE

Responsibilities

1. Whilst the DDF is currently responsible for the maintenance of handpumps and small piped supplies, this should be handed over to the District Council as soon as possible. This responsibility includes the procurement of spares.
2. DDF should continue to execute on behalf of the Council until such time as the council is able to develop pump repair capacity.

3. Villagers should be responsible for proper operation of water points and the reporting of breakdowns through the water committee.

Evaluations and Data Collection

1. Further evaluate effectiveness of Pump Minder system.

2. Improve collection and use of data related to Bush Pump breakdowns. (pipes and other replacement parts)

SANITATION

Rural

1. There should be no compromise of principle of the Blair Latrine, but that greater flexibility in structures should be allowed.

2. Subsidy for family Blair Latrines should be standardized to 5 bags moving towards the adoption of a 3 bag subsidy in the future.

3. Systems for pit emptying services should be considered.

Urban

1. A study of urban sewage disposal systems versus population density should be conducted and revised standards developed.

2. More affordable methods of sewage disposal must now considered for future development. These should include on-site systems and also cost effect means of transferring sewage to treatment sites.

PROGRAMME FOR THE FIELD TRIP TO MAKONI DISTRICT ON 29 NOVEMBER, 1990

0800 - 0945 Hours	Travel to Headlands in Makoni District.
0945 - 1030 Hours	Introduction of visitors to the District Administrator Mr E S C Nyagwaya.
	Welcome Speech by the Provincial Governor of Manicaland Cde K Manyonda
11.15 - 11.45 Hours	Visit a borehole in Chinyika Resettlement Scheme Village 23.
12.00 - 12.15 Hours	Visit Chinyudze Rural Service Centre.
	a) Grain Marketing Board depot
	b) Central Mechanical Equipment
	c) Shopping Centres
	d) Government Offices
	e) Rural Health Centre
	f) Residential Houses
	g) Primary and Secondary School
	h) Piped Water Scheme
12.30 - 13.00 Hours	Visit Masson Farm at Bardley
13.15 - 14.00 Hours	Lunch at Crocodile Motel
14.15 - 14.30 Hours	Visit Mukamba Village
	a) Protected well b) Piped Water c) Showers d) Blair Toilet
14.30 - 15.00 Hours	Tandi clinic
15.30 - 16.00 Hours	Back to Rusape
16.00 - 18.00 Hours	Travel to Harare

DISCUSSION OF FIELD VISIT TO MAKONI DISTRICT, MANICALAND

The following points were noted by the participants in plenary discussion of the field visit:

1. Water quality of rural water supplies should be monitored more effectively;

2. There is a need for research and development on alternative technologies for water purification, such as slow sand filtration, to provide a greater range of technical options for rural water supply;

3. The selection of the standard technologies for water supply is not sufficiently guided by the affordability of the individual technical options; and

4. Greater efforts are needed to improve the provision of water supply and sanitation facilities on commercial farms.

DECADE CONSULTATIVE MEETING

Participants from Government of Zimbabwe (GOZ)

CODE	NAME	DESIGNATION	ORGANISATION
GOZ	E Chimbunde (Mr)	Senior Field Officer	Blair Research Laboratory
GOZ	S Mtero (Ms)	Research Officer	Blair Research Laboratory
GOZ	P Morgan (Mr)	Advisor	Blair Research Laboratory
GOZ	G Mlilo (Mr)	Director of Engineering Services	Bulawayo, City Council
GOZ	D Chinyowa (Mr)	Provincial Field Officer (Water)	DDF, Mash. East
GOZ	N Z. Sibanda (Mr)	Provincial Field Officer (Water)	DDF, Masvingo
GOZ	M. Mthuthuki (Mr)	Provincial Field Officer (Water)	DDF, Mat. South
GOZ	R. M. Muzamhindo (Mr)	Operations and Maintenance Engineer	DDF, Water Division
GOZ	P Arvidsson (Mr)	Chief Water Engineer	DDF, Water Division
GOZ	M Kasunzuma (Mr)	City Enginer	Gweru, City Council
GOZ	T Mahachi (Mr)	Director of Works	Harare, City Council
GOZ	P Mukandishaya (Mr)	District Community and Cooperative Officer	MCCD, Guruve
GOZ	R Nyatsine (Mr)	Community and Cooperative Officer	MCCD, Makoni
GOZ	A Chikasha (Ms)	Provincial Community and Cooperative Officer	MCCD, Manicaland
GOZ	Z P Chidewu (Mr)	Provincial Community and Cooperative Officer	MCCD, Mash Central
GOZ	W Z. Sadombo (Mr)	Community and Cooperative Officer	MCCD, Masvingo
GOZ	P Hwata (Mr)	Community and Cooperative Officer	MCCD, Mudzi
GOZ	Sandaramu (Mr)	Community and Cooperative Officer	MCCD, Mudzi
GOZ	N Musiyazvinyo (Mr)	Community and Cooperative Officer	MCCD, Zaka
GOZ	E. Mushayanyama (Mr)	Provincial Community and Cooperative Officer	MCCD, Zaka
GOZ	R Mutepfa (Mr)	Senior Hydrogeologist	MEWRD, Ground Water Section
GOZ	F Zvarevashe (Mr)	Hydrogeologist	MEWRD, Mashonaland
GOZ	H H Remba(Mr)	Planner	MEWRD, Operations
GOZ	L Mujuru (Mr)	Deputy Secretary	MFEPD
GOZ	G Tsododo (Mr)	Assistant Director	MLARR, AGRITEX
GOZ	D R, Chipendo (Ms)	Senior Executive Officer	MLARR, AGRITEX
GOZ	D Chipatiso (Mr)	Chief Agricultural Extension Officer	MLARR, Mashonaland Central
GOZ	O L Muzawazi (Mr)	Assistant District Administrator	MLGRUD, Chipinge

DECADE CONSULTATIVE MEETING

Participants from Government of Zimbabwe (GOZ)

CODE	NAME	DESIGNATION	ORGANISATION
GOZ	G Paraiwa (Mr)	Director	MLGRUD,Dept. of Rural Development
GOZ	S G. Mhishi (Mr)	Chief Planning Officer	MLGRUD,Dept. of Rural Development
GOZ	S M Jinya (Mr)	Principal Planning Officer	MLGRUD,Dept of Rural Development
GOZ	T N Mavheneke (Mr)	District Administrator	MLGRUD, Guruve
GOZ	N Mapfumo (Mr)	District Administrative Officer	MLGRUD, Guruve
GOZ	V Sibanda (Ms)	Snr Provincial Administrative Officer	MLGRUD, Midlands
GOZ	S C Chipunza (Mr)	National Coordinator (Counterpart)	MLGRUD, National Coordination Unit
GOZ	G. Wangen (Mr)	National Coordinator	MLGRUD, National Coordination Unit
GOZ	B T Majaya (Mr)	Monitoring Officer	MLGRUD, National Coordination Unit
GOZ	C Chemhuru (Mr)	Programme Planner	MLGRUD, National Coordination Unit
GOZ	A Mlalazi (Mr)	Deputy Director	MLGRUD, Physical Planning
GOZ	S Mpofu (Mr)	Assistant Secretary	MLGRUD, Physical Planning
GOZ	G S Maphosa (Mr)	District Administrator	MLGRUD, Plumtree
GOZ	S C. Tsvakwi (Ms)	Assistant Secretary	MLGRUD, Urban Councils
GOZ	C W Matumbike (Mr)	Deputy Secretary	MLGRUD, Urban Councils
GOZ	G Katito (Mr)	Under Secretary	MLGRUD, Urban Councils
GOZ	P. Cross (Mr)	Water and Sanitation Advisor	MOH
GOZ	J Broome (Mr)	Water and Sanitation Advisor	MOH
GOZ	D Proudfoot (Mr)	Acting Chief Enviromental Health Officer	MOH, Enviromental Health Services
GOZ	A Makuto (Mrs)	Media Development Officer	MOH, Enviromental Health Services
GOZ	M Chibanda (Mr)	Principal Chief Enviromental Health Officer	MOH, Enviromental Health Services, Mash Central
GOZ	V Chikwavaire (Ms)	Principal Chief Enviromental Health Officer	MOH, Enviromental Health Services, Midlands
GOZ	S Mukono (Mr)	Acting Decade Officer	MOH, Environmental Health Services
GOZ	A Ruwende (Mr)	Provincial Environmental Health Officer	MOH, Environmental Health Services, Manicaland
GOZ	S Choto (Mr)	Administrative Officer	MPA, Commissariat
GOZ	S M Maturure (Mr)	Deputy Secretary	MPA, Commissariat
GOZ	M Mudutsa (Mr)	City Engineer	Mutare City Council

DECADE CONSULTATIVE MEETING

Participants from External Support Agencies and NGO's

CODE	NAME	DESIGNATION	ORGANISATION
E	Mr P E Njuguna	Water Engineer	African Development Bank - Abidjan, Cote D Ivoire
E	Mr D C Tolson	Aid Secretary	British High Commission
E	Mr. Ward	First Secretary	British High Commission
E	Mr E. Boel	First Secretary	DANIDA, Harare
E	Mr T Troise	Ambassador	Embassy of Italy
E	Mr R Schottke	Project Manager and Coordinator	GTZ, Harare
E	Mr B van Geel	First Secretary	Netherlands Embassy
E	Ms. R. Kove	Senior Programme Officer	NORAD, Harare
E	Mr S Melsom	Resident Representative	NORAD, Harare
E	Mr A Kruger	Water and Sanitation Advisor	NORAD, Oslo
E	Mr L G Nilsson	Senior Programme Officer	SIDA, Harare
E	Mr. R. Winberg	Senior Regional Advisor, Water	SIDA, Nairobi Kenya
E	Mr. P Flik	Director	SNV-Netherlands Development Organisation
E	Mr. D Chiwota	Manger Water and Sanit.	UNDP/
E	Mr O Purhonen	Engineer	UNDP/World Bank, Nairobi Kenya
E	Mr G Kitake	Programme Specialist	Unesco Regional, Nairobi Kenya
E	Mr B Fellows	Project Coordinator	UNICEF, Harare
E	Mr G Sinnatamby	Executive Director	United Nations Centre for Human Settlement, Kenya
E	Mr F Zawide	Sanitary Engineer	WHO, Harare
G	Ms M. Mwangola	Executive Director	Kenya Water for Health Organization, Nairobi Kenya
G	Mrs J Waterkeyn	Executive Director	Kenya Water for Health Organization, Nairobi Kenya
G	Ms S Theko	National Rural Sanitation Coordinator	Ministry of Health, Lesotho
G	Mr Y Mhone	Technical Adviser	Ministry of Local Government, Lilongwe Malawi
G	Mr R Kafundu	Principal Hydrogeologist	Ministry of Local Government, Lilongwe Malawi
G	Ms M Ramonaheng	USIT Coordinator	Urban Sanitation Improvement Team, Lesotho
G	Mr B Mulunes	Chief Engineer	Water Supply and Sewerage Auth , Addis Abbaba.Ethiopia
N	Mr H Luukko	Eastern Africa Regional Director	Adventist Development & Relief Agency
N	Mr B Butcher	Zimbawe Country Director	Adventist Development & Relief Agency, Gweru

DECADE CONSULTATIVE MEETING

Participants from External Support Agencies and NGO's

CODE	NAME	DESIGNATION	ORGANISATION
N	Mr K M Clements	Resident Representative	AFRICARE
N	Mr B Waithas	National Water Engineer	CADEC
N	Mr M T Chanyowedza	Senior Project Officer Water	Christian Care, Mutare
N	Mr M J Mapfunde	Consultant	Friedrich Ebert Foundation
N	Mr L Moyo	Deputy Director	Lutheran World Federation
N	Mr de Velte	Director	Lutheran World Federation, Bulawayo
N	Mr J M Mathe	Director	Redd Barna
N	Mr T Skitt	Technical Advisor	Save the Children Fund (UK)
N	Mr J Chinyanga	Project Officer	Save the Children Fund (UK)
N	Mr. J Kadzinga	Water & Sanitation Co-ord	World Vision
N	Mrs J Nyamurowa	Secretary General	Zimbabwe Red Cross Society
N	Mr. B. Tamirepi	Head-Comm Based Health Program	Zimbabwe Red Cross Society

SUMMARY OF SECTOR POSITION PAPERS

This appendix contains an overall summary of the water supply and sanitation sector in Zimbabwe and draws from the five sector position papers presented at the DCM [1].

SECTOR BACKGROUND

Water development is a high priority, for rural women in particular, in this semi-arid country. A sound urban infrastructure and considerable experience in appropriate, locally manufactured technologies greatly assist sectoral development. Challenges facing the sector include: a high population growth, a complex administrative structure (divided into urban areas, communal lands, resettlement areas, commercial farming areas and state lands); a poor infrastructure in communal lands; and an anticipated lessening of Government subsidies to the sector in line with Government's programme of economic structural reform.

CURRENT STATUS OF SERVICE PROVISION

Zimbabwe has made significant progress in water supply and sanitation development through the 1980s, particularly in rural areas as is indicated in the tables below. Of the 1990 population of 10.6 million, 73% presently have basic access to potable water and 46% access to safe and adequate sanitation. The sector is characterized by the basic soundness of many of its policies; by the development of far-sighted technologies; and by strong political commitment (especially in communal lands where over 60 ongoing donor-assisted projects comprise a strong programme, the core of which is 19 integrated, community-based, district-wide projects). Zimbabwe remains, in many respects, a leading example of sector development on the continent.

Table 1 - Potable Domestic Water Service Coverage

Area	1990	Served Population		Unserved Population	
	Pop (mill)	(mill)	%	(mill)	%
Urban Areas	3.1	3.1	100	0	0
Commercial Farms	1.5	1.05	70	0.35	30
Communal Land	5.4	3.0	55	2.4	45
Resettlement Areas	0.3	0.3	100	0	0
State Land	0.3	0.28	80	0.07	20
TOTAL	10.6	7.74	73	2.9	27

[1] Five main papers were distributed at the meeting:
- Sector Paper on Water Supply and Sanitation in Zimbabwe
- Sector Paper on Water Supply and Sanitation in Communal Lands
- Sector Paper on Water Supply and Sanitation in Resettlement Areas
- Sector Paper on Water Supply and Sanitation in Commercial Farming Areas
- Sector Paper on Water Supply and Sanitation in Urban Areas.

Table 3 - Sanitation and Sewerage Service Coverage

Area	1990 Population (mill)	Served Population (mill)	%	Unserved Population (mill)	%
Urban Areas	3.1	3.1	100	0	0
Commercial Farms	1.5	0.35	23	1.15	77
Communal Land	5.4	1.1	21	4.3	79
Resettlement Areas	0.3	0.06	19	0.25	81
State Land	0.3	0.24	68	0.11	32
TOTAL	**10.6**	**4.85**	**46**	**5.81**	**54**

The chief weakness of sector programmes in Zimbabwe lies in their lack of sustainability. Government is keenly aware of this and, in consultation with its partners, is making significant efforts to address outstanding issues. Major challenges facing the sector are outlined below:

Programme Planning, Coordination and Management

* The sector has a complex array of institutional responsibilities. These require rationalization to reduce areas of overlap, assist sector co-ordination, reduce recurrent costs and improve efficiency.

* Prior subsector plans have provided a useful impetus, but there remains a need to develop a comprehensive, updated national sector plan reflecting all land bases in the country and providing a framework for policy development and future investments.

* Public sector staffing problems are hindering sector output. The private sector is under-utilized and insufficiently promoted in key areas. In addition to a re-deployment of public sector resources, a restructuring of responsibilities is required. Government's role would thereby become less of a provider and sponsor of services, and become more advisory and promotional, with emphasis being placed upon community and local authority management.

Community Participation and Health Education

* The focus of present community participation support activities is in community mobilization. A major challenge is to create amongst communities a long term managerial capacity for operation and maintenance and financial management.

* Institutional, financial and technical aspects of hygiene education need further strengthening and its linkage to the water and sanitation programme clarified.

Financing and Cost Recovery

* Since Independence Government has adopted a policy of subsidizing much service provision in the sector, but is actively reconsidering this policy to enhance the sustainability of the programme. A first objective is to shift the onus for payment for operation and maintenance to consumers. Strategies have to be devised to achieve this. Other objectives are to improve cost-effectiveness and financial efficiency through reforms to make better use of existing resources, and to reduce recurrent expenditures.

* Zimbabwe has been highly successful in mobilizing financial resources for the sector in the 1980s. An increasing proportion of resources derive from donor finance. In the longer term, strategies will be required to increase domestic resource mobilization.

Technology Choice and Operations and Maintenance

* Current technology choices are not always made on the basis of cost-efficiency and other proven techniques are under-exploited. Standards set without regard to cost have inhibited sector development. Technology development in the sector should continue to be directed to the goal of minimizing maintenance to encourage community and local authority management.

OPPORTUNITIES FOR ESA SUPPORT

ESA support to Government initiatives to achieve greater sustainability is requested as a priority in sector development. Areas of support include institutional restructuring and reform, human resource development and strengthening decentralization. Support for the development of a full sector plan to provide a framework for future development assistance. Financial support is needed to continue water supply and sanitation provision, especially in communal lands, resettlement areas and commercial farming areas. The attachment to this appendix presents a list of projects requiring assistance.

Annex I - List of Projects Requiring Funding

Project Name	Agency	Status	Est. Cost (Z$) and Duration
1. District Projects			
Manicaland Mutasa	Integrated	Existing NGO Project	
Manicaland Nyanga	Integrated	Proposal Prepared	
Manicaland Mutare	Integrated		
Mashonaland East UMP	Integrated	Approved Proposal	
Mashonaland East Wedza	Integrated	Approved Proposal	
Mashonaland Central Centenary	Integrated		
Mashonaland Central Mazowe	Integrated		
Mashonaland West Hurungwe	Integrated		
Mashonaland West Mhondoro	Integrated		
Midlands Gokwe	Integrated	Approved Proposal	19.2 m (7 yr)
Midlands Mashambazhou	Integrated		
Masvingo Mwenezi	Integrated	Approved Proposal	8.5 m (5 yr)
Masvingo Chiredzi	Integrated		
Matabeleland North Binga	Integrated	Existing NGO Project	
Matabeleland North Bubi	Integrated	Proposal Prepared	3.5 m (5 yr)
Matabeleland North Lupane	Integrated		
Matabeleland South Umzingwane	Integrated	Extension of Project	
Matabeleland South Insiza	Integrated	Extension of Project	
Matabeleland South Matobo	Integrated	Extension of Project	
Matabeleland South Beitbridge	Integrated	Approved Proposal	1.9 m (2 yr)
Matabeleland South Gwanda	Integrated		
2. Sector Projects			
Commodity Import Assistance	MLGRUD		
Water and San on Commercial Farms	MOH/NGO	Proposal Prepared	1.2 m (3 yr)
National Family Well Promotion	MOH		
Nutrition Garden Promotion	MOH	Feasibility Study Complete	
Institution Reform	All Agencies		
Revenue Collection for DSCs	MLGRUD	Outline Proposal	
Private Sector Promotion	All Agencies	Study Approved	
Water and Sanitation Studies	All Agencies	Proposal Approved	2.4 m (3 yr)
Manpower Dev and Training	MLGRUD		
Manpower Dev and Training	MOH		
Manpower Dev and Training	DDF		
Manpower Dev and Training	MCCD		
Manpower Dev and Training	MEWRD		
Manpower Dev and Training	Local Authorites		
Strengthening Capacity of TCWS	UZ		
National Water Resources Plan	MEWRD	Proposal Prepared	0.8 m (2 yr)
Health and Hygiene Education			
Strategy Development	MOH	Proposal Prepared	0.6 m (5 yr)
Training in Participatory Methods	MOH		
Community Theatre	MOH/NGO	Proposal Prepared	0.2 m (1 yr)
Decentralising Info Management	All Agencies		
Strengthening Technical Training	MOH, Blair	Proposal Prepared	0.3 m (2 yr)
Handpump Development	MOH, Blair	Proposal Prepared	0.6 m (5 yr)

APPENDIX 6

OPENING ADDRESS BY THE SENIOR MINISTER OF LOCAL GOVERNMENT, RURAL AND URBAN DEVELOPMENT, THE HONOURABLE J W MSIKA, MP, ON THE OCCASION OF THE DECADE CONSULTATIVE MEETING ON WATER SUPPLY AND SANITATION IN ZIMBABWE : HOLIDAY INN, 26THE NOVEMBER 1990

REPRESENTATIVES OF THE GOVERNMENT OF ZIMBABWE
REPRESENTATIVES FROM THE GOVERNMENT OF LESOTHO, MALAWI AND ETHOPIA
REPRESENTATIVES OF DONOR AGENCIES IN ZIMBABWE
REPRESENTATIVES OF DONOR AGENCIES FROM ABROAD
LADIES AND GENTLEMENT
COMRADES AND FRIENDS

IT GIVES ME GREAT PLEASURE TO BE WITH YOU AT THIS VERY IMPORTANT DECADE CONSULTATIVE MEETING ON WATER SUPPLY AND SANITATION. THE SUBJECT OF SAFE DRINKING WATER AND PUBLIC HEALTH IS A VERY IMPORTANT ONE, CONSIDERING THE HIGH LEVEL OF ENVIRONMENTAL DEGRADATION, IN THE WORLD. IT IS A SUBJECT THAT NEEDS GLOBAL APPROACH AND ACTION AS THE ONE BEFORE US HERE.

THE LACK OF CLEAN DRINKING WATER AND ADEQUATE SANITATION FACILITIES HAVE LED TO THE OUTBREAK OF DISEASES LIKE TYPHOID, DYSENTRY, CHOLERA, BILHARZIA AND A HOST OF OTHERS, IN DEVELOPING COUNTRIES. IT IS AN OPEN SECRET THAT A HEALTHY HUMAN BEING CONTRIBUTES MORE TO THE DEVELOPMENT OF A NATION. AS DEVELOPING COUNTRIES WE SHOULD PUT OUR HEADS TOGETHER TO COMBAT THE OUTBREAK OF THESE DISEASES BY MAPPING OUT STRATEGIES TO ENSURE THE SUPPLY OF SAFE DRINKING WATER AND THE PROVISION OF ADEQUATE SANITATION FACILITIES.

THE MEETING THEREFORE BECOMES EVEN MORE RELEVANT SINCE IT HAS BEEN CONVENED TO REVIEW PROGRESS AND SHARE IDEAS ON THE SECTOR, WITH SPECIFIC REFERENCE TO ZIMBABWE. MY MINISTRY, THROUGH THE CHAIRMANSHIP OF THE NATIONAL ACTION COMMITTEE, IS RESPONSIBLE FOR THE CO_ORDINATION OF ALL ACTIVITIES IN THE SECTOR BY OTHER MINISTRIES, GOVERNMENT DEPARTMENTS AND NON GOVERNMENTAL ORGANISATIONS (NGO).

2/...

IN ZIMBABWE, THE MINISTRY OF LOCAL GOVERNMENT, RURAL AND URBAN DEVELOPMENT THEREFORE, ACTS AS A FOCAL POINT WHERE ALL EFFORTS IN THE SECTOR OF WATER SUPPLY AND SANITATION ARE INTEGRATED INTO ONE WHOLE. THIS CAN BEST BE DONE THROUGH THE POOLING OF IDEAS AND THE HOLDING OF CONSULTATIVE MEETINGS LIKE THIS ONE. HENCE I FEEL GREATLY HONOURED TO ADDRESS THIS MEETING, THE FIRST EVER TO BE HELD IN ZIMBABWE, WHOSE SOLE FOCUS IS ON WATER SUPPLY AND SANITATION. I WILL THEREFORE TAKE THIS OPPORTUNITY TO DISCUSS ISSUES PERTAINING TO THE ZIMBABWE GOVERNMENT POLICY AS FAR AS THE PROVISION OF WATER SUPPLY AND SANITATION SERVICES IS CONCERNED.

AT THE ATTAINMENT OF INDEPENDENCE IN 1980, ZIMBABWE INHERITED A SYSTEM THAT WAS HEAVILY BIAISED TOWARDS THE URBAN AREAS. THERE WAS VERY LITTLE EFFORT DIRECTED TOWARDS WATER SUPPLY AND SANITATION IN THE RURAL AREAS IF ANY AT ALL. THE URBAN AREAS WERE HALF_HEARTEDLY ATTENDED TO BUT THIS WAS MAINLY BECAUSE OF THE DUAL NATURE OF HABITATION IN URBAN SETTLEMENTS. ON ATTAINING INDEPENDENCE THE GOVERNMENT HAD NO OPTION EXCEPT TO SEEK REDRESS OF THIS IMBALANCE.

IN 1981, THE GOVERNMENT ENDORSED THE INTERNATIONAL DRINKING WATER SUPPLY AND SANITATION DECADE AND THEN DEVELOPED A 1985 TO 2005 PLAN FRAMEWORK FOR THE IMPLEMENTATION OF A NATIONAL MASTER PLAN FOR RURAL WATER SUPPLY. THE PLAN WAS MAINLY AIMED AT THE COMMUNAL AND RESETTLEMENT AREAS WHICH HAD BEEN HITHERTO NEGLECTED.

TO SEE TO THE IMPLEMENTATION OF THE PLAN, A NATIONAL ACTION COMMITTEE (NAC) CHAIRED BY THE MINISTRY OF LOCAL GOVERNMENT, RURAL AND URBAN DEVELOPMENT WAS FORMED. THE COMMITTEE HAS GOT REPRESENTATIONS FROM ALL THE SECTOR MINISTRIES WHO HAVE A ROLE IN THE PROVISION OF WATER SUPPLY AND SANITATION SERVICES. AT PRESENT THE NATIONAL ACTION COMMITTEE IS AT ADVANCED STAGES OF PREPARATIONS OF A FIVE YEAR (1991-1996) WATER AND SANITATION PLAN, WHOSE MAIN AIM IS TO COVER ALL THE UNSERVED ZIMBABWEANS.

3/...

SINCE THE BEGINNING OF THE DECADE, THE SECTOR OF WATER AND SANITATION BOASTS OF A NUMBER OF SUCCESSES THOUGH THERE ARE SETBACKS BEING EXPERIENCED. FIRSTLY, AS I HAVE ALREADY INDICATED EARLIER ON, AT THE TIME OF INDEPENDENCE NOTHING MUCH HAD BEEN DONE IN TERMS OF PROVIDING CLEAN POTABLE WATER AND SANITATION SERVICES. AT PRESENT, THE COVERAGE OF THE SECTOR IS NOW 73% FOR WATER AND 46% FOR SANITATION. THIS IS A TREMENDOUS MEASURE OF SUCCESS FROM A SITUATION WHERE VIRTUALLY NOTHING HAD BEEN DONE.

APART FROM BEING ABLE TO PROVIDE THE SERVICES, A SECOND POINT OF SUCCESS IS THE FACT THAT THE SERVICE HAS BEEN PROVIDED AT REASONABLE COST.

THIS HAS BEEN POSSIBLE THPOUGH THE USE OF APPROPRIATE TECHNOLOGY AND COMMUNITY MOBILISATION. THE AIM HAS NOT BEEN TO REPLACE THE OLD SYSTEM WITH A COMPLETELY NEW ONE, BUT TO UPGRADE THE OLD SYSTEM AND GRADUALLY REPLACE IT WITH MANAGEABLE TECHNOLOGY. AS A RESULT OPEN SHALLOW WELLS WERE FIRST REPLACED BY CLOSED ONES. GRADUATION INTO BUCKET, AND BUSH PUMPS THEN FOLLOWED. BLAIR LATRINES REPLACED THE EARLIER METHODS. ALL THESE WERE DONE WITH AIDED SELF-HELP METHODS WHICH WERE DESIGNED TO ENSURE THAT THE COST WOULD NOT BE TOO HIGH FOR THE CONSUMER.

THE MINISTRY OF LOCAL GOVERNMENT, HAS THE LEAD ROLE IN THE PLANNING OF THE WATER AND SANITATION SECTOR. AS MENTIONED EARLIER, THE MINISTRY CHAIRS THE INTER-MINISTERIAL NATIONAL ACTION COMMITTEE. THE PLANNING PROCESS STARTS WITH THE VILLAGE DEVELOPMENT COMMITTEE (VIDCO) AT THE VILLAGE LEVEL, THE WARD DEVELOPMENT COMMITTEE (WADCO) AT THE WARD LEVEL, THE DISTRICT DEVELOPMENT COMMITTEE (DDC) AT THE DISTRICT LEVEL, THE PROVINCIAL DEVELOPMENT COMMITTEE (PDC) AND LASTLY THE NATIONAL PLANNING AGENCY (NPA) AT THE NATIONAL LEVEL. THE SAME STRUCTURES ARE ALSO USED FOR PROJECT MONITORING AND EVALUATION.

4/...

THROUGH THE USE OF THE DISTRICT DEVELOPMENT FUND (DDF) BOREHOLES HAVE BEEN DRILLED, WELLS HAVE BEEN BLASTED, SMALL AND MEDIUM SIZED DAMS HAVE BEEN CONSTRUCTED WHILE PIPED WATER SCHEMES ARE BEING INTRODUCED AND IN SOME CASES ARE OPERATIONAL. IT IS HOWEVER NECESSARY TO ACKNOWLEDGE THE TREMENDOUS HELP FROM DONOR AGENCIES AND NON GOVERNMENTAL ORGANISATIONS (NGOS).

A MAJOR PROBLEM BEING FACED BY THE SECTOR IN THE COUNTRY IS THAT OF LACK OF FINANCE. CONSTRUCTION OF WELLS AND DAMS THE DRILLING OF BOREHOLES AND THE INSTALLATION OF PIPED WATER SCHEMES REQUIRES A LOT OF CAPITAL INPUTS. WHILE AIDED SELF HELP HAS BEEN A WAY OF OVERCOMING THIS PROBLEM, HOWEVER, LACK OF SUFFICIENT FUNDS HAVE ALWAYS BEEN A HINDERANCE. AGAIN DONOR AGENCIES HAVE BEEN OF GREAT ASSISTANCE IN THIS REGARD.

ZIMBABWE'S CONSTRUCTION INDUSTRY HAS BEEN HIT BY LACK OF MATERIALS. IN THE WATER AND SANITATION SECTOR, THIS HAS BEEN EVIDENCED BY THE SHORTAGE OF INPUTS LIKE CEMENT. AS A RESULT SOME PROJECTS HAVE BEEN DELAYED OR HAVE NOT BEEN COMPLETED ON TARGET. THE SHORTAGE OF INPUTS IS BEING SERIOUSLY LOOKED INTO IN THE CONTEXT OF APPROPRIATE TECHNOLOGY SO AS TO FIND OUT WHAT CAN BEST BE DONE.

ANOTHER SETBACK IN THE WATER SUPPLY AND SANITATION SECTOR IS THE LACK OF SKILLED MANPOWER. PRESENTLY THE SECTOR IS IN THE AUSPICES OF THE PUBLIC SECTOR. THOUGH THE LOWER LEVEL TECHNICIANS LIKE ENVIRONMENTAL HEALTH TECHNICIANS, ARE IN ABUNDANCE, THE MIDDLE MANAGEMENT LEVEL IS CONTINUOUSLY SHORT STAFFED. THE PUBLIC SERVICE IS CAPABLE OF TRAINING THESE PEOPLE BUT BECAUSE OF LACK OF COMPETITIVE SALARIES THE SO TRAINED PEOPLE USUALLY RUN OFF TO THE PRIVATE SECTOR. THE SECTOR THEREFORE ENDS UP LOSING MONEY FOR TRAINING THE PEOPLE AND LOSE THE TRAINED PEOPLE AS WELL.

5/...

DESPITE ALL THESE SETBACKS, CENTRAL GOVERNMENT CONTINUES TO BE COMMITTED TO WATER SUPPLY AND SANITATION. AS SUCH A NUMBER OF STRATEGIES HAVE SINCE BEEN ADOPTED TO MAKE SURE ALL EFFORTS IN THE SECTOR ARE A SUCCESS.

FIRSTLY, ALL PROJECTS ARE NOW TO BE WELL CO-ORDINATED AND INTEGRATED. UNLIKE PREVIOUS PROJECTS WHICH WERE FRAGMENTED AND TENDED TO FOCUS ON SECTIONS OF THE SECTOR E.G. WATER ALONE OR SANITATION ALONE, PROJECTS NOW HAVE TO BE INTEGRATED SO AS TO INCLUDE LAND USE PLANNING, COMMUNITY MOBILISATION, SELECTION OF APPROPRIATE TECHNOLOGY, WATER AND SANITATION CONSTRUCTION, HEALTH AND HYGIENCE EDUCATION, COMMUNITY MAINTENANCE AND AN INTEGRATED MONITORING SYSTEM. ALL THESE ASPECTS OF THE PROJECT GO HAND IN HAND AND ARE COMPLIMENTARY TO EACH OTHER THEREFORE MUST BE PAID ATTENTION TO AT THE SAME TIME.

SECONDLY, WHILE PREVIOUS EFFORTS WERE AIMED AT COMMUNAL AND RESETTLEMENT AREAS ALONE, EFFORTS ARE NOW TO BE DIRECTED AT ALL SECTORS OF THE POPULATION BE THEY, URBAN OR RURAL.

WATER AND SANITATION IN COMMERCIAL FARMING AREAS HAD LARGELY BEEN LEFT TO THE INDIVIDUAL FARMERS. THIS HAS RESULTED IN UNCO-ORDINATED EFFORTS SO THAT THE LEVEL OF PROVISION OF THE SERVICES DIFFERS FROM ONE FARM TO ANOTHER DEPENDING ON THE LEVEL OF COMMITMENT OF THE INDIVIDUAL FARMER. AS FOR URBAN AREAS THE ONUS WAS LEFT TO THE INDIVIDUAL LOCAL AUTHORITIES TO DO THEIR BEST. CONTROL ONLY CAME THROUGH APPROVED STANDARDS OF WATER AND SEWERAGE RETICULATION SYSTEMS. ALL SECTORS ARE NOW TO BE BROUGHT UNDER THE WATCHFUL EYE OF THE NATIONAL ACTION COMMITTEE THROUGH THE MASTER WATER SUPPLY AND SANITATION PLAN.

THIRDLY, THE ROLE OF THE PRIVATE SECTOR HAS TO BE EXPLORED. IF THE STANDARDS OF WATER AND SANITATION ON COMMERCIAL FARMS ARE ANYTHING TO GO BY, THEN THE PRIVATE SECTOR HAS A LOT TO OFFER. MANUFACTURERS OF THE NECESSARY INPUTS HAVE ALSO A BIG ROLE TO PLAY.

6/...

INSTEAD OF LEAVING THE INITIATIVE TO THE GOVERNMENT CONTROLLED BLAIR RESEARCH INSTITUTE AND THE TRAINING CENTRE FOR WATER SUPPLY AND SANITATION AT THE UNIVERSITY OF ZIMBABWE, THESE MANUFACTURERS SHOULD ALSO BE AT THE FOREFRONT SO AS TO COME UP WITH APPROPRIATE TECHNOLOGY IN THE SECTOR. THIS IS ALSO IN KEEPING WITH GOVERNMENT POLICY ON SUPPORTING LOCAL INDUSTRY.

FOURTHLY, THE ROLE OF WOMEN NEEDS TO BE RE-EMPHASISED. WOMEN PLAY A CENTRAL ROLE IN THE PROVISION OF WATER AND SANITATION. THEY DRAW THE WATER FOR THE FAMILY AND GENERALLY LOOK AFTER THE SANITATION OF THE FAMILY. WAYS AND MEANS OF MAKING SURE THAT THEY ARE INVOLVED RIGHT FROM THE PLANNING STAGE THROUGH THE IMPLEMENTATION, MAINTENANCE AND EVALUATION STAGES SHOULD BE FOUND. THE TRAINING OF WOMEN SO AS TO EQUIP THEM WITH THE SKILLS TO DO MINOR REPAIRS AND MAINTENANCE WILL ALSO BE IN LINE WITH GOVERNMENT POLICY ON THE PROMOTION OF THE WELFARE OF WOMEN.

FIFTHLY, THERE IS NEED FOR AN UPDATED INFORMATION MANAGEMENT SYSTEM. IN KEEPING WITH TECHNOLOGICAL ADVANCEMENT IN OTHER SECTORS, THERE IS A NEED FOR A COMPUTERISED DATA BASE WHERE ALL STATISTICS OF SPRINGS, WELLS, PIPED WATER SCHEMES, BOREHOLES AND LATRINES ARE KEPT WITHIN EASY REACH. THIS SHOULD MAKE DECISION MAKING VERY EASY.

ANOTHER IMPORTANT POLICY FACTOR WHICH ZIMBABWE IS PUTTING UNDER SERIOUS CONSIDERATION IS COST RECOVERY. SINCE 1981, PROVISION OF WATER AND SANITATION IN COMMUNAL AND RESETTLEMENT AREAS WAS HEAVILY SUBSIDISED BY CENTRAL GOVERNMENT. SOME OF THE INPUTS WERE GIVEN TO THE CONSUMERS FREE OF CHARGES. THERE WAS ONLY PARTIAL RECOVERY OF THE COSTS OF BOTH CONSTRUCTION AND MAINTENANCE. THIS SHOULD BE IN THE FORM OF USER CHARGE. THE CONSUMERS SHOULD BE ABLE TO PAY FOR THE SERVICE THEY GET. THIS CAN BE ACHIEVED THROUGH MINIMISING COSTS OF CONTRUCTION, COMMUNITY PARTICIPATION IN MAINTENANCE AND THE GENERAL MOBILISATION OF THE CONSUMER. THE PRINCIPLE OF COST RECOVERY IS NOT YET POLICY BUT EFFORTS ARE ALREADY UNDERWAY TO HAVE IT AS OFFICAL POLICY.

7/...

LASTLY, I WOULD LIKE TO APPEAL TO DONOR AGENCIES TO CONTINUE LENDING THE SUPPORT THEY HAVE ALWAYS BEEN GIVING US AND ALL DEVELOPING COUNTRIES UNTIL SUCH TIME THE SECTOR IS SELF SUSTAINING. THE SUPPORT CAN BE IN THE FORM OF FINANCE OR TECHNICAL EXPERTISE. WITHOUT THE SUPPORT OF THESE DONOR AGENCIES, WE IN ZIMBABWE WOULD NOT HAVE REACHED AS FAR AS WE ARE RIGHT NOW. IT IS ALSO ENCOURAGING TO NOTE THAT WE HAVE, HERE WITH US TODAY, VARIOUS DONOR AGENCIES WHOSE REPRESENTATIVES ARE DUE TO PRESENT PAPERS TO THE MEETING.

IN THE TRUE SPIRIT OF CO-OPERATION AND CONSULTATION I AM ALSO APPEASED TO NOTE THAT THERE ARE SEVERAL REPRESENTATIVES FROM OTHER COUNTRIES HERE IN AFRICA WITH WHOM WE SHARE ALMOST SIMILAR PROBLEMS IN THE SECTOR. THE EXPERIENCE IN THEIR OWN COUNTRIES IS VERY VITAL FOR US HERE IN ZIMBABWE AS WE WILL MAKE USE OF THEIR STRATEGIES AND AVOID ANY PITFALLS THAT MAY HAVE OCCURRED. AS THEY SAY, FOREARNED IS FOREARMED. I AM SURE THE DISCUSSION IS GOING TO BE BOTH LIVELY AND FRUITFUL.

WITH THESE FEW WORDS I WOULD LIKE TO LEAVE YOU TO YOUR DELIBERATIONS. ON BEHALF OF THE PEOPLE OF ZIMBABWE, I WOULD LIKE TO EXTEND A HEARTY WELCOME TO ALL VISITORS HERE AT THE SAME TIME WISHING YOU ALL A PLEASANT STAY IN THE COUNTRY.

THANK YOU.

MESSAGE DELIVERED ON BEHALF OF DR G.L. MONEKOSSO, REGIONAL DIRECTOR OF THE WORLD HEALTH ORGANISATION FOR AFRICA, AT THE OPENING OF THE DECADE CONSULTATIVE MEETING ON WATER SUPPLY AND SANITATION IN ZIMBABWE: 26-30th NOVEMBER 1990

Environmental health problems resulting from inadequate water supply and basic sanitation also poor housing and environmental hygiene (refuse disposal) are characterized by such communicable diseases as diarrhoea, cholera, typhoid, malaria, schistosomiasis (bilharzia), and several other preventable water-related and sanitation-related diseases which are responsible for well over 70% of cases of morbidity and mortality in the African continent. This type of environmental health problems is said to be due to lack of development or inappropriate development because their origins, aetiology are well-known and well established and the technology for their prevention and/or cure present few difficulties as has been demonstrated in the presently developed countries over the past seventy years or so. The reasons why the necessary preventive work has not been carried out at the desired rate in Africa are essential due to lack of money and appropriately trained technical manpower and also the misplacement of development priorities.

The International Drinking Water Supply and Sanitation Decade (IDWSSD), announced by the United Nations Water Conference in 1977, set goals for countries to prepare programmes designed to provide all people with safe drinking water and adequate sanitation services by 1990, if possible. The International Conference on Primary Health Care in Alma-Ata in 1978 identifies water supply and sanitation as among the essential elements of PHC. Accordingly the Organizations's Strategy for Health for All by the Year 2000 took the Decade and its targets into account, establishing indicators for monitoring and evaluation, recognizing the need for intersectoral action for health, and emphasizing the role of the individual, the family and the community.

With drought, floods and conflict imposing their own pressures, within an economic climate which saw the per capita gross national products falling in real terms, African countries have faced difficult times throughout the IDWSSD to date.

High population growth rates, particularly in urban areas have added to the challenge of improving water supply and sanitation service.

Against this background, the statistics for the IDWSS D in the African Region of WHO show the following in terms of estimated service coverage:

-Urban Water Supply

66% coverage in 1990 up to 84% in 1988
An extra 59.6 million people served in eight years.

-Urban sanitation

54% coverage in 1980 up 61% in 1988
An extra 35.5 million people served in eight years.
-Rural Water supply

22% coverage in 1980 up to 31% in 1988
An extra 35.5 million people served in eight years.

-Rural sanitation

20 % coverage in 1980 up to 26% in 1988
Extra 25.6 million people served in eight years.

The IDWSSD has helped to expose such severe constraints as inadequate operation and maintenance, ineffective cost recovery procedures, inequitable provision of drinking water and sanitation facilities between the rural and urban areas, lack of adequately trained manpower, etc, in the implementation of water supply and sanitation programmes in the African Region. It has also helped to stimulate interagency collaboration and coordination in the sector. Above all, the IDWSSD has helped to generate and increase general awareness and recognition for the need for adequate and safe water supply and basic sanitation particularly with respect to their health protecting and promoting importance.

Environmental health problems are more acute by the lack of adequate shelter and of the necessary health protecting services and installations in human settlements in both rural and urban areas.

They are characterized not only by the same types of communicable diseases which have been attributed to poor water supply and sanitation but also by other diseases and conditions including acute and chronic raspatory diseases, mental stresses and disorders, increased aggressive behaviours and household accidents.

Environmental health problems related to food safety and environmental health hazards or pollution have arisen as a result of rapid urbanization and industrialization. Diseases associated with the chemical contamination of food safety problem have transboundary effects since nations are necessarily interdependent for raw materials sourcing, industrial production and the marketing of finished consumer products.

The World Health Organization, in its capacity as the international agency responsible for coordinating and directing international health matters, has recognized that ENVIRONMENT IS ONE OF MAJOR DETERMINANTS OF HEALTH and has accorded environmental health very high priority in its global programme planning and implementation.

With the aim of accelerating the attainment of Health for All by the Year 2000, the WHO's Regional Committee for Africa held in Lusaka, Zambia in September 1985, adopted a 3-phase scenario for health development. The scenario recognizes that achieving the Health for All goal in Africa depends essentially on the effective implementation of the District Focus approach to primary health care.

The District Focus approach to primary health care implies that health, with other associated socioeconomic activities, should be carried out in villages and identifiable communes within well-defined and organized districts.

The district level will offer the necessary operational and management support. In addition the intermediate and central levels providing technical and strategic support respectively to the district level.
The latter level, however, remains the focus of activity and serves as the interface between the government and the population.

Having regard to the five years plan for implementation of the Three-Phase health development scenario as well as to the strategy for Environmental needs (water, food and health) of poor and underserved populations and considering the environmental problems in the African Region, WHO/AFRO has identified the following approaches and major areas of support in ensuring health maintenance in the Region:

(i) Build up and consolidation of the institutional framework for effective translation of policy and concepts into operational realities.

(ii) Staff development to enhance practical administrative, managerial and technical capabilities at all levels with a view to ensuring optional service coverage and return on all forms of investment.

(iii) Information and education on the need and benefits of the EH programme action to health and socio-economic development for the profit of policy makers, staff of health and health-related sectors, beneficiaries of the programme activities as well as the general public. These would be designed to ensure better understanding and wider support and participation to all the programme actions.

(iv) Resource mobilization within the countries through equitable fund allocation from national budgets, community participation and where appropriate, cost participation and/or recovery mechanisms and through formulation and presentation of bankable projects to interested support agencies.

The mobilization resources would help to provide not only the essential material and logistics requirements, but also other acutely felt needs in areas of staff training, institution building and reinforcement of technical cooperation with WHO, especially at country level and specifically aimed at overcoming other constraining factors.

The organization of the present Decade Consultative Meeting, which will provide a forum for discussion with External Support Agencies to obtain their views on the future development of the programme, to identify new projects and to secure their continued support, is a very fortunate event.

By putting together a picture of status and requirements for water and sanitation in the country as a whole it would assist in the development of sector strategies, in line with the motto of the Global Consultation "Safe Water 2000" which took, place in New Delhi, India in September 1990 giving consideration to "Some for All rather than More for Some".

I should like to conclude this short address by wishing all participants success in the work which you will be devoting yourselves in the next few days.

Thank you.

THE HONOURABLE MINISTER OF STATE (LOCAL GOVERNMENT)
COMRADE S. MOMBESHORA
CLOSING SPEECH FOR THE DECADE CONSULTATIVE MEETING
FOR WATER SUPPLY AND SANITATION
NOVEMBER 30, 1990, HOLIDAY INN, HARARE
12 NOON

Comrade Chairman, Distinguished Guests, Delegates from Ethiopia, Kenya, Lesotho and Malawi, Representatives of the World Health Organization and External Support Agencies, Members of the National Action Committee and other Officials of the Government of Zimbabwe, Ladies and Gentlemen, Comrades and Friends.

It gives me great pleasure to be with you at the closing of the Decade Consultative Meeting for the Water Supply and Sanitation Sector. Ten years ago, in November 1981, soon after the birth of Zimbabwe, the Government endorsed the United Nations proclamation of the International Drinking Water Supply and Sanitation Decade (1981 to 1990). Over the past decade we have initiated a national water and sanitation programme with specific emphasis upon serving rural communities. Zimbabwe has made important and significant progress through the 1980s, to the point where the programme is a leading example of sector development on the continent.

The objectives of this meeting were to provide an opportunity to assess lessons from Zimbabwe's first decade of water and sanitation development and to consider the requirements to meet the challenges of the 1990s. In assessing the challenges facing us, and the route we should follow for the future, we are guided both by our own process of national policy development, and also by our participation in regional and international meetings, such as those recently held in Abidjan, Cote D'Ivoire, and the "Safe Water 2000" meeting in New Delhi, India. While one decade may have drawn to a close, another, with even greater challenges is upon us. On this occasion I wish formally to renew our commitment to the objectives of providing safe and adequate water and sanitation facilities to all Zimbabweans. Let us work together to ensure that the decade of the 1990s enables us to get much closer to our goal of universal access to these basic facilities.

I note from your conference statement and the recommendations from your group discussions that you have taken your task seriously and have come up with a wide range of interesting and important recommendations.
Some of these are administrative issues, which can be implemented immediately. Others concern sector policy and will require consideration at a higher level before they can be implemented. You have my assurance, ladies and gentlemen, that the conclusions to your deliberations shall be followed up and implemented expeditiously.

Your recommendation giving greater responsibility to Local Authorities in the planning, implementation and management of water and sanitation development is timely and in line with Government's objective of achieving further decentralization through the enactment of the Rural and District Councils Act. The central position of rural communities in taking the principle responsibility for the planning, implementation, operation and maintenance and payment of facilities through their established structures is an approach which we fully endorse.

My ministry recognizes the need for development of an overall national plan to provide a framework for balanced development of the water supply and sanitation sector for the whole nation. In this context it is with great pleasure to note that your discussions have taken the circumstances of all Zimbabweans into account - whether in urban areas, on state lands, in commercial farms, in resettlement areas or on communal lands. Your comments on the institutional complexity of the sector are noted and I endorse your attempts to find a solution to this intractable problem and so improve the efficiency and effectiveness of Government's support to the water and sanitation sector. The recommendations you have made towards improving community management and health education are well-taken and I am sure that the implementing agencies will take serious note of them.

The recommendations you have made regarding cost recovery and achieving greater financial sustainability in the water supply and sanitation sector are tough measures. We live in tough times and these are in line with Government's overall stress on structural reform to meet the economic challenges of the 1990s.

Greater community responsibility for facilities provided to them through Government assistance should not be viewed as a step backwards, but rather as a step forwards to greater sustainability of the whole programme to ensure that Government can achieve its objective of providing a basic level of improved services to all Zimbabweans.

Your recommendations regarding extending the range of appropriate technology options to build on Zimbabwe's considerable success in this field are welcome. Appropriate selection of technology has been the mainstay of the programme in recent years.

I am most impressed with the quality of recommendations you have made in the course of your deliberations. This can only have come through hard work and commitment. In this context let me thank not only the participants, but those who made this meeting possible. In particular, may I take this opportunity to extend my Ministry's heartfelt gratitude to the World Health Organization and to NORAD for the financial support they provided to make this occasion such a success.

I cannot end without a special note of thanks to our visitors from the region, Ethiopia, Kenya, Lesotho and Malawi, who have travelled a considerable distance to share their experiences with us. We have not attempted to solve the challenges faced in your own countries, but you have helped us to gain greater comparative understanding of our own situation. Thank you. I wish you a safe journey back home and hope you have enjoyed your stay in Zimbabwe.

On this note, ladies and gentlemen, I declare this conference officially closed. I thank you.

Action Plan for Follow-up of Recommendations

ACTION PLAN FOR FOLLOW-UP OF RESOLUTIONS FROM THE DECADE CONSULTATIVE MEETING

Res. 1 The future responsibility and authority for planning, financial control, implementation and operation and maintenance of rural water supply and sanitation, including decisions relating to technology choice, must be increasingly borne by the local authorities and community members, ultimately leading to complete management through established local structures.

Res. 3 The financial responsibility for direct operations and maintenance should, in future be borne by communities and local authorities.

Res. 6 The main thrust of central government's role should focus on overall sector guidance and promotion, training, information dissemination and support to communities and local authorities.

Action 1

- The paper on Development of Sustainable Financing Policies for Water and Sanitation Provision in Communal Lands & Resettlement Areas should be further discussed with the Senior Minister in Ministry of Local Government Rural and Urban Development. If approved, the paper should be submitted to the Cabinet Committee on Development for endorsement.
- Preparation of a second paper on how to secure a revenue base for the Local Authorities to take on the responsibility for operation and maintenance of primary water supplies should commence. Terms of reference for preparation of the paper should be presented to the NAC for approval.
- Further steps should be taken in order to streamline the financial management of IRWSS-projects. From FY 1991/92 call-ups of funds should be made on a half-yearly basis and commitment registers should be kept at district level for all agencies involved in the projects.
- Investigations should be made in order to identify pilot projects where the Local Authorities can take on the responsibility for implementation of IRWSS-projects.

Action: National Coordination Unit

Res. 2. In order to accomplish this, particular attention needs to be placed on human resource development, especially at district, ward and village levels.

Action 2.

- The Training and Education Subcommittee of the NAC should implement the Recommendations for the National Training Plan for the Rural Water Supply and Sanitation Sector. Emphasis should be put on the development of an Interministerial Training Plan for the sector.

Action: The Training and Education Subcommittee

Res. 4 The existing duplication of functions within the sector, particularly in the area of borehole drilling, well sinking, community mobilisation and operation and maintenance , need to be resolved as a matter of urgency.

Action 3

- The paper prepared by the National Planning Agency (NPA) on division of responsibilities between District Development Fund (DDF) and Ministry of Energy, Water Resources and Development (MEWRD) on borehole drilling should be released. The NCU should be tasked to revise this paper for later submission to the Permanent Secretaries in the involved agencies.

Action: The National Coordination Unit

- The Ministry of Community and Cooperative Development (MCCD) and the Ministry of Political Affairs (MPA) should be tasked to prepare a paper which outlines the operational responsibilities of the 2 ministries in community mobilization for rural water supply and sanitation.

Action: Ministry of Community and Cooperative Development and Ministry of Political Affairs

Res 5 Government's role in the promotion of improved water supplies and sanitation for the previously neglected commercial farming sector should be strengthened.

Action 4

- Ministry of Health has prepared a project proposal for Water and Sanitation Development on Commercial Farms. The proposal should be forwarded to the Planning and Budgeting Subcommittee for comments. MOH, through Ministry of Finance, Economic Planning and Development should try to solicit funds for implementation of the project.

Action: Ministry of Health

Res. 7 The contribution of the private sector and non-governmental organizations in the sector, will in the future assume greater importance and should be encouraged and co-ordinated.

Action 5

- The Subcommittee on Research and Development has under preparation a research project on involvement of the private sector in project implementation. This study should cover use of private entrepreneurs, local manufacturing of equipment and materials, borehole drilling by the private sector, and availability of materials and spare parts at the local level.

Action: Subcommittee on Research and Development

Res. 8 Existing plans covering various parts of the water and sanitation sector should be supplemented by development of an overall plan to set out a policy framework for the entire sector.

Action 6

- The proposal for Development of a Zimbabwe National Water Sector Plan prepared by MEWRD and discussed by the NAC should be submitted to the National Planning Agency (NPA) for an appraisal. Further action on this proposal should be decided by the NPA.

Action: National Planning Agency

Res. 9 Health and hygiene education within the sector must be strengthened through the participation of community members in the identification of problems, messages and target groups and in the development of training and promotional materials.

Res 10 Recognizing that community mobilization and health and hygiene education are essential components of the programme, all agencies need to support these activities. Villages Community Workers have an essential role in hygiene education and all efforts should be made to encourage their involvement in this activity.

Action 7

- The MOH has under preparation a National Strategy for Health and Hygiene Education. The Strategy should be presented to the NAC for endorsement and included in the planning framework for IRWSS-projects.

Action : Ministry of Health

Res 11 Recognizing the central role of women in water supply and sanitation, their active and full involvement in all community activities, and at all levels of programme management, must be achieved.

Action 8

- The NAC has established a Working Group on Gender Participation with a Terms of Reference to assess women involvement in IRWSS-projects and to propose measures which could improve women involvement. Recommendations from the Working Group should be submitted to the NAC for endorsement.

Action : The Working Group on Gender Participation

Res 12 Additional emphasis needs to be placed on measurement of less quantifiable activities, such as behavior change.

Action 9

•The NCU has just prepared a Handbook for Evaluation of Rural Water Supply and Sanitation Projects which includes measurement of intangible parameters. The Handbook should be reviewed by a Working Group of NAC members who should present their recommendations to the Planning and Budgeting Subcommittee.

Action : The National Coordination Unit

Res.13 The range of technology options recommended for water supply and sanitation must be expanded to provide sustainable and affordable options for all areas of Zimbabwe. Where feasible, family facilities should be promoted.

Res.14 The success of the rural programme is largely due to the development of standard, indigenous technologies, and this policy should continue to be followed.

Action 10

• The Subcommittee on Research and Development should continue to fund research projects to develop appropriate water and sanitation technology for Zimbabwe. New technology options should be presented to the Technical Subcommittee for endorsement.

Action : The Subcommittee on Research and Development and the Technical Subcommittee

Res. 15 The technical and policy issues delaying further provision of services in District and Rural Service Centres need to be resolved as a matter of urgency to ensure continued development of a sustainable water and sanitation infrastructure in these areas.

Action 11

•The Department of Rural/District Council in liaison with the Urban state Land in MLGRUD should be tasked to develop a strategy paper on how to secure sustainable water and sanitation in District and Rural Service Centres

Action : Ministry of Local Government, Rural and Urban Development, Department of Rural/District Council and Urban State Land

Res. 16 In recognition of the high urban growth rate, increased attention should be paid to provision in these areas. Standards for urban areas need to be reviewed.

Action 12

- The Department of urban Council in Ministry of Local Government, Rural and urban Development in liaison with the Urban Council Association should be tasked to review water and sanitation standards for Urban Areas and secure finance for provision of water supply and sanitation facilities

Action : Ministry of Local Government Rural and Urban Development, Department of Urban Councils and the Urban Council Association.

NCU 14/3/91

SECTOR PAPER ON WATER SUPPLY AND SANITATION IN ZIMBABWE

Prepared for discussion
at the Decade Consultative Meeting

Table of Contents

Acronyms

ALB	Agricultural Labour Bureau
CFU	Commercial Farmers Union
CRF	Central Rates Fund
DDC	District Development Committee
DDF	District Development Fund
DERUDE	Department of Rural Development
DSC	District Service Centre
EHT	Environmental Health Technician
ESA	External Support Agency
GAPWUZ	General Agricultural and Plantation Workers Union of Zimbabwe
IDWSSD	International Drinking Water Supply and Sanitation Decade (1981 - 1991)
LGPO	Local Government Promotion Officer
MCCD	Ministry of Community and Co-operative Development
MEWRD	Ministry of Energy and Water Resources and Development
MFEPD	Ministry of Finance, Economic Planning and Development
MLARR	Ministry of Agriculture and Rural Resettlement
MLGRUD	Ministry of Local Government, Rural and Urban Development
MOH	Ministry of Health
MPA	Ministry of Political Affairs
MPCNH	Ministry of Public Construction and National Housing
NAC	National Action Committee
NCU	National Co-ordination Unit
NMPRWSS	National Master Plan for Rural Water Supply and Sanitation
PDC	Provincial Development Committee
VIDCO	Village Development Committee
VIP	Ventilated Improved Pit (latrine)
WADCO	Ward Development Committee
ZNFU	Zimbabwe National Farmer's Union

Currency Equivalents

ZW$1 = US$0.38

SUMMARY

This paper contains an overall summary of the Water Supply and Sanitation sector in Zimbabwe. Section I presents background information to the sector highlighting the main features of the planning environment. Water development is a high priority, for rural women in particular, in this semi-arid country. A sound urban infrastructure and considerable experience in appropriate, locally manufactured technologies greatly assist sectoral development. Challenges facing the sector include: a high population growth, a complex administrative structure (divided into urban areas, communal lands, resettlement areas, commercial farming areas and state lands); a poor infrastructure in communal lands; and an anticipated lessening of Government subsidies to the sector in line with Government's programme of economic structural reform.

Section II summarizes the current status of service provision, the main achievements and the principal policies in the sector. Zimbabwe has made significant progress in water supply and sanitation development through the 1980s, particularly in rural areas. Of the 1990 population of 10.6 million, 73% presently have basic access to potable water and 46% access to safe and adequate sanitation. The sector is characterized by the basic soundness of many of its policies; by the development of far-sighted technologies; and by strong political commitment (especially in communal lands where over 60 ongoing donor-assisted projects comprise a strong programme, the core of which is 19 integrated, community-based, district-wide projects). Zimbabwe remains, in many respects, a leading example of sector development on the continent.

The chief weakness of sector programmes in Zimbabwe lies in their lack of sustainability. Government is keenly aware of this and, in consultation with its partners, is making significant efforts to address outstanding issues. Major challenges facing the sector are outlined in Section III:

Programme Planning, Coordination and Management

- The sector has a complex array of institutional responsibilities. These require rationalization to reduce areas of overlap, assist sector co-ordination, reduce recurrent costs and improve efficiency.

- Prior subsector plans have provided a useful impetus, but there remains a need to develop a comprehensive, updated national sector plan reflecting all land bases in the country and providing a framework for policy development and future investments.

- Public sector staffing problems are hindering sector output. The private sector is under-utilized and insufficiently promoted in key areas. In addition to a re-deployment of public sector resources, a restructuring of responsibilities is required. Government's role would thereby become less of a provider and sponsor of services, and become more advisory and promotional, with emphasis being placed upon community and local authority management.

Community Participation and Health Education

* The focus of present community participation support activities is in community mobilization. A major challenge is to create amongst communities a long term managerial capacity for operation and maintenance and financial management.

* Institutional, financial and technical aspects of hygiene education need further strengthening and its linkage to the water and sanitation programme clarified.

Financing and Cost Recovery

* Since Independence Government has adopted a policy of subsidizing much service provision in the sector, but is actively reconsidering this policy to enhance the sustainability of the programme. A first objective is to shift the onus for payment for operation and maintenance to consumers. Strategies have to be devised to achieve this. Other objectives are to improve cost-effectiveness and financial efficiency through reforms to make better use of existing resources, and to reduce recurrent expenditures.

* Zimbabwe has been highly successful in mobilizing financial resources for the sector in the 1980s. An increasing proportion of resources derive from donor finance. In the longer term, strategies will be required to increase domestic resource mobilization.

Technology Choice and Operations and Maintenance

* Current technology choices are not always made on the basis of cost-efficiency and other proven techniques are under-exploited. Standards set without regard to cost have inhibited sector development. Technology development in the sector should continue to be directed to the goal of minimizing maintenance to encourage community and local authority management.

The final section identifies areas in which External Support Agencies (ESA) can assist Government in the sector. ESA support to Government initiatives to achieve greater sustainability is requested as a priority in sector development. Areas of support include institutional restructuring and reform, human resource development and strengthening decentralization. Financial support is needed to continue water supply and sanitation provision, especially in communal lands, resettlement areas and commercial farming areas. Annex II presents a list of projects requiring assistance. Support for the development of a full sector plan is an immediate need to provide a framework for future development assistance.

SECTION I. BACKGROUND TO SECTOR DEVELOPMENT

A. General

Zimbabwe is a land-locked, middle-income, largely agricultural country of 39 million hectares, which attained independence in 1980. Zimbabwe's colonial inheritance has been, on the one hand, a diversified economy with a well-developed physical and administrative infrastructure, and on the other an highly unequal distribution of wealth and income with widespread poverty in rural areas. Bounded by South Africa, Botswana, Zambia and Mozambique the country's administrative structure comprises eight provinces and, within these, 55 Districts.

B. Population and Land Classification

Historically the land base of the country is divided into several categories presented in Table 1. Population and land distribution remain highly skewed by the history of settler colonialism. Approximately 53% of the 10.6 million (1990) population are presently in rural communal or resettlement areas with a further 15% resident on rural commercial farming lands. The population growth rate is a high 2.8%. The growth rate in urban areas and service centres ranges from 4 to 8%.

Table 1 - Land Classification [1] and Population in Zimbabwe

LAND CLASSIFICATION	TOTAL AREA (MILLION HECTARES)	% AREA		% NATURAL REGIONS I & II [2]	TOTAL POPULATION (MILL. 1990)	% POPULATION
Non-Agricultural						
National Parks	4.7	12.1	}		0.1	0.1
State Forest	0.92	2.4	}	18.6	0.1	0 1
Urban & State Land	0 22	0.5	}		3.2	30 2
Agricultural						
Commercial Farming						
Large Scale	12 82	32 8		32.7	1.4	13 2
Small Scale	1.42	3.6		18.1	0.1	1.9
Communal	16.35	41.8		8.7	5.4	50.9
Resettlement	2.64	6.8		21.9	0.3	2.8
TOTAL	**39.07**	**100.0**		**100.0**	**10.6**	**100.0**

C. Economic Outlook

Despite a diversified economic base and a sound infrastructure which provide Zimbabwe with an economic potential is considerably greater than many developing countries, the short term outlook is not optimistic. Declining investment levels, a budget deficit, and weak export performance pose severe problems for future economic growth. Government has embarked upon a programme of structural reform to address these economic problems.

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1 Communal Lands are former Tribal Trust territories; commercial farming land is privately owned farmland; resettlement areas are those lands procured by the state and resettled in a variety forms of co-operative management.

2 The country has been divided up into 5 Natural Regions according to rainfall and soil conditions. Natural Regions I and II are those with the best agricultural potential.

D. Water Resources

Longstanding hydrological records in the country indicate good potential for continued bulk water resource development. The mean annual rainfall is about 675mm, varying from a maximum range of 1200 - 2000mm in the Eastern Highlands to 300 - 500mm in the South Western Lowveld. However, surface water sources remain less suitable for domestic and low-cost rural water supply development because of the costs involved in water purification and the dispersed nature of rural settlements. By contrast there is good potential for groundwater development for rural domestic water supply. Virtually all areas of the country have some potential for the development of single point primary water supplies. Isolated pockets exist where this generalization does not apply. Surface water development is required in these areas.

E. Technological Resources

Zimbabwe's level of technological development in the sector - its manufacturing capacity, borehole drilling industry and orientation towards appropriate technical solutions - is a major resource. The country has received international acclaim in the field of technology development. Achievements include the indigenous design and manufacture of standard borehole and well handpumps, the development of a range of effective rural sanitation options, and ingenious and low-cost techniques for upgrading traditional wells. There exists a valuable pool of engineering skills in the private sector.

F. Human Resources

1. Cultural Issues

Zimbabwe is linguistically and culturally heterogeneous and water and sanitation demand and service acceptability are influenced by a variety of social and cultural parameters. Water, in particular, is associated with many longstanding cultural beliefs and traditional authorities remain important guardians of the resource. Development of domestic water supplies is regarded as a priority need amongst rural women, primarily to ease the burdensome task of water collection. The importance of accessibility is illustrated by the fact that, even where improved sources are available, in the wet season in higher rainfall areas water often continues to be collected from more convenient, unimproved sources.

Although improved sanitation is not generally perceived to be a high priority felt need, demand has increased following extensive promotion efforts. Latrine subsidies and the growth of rural deforestation, which destroys the privacy of traditional defecation sites, have been primary motivations for improved sanitation. Yet latrine ownership remains clearly associated with wealth and educational attainment. Levels of latrine usage are high except for young children.

2. Manpower

Notwithstanding the emphasis given to human resource development since independence, there remain major shortages of public service personnel in the sector. Shortages have been identified both among middle-level and field staff. While Zimbabwe has the capacity to train large numbers of skilled personnel at professional and sub-professional levels, the public service is not able to retain these staff in the numbers required to meet existing shortfalls in demand.

Differing professions have specific problems. The manpower constraints are most extreme in the case of engineers in DDF and MEWRD where Government has suffered a major loss of manpower due to uncompetitive conditions of service. The NAC has recently developed a National Training Plan for the Rural Water Supply and Sanitation Sector to address training needs.

G. Health Status

Water- and excreta-related diseases are a major public health problem in Zimbabwe[3]. Diarrhoeal diseases, typhoid, cholera, schistosomiasis, intestinal parasites and skin and eyes infections are responsible for a very significant proportion of morbidity and mortality, particularly amongst children under five years of age.

H. Environmental Concerns

1. Soil Conservation

The main rural domestic water supply programme, based as it is on extraction of small quantities of groundwater in isolated settings, appears to have limited environmental impact. Dam development however can lead to severe disturbances in the ecology, increased soil erosion, and impoverishment of vegetation. In general, whereas in the highveld and lowveld dam catchments are relatively well conserved, the heavily populated areas of the middleveld are characterized by high levels of erosion and siltation.

2. Livestock Watering

Livestock husbandry in the communal lands is based on free access to communal grazing and communal water. Shortage of water for livestock watering is a seasonal and regional problem, but one that is perceived to be of great importance. This shortage at critical times of the year may result in direct competition between animals and humans for groundwater sources. While water development combined with uncontrolled grazing practices has caused serious ecological decline, new water development is unlikely to worsen present trends as the growth of herds is mainly controlled by available grazing.

3. Deforestation and Rural Sanitation

The technological basis of the rural sanitation programme in Zimbabwe lies in community (traditionally wood-fired) brick production. An environmental concern for the programme is that the rural latrine programme may promote deforestation. A study examining this hypothesis[4] concluded that the additional demand made by latrine construction upon existing wood usage is negligible. In certain environmentally-stressed areas even this small increment is of concern. Government is undertaking further studies and pilot projects to seek methods of brick production which do not require wood burning.

4. Water Pollution

There is little evidence of sector programmes resulting in groundwater pollution. Pollution of urban bulk water supplies is however an increasing problem which is being addressed through improved control measures.

I. Sector Plans

Zimbabwe endorsed the International Drinking Water Supply and Sanitation Decade (IDWSSD) in late 1981 and developed a 1985 - 2005 plan frame for implementation of a National Master Plan for Rural Water Supply and Sanitation (NMPRWSS). The NMPRWSS contains an investment plan to the year 2005 and provides extensive information for planning the sector.

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3 The best available quantification of the toll of water and excreta-related disease in Zimbabwe is presented in "Outline of a Health Profile", **NMPRWSS**, Vol 4.1, MEWRD, 1985.

4 Waterman R. and Cross P. "Does rural sanitation promote deforestation in Zimbabwe?", **Zimbabwe Science News**, Vol 22, 1988.

Although not formally approved by Government, many of its provisions are currently being implemented and have provided a framework for sector implementation in communal lands and resettlement areas. The plan is limited to these areas and a national plan has not yet been developed for urban and commercial farming areas, nor is there an overall water sector plan. The MEWRD are presently formulating proposals for development of a comprehensive water sector plan to replace and extend the scope of the NMPRWSS.

A complementary health plan, the Zimbabwe Health for All Action Plan, is in force which has provisions similar to those in the NMPRWSS for the MOH's support for low-cost rural water and sanitation. The MLGRUD is presently co-ordinating development of a Five Year Development Plan for the Rural Water Supply and Sanitation Sector for communal land and resettlement areas development in the years 1991 to 1996 as a component to the national Five Year Development Plan.

J. Sector Targets

The overall sector target is basic service coverage for all Zimbabweans. In the absence of overall plans, a specification of the numbers of facilities required is not available. In urban areas, where service levels are already high, achievement of the overall target in effect means maintaining existing services and extending these to meet the demands of the fast-growing urban population. In commercial farming, communal land and resettlement areas achievement of this target requires considerably increased levels of investment. The NMPRWSS identified in 1985 the total 20 year requirement in communal lands and resettlement areas to be the construction of: 576 piped water supplies, 36 000 primary water supplies, and 1.4 million latrines.

K. National Planning Mechanisms

Government machinery has established national planning mechanisms whereby development requirements are established and ratified at VIDCO, WADCO and District level and incorporated into district and provincial plans. Provincial plans provide the basis for the National Five Year Plan which is developed by the National Planning Agency of MFEPD.

SECTION II. STATUS OF CURRENT PROGRAMMES AND POLICIES

A. Introduction

This section presents a summary of the status of water and sanitation development in Zimbabwe and the principle policies in the sector. The information is a compilation of detailed subsector papers each dealing with water and sanitation development in one of four principle land bases of the country: Communal Lands, Resettlement Areas, Commercial Farming Areas and Urban Areas. In addition the paper draws on information from state land, mines and refugee camps.

B. Service Coverage

Tables 2 and 3 present estimates of water [5] and sanitation [6] coverage respectively. Currently 73% of Zimbabweans have basic access to potable water while 46% have access to basic sanitation or better. These figures compare well with the 1984 figure of 33% coverage amongst communal area dwellers estimated to have perennial access to an improved drinking water source, and 15% access to safe and adequate rural sanitation.

Table 2 - Potable Domestic Water Service Coverage

Area	1990 Pop (mill)[7]	Served Population (mill)	%	Unserved Population (mill)	%
Urban Areas [8]	3.1	3.1	100	0	0
Commercial Farms [9]	1.5	1.05	70 [10]	0.35	30
Communal Land	5.4	3.0	55	2.4	45
Resettlement Areas	0.3	0.3 [11]	100	0	0
State Land [12]	0.3	0.28	80 [13]	0.07	20
TOTAL	**10.6**	**7.74**	**73**	**2.9**	**27**

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5 The criteria defining basic water service coverage follow the NAC guidelines: 50 persons per shallow well or protected spring; 150 persons per deep well; and 250 persons per borehole or communal tap.

6 1 Blair latrine or better per household.

7 These estimates do not always conform to 1982 census projections because they are based on family counts (using a standard family size of 6 persons) and council estimates.

8 There are 23 Urban Local Authorities in Zimbabwe.

9 Small and large scale commercial farming areas.

10 Estimate based on CFU and ZNFU figures.

11 The basic service coverage criteria which DERUDE utilizes (one borehole per 25 households) is higher than the NAC guidelines. When this is applied service coverage is 83%.

12 State land comprises 8 urban authorities, 50 urban settlements in Rural Council Areas and 55 Growth points (formerly District Service Centres) in Communal Lands. The figures presented in Tables 2 and 3 exclude the urban authorities which are presented under Urban Areas.

13 This estimate of coverage includes a uniformly high level of coverage amongst most centres, with the exception of Epworth (being supplied) and a minority of other centres.

Table 3 - Sanitation and Sewerage Service Coverage

Area	1990 Population (mill) [14]	Served Population (mill)	%	Unserved Population (mill)	%
Urban Areas	3.1	3.1	100	0	0
Commercial Farms	1.5	0.35	23	1.15	77
Communal Land	5.4	1.1	21	4.3	79
Resettlement Areas	0.3	0.06	19	0.25	81
State Land	0.3	0.24	68	0.11	32
TOTAL	**10.6**	**4.85**	**46**	**5.81**	**54**

The tables indicate that Zimbabwe has achieved a major increase in service coverage in the sector, well above the population growth rate. The areas least adequately served are communal lands and resettlement areas. In high rainfall areas the unserved rural population draws water mainly from unprotected wells. In low rainfall areas and in the dry season domestic water sources are sand abstraction, river and dam water.

The urban area coverage figures apply only to those areas legally defined as urban areas and this excludes some state land with urbanized populations whose coverage is below that in urban authorities. In addition the figure of 100% coverage masks the problem of reduced service as a result of a growth in household size. In Chitungwiza, for example, the estimated population of 700,000 has an official housing stock of approximately 32,000 units with an average household size of 22 persons [15].

In addition to the population in the above tables, Zimbabwe also provides a home to some 90,000 refugees from Mozambique housed in refugee camps. The 1989 levels of coverage were: sanitation 8% to 40%; an average of 1792 persons per tap (seven times above that recommended in NAC guidelines).

C. Programme Output

1. Urban Areas

Sector development in urban areas does not constitute a single programme and no overall estimates of urban sector output are available. The 1980s has generally been a period in which Government has placed greater emphasis on rural development. Urban sector programme output is expected to increase significantly in the 1990s with the implementation of a ZW$580 million World Bank co-financed Urban II[16] project which seeks to refurbish and extend the infrastructure for the bulk of the urban population. Current technologies for water provision are predominantly reticulated individual and communal piped supplies, though urban areas also have a significant number of boreholes and wells. Urban areas have approximately 85% sewerage coverage and 15% septic tanks.

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14 These estimates do not always conform to 1982 census projections because they are based on family counts (using a standard family size of 6 persons) and council estimates.

15 NAC guidelines would require that such households have 3 toilets.

16 Urban II is the second World Bank co-financed project assisting the development of Zimbabwe's urban infrastructure.

2. Commercial Farming Areas

Water and sanitation development in commercial farming areas has also not been conceived of as a co-ordinated public sector programme. Government's promotive efforts and investment by the land owners have made considerable advances over the previous decade. In current prices the water and sanitation sector investment is worth around ZW$200 million and has achieved service levels higher than in the communal areas. Most domestic water in commercial farms derives from boreholes. Blair latrines are the technology of choice for farmworkers.

3. Communal Lands

The communal land sector has seen greatly increased activity through the 1980s. Following the development of pilot projects in the early 1980s each province and a large number of districts have undertaken intensive area-based water and sanitation projects. Annex 1 presents a list of ongoing projects. These comprise 1 Government funded-integrated project, 19 bilateral-assisted integrated district projects, 12 bilateral-assisted area-based projects, 36 district projects assisted by non-governmental organizations, and ongoing government funded support to the sector, primarily through the Public Sector Investment Programme, from 6 governmental agencies. The regional distribution of current sector projects in communal lands is illustrated below.

The annual rate at which communal land rural water supplies are currently being implemented is estimated to be in the region of 3,000 water points. About a third of these are boreholes, about 5% springs and the remainder wells. It is estimated that over 250,000 rural Blair latrines, have been constructed since commencement of a national rural sanitation programme. The rate of programme output has increased from approximately 9,000 per year in 1982 to an estimated 47,000 per year in 1987. Since 1988 the output of the rural sanitation programme has dropped to around 36,000 latrines per year in communal lands. Project output in these and all other projects have been affected in recent years by chronic shortages of materials, including cement, steel pipe, stainless steel flyscreen and PVC piping.

Figure 1 - Integrated Water and Sanitation Projects in Communal Lands

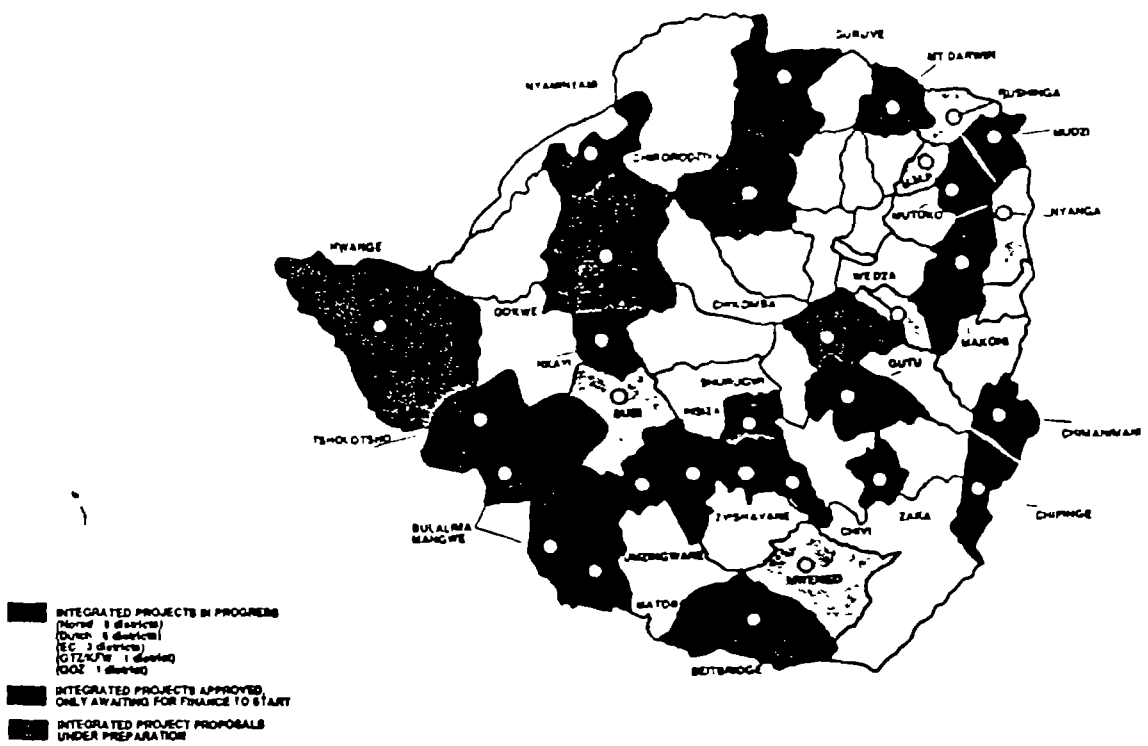
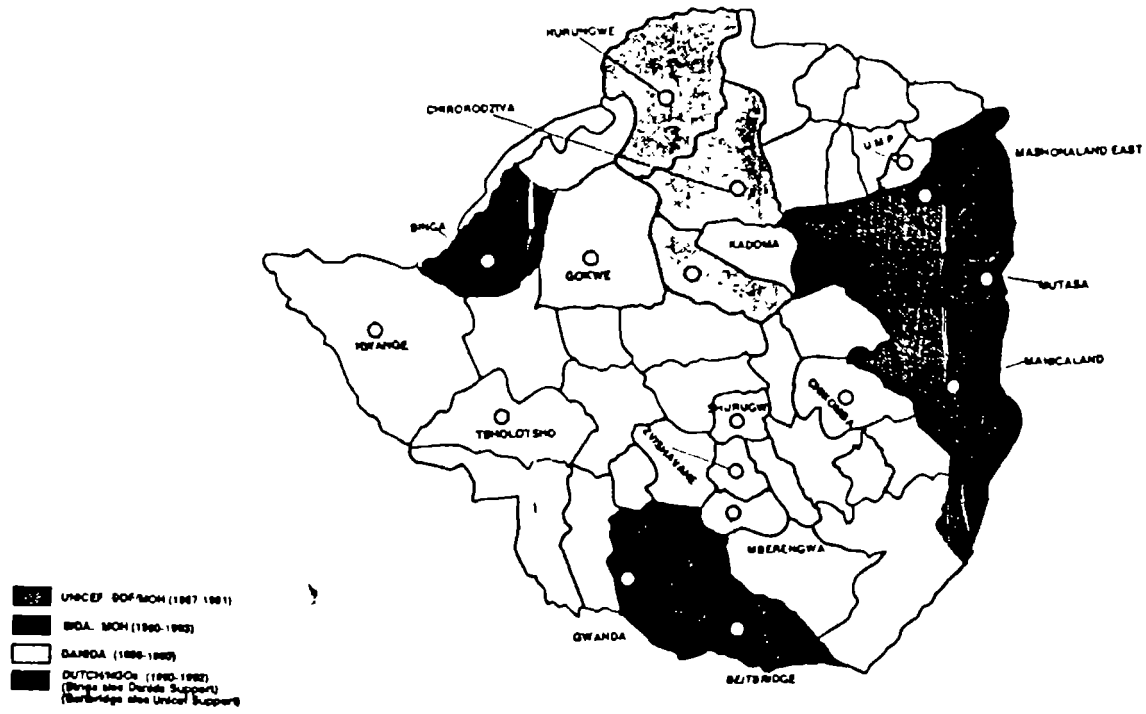


Figure 2 - Other Donor-Funded Water and Sanitation Projects in Communal Lands



4. Resettlement Areas

Water and sanitation constitutes only a part of the infrastructure requirements within an ambitious programme of infrastructure provision in rural resettlement. A total of 52 000 families have to date been resettled on just over 3 million hectares. This falls well short of the cabinet target of 162 000. Since the inception of the resettlement programme approximately 2000 water points for domestic use and 10,000 Blair latrines have been built. Boreholes have customarily been the technology of choice in resettlement areas.

5. State Land

Since independence Government has embarked upon an ambitious programme of infrastructure development in service centres on state land as a means of stimulating growth in rural areas. Approximately ZW$15 million has been invested in water and sanitation infrastructural development in District Service Centres (DSC) alone since 1981. Uneven growth in rural centres, premature infrastructural development and over provision in some centres yet to show signs of growth, and inability of local authorities to collect sufficient revenue to repay the loan finance has resulted in a slowing up of sector investments in recent years.

D. Sector Responsibilities

The sector is not generally managed nor conceived of as a single entity. Sector provision for the range of land bases of the country have historically developed at differing paces and with differing arrays of responsibilities. Figure 3 provides a summary of institutional responsibilities in the sector for planning and construction of facilities. Figure 4 presents a similar summary for maintenance activities alone.

E. Sector Coordination

There is no overall co-ordinating body for the sector as a whole. Sector development in urban areas is co-ordinated by the Urban Councils Department of MLGRUD. Sector development in commercial farming areas is co-ordinated by an interministerial committee chaired by MPCNH. In resettlement areas DERUDE in MLGRUD play the co-ordinating role for resettlement

infrastructural development. Water and Sanitation in State Lands is co-ordinated by the State Land Office in MLGRUD.

Coordination amongst implementing agencies in communal lands, the most active sector in recent years, is the responsibility of the NAC, chaired by MLGRUD. The NAC is supported by a National Coordination Unit (NCU) within MLGRUD which acts as its secretariat. Figure 5 presents the representation of the NAC with its arrangement of subcommittees.

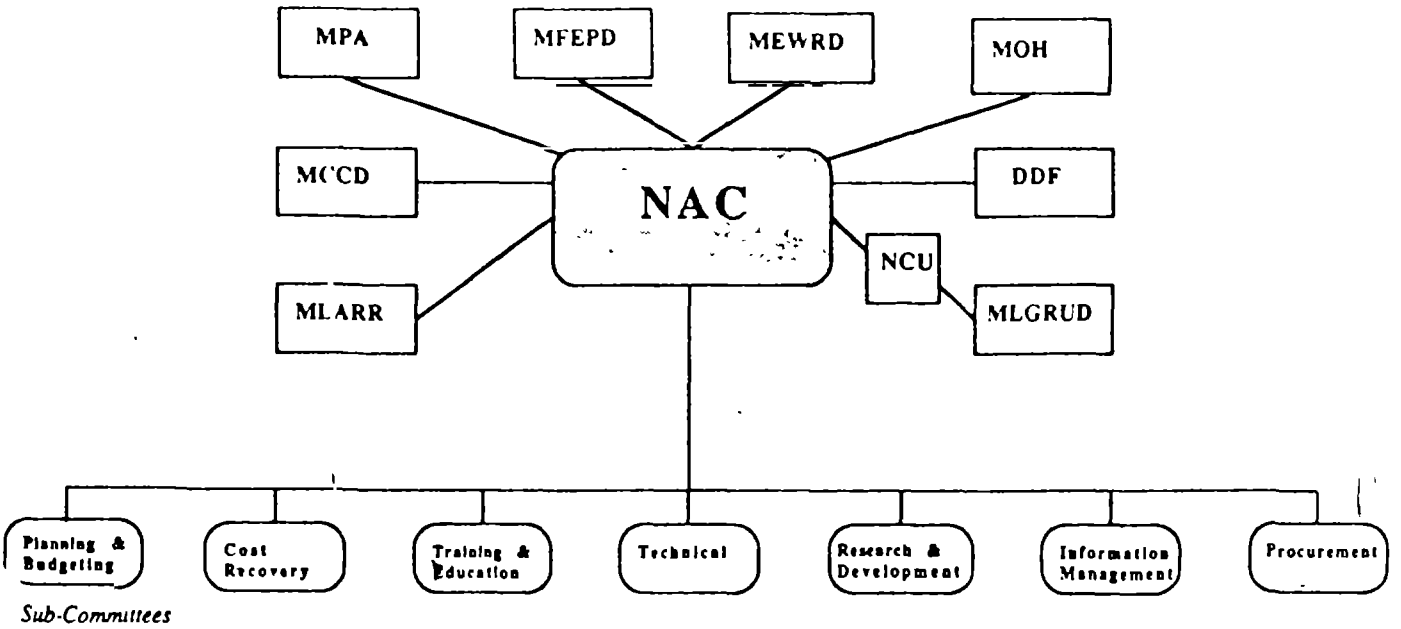
Figure 4 - Sector Responsibilities for Planning and Construction

Agency	Land Base				
	Communal Lands	Resettlement Areas	Commercial Farms	Urban Areas	State Lands
MLGRUD NCU	Planning Coordination				
DDF	Water Point Siting Borehole Drilling Deep Wells Some Piped Supplies Const of Small & Med Dams				Some Piped Supplies
DERUDE		Planning Coordination			
Urban Councils Dept				Supervision	
Urban Dev Corp				Technical Assistance	
State Lands Dept					Water Reticulation
REWRD	Borehole Drilling Some Piped Supplies Design of Dams Construction of Large Dams	Water Supply for Government Institutions		Water Resource Dev Bulk Water Supply Design of Dams Const of Large Dams	Water Resource Dev Some Piped Supplies
MOH	Sanitation Wells and Springs Health Education Technology Development	Sanitation Wells and Springs Health Education	Promotion Builder & Health Worker Training		Rural Sanitation Health Education
MCCD	Mobilization Training	Mobilization			
MPA	Mobilization	Mobilization			
MFEPD	Financial Control Long Term Planning ESA Liaison	Financial Control Long Term Planning ESA Liaison		Financial Control Loan Finance ESA Liaison	Financial Control Loan Finance thru' Central Rates Fund, MLGRUD
MPCNR			Coordination of Amenity Provision		
MLARR, AGRITEX	Land Use Planning	Land Use Planning			
Local Authorities	Promotion of Improved Facilities	Promotion of Improved Facilities	Promotion of Improved Facilities	Provision of Services Effluent Disposal Revenue Collection	Planning Some Revenue Collection
Farmer & workers Unions			Promotion Among Members		
Landowner/ Householder	Construction of Blair Toilets and Upgraded Family Wells	Construction of Blair Toilets	All Construction of Improved Facilities	Construction of Septic Tanks	Construction of Blair Toilets or Septic Tanks

Figure 5 - Sector Responsibilities for Maintenance

Agency	Land Base				
	Communal Lands	Resettlement Areas	Commercial Farms	Urban Areas	State Lands
MLGRUD DDF	Maintenance of Bush Pumps Operation and Maintenance of Some Piped Supplies	Maintenance of Boreholes with Bush Pumps			Operation and Maintenance of Some Piped Supplies
REWRD	Operation and Maintenance of Some Piped Supplies	Maintenance of Piped Supplies		Maintenance of Bulk Supplies	Operation and Maintenance of Some Piped Supplies
MOH	Maintenance of Bucket Pumps				
Local Authorities				Maintenance of Water & Sewerage Systems	Operation and Maintenance of Some Piped Supplies
Landowner/ Householder	Maintenance and Replacement of Blair Toilets Maintenance of Family Wells	Maintenance and Replacement of Blair Toilets	All Operation & Maintenance	Maintenance of Septic Tanks	Maintenance and Replacement of Blair Toilets Maintenance of Septic Tanks

Figure 6 - Organizational Structure of the NAC



F. Key Policies and Strategies

1. Emphasis on Rural Communal Land and Resettlement Areas

Given a well-established urban infrastructure and a historical neglect of what are now communal lands, since Independence Government's initiatives have concentrated on rural areas, especially communal and resettlement areas.

2. Integrated Approach

The Government has since the commencement of the IDWSSD endorsed an approach to sector provision whereby water, sanitation and health and hygiene education are provided to neglected communities in order to obtain maximum impact upon disease transmission and to improve quality of life through shorter walking distances to water points.

Since 1987, in implementing the recommendations of the NMPRWSS, the NAC have placed greater emphasis on the development of more closely integrated, district-based projects in communal lands combining many components including: land-use planning, district water planning, community mobilization, appropriate selection of water technologies after hydrogeological investigations, water and sanitation construction, health and hygiene education, the establishment of community-based maintenance systems and an integrated monitoring system.

3. Decentralized Planning

Government's intention has been to establish decentralized management of the sector. In communal lands, projects are planned and ratified through decentralized national planning structures at Village (VIDCO), Ward (WADCO), District (DDC) and Provincial (PDC) level. At each level a permanent, specialized water and sanitation subcommittee has been established for co-ordination and sector management. To assist district level planning Government has developed guidelines for communal land project preparation and management. In urban areas local authorities are responsible not only for planning and managing services but for revenue collection and financial control over existing and future service provision.

4. Community Participation

In line with development policy in other sectors, the communal land water and sanitation programme has adopted a strategy of community responsibility for project implementation and management. The MCCD has the mandate for supporting community participation and community management through local development committees. The community's role in project development includes planning, provision of local building materials, labour in construction; and thereafter responsibilities for the management of the resource including preventive maintenance and simple repairs. In the case of water development a cadre of volunteer pump caretakers has been established for first tier maintenance tasks. Householders constructing latrines or private wells pay local artisans. In the case of rural sanitation, the household contribution amounts to approximately 54% of the total latrine cost.

5. Health and Hygiene Education

Health and hygiene education is undertaken as a community-based programme, through the extension staff of the MOH, and through primary and secondary school curricula. Hygiene education has suffered as a result of the evolution of Village Health Workers under the MOH to multi-purpose Village Community Workers under MCCD. The MOH's multipurpose Health Education Unit has, moreover, not had the capacity to manage a programme commensurate with the size of water and sanitation construction activities. Government policy stresses infrastructural development in the context of educational programmes. MOH is developing a national hygiene education plan to better realize this policy.

6. Phased Development for Communal Lands

The NAC have adopted a phased approach to communal land sector development. Phase 1 (approximately 1987 - 1997) will concentrate on rehabilitation of all existing primary water points and provide a basic level of water coverage for the entire communal land and resettlement area population as well as partial sanitation coverage. Phase II (1997 - 2005) comprises the provision of safe water within 500m for all and one latrine for each household.

7. Training

In support of Government's policy of decentralization, emphasis is given to training of district and other field staff. Whilst each agency has some training capability this has recently been augmented by the establishment of a Training Centre for Water and Sanitation (TCWS) at the University of Zimbabwe and by the completion of the National Training Plan. Zimbabwe has also produced a range of educational materials of a good quality. Approximately 30 differing types of printed materials have been developed in addition to other audio-visual material for training and sector promotion.

8. Information Management

Government is well advanced in development of a national information management system for the sector. This programme comprises, for the communal lands in the first instance: a series of computerized data bases - piped schemes, dams, boreholes, wells and springs and latrines developed from existing data and inventories; a monitoring system to feed data into these data bases; and a programme to promote electronic data processing in each of the lead sector agencies and dissemination of information to provincial and district levels.

9. Private Sector Involvement

While efforts since Independence have largely focussed on development of public sector capacity, water and sanitation delivery remains highly dependent on the private sector. Zimbabwe's manufacturing and service industry provide many essential services and goods and equipment such as pumps, pipes, cement, tools, vehicles etc, and Government policy is, where possible, to

support local industry. The borehole drilling industry, despite an ageing drilling fleet, continues to provide much of the national borehole drilling capacity. Many private latrine contractors and well-sinkers have been trained in the sector and these contractors continue to provide services in areas of programme activity. Government seeks to promote the further development of the private sector in the 1990s.

10. Selection of Appropriate Technologies

An early post-Independence focus on piped water supplies has given way to an extensive primary water supply programme comprising a range of techniques including borehole drilling and hand-dug and hand-augered well-sinking. Considerable emphasis has been placed on the selection of low-cost and appropriate technologies. Handpumps used on Government-funded programmes have been standardized to two models: the Bush Pump for heavy duty settings, and the Bucket pump for light duty settings on shallow wells or tubewells. Rehabilitation of existing piped schemes and establishment of community management remains a service option is some areas. New piped schemes are now constructed to service heavily populated settlements which have ability to pay water tariffs. Rural sanitation technologies have standardized on the various options of VIP construction. NAC is establishing guidelines for selection of water technologies on the basis of unit costs.

11. Cost Recovery

Since Independence the Government of Zimbabwe has adopted a policy of subsidizing basic sector services (except on private farm land). Current policies with respect to cost recovery are:

Service	Level of Cost Recovery
Bulk water supply	Full cost recovery
Urban piped supplies	Partial cost recovery
Urban sewerage	Partial cost recovery
Communal land water	Community labour and material contributions only
Resettlement area water	Nil
Communal land sanitation	Household labour and material and subsequent latrines
Resettlement area sanitation	Household labour and material and subsequent latrines
Commercial farms	Full capital cost & O & M cost by landowner

The Rural District Councils Act has introduced the potential for new revenue collection systems in rural areas and is actively reconsidering the policy of subsidization to achieve a sustainable programme. New initiatives are under consideration for revenue collection systems in Rural District Service Centres with respect to cost recovery policy in communal land and resettlement areas. A draft cabinet paper has been developed by the NAC for communal lands and resettlement areas which outlines a four step process to achieve greater financial sustainability in the sector. This comprises:

Step 1: Shifting Operation and Maintenance Costs to the Consumer
Step 2: Improving Cost Effectiveness and Financial Efficiency
Step 3: Institutional Reforms
Step 4: Increasing Domestic Resource Mobilization for Capital Costs

Since 1985, revenue collected from delivery of bulk water supplies has been kept roughly in line with costs - though many local authorities have incurred budgetary deficits in paying for services at rural centres. MEWRD itself operates and maintains 120 piped supplies providing water directly to rural dwellers from which no revenue is collected. This results in an annual deficit which Government has had to meet from grant finance. Since the late 1980s many urban local authorities have incurred a deficit in providing water and sewerage services. An objective of Urban

II is to assist urban authorities implement phased financial recovery plans to remove sector budget deficits in urban areas.

12. Maintenance

One of the main intentions in the promotion of integrated sector projects is to ensure that there is sufficient capability to maintain new facilities and to link capital investment to maintenance capability. In communal lands DDF is establishing a three-tier maintenance system - comprising volunteer pump caretakers at village level, pump minders at ward level and a district maintenance team. Government's policy intention, to ensure sustainability of this system, is to require that future consumers contribute to the costs of maintenance of their own facilities. In the case of rural sanitation and family well upgrading programmes in communal areas, and in the case of on-site facilities in urban areas these costs are already borne by the consumer. In commercial farms all maintenance costs are borne by the land owner.

13. Promotion of Women

Since women are the principal actors in the water and sanitation sector, initiatives to promote their involvement communal lands and resettlement areas have encouraged: majority women's representation on community water and sanitation committees; the utilization of Village Community Workers (mainly women) as the principal extension agents for the sector; and the training of women latrine builders and well-sinkers.

14. Environmental Protection

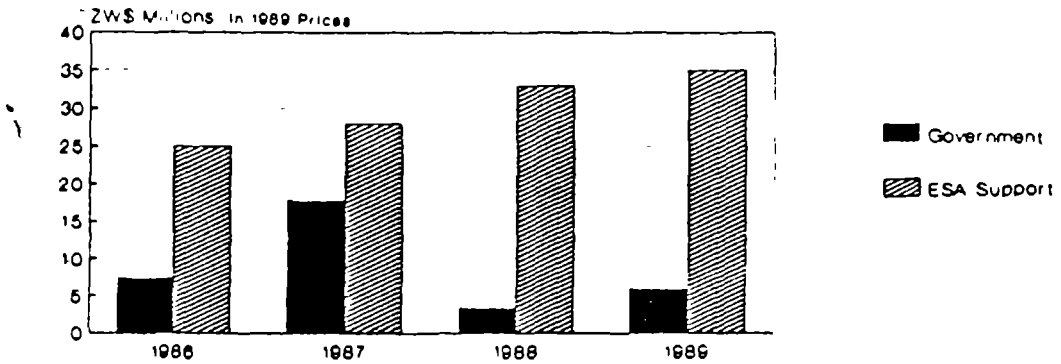
Government policy is to ensure that sector development does not promote environmental degradation and activities are underway to monitor water pollution, soil erosion and deforestation related to sector development.

G. Sector Financing

1. Capital Development

The overall level of funding available for the sector has increased markedly since Independence. The decade of the 1980s has clearly been one in which Zimbabwe has had much success in mobilizing financial resources for the sector. Moreover this increase has been sustained at a time when expenditure on other social development programmes has been reduced. In Government's priority sector, communal lands, total capital investment in the sector has increased from an estimated ZW$20 million in 1982 to ZW$41 million in 1989. Figure 4 presents this increase from 1986 to 1989.

Figure 7 - Communal Land Water and Sanitation Capital Development



The period has however seen a major change in the origin of sector finance as illustrated above. Whereas in 1982 donor grant finance accounted for 20% of the total capital finance in the sector in communal lands, by 1985 this figure had reached 35% and in 1989 this increased to 85%. In recognition of the need to develop greater financial sustainability within the programme the NAC has proposed a programme of increasing financing from domestic sources in the 1990s.

Other subsectors have had diffe·ent investment patterns. Investment in resettlement areas has continued steadily but at a pace slower than that initially intended. Since the inception of the resettlement programme over ZW$14 and ZW$0.4 million have been spent on water and sanitation respectively. This programme has also benefitted from extensive external financial support. Urban areas have had relatively limited investment in recent years though will in the 1990s undergo major refurbishment through local capital co-financing with a World Bank loan. Farmers own investments in the sector have increased substantially over the decade and are now within sight of achieving full coverage by the end of century. Substantial State Land investments were made in the mid 1980s through the CRF. Non-repayment of this loan finance has restricted further investment until proposals for establishing revenue collection are implemented.

2. Recurrent Finance

Government's stated intention is to reduce its recurrent financial expenditure. While Government's allocations to recurrent expenditure for the sector in communal lands and resettlement areas have increased in recent years, the level of funding still remains well below that required to ensure continued operation and maintenance of facilities. The amount currently allocated to maintain existing facilities (ZW$6 million) is well below the sum presently required and is already of the same order of magnitude as Government's entire present capital development commitment (ZW$7 million).

Urban authorities' ability to finance recurrent costs from revenue will largely depend upon Government's agreement to timely tariff increases and urban authorities efficiency in financial management. Lack of revenue collection in district service centres incurs annual deficits for operating and maintaining services in these state land areas. In commercial farming areas Government is incurring minimal recurrent costs in promotional activities.

SECTION III. ISSUES FOR POLICY DEVELOPMENT

A. Introduction

Zimbabwe has made important and significant progress in water supply and sanitation development through the decade of the 1980s, particularly in rural areas, to the point where the programme is a leading example of sector development on the continent. The sector is characterized in general by strong political commitment to its development, particularly in communal lands and resettlement areas, by the innovation and dedication shown by sector workers, by the basic soundness of many sector policies and by the far-sighted technologies and techniques which dominate sector work in Zimbabwe.

The chief weaknesses of sector programmes in Zimbabwe lie in questions of their sustainability. The Government is keenly aware of this and, in consultation with its partners and supporters is making significant efforts to address these questions. The main challenges facing the sector are discussed below. These are the principal issues on which group discussion will focus in the course of the Decade Consultative Meeting. The issues are frankly stated presenting the real challenges facing Government in the hope that they will stimulate an open and constructive appraisal of the policy options facing Government in coming years.

B. Programme Planning, Coordination and Management

1. Institutional Complexity

Institutional complexity in the sector as a whole is a constraint to efficient and effective programme development. The large number of agencies involved, although reduced in the communal land sector following the NMPRWSS, exacerbates the task of sector co-ordination.

Institutional complexity is compounded by the fact that implementing agencies have varying capacities at different levels. Differing degrees of decentralization means that implementing agencies are not evenly represented at all levels. MEWRD is not represented below provincial level; MOH and MCCD are decentralized to provincial level where budgetary control is held; and DDF and MLGRUD are decentralized to district level with budgetary control.

Lack of clarity for institutional responsibilities and lack of capacity in certain institutions to realize their allotted roles are major factors inhibiting further programme development. Moreover, overlapping responsibilities have lead to duplication of activities and capacity, and disputes between agencies. Borehole drilling, well-sinking, design and construction of piped schemes, community mobilization and support for operations and maintenance are all activities undertaken by more than one Government agency. Government is presently bearing the recurrent cost of developing this multiple capacity.

In the communal land sector institutional complexity combined with ambitious sector strategies and limited human resource development place considerable strain on co-ordination arrangements between head offices. Members of the NAC and its subcommittees often have to assume unsustainable workloads or become reliant on technical assistance both to fulfill their own ministry workplans as well as undertake interministerial tasks.

Since the reformulation of the NAC has not been formally approved by cabinet, the official mandate and powers of the co-ordinating body remain unclear. Co-ordination arrangements for the commercial farming sector need further clarification. Co-ordination for the sector in urban areas and between state land authorities remains weak.

2. Inadequate Sector Plans

The NMPRWSS remains unapproved five years after completion, is outdated in many respects and will need to be updated and restructured before presentation to the Cabinet for approval. Many of its recommendations have already been implemented and it remains a useful resource document which has significantly assisted sector development in communal lands. Some key provision, such as on cost recovery and institutional arrangements, have not been able to be addressed without full cabinet authority. A major limitation of the NMPRWSS is its restriction to communal lands and resettlement areas, comprising only just over half of Zimbabwe's population. The Five Year Plan under preparation is also confined to communal lands.

There remains a major need for the development of comprehensive updated sectoral plans (rural and urban) which reflect Government's economic reforms as well as the circumstances in all areas. Much of the information required for such a plan is available. What is required is a slim, up-to-date volume, applicable to the full sector which presents in a succinct manner technical, institutional, and financial information and policy recommendations on the sector and guides sector investments for the remainder of the century.

Present Phase 1 project plans in communal lands are primarily affected by funding supply and do not necessarily reflect service demand. It is likely that the full funding for completion of Phase 1 will not identified from Government and ESA sources and that greater emphasis will need to be placed upon consumer resources. These envisaged in policy reforms, will require development of a more flexible planning frame to achieve greater efficiencies by making services more responsive to consumer demand. The differing priorities of water and sanitation are similarly not adequately addressed in current plans or programmes.

3. Public Sector Staffing Problems / Underutilization of the Private Sector

Current manpower capacity in the public sector is behind that required to meet targets. The public service has not established key new posts required for management of the sector. Use of technical assistance to undertake these functions is only a short term solution. Continuing uncompetitive conditions of service means loss of experienced staff and lack of continuity in sector management.

Not withstanding public sector staffing problems sector plans in communal land and resettlement areas are caste within the mould of an ever-expanding civil service and continued public sector provision. Insufficient recognition is given to constraints facing the public service and to the contribution that private institutions might make.

The latter part of the 1980s have seen increasingly frequent shortages of basic commodities and equipment in the sector - including cement, PVC piping, galvanized steel piping, stainless steel flyscreen, and motor vehicles. Support to the private sector to assist local production of these commodities is required. Improved public sector procurement strategies are also required.

C. Community Participation and Health Education

1. Institutional Responsibilities for Support for Community Mobilization and Management

Present responsibilities for community mobilization and management in communal lands and resettlement areas fall to MCCD, MPA and MLGRUD. A clear differentiation of functions between these agencies is required.

2. Sustaining Community Management

The process of community mobilization established in communal lands is largely supply-driven,

ambitious in its scope and costly in terms of transport, government personnel and training. The adopted model needs to be modified to a more sustainable design. While the focus of the current approach to community support in the area of initial mobilization, the major challenges lies in the area of long term operation and maintenance and in cost recovery. Water point committees and VIDCOs have this long term management role. Increased community and consumer responsibilities will require increased and further ongoing support will be required.

3. Strengthening Linkages to Health and Hygiene Education

Institutional, financial and technical aspects of hygiene education and water and sanitation development need further strengthening in both rural and urban environments. The development of a national plan for hygiene education in communal lands is beginning to addressing this challenge. The pace of implementation of this plan and the inclusion of other sectors, in particular commercial farming and resettlement areas, are issues which require resolution.

4. Alternative Techniques in Hygiene Education

Effective hygiene education requires the development of a range of educational techniques, media and material to support a multi-facetted programme. Current techniques have largely been restricted to lecturing and the development of materials for literate communities.

Hygiene education further requires the development of approaches which takes maximum account of user's perceptions and definition of hygiene problems. Participatory approaches, both to the development and implementation of hygiene education activities, need to be developed.

D. Financing and Cost Recovery

1. Shifting Operation and Maintenance Costs to the Consumer in Communal Lands and Resettlement Areas

Government's allocation to operation and maintenance remains well below that required to ensure good operations and maintenance of facilities. In communal lands and resettlement areas Government's intention is to shift the financial onus for operations and maintenance. Strategies need to be devised to achieve this: several models have been identified.

One scenario is for Government to modify the three-tier maintenance system whereby it continues to train the community tier and further trains local private entrepreneurs in operation and maintenance skills. Government would promote spares provision to the local level through private distribution networks. In this model Government would continue to support a modest district level maintenance capacity to provide training, technical advice and back-up support. Consumers would be responsible to pay for maintenance services and spare parts. Another scenario is to continue to build DDF's three-tier maintenance system and require local authorities to fund the service through local levies.

2. Improving Cost-Effectiveness and Financial Efficiency

In several instances better use could be made of existing resources to service a greater population. Cost-effectiveness criteria and unit cost controls could be more strictly applied. Examples of areas where such cost-efficiencies might be applied include: technology priority selection criteria according to cost effectiveness; consumers being made aware of the maintenance cost implications that will fall to them in choosing different technologies; requiring beneficiaries to contribute to operations and maintenance funds prior to implementation will limit instances of duplication of services and provide a mechanism for giving highest priority to those most in need; selection of Blair latrine options which limit the Government's material subsidy; and reduction of administration costs etc.

3. Strategies for Reducing Recurrent Expenditure

Recurrent expenditure in the sector has grown substantially in recent years. Reduction of recurrent expenditure, and the national budget deficit, is high amongst Government's financial objectives. Within the water and sanitation sector the major steps toward reducing recurrent expenditure without affecting output are as follows: limiting Government's responsibility's for operations and maintenance (see above); creating a more unitary institutional structure and limiting areas of overlap; placing greater emphasis on Government's role in promotion of the sector through legislation, training, development of guidelines, information dissemination and awareness campaigns; reducing Government's responsibilities for provision of services.

4. Increasing Domestic Resource Mobilization for Capital Costs

The level of Governmental capital investment has declined in real terms and is well below that necessary to sustain national sector programmes. In communal land areas in particular the sector has become increasingly dependent upon donor finance to the extent that in 1989 donors provided about 85% of the capital flowing into the sector. The level of finance provided in some donor-financed programmes could not be replicated in Government-financed programmes.

Certain components of the sector, in particular in communal lands, will for some time remain dependent upon donor finance. The design of projects - both in scale and time frame - should remain related to Government's capacity in the sector. In the longer term Government needs to increase domestic resource mobilization in communal lands and resettlement areas through requiring consumer contributions to capital costs in the sector. Optimal mechanisms for establishing consumer payments - through RDCs, private contractors or Government agencies - needs to be investigated.

5. Financial Responsibilities of Local Authorities

Financial control of the sector in communal lands, resettlement areas and on much state land still lies with Government Ministry head offices, though the 1980s has seen a process of deconcentration of these responsibilities amongst some agencies. The Rural District Council Act provides the potential for placing greater financial responsibility for service provision on Rural District Councils. Realization of this intention will require the strengthening of the financial management capacity of local authorities.

Since the late 1980s several urban local authorities have incurred budget deficits on water/sewerage accounts. These deficits have resulted from increased costs, slow Government approval of applications to increase water tariffs and poor management. Through phased plans local authorities should implement financial recovery plans to remove deficits and cater for increases in service provision where necessary. Many DSCs continue to incur a major deficit in provision of water and sanitation services. The capacity of RDCs needs to be expanded to take over the responsibility for financial management of these services.

E. Technology Choice and Operations and Maintenance

1. Priorities in Technology Choice

Current choices of technologies are not always weighted towards the most cost-efficient techniques. Prior emphasis should be placed on techniques which have a lower capital cost and make less recurrent demands. In rural settings the applicability of wells and springs should be explored before other techniques. Resettlement areas, in particular, have relied solely on boreholes.

2. The Application of Other Technologies

Other proven, cost effective techniques, such as gravity fed reticulation from perennial springs,

and rainwater harvesting have been underexploited in rural programmes. Sustainable guidelines for the implementation of piped schemes needs to be developed and in particular, strategies for rehabilitation and establishment of community management of existing motorized piped schemes. The range of water supply technologies appropriate to the circumstances of commercial farmers also needs to be further explored. In urban settings where sewerage provision assumes a major portion of costs, alternative cost saving techniques should be identified.

3. Setting Affordable Standards

Service level standards in both rural and urban areas which are set at too high an initial level inhibit basic improvements and establish unsustainable precedents. Technology standards should be established are affordable by consumers and are natic nally sustainable.

4. Shifting the Onus of Operations and Maintenance to the User

The argument for shifting the onus for operations and maintenance to users has been developed under the financial issues above. The institutional implications of this change of responsibility need to be explored.

5. Minimizing Pump Maintenance

Maintenance of family wells and Bucket pumps are within the capacity of individual households and the community respectively. Recent modifications to the Bush pump have made the pump more conducive to community maintenance. The Bush Pump remains, however a pump that depends upon external technical assistance to undertake frequent maintenance routines. Further development of the "user friendliness" of the Bush pump is required.

SECTION IV. OPPORTUNITIES FOR ESA SUPPORT AND ACTION

Based on the foregoing presentation of the current status of the sector, the present investment levels, and the issues confronting the sector, it would appear that there are several areas for which external donor support could be mobilized. Annex II presents a list of projects for which funding is currently being sought. The following paragraphs outline the areas in which ESA support is needed.

A. Support for Sector Sustainability

ESA support is required in a variety of contexts to support Government's efforts to steer the national programme towards greater sustainability.

1. Institutional Rationalization

The task of reworking institutional structures should be undertaken with consultation from the highest levels. ESA assistance is required to support the process of re-organization and to conform to Government's selected mechanisms for sectoral co-ordination and the reallocation of responsibilities as this develops.

2. Human Resource Development

Because of the central importance of human resource development to future sector development, implementation of the National Training Plan for the rural sector and development of action plans for human resource development need to be undertaken throughout the sector. Particular attention is needed to establish competitive conditions and strategies to retain key public sector staff. The recommendations of human resource development studies should be integrated into future projects of all donors, and further activities at the TCWS should be supported.

3. Cost Recovery

Donors should assist Government in implementation of its phased programme for development of sustainable financial policies in the sector. Donors are invited to assist and participate in the process of development of these policies and thereafter in their implementation in projects.

4. Technology Development and Operation and Maintenance

Assistance is required to continue to develop sustainable technical solutions. Capital investments in all sector projects should be linked to operations and maintenance capacity and, where appropriate further assistance given to these activities.

5. Assistance in Procurement of Scarce Commodities and Equipment

Donor assistance in procurement of essential scarce commodities is of great value to the sector. These include steel piping, PVC, cement, stainless steel mesh, vehicle kits etc.

6. Support to NGOs and the Private Sector

In the current phase of public sector curtailment and in order to provide for long term sustainability of the programme, greater reliance needs to be placed on the private sector and NGOs in delivery of sector activities. This includes: development of local private well-sinking and latrine construction contractors, development of Zimbabwe's private borehole drilling capacity; development of spares distribution through retail outlets; and support to sustain Zimbabwe's manufacturing capacity in the sector. NGO involvement in the delivery of complex projects can bring greater flexibility to project management.

The relative roles of the private and public sectors should be clearly articulated in the sector plan. The long term goal for the public sector should be to act in an advisory and supervisory capacity

rather than attempt to undertake all implementation and operational activities. Promotion of private sector activities should be clearly reflected in future project design and implementation plans.

B. Financial Support for Water and Sanitation Service Provision

1. Integrated Projects in Communal Lands

Approximately two thirds of the 55 districts in the country do not have substantial, ongoing integrated water and sanitation projects. Funding of decentralized integrated water and sanitation projects in these districts could be supported. Project designs are being modified in cognizance of public sector capacity and within established guidelines.

2. Resettlement Area Projects

The enhanced resettlement programme will require additional resources to meet targets. ESA assistance to establish adequate water and sanitation facilities in these areas is sought.

3. Commercial Farming Area Projects

In recent months Government has given further clarification on its policy towards promotion of improved facilities on commercial farming areas. ESA support is sought to increase technical assistance and promotion of sound solutions to problems of water and sanitation provision among this disadvantaged section of Zimbabwe's population.

C. Development of a Full Sector Plan

An immediate need in order to provide a framework for development assistance is the development of a full sector plan (rural and urban). The full sector framework would take into account the detailed planning work already undertaken by Government and would encompass the important initiatives made in prior plans. The plan should provide the policy frame for the whole sector including linkages and relative priorities for irrigation, and environmental health facilities; to distinguish priorities in sector investment for productive purposes and for social sector goals; to take into consideration strategies for the differing subsectors; and to examine linkages and trade-offs between the rural and urban subsectors. This plan document would provide a framework for increased and orderly involvement of the donor community, and would address the key institutional and financial questions facing the sector.

Annex I - List of Current ESA-Funded Projects

Project Name	Gvt.Agency	Donor	Duration
A. Communal Lands			
1. Donor-funded Integrated Projects			
Mashonaland Central Mt Darwin	Integrated	NORAD	1987 - 1991
Mashonaland Central Guruve	Integrated	DUTCH	1988 - 1992
Mashonaland East Mudzi	Integrated	NORAD	1988 - 1991
Mashonaland West Nyaminyami	Integrated	DUTCH	1988 - 1992
Mashonaland West Chirorodziva	Integrated	DUTCH	1990 - 1994
Manicaland Chimanimani	Integrated	NORAD	1988 - 1991
Manicaland Chipinge	Integrated	NORAD	1988 - 1992
Manicaland Makoni	Integrated	NORAD	1988 - 1992
Masvingo Gutu	Integrated	KFW/GTZ	1985 - Ongoing
Masvingo Zaka	Integrated	NORAD	1988 - 1991
Masvingo Chivi	Integrated	NORAD	1990 - 1996
Midlands Zvishavane	Integrated	NORAD	1990 - 1996
Matebeleland North Nkayi	Integrated	DUTCH	1988 - 1994
Matebeleland North Tsholotsho	Integrated	DUTCH	1990 - 1994
Matebeleland South Bulalima Mangwe	Integrated	DUTCH	1988 - 1994
Matebeleland South Matobo	Integrated	EEC	1986 - Ongoing
Matebeleland South Bulalima Mangwe	Integrated	EEC	1986 - Ongoing
Matebeleland South Insiza	Integrated	EEC	1986 - Ongoing
Matebeleland South Umzingwane	Integrated	EEC	1986 - Ongoing
2. Other Donor-funded Field Projects			
Matebeleland South Beitbridge	MOH	UNICEF	1987 - 1992
Mashonaland West Chirorodziva	MOH/DDF	UNICEF	1987 - 1992
Mashonaland West Hurungwe	DDF	UNICEF	1987 - 1992
Mashonaland West Ngezi	DDF	UNICEF	1987 - 1992
Mashonaland East UMP Zvataida	MOH	UNICEF	1987 - 1992
Midlands Chikomba	DDF/MOH	DANIDA	1987 - 1990
Midlands Gokwe	DDF	DANIDA	1987 - 1990
Matebeleland North Hwange	DDF/MOH	DANIDA	1987 - 1990
Midlands Mberengwa	DDF	DANIDA	1987 - 1990
Midlands Shurugwi	MOH	DANIDA	1987 - 1990
Midlands Takawira	DDF	DANIDA	1987 - 1989
Midlands Zvishavane	DDF	DANIDA	1987 - 1989
Manicaland All Districts	MOH	SIDA	1988 - 1993
Mashonaland East All Districts	MOH	SIDA	1990 - 1993
3. Donor-funded Head Office Projects			
Training Mats., Well-Sinking	DDF	UNICEF	1990 - 1993
Hydrogeologist	DDF	UNICEF	1990 - 1993
O & M District Support	DDF	NORAD	1987 - 1991
Drilling Programme Support	DDF	NORAD	1987 - 1991
Support O & M Section	DDF	NORAD	1987 - 1991
Technical Assistance to DDF	DDF	UNDP	1989 - 1990
Support to Drilling Section	DDF	NORAD	1987 - Ongoing

Project Name	Gvt.Agency	Donor	Duration
Donor-funded Head Office Projects Continued			
Management Support	MCCD	NORAD	1987 - Ongoing
Training and Education	MCCD	NORAD	1988 - 1991
Manpower Rev. Study, MEWRD	MEWRD	ODA	1989 - 1990
Technical Assistance	MEWRD	ODA	1989 - 1992
Water Testing Laboratory	MEWRD	ODA	1989 - 1990
Commodity Assistance	MEWRD	SIDA	
Deep Boreholes, MIDL, PHA	MEWRD	JICA	1988 - 1989
Water Testing Laboratory	MEWRD	DUTCH	1989 - 1990
Borehole Drilling	MEWRD	DUTCH	1988 - 1989
Technical Assistance to MEWRD	MEWRD	GTZ	
Master Plan Office	MEWRD	NORAD	1987 - 1990
EDP Support	MEWRD	NORAD	1987 - 1990
Management Support	MEWRD	NORAD	1989 - 1991
Spares and Transport	MEWRD	GTZ	1988 - 1989
Technical Assistance	MEWRD	AUSTRALIA	1989 - 1991
National Inventory	MLGRUD	NORAD	1988 - Ongoing
National Co-ordination Unit	MLGRUD	NORAD	1987 - Ongoing
Training and Seminars	MLGRUD	NORAD	1988 - 1991
Monitoring and Evaluation	MLGRUD	NORAD	1988 - 1990
Water Sector Spare Parts	MLGRUD	DUTCH	
Study on Service Centres	MLGRUD	UNDP/WB	1988 - 1989
Water & Sanitation Studies	MLGRUD	NORAD	1988 - Ongoing
Revenue Collection	MOH	UNDP/WB	1989 - 1989
Technical Assistance	MOH	UNDP/WB	1984 - 1991
Publ. Inform & Education	MOH	WHO	1988 - 1991
Primary Health Care	MOH	WHO	1988 - 1991
Community Water & Sanitation	MOH	WHO	1988 - 1991
Management Support	MOH	NORAD	1987 - 1991
Information Management	MOH	NORAD	1987 - 1991
Training and Education	MOH	NORAD	1987 - 1990
Drought Relief Pilot	MOH/DDF	NORAD	1987 - 1989
Technology Development	MOH/Blair	SIDA	1990 - 1993
Interministerial Train. Centre	UZ	UNDP	1989 - 1992

4. NGO-Funded Projects

Project Name	NGO
Manicaland Chipinge	WORLD VISION
Manicaland Makoni	AFRICARE
Manicaland Mutasa	WORLD VISION
Manicaland Nyanga	CHRISTIAN CARE
Manicaland Mutare	ADRA
Manicaland Buhera	CHRISTIAN CARE
Mashonaland East Mudzi	REDD BARNA/WORLD VISION
Mashonaland East UMP	REDD BARNA/WORLD VISION
Mashonaland East Hwedza	AFRICARE
Mashonaland East Murewa	WORLD VISION
Mashonaland Central Mt Darwin	WORLD VISION
Mashonaland Central Guruve	WORLD VISION

NGO-Funded Projects Continued

Project Name	NGO
Mashonaland Central Rushinga	CADEC
Mashonaland West Nyaminyami	SCF(UK)
Mashonaland West Chirorodziva	WORLD VISION
Mashonaland West Hurungwe	CADEC
Midlands Chikomba	WORLD VISION
Midlands Zvishavane	AFRICARE
Midlands Kwekwe	WORLD VISION
Midlands Chirumanzu	AFRICARE
Midlands Mberengwa	AFRICARE
Masvingo Zaka	ARDA/AFRICARE/CADEC
Masvingo Chivi	AFRICARE
Masvingo Chiredzi	REDD BARNA
Masvingo Bikita	LWF
Masvingo Masvingo	AFRICARE/WORLD VISION
Matebeleland North Nkayi	LWF
Matebeleland North Hwange	AFRICARE
Matebeleland North Tsholotsho	LWF/WORLD VISION
Matebeleland North Binga	SCF(UK)
Matebeleland North Bubi	WORLD VISION
Matebeleland North Lupane	LWF
Mat. South Bulalima Mang.	CHRISTIAN CARE/LWF
Matebeleland South Matobo	LWF
Matebeleland South Beitbridge	AFRICARE
Matebeleland South Gwanda	LWF

Project	Govt Agency	Donor	Duration
B. Resettlement Areas			
National Resettlement Programme	DERUDE	ODA/EEC	1980 - Ongoing
C. Commercial Farming Areas			
1. Donor-Funded Projects			
Farm Health Workers	MOH	SIDA	1986 - Ongoing
FHW Training	MOH	UNDP	1985 - 1988
2. NGO-funded Projects			
FHW Support	MOH	SCF (UK)	1983 - 1989
D. Urban Areas			
Urban Development (Urban I)	MLGRUD	WB	1984 - 1989
Urban and Regional Dev (Urban II)	MLGRUD	WB	1990 -

Annex II - List of Projects Requiring Funding

Project Name	Agency	Status	Est. Cost (Z$) and Duration
1. District Projects			
Manicaland Mutasa	Integrated	Existing NGO Project	
Manicaland Nyanga	Integrated	Proposal Prepared	
Manicaland Mutare	Integrated		
Mashonaland East UMP	Integrated	Approved Proposal	
Mashonaland East Wedza	Integrated	Approved Proposal	
Mashonaland Central Centenary	Integrated		
Mashonaland Central Mazowe	Integrated		
Mashonaland West Hurungwe	Integrated		
Mashonaland West Mhondoro	Integrated		
Midlands Gokwe	Integrated	Approved Proposal	19.2 m (7 yr)
Midlands Mashambazhou	Integrated		
Masvingo Mwenezi	Integrated	Approved Proposal	8.5 m (5 yr)
Masvingo Chiredzi	Integrated		
Matabeleland North Binga	Integrated	Existing NGO Project	
Matabeleland North Bubi	Integrated	Proposal Prepared	3.5 m (5 yr)
Matabeleland North Lupane	Integrated		
Matabeleland South Umzingwane	Integrated	Extension of Project	
Matabeleland South Insiza	Integrated	Extension of Project	
Matabeleland South Matobo	Integrated	Extension of Project	
Matabeleland South Beitbridge	Integrated	Approved Proposal	1.9 m (2 yr)
Matabeleland South Gwanda	Integrated		
2. Sector Projects			
Commodity Import Assistance	MLGRUD		
Water and San on Commercial Farms	MOH/NGO	Proposal Prepared	1.2 m (3 yr)
National Family Well Promotion	MOH		
Nutrition Garden Promotion	MOH	Feasibility Study Complete	
Institution Reform	All Agencies		
Revenue Collection for DSCs	MLGRUD	Outline Proposal	
Private Sector Promotion	All Agencies	Study Approved	
Water and Sanitation Studies	All Agencies	Proposal Approved	2.4 m (3 yr)
Manpower Dev and Training	MLGRUD		
Manpower Dev and Training	MOH		
Manpower Dev and Training	DDF		
Manpower Dev and Training	MCCD		
Manpower Dev and Training	MEWRD		
Manpower Dev and Training	Local Authorites		
Strengthening Capacity of TCWS	UZ		
National Water Resources Plan	MEWRD	Proposal Prepared	0.8 m (2 yr)
Health and Hygiene Education			
Strategy Development	MOH	Proposal Prepared	0.6 m (5 yr)
Training in Participatory Methods	MOH		
Community Theatre	MOH/NGO	Proposal Prepared	0.2 m (1 yr)
Decentralising Info Management	All Agencies		
Strengthening Technical Training	MOH, Blair	Proposal Prepared	0.3 m (2 yr)
Handpump Development	MOH, Blair	Proposal Prepared	0.6 m (5 yr)

Decade Consultative Meeting on Water Supply and Sanitation

Sector Paper on Water Supply and Sanitation in Communal Lands

Prepared by:
National Coordination Unit
Ministry of Local Government,
Rural and Urban Development

CONTENTS

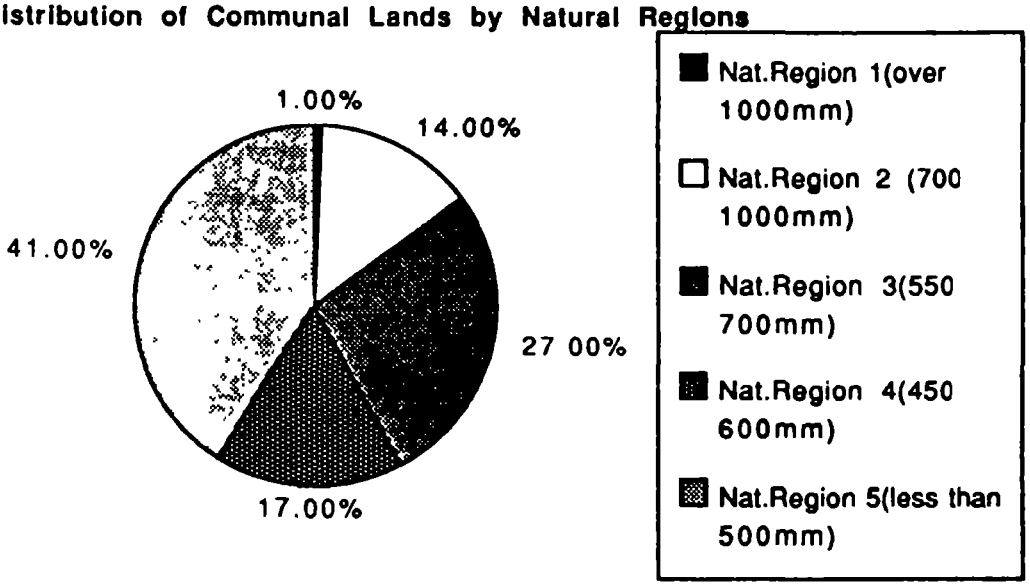
1) BACKGROUND

Water and Sanitation in the Communal Lands is provided through the efforts of both Government and Non Governmental Organisations. Thus the National Rural Water Supply and Sanitation Programme (NRWSSP) is a combination of these efforts.

The NRWSSP covers the rural population in Zimbabwe in designated Communal Lands and Resettlement Areas. Using the census of 1982 and an annual increase in population of 2.8 %, the population in Communal Lands is estimated at 5.4 mill in 1990 with a projected increase to 7.2 mill in year 2000. The population in Resettlement Areas amounts to approx. 0.3 mill in 1990. Water and Sanitation development in the Resettlement Areas is included in general infrastructure development and is separated from the approach used in Communal Lands.

Zimbabwe is divided into 8 provinces and 55 districts. The land area is 390 km2. Based on variations in precipitation and suitability for cultivation the land can be divided into 5 Natural regions. The table below shows the distribution of Communal Lands by Natural regions.

Distribution of Communal Lands by Natural Regions



As shown 41 % of the Communal Lands are located in Natural Region 5, with an annual rainfall of less than 500 mm per year. This figure clearly points to the big challenge of securing safe drinking water supplies for these areas throughout the year.

The NRWSSP has its foundations in the National Master Plan for Rural Water Supply and Sanitation (NMWP). Completed and submitted to Cabinet in 1987 the plan still awaits approval. It still however has not been approved. The conscious initiation of the national programme started in 1987 with a more specific set of policies and objectives. But however there were water and sanitation activities prior to this. These had developed however in a less co-ordinated manner. It was on the basis of each individual ministry planning its activities according to its responsibilities and then bidding for the funds from the Treasury and Donors. In essence the programme is a Government driven effort based on the recommendations of the Master Plan to plan, co-ordinate and monitor the development of rural water supply and sanitation in an effective and efficient manner. Since then the programme has developed from one district project in Mount Darwin in Mashonaland Central Province to 16 district projects as of June 1990.

2.1) NATIONAL ACTION COMMITTEE

The National Action Committee has its foundation in MOH. Founded in 1981, with a different title but latter reorganised in accordance to the recommendations of the Master Plan in 1986 under MLGRUD it is tasked with the responsibility of co-ordinating the development of the programme. The National Action Committee (NAC) is an inter-ministerial policy making body which draws its membership from all the involved governmental agencies in the programme. The NAC is chaired by the Permanent Secretary, MLGRUD, and is responsible for strategy and policy development for the national programme. All policy matters relating to the programme are discussed in this forum. Decisions are made on the basis of agreement between all ministries involved. Although there is a clear division of responsibility between the ministries, no single ministry has authority over any of the others. Decisions are thus reached on the basis of consensus.

Main meetings of the NAC are the occasions when major strategies and policies affecting the secto. are discussed, and decisions made. More detailed work is undertaken by a number of sub-committees, responsible for dealing with specific aspects of programme development. Recommendations from the sub-committees are passed up to the main committee for approval. Ad Hoc working groups are also formed to deal with special issues as they arise.

At present, the NAC has seven sub-committees:

- **Planning and Budgeting**
- **Training and Education**
- **Technical**
- **Cost Recovery**
- **Research and Development**
- **Information Management**
- **Procurement**

The previous chart summarizes the organizational structure of the NAC.

2.2) INTEGRATED APPROACH

The Master Plan recommended the adoption of the Integrated Approach as the strategy for development of Water and Sanitation in the Communal Lands. This recommendation has been adopted as a policy decision for the development of Water and Sanitation by the NAC.
The adoption of an integrated approach to rural water supply and sanitation development in Zimbabwe is based on the principle that the full benefits of such programmes will only be achieved if the linked elements of clean water, good sanitation, and health education are introduced as a package to the rural population.

In order to achieve this, the joint efforts of several ministries, each with different skills to contribute, is required. If each ministry implements its part of the programme independently of the others confusion is sure to arise. Above all, the rural population may fail to realise the important relationship between water, sanitation, and health. A combined, integrated effort is thus required to fully meet the goals of the programme.

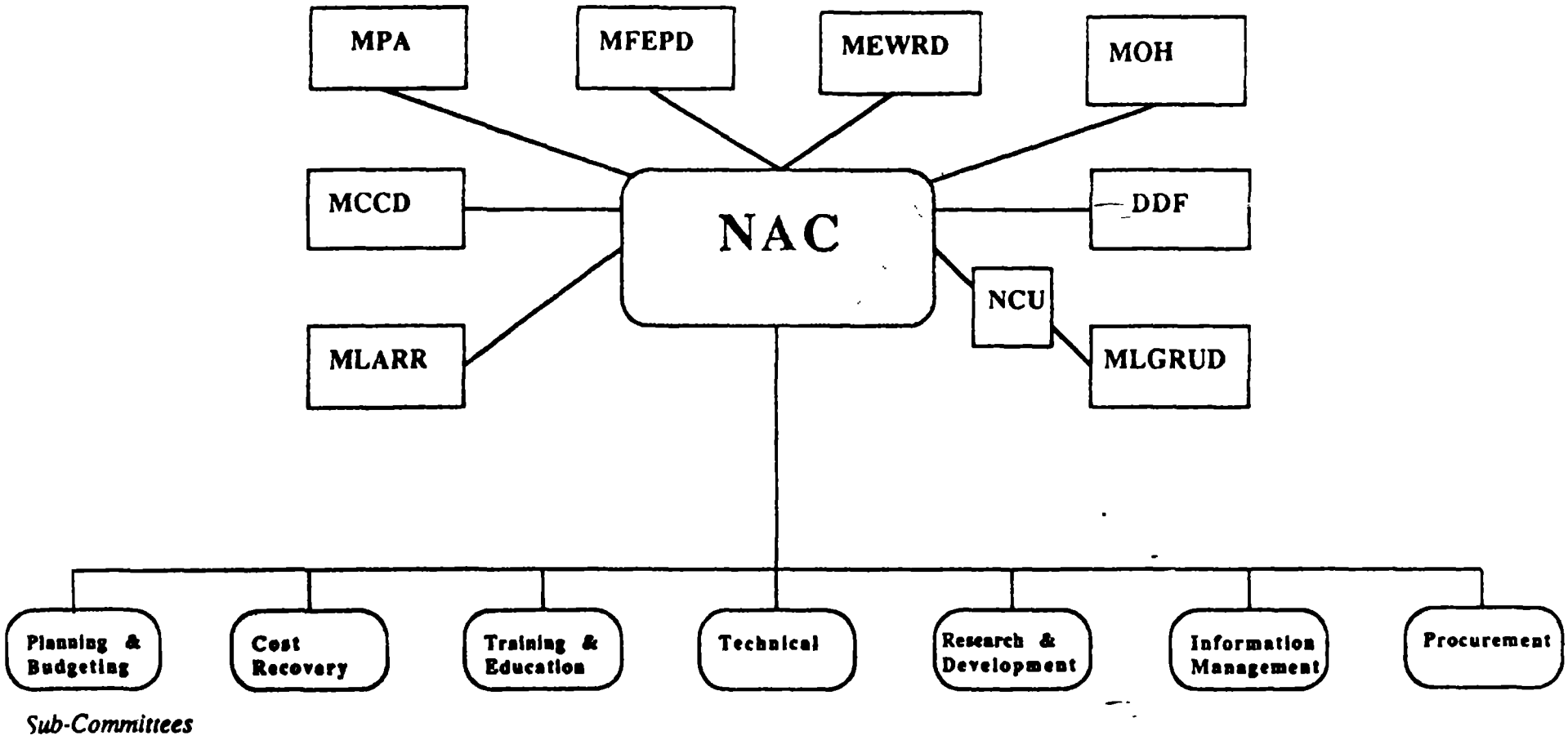
2.2.1) Involved Ministries

The following ministries and agencies are involved in the planning and implementation of Integrated Rural Water Supply and Sanitation (IRWSS) projects.

Involved Ministries, IRWSS Projects

MFEPD	*Ministry of Finance, Economic Planning and Development*
MLGRUD	*Ministry of Local Government, Rural and Urban Development*

ORGANIZATIONAL STRUCTURE, NAC



DDF	*District Development Fund*
MEWRD	*Ministry of Energy, Water Resources, and Development*
MOH	*Ministry of Health*
MCCD	*Ministry of Community and Cooperative Development*
AGRITEX	*Department of Agricultural, Technical, and Extension Services: Ministry of Lands, Agriculture, and Rural Resettlement*
MPA	*Ministry of Political Affairs*

3) INSTITUTIONAL RESPONSIBILITIES

3.1) DIVISION OF RESPONSIBILITIES

All the participating ministries have agreed to a division of responsibilities as outlined in the NMWP which are:

MLGRUD
- Project Co-ordination
- Planning and monitoring of the national programme

DDF
- Construction of deep, blasted wells
- Rehabilitation of Primary Water Supplies
- Water point siting
- Drilling of boreholes and construction of headworks
- Operation and maintenance of all primary water supplies in the communal lands

MEWRD
- Siting of boreholes
- Planning and implementation of piped water supplies
- Borehole drilling and headworks construction
- Registration of water supplies in a national database
- Hydrogeological Research

MOH
- Construction of shallow, hand dug wells
- Construction of Protected Springs
- Construction and supervision of rural sanitation , i.e. Blair latrines
- Health and hygiene education

MCCD
- Community mobilization for community participation
- Community Training
- Monitoring of Community Inputs

MLARR (AGRITEX)
- Land Use Planning

MFEPD
- Donor Co-ordination
- Control of Funds
- Programme Monitoring

MPA
- The role is not yet well defined, but the former LGPOs who were in MLGRUD responsible Community Leadership mobilisation and training have been moved to this ministry.

3.2) CO-ORDINATION

MLGRUD is responsible for the coordination of NRWSS projects at National, Provincial, and particularly IRWSS projects at District level. It is important to note that this coordination role should not be mistaken for a management role. No ministry has the power to direct the actions of any other. As such work is based on the consensus of the involved ministries

MLGRUD fulfills its coordinating role by mediating between the implementing ministries. In more specific terms, MLGRUD is responsible for producing integrated documentation for District projects, preparing integrated plans, and monitoring and reporting on project progress as a whole. Each involved ministry, meanwhile, is responsible for the detailed planning of its own inputs, reporting through its own standard channels to Province and Head Office, and making its own contributions to the preparation of integrated plans and reports. The NAC, PWSSCs, and DWSSCs are the key coordination bodies.

4) KEY POLICIES

4.1) DECENTRALISED PLANNING

NAC and its Sub Committees is responsible for guiding the national programme. The NAC sits at the top and is replicated at the Provincial and District level with Water Supply and Sanitation Sub Committees. The District Subcommittee is responsible for planning (preparation of proposal and annual implementation plans), implementation, and monitoring and reporting on project progress to the NAC through the provincial committees. The District Council is involved in approving the project proposal and the annual implementation plans.

Annual and half-annual district workshops play an important role in scheduling the inputs from the various agencies. Activities are grouped into three main categories:

1. Mobilization, Training and education
2. Construction and installation
3. Community based operation and maintenance

The planning framework used in the integrated approach can be characterised by a combination of *Bottom-up approach* where districts are preparing proposals, implementation plans and progress reports and a *Top-down approach* where the NAC develop planning guidelines and approve proposals submitted from the district level.

4.2) CHOICE OF TECHNOLOGY

The technology choice is based on low cost facilities which fall within the available financial framework of the programme. The programme components are listed below:

Primary water supplies

- Shallow wells (hand dug)
- Spring protection
- Deep wells(blasted)
- Boreholes
- Rehabilitation of existing water points

Piped schemes

- New constructions and rehabilitation of existing schemes, is postponed until a cost recovery policy is being developed.

Sanitation

- Blair latrine (ventilated improved pit latrine)

Other components

- Health and hygiene education
- Community mobilization
- Operation and maintenance

All wells are fitted with handpumps, shallow wells with bucket pumps and deep wells and boreholes with bush pumps. Since the pumps are manufactured in Zimbabwe, spare parts are available in the country. The Blair latrine is designed in Zimbabwe. Except for flyscreens and cement all materials required for construction are available in the country. Over the last 2 years, Zimbabwe has been facing a shortage of cement to meet the requirements within the programme, cement has been imported from Zambia using foreign currency made available by External Support Agencies (ESA). Recently there has been a shortage of Galvanised Steel pipes used in the pump fittings. Here also foreign currency available through ESA is being used to avail the needed inputs into the manufacture of these pipes.

4.3) COMMUNITY PARTICIPATION

Community Participation is a major feature of IRWSS projects, and is vital to the long-term success of the national programme. MCCD is responsible for spearheading community mobilization and participation at Ward and Village levels. Officers from this ministry are responsible for ensuring that the necessary groundwork for successful project implementation is laid through mass education, and for providing management assistance in the organization of community inputs. When the project is complete, MCCD remains in close touch with communities and work with them on grass-roots follow-up projects after the implementation phase is over. Communities are expected to contribute to the project in a number of ways, as indicated in the chart below. Community Participation is a continuous feature of IRWSS project development, with communication channels being kept open at all times. Community involvement is be encouraged from the very beginning, with consultations being held at grass-roots level from the beginning of the project preparation phase onwards. The better informed communities are, and the more involved they feel they are, the easier project implementation becomes. The chances of the long-term maintenance of water and sanitation facilities are also much greater.

Community Inputs, IRWSS Projects

Project Planning	*Communities are involved in the project preparation and planning process, and assist with the collection of data for ward inventories*
Water Point Siting:	*Communities are consulted over the siting of new water points.*
Shallow Wells:	*Communities dig shallow communal wells with assistance from MOH.*
Deep Wells;	*Communities are required to dig the first 3 to 4 m, or to the level of hard rock if this is sooner, before DDF well sinking teams take over.*
Boreholes:	*Communities gather locally available materials and assist in the construction of headworks. This also applies to headworks for Deep Wells.*
Blair Latrines:	*Householders contribute substantially to the construction of their own latrines by providing local materials and paying latrine builders. Householders are also responsible for pit excavation.*
Maintenance:	*A Water Point Committee, made up of community volunteers, is established at every water point and is responsible for the day to day care, maintenance and hygienic use of the water point. One or two members of each committee are trained by DDF as Pump Caretakers.*
Rehabilitation:	*The community provides locally available materials and assists in the construction of headworks where required.*

Follow-Up Projects — *Communities are encouraged to undertake follow-up activities on completion of the IRWSS project, such as the development of community gardens, both on the basis of self-help and with Government assistance.*

4.4) MAINTENANCE

The development of a sound operation and maintenance system is of crucial importance to the long-term sustainability of District IRWSS projects, once the installation phase is over. There would be no point in developing new facilities if no provision is made to keep them in good operating order. In order to ensure that water points are kept in good working order, a 3-tier operation and maintenance system has been developed. The development of this system is the responsibility of DDF. The three tiers in the system are made up of volunteer Pump Caretakers at Village level, Pump Minders at Ward level, and a District Maintenance Team at District level. As far as possible, routine care and maintenance of water points is a community responsibility, with technical back-up being provided by DDF through the second and third tiers of the system.

Maintenance of Blair Latrines is the responsibility of the individual households which own them. MOH provides advice to householders on correct use and maintenance procedures.

5) PROGRAMME OBJECTIVES AND TARGETS

5.1) PROGRAMME OBJECTIVES

5.1.1) Programme Goal

Zimbabwe's goal in the rural water supply and sanitation sector is stated the NWMP as follows:

> **"...providing the entire communal and resettlement area population with access to safe and adequate (drinking water and sanitation) facilities by the year 2005."**

5.1.2) General Objectives

The general objectives of the national programme are to improve health conditions and quality of life of rural population in the Communal Lands through:

- **Improved provision of safe and adequate water from Primary Water Supplies (PWS)**
- **Increased provision of improved excreta disposal facilities through the construction of Blair Latrines**

5.1.3) Specific Objectives

The specific objectives of the programme are:

- **to provide adequate and safe protected drinking water supplies for all**
- **to ensure that every household has <u>at least</u> a Blair Latrine**
- **to rehabilitate all existing water points to national standard, including the provision of headworks**
- **to promote Health Education and Community Participation so as to encourage safer use, care and maintenance of the facilities provided**
- **to ensure sustainability through the development of a 3-tier maintenance system, based on community management and preventive maintenance of every water point**
- **to strengthen decentralized planning and coordination of rural water supply and sanitation projects.**

In order to achieve these goals, a phased approach to implementation has been developed. Phasing is apparent at two levels.

5.2) PROGRAMME TARGETS

5.2.1) Service Level Targets

To help clarify targets and objectives for District projects, a two-phase approach to reaching acceptable service levels has been agreed upon. Districts will need to pass through both phases before the overall goal of safe water and sanitation for all is achieved.

According to national policy, Service Level 1 is achieved in rural water supply coverage when:

- **all people in the Communal Lands and Resettlement Areas are supplied with safe water from a protected Primary Water Supply (PWS).**
- **a 3-tier Operation & Maintenance System has been established.**
- **all Primary Water Supplies are in full working order and supplied with headworks.**
- **Health Education has been included as part of the project.**
- **Community participation has been encouraged in planning and implementing the project, with emphasis on village-level maintenance of water supplies.**
- **Service Level 1 is reached in sanitation coverage when 50% of households have at least a Blair Latrine. (Coverage will however vary from Ward to Ward in a District)**

The first phase of district project activity should take 4 to 6 years to complete, depending on the existing level of service. By the end of the first phase, clean water should be available as a basic provision to all of the rural population, though some may still have to walk a kilometre or two to the nearest water point. Once this level has been reached, intensive water point development activity ceases in the district for the time being while other districts in the Province implement projects up to the same level. However development of water points will continue to keep up with the population growth.

During the intensive period of project activity, water and sanitation improvements are undertaken simultaneously. Sanitation improvement, however, generally requires more time than Borehole Drilling and Well Sinking. For this reason, the Latrine building programme in most districts will probably continue after Service Level 1 for water has been reached.

When most of the Districts in a Province have reached, or are close to reaching, Service Level 1, follow-up projects will be introduced to raise service to Level 2. Each district will remobilize for a second water and sanitation project, rejoining the ongoing sanitation component, and develop additional water points until Level 2 is reached. A break is necessary between the first and second phases to allow all districts to have equal access to the available resources in a reasonable period of time, and to allow factors such as population growth and migration to be taken into account in the implementation of the second phase.

Service Level 2 is reached in a District when:

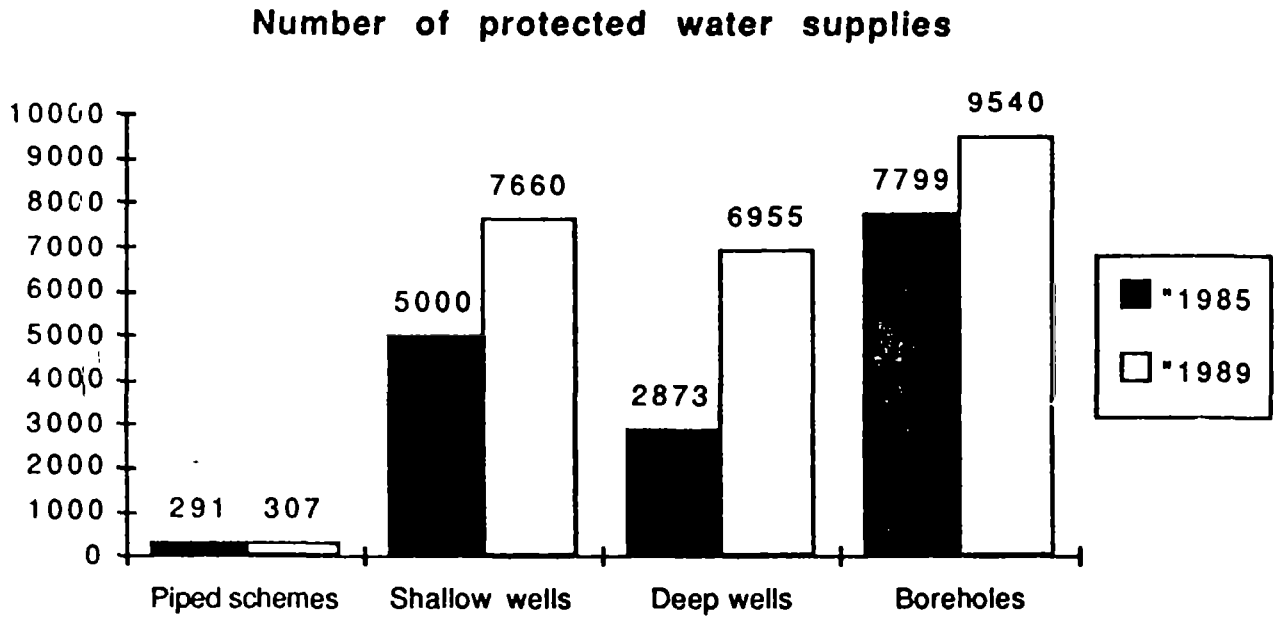
- **everyone has access to safe drinking water supplies from a Primary Water Supply within 500 metres of home**
- **every household has at least a Blair Latrine**

In the draft Five Year Development Plan 1990-1995 it is targeted on the basis of the experience gained so far and the implementation capacity that Phase 1 service level be reached by the year 2000.

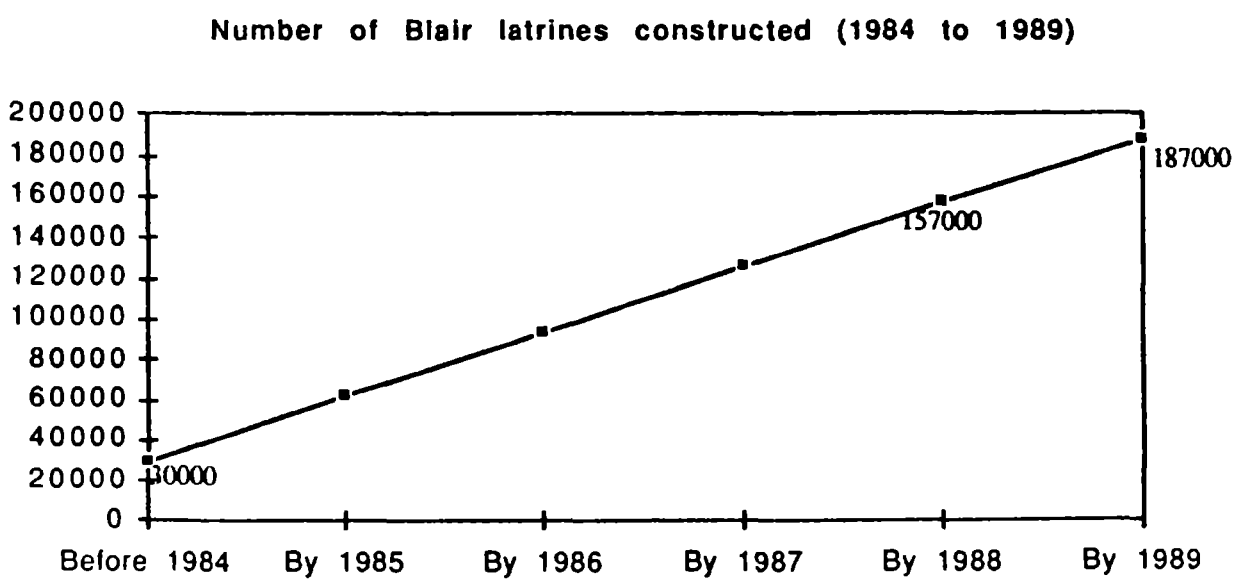
6) CURRENT PROGRAMME STATUS AND ACHIEVEMENTS

6.1) PRESENT SERVICE LEVELS

The table below shows the number of protected water supplies in communal lands in 1985 and 1989.



The term Shallow Well Unit (SWU) has been introduced as a planning tool for calculation of water supply coverage. The SWU is based on the capacity of a shallow well to serve 50 people (1 SWU), a deep well to serve 150 people (3 SWUs), and a borehole to serve 250 people (5 SWUs). Water coverage is 100% when the total population is being served by one SWU per 50 persons. National coverage has increased from 39% in 1985 to 74% in 1989. This figure does not reflect the uneven distribution of water points among the different wards, neither does it reflect the completely or partially non-functional water points (calculated to be approx 30%) It may therefore be more correct to say that the actual provision of safe water supplies in 1989 is closer to 55 %.



If the sanitation coverage is 100 % when each household of 6 persons has its own Blair latrine, coverage has increased from 16 % to 21 % during the period 1985 to 1989.

6.2) CURRENT PROGRAMME OUTPUTS

With present activity levels maintained for construction of primary water supplies, the NAC Phase 1 targets are well within reach even without increasing the present implementation rate significantly. The **projected** annual requirement for new Shallow Well Units (SWU) over the period 1989 - 2000 is approximately **6 000 SWUs** per annum. An assessment of **current** average annual outputs of SWUs in the various types of water and sanitation projects throughout the country suggests a figure close to **9 500 SWUs** per annum.

Average Annual Output of SWUs by Type of Project

TYPE OF PROJECT	AVERAGE ANNUAL OUTPUT OF SWUs
Donor funded:Integrated	1 311
Government funded	4 638
Donor funded: Non-Integrated	839
NGO Implemented	1 361
Other (Gutu, Mat South)	1 413
OVERALL AVERAGE	9 562

Sanitation coverage has increased from approximately 16% to 21% during the period 1985 to 1989, with approximately 157 000 Blair latrines built during that period. Based on estimates of the number of additional facilities required between 1989 - 2000, an annual production rate of approximately **46 000** Blair latrines is necessary. At present the average annual production rate is estimated to be around 36 000, however with improved supplies of cement and transport in the districts, this average can be significantly increased and the NAC Phase 1 target of 50% coverage may be possible.

6.3) INSTITUTIONAL ACHIEVEMENTS

6.3.1) National Action Committee

One of the major institutional achievements of the Rural Water and Sanitation Programme has been the establishment of the National Action Committee as discussed above (see Institutional Responsibilities)

6.3.2) Water and Sanitation Sub-Committees

Water and Sanitation Sub Committees have been established in all 8 Provinces. All the 16 Districts currently in implementation have Sub Committees. In addition to that about nine other districts which have prepared project proposals have Sub Committees formed. Project proposals are prepared by the District Water and Sanitation Sub Committee and approved by the Provincial Water and Sanitation Sub Committee and the National Action Committee. District sub-committees meet every month. Provincial sub-committees meet at least once a quarter, and in some instances more often especially where there is more than one District project underway in the Province.

6.4) MANPOWER ACHIEVEMENTS

The Rural Water and Sanitation Programme has made drastic strides in the area of manpower especially in creating employment and imparting skills through training. It is however difficult to measure the qualitative aspect of the achievement but figures are given below of the quantitative achievements. Assessment and figures can only be given for the changes that have taken place in the Civil Service structure. It has not been possible to give an assessment of the employment created within the NGOs.

MLGRUD: In this ministry Water and Sanitation activities are being co-ordinated by the National Co-ordination Unit for Rural Water Supply and Sanitation which is a direct creation of this programme. However the Unit has not been established as part of the Civil Service and as such is currently filled by expatriates and local consultants

DDF The Water Division of DDF was established in 1987 as a distinct arm as a result of this programme and posts have been created here for the purpose of this programme.The fund now has an establishment of

1 x Chief Water Engineer
1 x Operations and Maintenance Engineer
1 x Operations and Maintenance Technician
1 x Operations and Maintenance Assistant Technician
8 x Provincial Field Officers
8 x Senior Field Officers
55 x District Field Officers
55 x Supervisors
134 x Water Supply Operatives
54 x Clerks
565 x Pump Minders (* these are casual workers)

The post of the Chief Water Engineer is currently filled by an expatriate. DDF also employs casual labour (Headworks Builders and Well blasters) during project implementation which is usually paid out of the project funds.

MCCD: This ministry has been plagued by changes in the Civil Service which have affected the structure of the ministry continuosly. A Community Participation Support Team has been established filled by local consultants 4 Community Participation Co-ordinators and 8 Community Participation Officers. This team works through the establishment of Community and Cooperative Officers at Provincial and District Levels.

MEWRD: The expansion of the Groundwater Branch of this ministry can be directly attributed to this programme. The Ministry before this programme had only 6 hydrogeologists posts in the branch and now have an additional 13 hydrogeologists posts. There used to be only 5 posts of the Drilling Superintendent but now have 11 posts. There has also been an increase in the number of supporting staff with 3 Advisors directly related with the programme and a further 5 who among other things are involved in the programme. With the acquisition of 10 new air rigs there has been also an expansion in the fleet crew though figures were not available on this.

MOH. Here the Department of Environmental Health Services has been established but only with 3 established posts including the Director and the Chief Environmental Health Officer and local consultants together with some Advisors at Head Office level. It also has an establishment of Provincial Environmental Health Officers, District Environmental Health Officers and about 700 Environmental Health Technicians at Ward level.

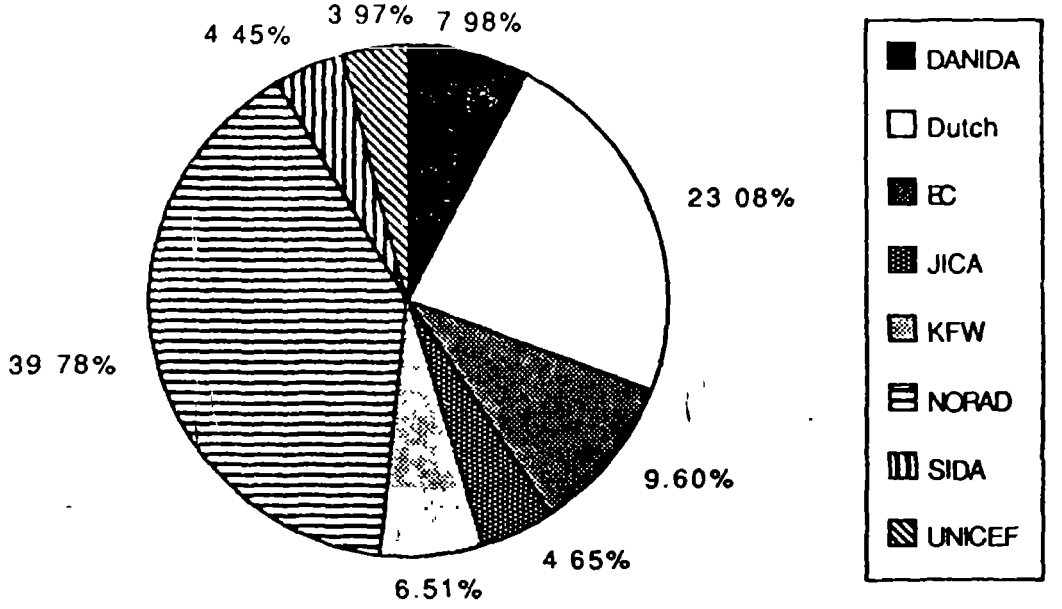
7) PRIOR AND EXISTING INVESTMENTS AND FUTURE REQUIREMENTS

The funding of the Programme has been jointly by Government and ESAs. The ESAs have financed the developmental costs through the District projects and Institutional Support in the form of Head Office Support projects. The Government on the other hand has financed developmental costs through its PSIP projects and now with the Mutoko Integrated District project. The Recurrent costs have been in the main financed by the Government, but however the ESAs have also supported project specific Recurrent costs like the Vehicle Running Costs and the Travel and Subsistence especially during intensive implementation to maintain the pace. A significant contribution has been forthcoming from the NGOs. In the past no recognition was being given to this source but now due recognition is awarded to the contribution of NGOs both in terms of the implementation capacity and output and investment. Finally there is a significant contribution which comes from the community. The table on Community Inputs, IRWSS Projects (see Community Participation) clearly reflects the requirements placed upon the community. Though no monetary value has been attached to this contribution it is appreciable that the communities make a significant contribution in kind and at times in cash in respect to the latrine construction. .

7.1) ESA SUPPORT

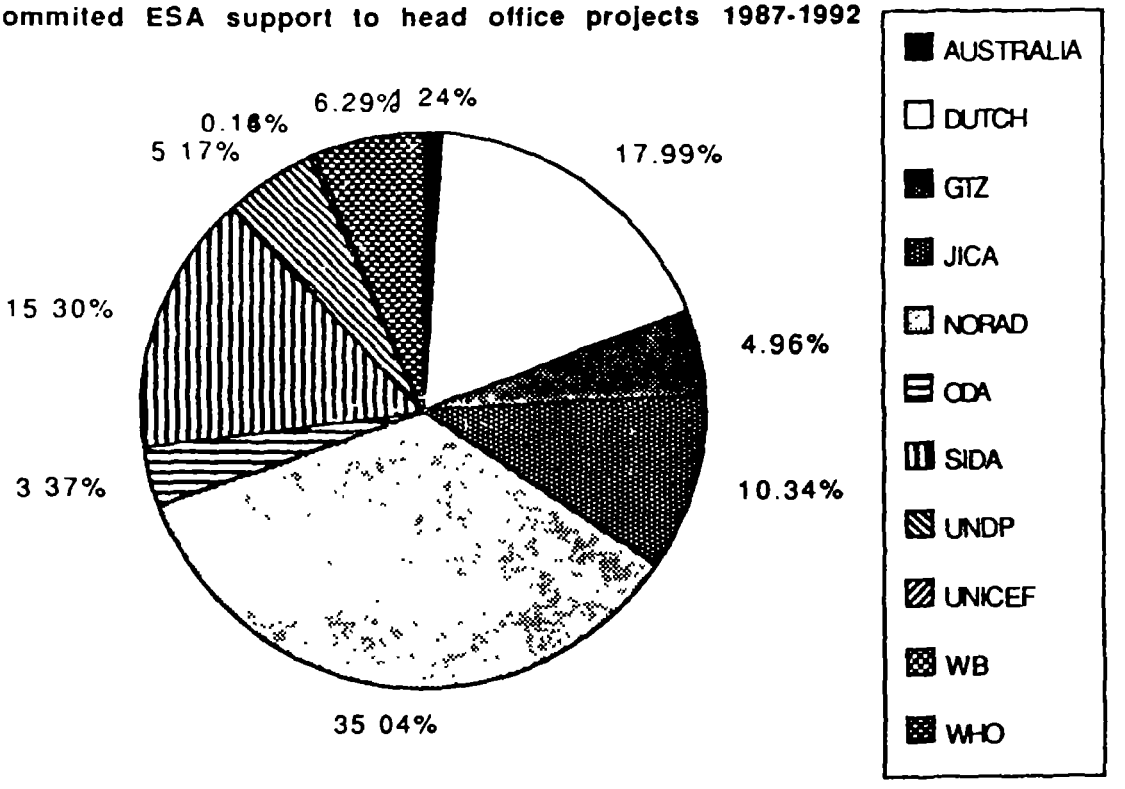
ESA's commitments to district projects between 1987 and 1992 are calculated at Z$ 61,5 million (1 Z$=0,40 US$) Relative contribution from the various ESA's are indicated below:

Commited ESA support to district projects 1987-1992



Commited support to head office projects between 1987 and 1992 is estimated to Z$ 48.3 million with a distribution among donors as indicated below:

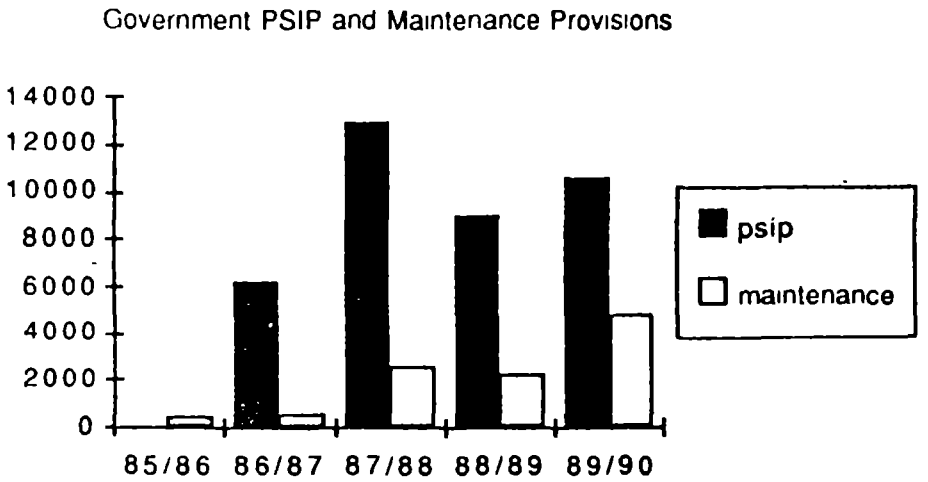
Commited ESA support to head office projects 1987-1992



7.2) GOVERNMENT SUPPORT

The chart below shows the Government of Zimbabwe's contributions to the sector development It should be noted however that the nature of the Government accounting system does not make it possible to reflect all recurrent costs incurred by the Government on behalf of the sector except maintenance costs only. This is because most recurrent expenditures are bulked for each ministry and it is impossible to divide these expenditures to the various activities of each ministry. What can be demonstrated however are the maintenance costs. It seems however from the chart that the maintenance costs are on the increase though there does not seem to be a definite pattern to the Public sector Investment Programme (PSIP) allocations which funds Capital developments.

Government Support to the Sector



7.3) NON GOVERNMENTAL ORGANISATION'S SUPPORT

The Non Governmental Organisations are making a contribution to the sector of about Z$ 18 million over the five year period of 1987 to 1992. The insufficiency of the information makes it difficult to give a comparative representation. The estimate given is based on the limited information available.

7.4) REQUIRED INVESTMENTS

According to the objectives in the draft 5 Year Development Plan for Rural Water Supply and Sanitation for 1990-1995 at least the ongoing 16 integrated district projects should be completed and projects should have started in all the remaining 39 districts by 1995. Requirements in order to meet service level 1 for the population by year 2000 are estimated to 6000 SWU and 46000 Blair latrines per annum. The annual costs to meet these requirements are calculated to Z$ 25 million.

The constraints faced by the implementors of this programme have mainly been those that emanate from the economic environment in which the programme is operating within The problems are thus more of national economic problems rather than being directly in the sector alone. The sector however has problems of its own which are not necessarily induced by the national economic framework.

8.1) INSTITUTIONAL CONSTRAINTS

8.1.1) Complexity

The programme is a massive structure which requires clear lines of communication throughout. The involvement of many ministries make it imperative that there is uniform commitment on the parts of the involved agencies. However this commitment is hardly found in the same proportions from each ministry. The bureaucratic structure of the programme also at times hinders faster decision making.

8.1.2) Impact of Land Reorganisation

The Land Reorganisation issue has had a bearing on the implementation of the programme. The policy issues related to this still seem unclear but the programme has accommodated the whole concept into the planning of the projects as it has a bearing on the Community Participation. It still however slows down the rate of implementation as this is a time consuming exercise which is exacerbated by the staff shortages in the Agritex Dept.

8.2) MATERIAL CONSTRAINTS

8.2.1) Cement Shortages

One constraint that has threatened development in the sector is current national Cement shortage. This has been affecting the programme seriously for some time. Solutions that have been adopted have only been short term ones (i.e importation of cement from Zambia). While this has helped the programme stay on its feet urgent long term solutions are still required to solve the problem as all the infrastructure being installed requires cement. This notably has to go down as a constraint that retarded development.

8.2.2) Shortage of Galvanised Steel Pipes

This is a current problem which has been the result of the non availability Foreign Exchange for the manufacturers to import the raw zinc and steel plates for the manufacture of these pipes. These pipes are used in the installation of borehole pumps. This has resulted in a large number of boreholes already drilled being in disuse. This has obviously effected the output particularly in last Financial Year.

8.2.3) Equipment Constraints

Another constraint that has been heart felt in the sector is the shortage of equipment and raw materials. This is particularly so with any equipment or material that has a foreign exchange input. This includes the shortage of Office equipment, tools and spare parts. There has been shortages of handpumps which are being manufactured in Zimbabwe as the demand has been rapidly increasing. This is a national problem which the sector has also had to bear.

8.3) FINANCIAL CONSTRAINTS

8.3.1) Cumbersome Financial Procedures

Another general constraint that has caused unnecessary delays in project implementation on the part of Government agencies is the cumbersome financial procedures. The centralisation of all Government payments has meant that some suppliers have had to go for six months to a year without payment. This unsatisfactory situation has caused incredible difficulty in getting supplies especially from the small rural traders who can not afford that long delay.

8.3.2) Limited Financial Resources

Perhaps the biggest constraint to the sector is the availability of finance for development. It has been NAC's objective to start up one district in each Province each year but this has not been possible. With decentralised implementation of the projects the capacity to implement a large number of projects is possible since the Provincial and National offices only offer back up services but the availability of finance has limited the number of projects that can be undertaken. This has detected the pace of development.

8.4) MANPOWER CONSTRAINTS

8.4.1) Technical Assistance and Skilled Manpower Requirements

The Manpower problem has been evident in the economy since Independence and Technical Assistance has been required in the sector. What has generally been lacking is personnel with the right kind of training and experience especially in the technical areas. On the other hand where this personnel is available in the country the Civil Service has not been attractive enough for the required calibre. Technical Assistance has been used to fill up this gap. There has also been an increasing use of local consultants as part of the Technical Assistance. This builds up the indigenous capacity but this is only short term support to the sector which can not be maintained with the Civil Service salaries. It is notable however that the Technical Assistance provided to date has in the main been at Provincial and Head Office levels. At the District level Technical Assistance has only been provided in respect to the Community Participation where short term Local Consultants are employed for two years to assist in the intensive initial mobilisation. The only other case has been in Kariba District where the geographical nature of the district has necessitated the employment of a Local Consultant to be in the project area which is distant from the administrative centre. Thus the issue of qualified, experienced local personnel still remains a challenge for the future.

8.4.2) Staff Shortages

A notable constraint for the Government agencies in the sector has been the drift of qualified personnel to the Private sector. The low Public Sector salaries relative to the Private Sector salaries have always allowed for the drift of personnel. This is particularly so with experienced technical personnel whose replacement and/or training is very time consuming. An allied problem is the difficulty that is encountered in trying to get new posts created in the Civil Service. This has forced a reliance on Technical Assistance (expatriates and local consultants) even in posts which could be filled with local personnel.

8.5) TRANSPORT CONSTRAINT

Rural development is not possible without transport and thus this has to feature as one of the crucial constraints that has faced the sector. The unavailability of efficient transport is not unique to the sector but is a national economic problem. Transport in this sector is required to supervise the projects and to ferry materials and tools to the project sites which are always distant from the Administrative centres As such lack of transport automatically means a retardation in the project implementation rate. Solutions that have been undertaken have really been to request Donors to support in the provision of transport. This can not be possible with any locally funded project as there will be no foreign exchange available to facilitate this. However even when Donors have provided the foreign exchange for the kits to be imported the period it takes to go through the procedures to get the vehicles has meant that projects have had to go without vehicles for a year or so. In the same respect the unavailability of spare parts has continually dwindled the fleet at times even for minor repairs. The transport management of the Government vehicles has also been constraining in that the funds paid for maintenance purposes to CMED is all in local currency and this does not avail CMED with the required foreign exchange to buy the spare parts.

8.6) SUSTAINABILITY

The issue of sustainability has been carefully considered in the choice of the technology adopted. The technology is inexpensive and simple and thus can be maintained by the community. The programme has established a community based three tier maintenance system. The Bush and Bucket pumps used are manufactured locally. Problems have only arisen when the manufacturers have failed to meet the demand. Also problems have been met where NGOs have installed pumps which are not standard because all the maintenance is done by DDF. This has simply been solved by asking all participants in the sector to adopt the same technology as all installations will be handed over to DDF for maintenance. The major constraint that is related to sustainability is that Central Government is bearing the maintenance costs to date (an average of $186 a year per water point). However as the programme is expanding and more installations are being erected the burden is heavily increasing Treasury has hinted that it can not continue to bear the burden alone. Constraints have also been realised where there are piped water supply schemes as these are very expensive to maintain and provisions from Treasury are not adequate. Consequently NAC have not adopted this technological option until some cost sharing mechanism is in place.

9) FUTURE STRATEGIES

9.1) GENERAL STRATEGIES

The present approach to development of rural water supplies and sanitation in the communal lands will be further consolidated and strengthened. The long term sustainability of the development in the rural areas is the main issue of concern. Therefore the new approach to development using the integrated model of project implementation will be further expanded. Other more conventional forms for project implementation will also continue but at a reduced magnitude.

The significant contributions of both funding and implementation by the NGOs will be recognized, and with improved co-ordination of the NGOs, all water and sanitation projects will move towards the integrated approach which focuses on decentralized planning and implementation of projects, community participation, health and hygiene education, establishment of a community based operation and maintenance system where this is not already established.

The principle of equity will be used fully in this programme. This means that all rural people will be assisted to the same level of service through public funded project activities. Due to financial constraints, basic services will first and foremost be provided. This means that since piped services costs 5 to 10 times more than primary water supplies and on site sanitation facilities, if all people are to be served only primary water supplies and sanitation (Blair Latrines) can be provided using government subsidies or grants. Where piped water supplies are planned, the users will have to carry the additional costs for having higher than primary services through an established revenue collection system. Due to serious financial constraints, operation and maintenance of existing schemes is inadequate and poor.

9.2) STRATEGIES TO OVERCOME PAST CONSTRAINTS

In looking at the past constraints which are likely to face the sector in the next five years there are those constraints whose solutions lie outside the scope of the sector and as such suggested solutions to these can only be recommendations or short term solutions to facilitate the work to go on

9.2.1) Institutional Constraints

Complexity: This issue has to be resolved alongside that of the institutional responsibilities. It is the general opinion that institutional reorganisation must be instituted. The heavy duplication of efforts within the integrated approach can be streamlined and possibly reduce the number of participants in the programme. This in itself could reduce the complexity of the programme.

Land Reorganisation: The Land Reorganisation issue has more or less been accommodated into the programme by taking it into consideration in the planning exercise. Continued support should be rendered to the Dept of AGRITEX to enable them to work on the land use plans at the pace of the programme. However the staff shortages that they are facing will still be a problem affecting the implementation rate.

9.2.2) Material Constraints

Cement Shortage: The Cement shortage is a problem which rightly falls outside the scope of the sector and permanent solutions lie in the hands of other responsible authorities. It is recommended that long term solutions be found to increase the current cement production capacity within the country. Within the limits of the sector the NAC should however continue to search for a solution within Zimbabwe.

Galvanised Steel Pipes Shortage: The shortage is a direct result of the Foreign Exchange problems in the national economy. Long Term solutions lie in the relevant authorities responsible macro economic management. An increase in the steel production will also ease the situation as demand is currently outstripping supply. However in the short term in order to facilitate the continuation of the programme, the NAC should wherever foreign exchange is available from External Support Agencies to assist the manufacturers in the procurement of the necessary raw materials. Participation in Commodity Import Programme can alleviate the situation in the short term as well.

Equipment Constraints

The Equipment problem is a national one which is strongly related to the whole foreign currency problem which is facing the country. As such the NAC's strategy to this is to use Donor funds which are available in foreign exchange for this purpose. It is recommended that the Donor Funded projects be used for this purpose. It thus becomes paramount that these projects be properly co-ordinated to ensure efficient resource allocation and utilisation. It is further recommended that wherever possible participation in Commodity Import programmes be encouraged to facilitate this need. The Commodity Import Programmes should be utilised in a co-ordinated way and the newly formed Procurements Sub Committee could be the forum for this.

9.2.3) Financial Constraints

Cumbersome Financial Procedures: The Cumbersome financial procedures is a problem within Government hands though the relevant authorities are outside the sector. The sector thus recommends that there be a streamlining of financial procedures by decentralising the payment facilities within Government. This will ensure faster payment of invoices and increase the credit worthiness of the Government agencies to the suppliers

Financial Limitations: The Financial Limitation constraint should be solved by making more Donors aware of the programme and interesting those Donors who are currently not involved in the sector. Of great importance here are reporting procedures, monitoring and evaluation which have to be maintained extremely well and information flow kept up. Good reporting to the Donors in respect to Financial accounts progress reports will go a long way in maintaining and winning Donor confidence. The NAC has invested great efforts in this and will have to continue to do so.

9.2.4) Manpower Constraints

Technical Assistance: The requirement for Technical Assistance is bound to persist into the future. It has been recommended and also undertaken that there be understudies to the expatriates. This exercise is feasible and effective in some instances. In certain cases however this has not been possible because of the limitations within the Civil Service. Where however this has been possible the issue then is that of maintaining that trained person. Bonding might be necessary though this is only a short term solution. Training of the local personnel is paramount in this and the long awaited National Training Plan is being developed which should help identify the areas requiring development. It is still recommended strongly that wherever possible technical assistance be provided in advisory capacity.

Staff Shortages: Staff shortages is a problem that falls outside the scope of the sector. Here national economic factors are more at play as well. There is a limit to the salaries that can be paid by the Civil Service because of the Budgetary constraints involved. It will always be that the Public Service salaries will never be competitive with the Private sector. It is anticipated that there will be a continued drain from the Public Sector of experienced personnel. Where gaps will still exist Technical assistance will be used on a short term basis.

Transport is a constraint which is envisaged to continue into the future. This is a problem precipitated by the national foreign currency problem. The NAC undertakes to evade the problem by the use of Donor funds available in foreign currency for this purpose. Transport is the crucial element at play in rural development and due priority must be given to it in the allocation of the foreign currency. The importance of this issue makes it necessary to have proper co-ordination of the use of these resources. The CMED should be provided with the necessary foreign exchange to procure the needed spare parts.

9.2.6) Sustainability Constraint

Technological: Sustainability is the issue that needs immediate attention in the sector. While strong consideration has been given to this issue in respect of the choice of technology it still rests on Government support in terms of maintenance. The three tier maintenance system already in operation in some districts in the country is being supported by the government.

Financial: In 1989 it became clear that Treasury could not continue to bear the ever increasing burden of funding the whole maintenance. Though it was never really spelt out as to the expected limit of Government funding it was accepted that steps had to be undertaken to share the burden with the beneficiaries. Thus the issue at stake is more of a cost sharing concept between the Government and the beneficiaries. This is a policy issue which also requires political backing in taking it to the masses and is under consideration now. A policy paper has been prepared in respect to this for the Minister of Local Government Rural and Urban Development for presentation to Cabinet. It proposes contribution from the beneficiaries mainly to cater for the maintenance of the facilities. It envisages a cost sharing programme that will involve the Local Authorities. A second paper which is being prepared will now spell out the mechanics of how this cost sharing will take place.

Institutional: It is admitted that the sector suffers from a heavy duplication of efforts which is also questionable as to its sustainability. Well Sinking is currently being undertaken by MOH and DDF, Drilling is being done by MEWRD and DDF and Community Mobilisation by MCCD and MPA (former LGPOs). This duplication is expensive to maintain and is definitely not the most efficient manner of doing the job. The future strategy is to see a rationalisation of the division of responsibilities removing duplication of efforts. In the same breadth a reduction in the number of agencies involved would be cost effective.

Decade Consultative Meeting on Water Supply and Sanitation

Sector Paper on Water Supply and Sanitation in Commercial Farming Areas

Prepared by:
Department of Enviromental Health Services
Ministry of Health

I. Background to Water and Sanitation Provision in Commercial Farms

A. Definition of Commercial Farms

The land base of Zimbabwe includes the following divisions: Urban Areas, State Lands, Communal Lands, Resettlement Areas and Large and Small Scale Commercial Farming Areas. Commercial farming areas are privately owned land areas with freehold title rights in which agricultural production is primarily geared towards marketable crop or livestock production. Historically the 1930 Land Apportionment Act and subsequent amendments restricted these areas to "european" or "african" purchase. Since Independence the racial restrictions on ownership have been lifted. The historical divisions have become known as large and small scale commercial farming areas (LSCFAs and SSCFAs). Commercial farming areas have historically been represented through Rural Councils elected by land-owners. Following the 1988 Rural District Council Act, Government is in the process of amalgamating these bodies with District Councils to form Rural District Councils (RDCs).

For statistical purposes the Central Statistical Office defines a commercial farm as a farm with 5 or more permanent employees and 25 ha or more under crops or 350 head or more of livestock. Much of the data presented below derives from the CSO.

B. Description of Commercial Farming Areas

LSCFAs presently comprise 10,6 million hectares of land, or 40% of the country's land area. Fifty one per cent of this land is located in the top three agro-economic regions of the country. In 1989 there were 4,804 active large scale commercial farms [1] with an average farm size of 2,800 hectares, though this number is slowly declining keeping the farm population relatively stable. Approximately 17% of the present national population (1,5 million people) are estimated to reside in LSCFAs. The average large-scale commercial farm comprises 42,9 households.

SSCFAs are far smaller in scale. There are approximately 8,653 small-scale farms [2] covering 1,07 million hectares representing 4% of the country's land area. The average farm size is 128 hectare and the average farm size comprises a family of 7,7 persons with 1,7 permanent employees and 3,7 casual employees.

The commercial farming sector as a whole is of great economic importance. The sector contributes approximately 90% of all crops marketed through controlled marketing bodies, contributes 10% of the Gross Domestic Product and accounts for a third of the country's total export earnings. The sector employs some 22% of the formal sector labour force.

Many [3] farm workers are descendants of migrant labourers from Mozambique or Malawi. In the early 1980s the promulgation of minimum wage legislation has resulted in a shift from permanent to non-permanent (contract, temporary or casual) terms. This has affected labour stability and requires the development of differing facilities.

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1 A further 258 farms are reportedly inactive.

2 The ZNFU claims to have 9,600 registered members. For consistency the CSO figure is used in this paper.

3 Sample surveys on LSCFAs show up to 40%.

The health status of farm workers has consistently been found to be lower than other sectors of Zimbabwean society. This has been demonstrated in studies with indicators as diverse as immunization coverage, rate of supervised deliveries, nutritional status, knowledge of Oral Rehydration Therapy and hygiene knowledge. The reasons for this lower health status are a result of a combination of factors. Educational levels are low, living conditions are crowded, income levels are below the poverty datum line and housing and infrastructural provision inadequate.

II. Existing Water and Sanitation Service Levels

The water and sanitation situation on commercial farms was excluded from the National Master Plan for Rural Water Supply and Sanitation and has not been studied extensively at national level. The data presented below derives from the CFU's Annual Farm Survey supplemented by regional studies.

1. Water Supply

Tables 1 and 2 provide details of the numbers of water points currently provided on LSCFA and SSCFAs respectively. The tables also provide a measure of coverage against the guidelines for service coverage developed for the Communal Lands and Resettlement Areas[4].

Table 1 - Domestic Water Supplies in LSCFAs

PROVINCE	No.	FARM SIZE (ha)	NO HHOLDS[5]	NO. WATERPTS PER FARM	% NAC MIN SERVICE LEVEL
Mash. West	1054	1878	43.4	4.0	- 7.8
Mash. East	989	1047	38.8	4.8	+23.7
Mash. Central	479	1574	56.7	4.3	-24.2
Manicaland	602	1335	55.1	10.5	+90.6
Midlands	656	2845	16.0	3.5	118.8
Masvingo	281	6467	70.0	7.10	1.4
Matebeleland	743	4703	20.10	4.60	128.9
Total/Average	4804	2835	42.90	5.54	

4 1 Shallow Well per 50 persons; 1 Deep Well per 150 persons; 1 borehole and 1 tap per 250 persons.

5 Average household size on large scale commercial farms is 5.8 people.

Table 2 - Domestic Water Supplies in SSCFAs

PROVINCE	NO FARMS	FARM SIZE	PERMA'NT HH/FARM	CASUALS PERS/FARM	WATERPTS %	% NAC MIN SERV LEVEL
Mashonaland	2936	124	2.8	4.6	N.A	N.A
Manicaland	1591	68	2.5	3.1	N.A	N.A
Midlands	1335	176	2.8	4.6	N.A	N.A
Masvingo	2017	108	2.5	4.1	N.A	N.A
Matebeleland	774	165	2.9	1.9	N.A	N.A
Total/Average	8653	128.0	2.7	3.7	0.05%	95%

On the basis of these basic criteria Table 1 shows that the major areas of deficit with respect to numbers of water points in LSCFAs are Mashonaland Central and Mashonaland West. Progress has been made in provision of improved water sources on commercial farms. The average numbers of water points per farm has increased from 4,7 in 1987 to the 1989 figure of 5,54.

These encouraging figures however obscure the skewed distribution of water points within provinces. Some farms have a higher standard of service and others a much lower level of service. A 1988 survey in Mazowe, Centenary and Bindura found a variation between 55,2 and 9% of farm worker households obtaining water from unprotected sources. There remain a minority of cases where water of inadequate quality is being supplied, such as the case of dam or river water being supplied untreated through standpipes. The great majority of improved water sources are boreholes.

There is little data available for SSCFAs on water provision and no regional breakdown. From field visits and ZNFU information it appears that water supplies are inadequate both in quality and quantity. A few of the wealthier small-scale farmers have boreholes (ZNFU estimate is 5%) but the majority (95%) depend upon water from unprotected wells or river water.

2. Sanitation

Tables 3 and 4 present the available data on sanitation provision in LSCFAs and SSCFAs respectively. The tables also provide a measure of coverage against the guidelines for service coverage developed for the Communal Lands and Resettlement Areas [6].

Sanitation remains inadequate on both LSCFAs and SSCFAs and well behind MOH guidelines. A variety of solutions, other than Blair VIPs have been attempted by large-scale farmers, including communal sanitation facilities and provision of commercially produced VIP latrine kits. Communal toilets have found to have major hygiene and usage problems and the commercial kits are not cost-effective.

[6] 1 Blair VIP or better facility per household.

Table 3 - Blair VIPS on Large Scale Farms

PROVINCE	NO ACTIVE FARMS	HSEHOLDS/ FARM	NO BLAIR VIPS/FARM	% NAC GUIDELINE
Mash. West	1054	43.4	13.50	-68.9
Mash. East	989	38.80	13.50	-65.2
Mash Central	479	56.70	25.60	-54.9
Manicaland	602	55.10	18.00	-67.3
Midlands	656	16.00	4.10	-74.4
Masvingo	281	70.0	8.30	-88.1
Matebeleland	743	20.10	4.60	-77.1
Total/Average	4804	42.90	12.51	-70.8

Table 4 - Blair VIPS on Small Scale Farms

PROVINCE	NO. FARMS	PERM.HHS/ FARM	NO.BLAIR VIPS/FARM	NAC % GUIDELINE
Mashonaland	2936	2.80	n.a	-87
Manicaland	1591	2.50	n.a	-86
Midlands	1335	2.80	n.a	-87
Masvingo	2017	2.50	n.a	-86
Matebeleland	774	2.90	n.a	-87
Total/Average	8653	2.70		-86.5

III. Prior and Existing Programmes

The priority for Government sector development through the 1980s has been in Communal Lands and Resettlement Areas. Several activities have been initiated to improve the social conditions on commercial farms. The major thrust for environmental health improvement has come from the Ministry of Health.

A. Ministry of Health Farm Health Worker Scheme

The first pilot project to attempt to improve social conditions on LSCFAs began in Bindura in 1981. The scheme implemented by MOH staff with Save the Children Fund (SCF) (UK) trained Farm Health Workers (FHW), provided pre-school facilities and promoted improvements in water and sanitation. Good progress was achieved in sanitation while water supply improvement was disappointing.

Provision of latrines was planned on the basis of one Blair VIP latrine per family. A range of technical/operational methods were tested. These included construction of pole and dagga,

concrete and brick latrines by the community, contractors and farm builders. The preferred option was for farm builders to be trained to construct brick Blair VIP latrines with brick lined pits. Community participation included siting and in some instances digging of pits.

Various technical options were attempted to improve water supplies, including well development, hand-augered tubewells and boreholes. Borehole supplies were generally supplied with inadequate storage tanks and too few water points. Reticulated supplies pumped from surface sources were expensive and problematic. The automatic chlorinators used did not always work and storage tanks were open. The reticulation systems to communal taps were frequently inadequate.

The Bindura scheme was replicated in other areas of Mashonaland Central, East, and West and Manicaland. Success was dependent on the level of outside support supplied and the degree of support by individual farmers. Where FHWs were paid by the farmers sustainability was less of a problem while community support often waned. The UNDP-assisted PROWWESS programme (INT/83/003) supported SCF (UK) in attempting to duplicate the Bindura project in Shamva and Mvurwi districts. A second phase of this project was implemented from 1987 to extend the scheme to other areas of Mashonaland Central. In Manicaland a slightly different approach was used. Farmers were obliged to support FHWs who were trained by the MOH. Progress in water and sanitation has been equally slow. The Swedish International Development Agency (SIDA) has assisted the MOH through support for a FHW scheme in Mashonaland East as well as support for a number of studies on the socio-economic situation of farmworkers. In addition to support for FHWs, Mashonaland West has initiated a practice whereby an Environmental Health Technician is available to promote environmental health improvement on commercial farms.

The Department of Environmental Health Services following a meeting in Kadoma in 1985 sought to define minimum standards for environmental health on commercial farms. These standards - 1 Blair latrine per permanent household, 1 Blair Latrine per 10 Casual labourers, 10 persons per water point remain long term targets for sector development. Attempts to legislate these standards have not succeeded because of their financial implications and the difficulties of singling out commercial farming areas for enforcement.

B. The Agricultural Finance Corporation (AFC)

The AFC may in principle provide loan finance for improving farm worker amenities but in practice rarely does so because of a lack of the direct improvement in productivity. The National Irrigation fund, which in LSCFAs can only be utilized for irrigation development where wheat is to be grown can fund water development of which some proportion may be used for domestic purposes. In SSCFAs the restriction on wheat production is not applied and this fund is presently being used to fund borehole development among groups of SSCFAs. Again, while these developments are primarily utilized for irrigation development, the farm's domestic water source commonly also benefits.

C. Commercial Farmers Union (CFU)

The CFU representing the LSCFAs have promoted the improvement of better conditions for their member's workforces. At the 1988 CFU Congress the President restated CFU policy on workers' amenities, whereby every farmer must make a commitment to improve the living conditions of farm workers commensurate with the farm viability. The CFU has further recommended that the priorities for farm worker infrastructural development are clean water supply, sanitation and housing. The Agricultural Labour Bureau (ALB) has similarly supported these initiatives.

D. Zimbabwe National Farmer's Union (ZNFU)

The ZNFU representing the SSCFAs have also promoted the improvement of better conditions for their member's workforces. ZNFU has assisted in arranging for utilization of the National Irrigation Fund for general purpose water development on SSCFAs.

E. General Agricultural and Plantation Workers Union (GAPWUZ)

GAPWUZ have a mandate for improving the work conditions of farm workers. At a workshop in March 1988 on Health and Safety in LSCFAs GAPWUZ defined minimum requirements for sector facilities as: one toilet and one water point per house. As in the case of the MOH enforcement of these standards has not proved possible.

F. Ministry of Public Construction and National Housing (MPCNH)

MPCNH chairs an interministerial committee on amenity provision within Commercial Farming Areas. The committee includes representation from the CFU and AFC but excludes the Trade Union. This committee is composed of technical staff and its primary focus in recent years has been technical rather than policy discussion.

IV. Institutional Responsibilities

The sub-sector has the following existing principal institutional responsibilities.

A. Ministry of Health (MOH)

MOH's national responsibility for disease prevention and environmental health improvement includes environmental health improvements in the commercial farming sector. The Department primarily concerned in the Department of Environmental Health Services. Other Departments in the Health Care Services Division, Mother and Child Health - including Health Education, Epidemiology and Communicable Disease Control are also active amongst farm populations. The Ministry has a National Co-ordinating committee for the Farm Health Worker Programme which has the responsibilities for co-ordinating Farm Health Workers, one of whose responsibilities is the promotion of improved drinking water and sanitation.

B. Ministry of Public Construction and National Housing (MPCNH)

The MPCNH chairs an interministerial committee on amenity provision in Commercial Farming Areas whose membership includes the MPCNH, MOH, MLGRUD, MEWRD, CFU and AFC, which examines the provision of housing in LSCFAs. The mandate of the committee is to co-ordinate infrastructure development in commercial farming areas.

C. Ministry of Local Government, Rural and Urban Development (MLGRUD)

The MLGRUD is responsible for the overall management of Rural Councils, the local authorities responsible for commercial farming areas. Following the promulgation of the 1988 Rural District Council Act which provides for the amalgamation of Rural and District councils MLGRUD is instituting a process of constituting the new local authorities which will have authority over commercial and other land bases in the country.

D. Ministry of Energy and Water Resources and Development (MEWRD)

The MEWRD, having responsibility for the nation's water resources has responsibility for all major water development upon commercial farming areas. All dam construction requires MEWRD approval and MEWRD require to be informed of all groundwater development. MEWRD provide assistance in design of all major water works.

E. The Agricultural Finance Corporation (AFC)

The AFC provides loan finance to commercial farmers which can be used for water development. In particular the National Irrigation Fund provides finance for the development of irrigation works for wheat production. Small-scale farmers may borrow money from the NIF for water development not restricted to wheat production.

F. Commercial Farmers Union (CFU)

The large scale commercial farmers are represented by the CFU. The CFU provides a range of services to its members including representation of members in discussion with Government. At its central level the CFU comprises a team of economists, planners, agricultural specialists and an Agricultural Labour Bureau which deals with labour matters. At local level there are farmers associations which meet regularly and ensure rapid communication from the CFU president and council to every farmer.

G. Zimbabwe National Farmer's Union (ZNFU)

The small-scale farmers are represented by the ZNFU. The ZNFU provide similar services, to their members as the CFU excepting that they have far fewer resources at their disposal.

H. General Agricultural and Plantation Workers Union (GAPWUZ)

Commercial farmworkers are represented by a trade union, The General Agricultural and Plantation Workers Union of Zimbabwe (GAPWUZ) to which 15-20 % of the workers belong. This relatively newly formed organization faces the considerable challenge of representing the interests of a widespread, poorly organized and diverse membership with few resources. GAPWUZ's primary interest is improvement of the working conditions of their membership.

V. Key Policies

A. No Subsidies for Water and Sanitation on Commercial Land

Government has taken a clear stand since Independence not to subsidize water and sanitation investments on privately-owned commercial farming land. The onus for provision of adequate services to the farm workers lies with the farmers and the farm workers themselves.

B. Emphasis on Promotion

Government has through a variety of fora campaigned for improved levels of service, and improved environmental health conditions for farm workers. Government's strategy has been to concentrate on promotion to encourage the achievement of minimum standards on all farms. Promotive efforts have been undertaken through national media, preventive health campaigns and Farm Health Worker Programmes.

C. Appropriate Technologies

Through the work of the Blair Research Laboratory government has developed a range of technical options suitable for cost-effective sector provision on farms. The optimum technologies are affordable, culturally appropriate, standardized, locally manufactured and can be maintained with on-farm resources.

D. Builder Training

A strategy which has achieved some success has been the training of local builders in latrine construction, well-sinking and pump maintenance. Farmers can then utilize these local entrepreneurs on an ongoing basis.

E. Farm Health Workers

Farm Health Workers have been identified as key workers responsible for health and hygiene promotion to complement water and sanitation improvements. Farm Health Workers provide the community level workers within the primary health care structure operational in commercial areas. The funding of FHWs should ideally come from the farming community.

F. Financial Incentives

Current regulations allow farmers tax deductions for construction of farm facilities including water and sanitation provision for farm workers. Special concessions are made in the case of small scale farm workers in the operation of the NIF to enable these farmers access to AFC credit for water development.

VI. Programme Objectives and Targets

The overall objective of drinking water and sanitation development on commercial farms is the improvement of the health and welfare of commercial farmers and farm workers.

The specific objectives to reach this overall objective are:

* Development of hygienic practices among all farm households
* Provision of potable water to all commercial farming households
* Provision of safe and hygienic sanitation facilities to all farm households.

Specific targets with respect to water provision are to provide sufficient potable water within 300 m walking distance to increase per capita water use to 25 liters for all farm households. The minimum water quality standards is less than 10 FC per 100 ml. With respect to sanitation the minimum facility of a Blair VIP should be provided to every farm household. For casual workers a maximum of ten persons should share a single Blair VIP.

VII. Current Programme Status and Achievements

Commercial Farming Areas have not been Government's priority in sectoral development and Government's involvement in service provision has been limited to promotion. Nevertheless, its clear stance on the one hand that no subsidized development of private land will be entertained from public resources, together with the creation of a general climate promoting improved facilities for farm workers in keeping with Independent Zimbabwe, have achieved a significant expansion

of service coverage. The clarity of Government's stance has meant that many farmers have been motivated to provide these services at their own expense.

Government's position and the overall programme is highly sustainable. Government has made no promises that has not kept and remains willing to continue to promote improvement of environmental health circumstances.

VIII. Major Constraints

A. Lack of Clear Institutional Responsibility and Weak Sub-Sector Co-ordination

A major constraint to the sector remains in that there is no clear co-ordinating structure for water and sanitation improvement within commercial farming areas. Several ministries have interests and related projects but the locus of primary responsibility is not clear.

B. Uncertainty of Policy Implications

While Government's policy on not investing in private land is clear there has been uncertainty in the extent of Government responsibility, as opposed to the Farm owner's, for the well-being of farm workers. This uncertainty has often delayed the implementation of initiatives in the sub-sector.

C. Lack of Technical Capacity

Many of the institutions in the sector lack the capacity to provide adequate coverage and support to all land bases of the country. With the emphasis on communal land development capacity is extremely limited in commercial farming area development.

D. Ill-informed Technology Selection

Without adequate advisory services farmers are frequently not making optimum decisions regarding sector investments. Costly and non-durable latrines have been constructed and water supply improvements may not meet guideline standards.

E. Lack of Financial Resources

Farmers, especially small-scale farmers, may not have adequate financial resources to make further infrastructural investments. Farm indebtedness, particularly among farmers producing controlled price crops, is rising and farmers and their creditors may be unwilling to worsen this situation with further non-production-related investments.

F. Inconsistent Farmer Attitudes

A factor which accounts for the wide variation in levels of services for farm dwellers is the attitude of farmers. Many progressive farmers have clearly seen their social responsibilities toward their work force and the benefits that can accrue from a well-motivated and loyal workforce and are prepared to provide improved facilities. Others are frankly unwilling to accept this responsibility and are not motivated to invest in the sector.

IX. Future Strategies

The future strategy proposed for the sub-sector remains within Government's basic policy frame, though it is intended to improve and intensify the promotive and advisory activities in the sector. Many of the lessons of the development of rural water supply and sanitation in communal lands can be applied to the commercial farms. These include the development of appropriate water and sanitation technologies, guidelines to maximize health impact at a reasonable cost, educational materials and training courses.

A major initiative currently under development is to mount a nationwide promotional programme to encourage farmers to further improve environmental health facilities on farms. The promotional programme will be linked with provision of technical advisory services by CFU and ZNFU and the establishment of further loan finance facilities to assist farmers in meeting the costs of sector investments. The programme will stimulate the establishment within every farmers association, on both SSCFAs and LSCFAs, a demonstration farm with model facilities. The respective farmers unions will have the responsibility to ensure that the impact of the demonstration is extended to upgrade facilities on all farms within each farmer's association. In the last resort Government will also consider a range of statutory instruments which penalize farmers who do not provide these basic facilities.

X. Prior and Existing Investments and Future Requirements

Tables 5 and 6 present estimates of existing and required sector investments. These tables illustrate that a total investment in 1990 prices of ZW$ 200 million has already been made. The future investment required to meet the existing farm population is estimated at ZW$ 65 million to meet total basic needs.

Table 5 - Existing Sector Investments on Commercial Farms

Item	ZW$ millions (1990 Prices)
Large Scale	
26 600 Existing Water Points [7]	186.2
60 100 Existing Blair VIPs [8]	12.0
Small Scale	
450 Existing Water Points	3.2
900 Existing Blair VIPs	0.2
TOTAL	199.6

[7] @ZW$ 7 000 per water point

[8] @ ZW$ 200 per Blair VIP.

Table 6 - Future Sector Investments on Commercial Farms

Item	ZW$ millions (1990 Prices)
Large Scale	
200 New Water Systems	1.8
4 600 Upgrade Existing Water Systems	23.0
146 000 New Blair VIPs	29.3
Small Scale	
7 380 Upgrade Existing Water Points	7.8
820 New Water Primary Water Points	1.5
7 800 New Blair VIPs	1.6
TOTAL	65.0

Decade Consultative Meeting on Water Supply and Sanitation

Sector Paper on Water Supply and Sanitation in Resettlement Areas

Prepared by:
Department of Rural Development
Ministry of Local Government,
Rural and Urban Developmnt

WATER AND SANITATION IN RESETTLEMENT AREAS

1. BACKGROUND INFORMATION

At Independence, The Government of Zimbabwe inherits a land distribution system that not only worked against the establishment of a stable and multi- racial nation, but also created a range of problems, which included land degradation, land hunger, land under - utilization, overstocking, and overgrazing, all of which threatened the survival of the majority of the rural population and the quality of the environment.

The Independence Government therefore embarked upon a Resettlement Programme that sought to redress these imbalances and introduce a meaningful and desirable production system, by acquiring land from the commercial farming sector and settling people on a planned basis.

The initial target was set at 18 000 families on 1,1 million hectares of land at an estimated cost of Z$60 million. This target was subsequently changed by cabinet to 162 000 families on 9 million hectares at an estimated cost of Z$500 million at constant prices. The target of 162 000 was of course too ambitious and was never realized within the plans period of 3 years. Today, ten years later, only 52 000 families have been resettled on just over 3 million hectares. Since the programme is implemented on a planned basis, total infrastructure provisions are planned and budgeted for. This includes roads, dips, water and sanitation, fencing schools, clinics, rural service centres, Government staff houses etc.

The provision of water and sanitation is therefore part and parcel of the whole social infrastructural package. Since the inception of the resettlement programme Z$14 084 365 and Z$413 897 have been spent on water and sanitation respectively. In designing strategies to make the water and sanitation programme sustainable cognisance should be taken of the fact that families are resettled on a permit system; permit to reside, permit to de-pasture and permit to cultivate.

Although water and sanitation, together with other social and physical infrastructure are delivered as a package, different government specialist agencies provide their different specialist inputs.

2. INSTITUTIONAL RESPONSIBILITIES (Water and Sanitation)

2.1 Water

2.1 Ministry of Energy, Water Resources and Development is responsible for the provision of:

a) domestic water supply to all villages and schools

b) reticulated supplies to administrative centres including operation and maintenance

2.1.2 Ministry of Local Government, Rural and Urban Development through its Department of Rural Development's Primary Development Section is responsible for the digging of deep and shallow wells.

2.1.3 The District Development Fund is responsible for the maintenance of the boreholes.

2.1.4 The Ministry of Health educates the families on hygiene.

2.1.5 National Action Committee: Although NAC is not directly involved in the provision and or maintenance of boreholes in resettlement schemes, the technological standards set by NAC are emulated in the establishment of new boreholes.

2.2. Sanitation

The Ministry of Health is responsible for the provision of technical advice on siting and construction of Blair privies in the resettlement villages and at schools.

As noted above the provision of all infrastructural requirements is planned and budgeted for as a development package and the Department of Rural Development is the overall budget holder. So it is the responsibility of that department to coordinate all other service agencies so as to ensure timely and efficient provision of these services. Coordination of the programme is facilitated by a series of permanent committees which are structured as follows:

Level	Committee	Members
NATIONAL	Cabinet Committee on Resettlement and Rural Development	Ministers
	Inter-Ministerial Committee on Resettlement and Rural Development	Senior Government Officials
PROVINCIAL	Provincial Development Sub-committee on Resettlement	Senior Government Provincial Officials
DISTRICT	District development Committee	District Government Officials

The list of institutions who attend the Inter Ministerial Committee on Resettlement is given in Appendix I. The composition of lower tier institutions is similar to that of the Inter-Ministerial Committee except for donor agencies who are only permanently represented at National level.

3. KEY POLICIES

3.1 Water Supplies

a) Provision of potable domestic water to all settlers. In all but exceptional circumstances, this consists of a borehole with a handpump for each village of 25 to 50 families in size. Each school must have its own potable water supply separate from village supply.

b) Whenever possible stock watering is based on natural water. Where this is not possible a separate provision will be made for stock watering from boreholes.

c) In exceptional circumstances in the drier areas, a pump and pipeline system may be considered. This will be individually costed based on Ministry of Energy, Water Resources and Development estimate.

3.2 Sanitation

a) Villagers must construct their own ventilated pit latrines.

b) Settlers dip pits at a location and to a specification acceptable to the Ministry of Health and are provided with concrete floor units, cement and vent with a fly screen free of charge.

3.3 Financing

The Resettlement programme in Zimbabwe is jointly financed by the Government and various donor countries and some NGOs. Infrastructural provision is therefore costed as a package at the planning stage. With regards water and sanitation, the following development costs schedule is used as a planning guide:

			Per borehole
a)	Water supplies	- repairs (existing boreholes)	$10,890.00
			Per borehole
		- new boreholes	$16,625.00
			Per centre
b)	Rural Service Centre reticulation	-	$200,000.00
c)	Sanitation	-	$90.00/family

3.4. Maintenance and Community Participation

Since it is ideal in translocation resettlement to provide water before settlers are placed on the ground, there is therefore no room for initial settler participation in water provision. However with regards to sanitation, settlers are required to dig the pits,

mould bricks and build the latrine or pay a builder to do so. Government only provides floor slabs, cement and vent pipes with a fly screen.

With regards the maintenance of boreholes, 2% of the cost of a new borehole ($330/borehole/yr) is budgeted for every year. However this amount is normally not made fully available by Treasury; in the 1986/87 financial year, only $20 000 was provided for the operation and maintenance of the existing 944 boreholes ($21/borehole/yr) while in the 1989/90 financial year, only $23 000 was provided for the 2 299 boreholes ($10/borehole/yr).

3.5 General Administration

Since the resettlement schemes do not fall under the normal local government system, the Resettlement Officer is therefore Government's primary representative at scheme level. The Resettlement Officer therefore is responsible for, among other functions:

a) General administration of the scheme

b) Fostering a community spirit amongst the settlers and encouraging community projects such as the establishment of cooperatives, schools, woodlots etc.

c) Ensuring maintenance of the infrastructure in the resettlement area.

d) Supervision of the communal activities etc.

4. PROGRAMME OBJECTIVES AND TARGETS

Since the Resettlement programme is a rolling programme, whose ultimate objective is to resettlement 162 00 families, it is difficult to set the programme target. However, in terms of water and sanitation provision the programme aims to:

a) provide a borehole per every 25 to 50 settled families

b) provide a borehole per every dip tank

c) provide a borehole per every dip tank

d) provide reticulated water system per every Rural Service Centre

e) provide a ventilated blair privy per every settled family

5. CURRENT PROGRAMME STATUS AND ACHIEVEMENT

Although the programme proceeds on a planned and budgeted basis, it is normally not possible to attain all planned targets due to implementation bottlenecks. The table

below shows the achievements so far by province. However it should be noted that the figures regarding boreholes, include boreholes sunk for schools, clinics, dip tanks, and Rural Service Centres. Therefore in order to calculate coverage with respect to settler families, 564 boreholes will have to be deducted from the figure of 2 299 leaving out 1 735 boreholes specifically for settler drinking water requirements. Appendix II borehole coverage by district.

WATER AND SANITATION INFRASTRUCTURE IN RESETTLEMENT AREAS

Province	Boreholes	Blair Toilets	Wells	Families Resettled
Mashonaland Central	490	744	6	7 470
Mashonaland West	284	915	16	5 895
Mashonaland West	324	1 947	22	7 526
Midlands	231	1 870	11	7 855
Masvingo	193	2 369	112	5 726
Matabeleland North	120	67	7	1 465
Matabeleland South	109	231	17	2 091
Manicaland	548	1 814	88	13 972
TOTAL	2 299	9 947	308	52 000
	- 564*			
	1 735	9 947	308	
Planned target	2 080	**52 000	-	162 000
% Coverage	83%	19%		

* Number of boreholes servicing schools, clinics, Rural Service Centres and dip tanks.

** At one borehole per 25 families

If only boreholes are considered, a percentage of 83% has been achieved in terms of water provision. However if wells are added, considering that one well serves about 25 families, a total of 7 770 families is currently being served by wells. Adding this to those families being served by boreholes (i.e. 1735 x 25 = 43 375), a total of 51 075 families can be considered to be adequately served with safe drinking water. This leaves out only 925 families out of the resettled 52 000 as needing proper water provision. Therefore percentage coverage for both boreholes and wells can be said to be just below 100% (98,22%).

The Resettlement programme service level standards for water supplies provision are in fact higher than those set by NAC. In all provinces there is a borehole for not more than 210 people.

With regards sanitation the coverage is still very low 19% as indicated on the table above. The reasons for this low coverage are; the fact that when the programme started blair toileted were not planned and budgeted for (this aspect was only introduced in 1985 or 5 years after programme inception), shortage of cement and last but not least, the fact that this aspect requires mass mobilization for popular participation.

Appendix III lists resettlement schemes implemented prior to 1985 and thus have no secure funding for the sanitation component.

6. FUTURE REQUIREMENTS

Since it is the intention of government to resettle 162 000 families, it implies that the programme still has to resettle 110 000 families. This means that extra 4 400 boreholes will need to be sunk. With regards sanitation, since the programme has so far only achieved a 19% coverage, it means that there is still a backlog of 42 120 blair toilets required to serve the present settler families families and a future requirement of 110 00 blair privies if the target of 162 000 families is finally achieved.

The number of water and sanitation units required per year is a function of the number of families resettled per year. Since the inception of the resettlement programme in 1980, the highest settler emplacement figure per year has been in 1980, the highest settler emplacement figure per year has been 10 511 families which was achieved in 1982. Taking into account the fact that government has indicated that it wants to accelerate the resettlement programme, it is projected that at least 10 000 families are going to be resettled per year.

The table below shows the projected phasing of water and sanitation development throughout the country. A constant implementation rate of 400 boreholes per year has been assumed. For sanitation provision it has been assumed that there would be

initially lower implementation rates as the provision of this component depends on the success of hygienic education by Ministry of Health which involved attitudinal changes by the beneficiaries and the success of Ministry of Community and Cooperative Development, DERUDE and Ministry of Political Affairs, community mobilization efforts.

PROJECTED REQUIREMENTS:WATER AND SANITATION - RESETTLEMENT

YEAR	BOREHOLES		SANITATION	
	No. of Units	Est. Cost (Z$'000)	No. of Units	Est. Cost (Z$'000)
1991	400	6 650	5000	450
1992	400	6 650	6 000	540
1993	400	6 650	7 000	630
1994	400	6 650	10 000	900
1995	400	6 650	13 000	1 170
1996	400	6 650	16 000	1440
1997	400	6 650	19 000	1 710
1998	400	6 650	19 000	1 710
1999	400	6 650	19 000	1 710
2000	400	6 650	19 000	1 710
2001	400	6 650	19 053	1 715
TOTAL	**4 400**	**73 150**	**152 053**	**13 685**

The boreholes provided under the Resettlement programme do not have the necessary headworks as the boreholes provided in the Communal Areas under the water and sanitation programme. So there is need in the future to have the required standard headworks as recommended in the National Water and Sanitation programme. This is an area that needs closer liaison between the Department of Rural Development and the National Action Committee.

7. MAJOR CONSTRAINT

The major constraint to the provision of water under the Resettlement programme is the capacity of the service Ministry responsible for water provision. i.e. Ministry of Energy and Water Development. The Ministry simply does not have enough equipment, materials, manpower and transport facilities to fully service the requirements of the programme.

With regards the provision of sanitation facilities, the main problem has been the mobilization of people, to realise the need to construct their own blair toilets. Settlers have given a low priority to the digging and construction of toilets.

8. FUTURE STRATEGIES TO OVERCOME CONSTRAINTS

Thee is simply a need to beef up the capacity of the Ministry of Energy, Water Resources and Development, the District Development Fund and Ministry of Health. Maybe there is also need in future to consider the role and need for direct participation of the private sector and development of strategies for some cost recovery mechanisms in the sector.

With regards sanitation, the need for a stepping up of community mobilization by the Ministry of Community and Cooperative Development and health education by the Ministry of of Health cannot be over emphasized.

APPENDIX I

INSTITUTIONS COMPRISING INTER-MINISTERIAL COMMITTE ON RESETTLEMENT

1. **Government and Parastatal Organizations**

Ministry of Local Government Rural and Urban Development
Department of Rural Development (Chair)
District Development Fund
Ministry of Lands, Agriculture and Resettlement (Vice-chair)
Agritex
Ministry of Community and Cooperative Development
Ministry of Political Affairs
Agricultural Development Authority
Department of National Parks and Wildlife Management
Ministry of Education
Ministry of Public Construction and National Housing
Minstry, of Energy, Water Resources and Development
Forestry Commission

2. **Donors**

British High Commission
EEC

APPENDIX II

DISTRICT DISTRIBUTION OF RESETTLED FAMILIES IN RELATION TO BOREHOLES

	Total Settler H/H	No. of Boreholes
MASVINGO PROVINCE		
District		
Masvingo	1 523	73
Chiredzi	1 515	61
Bikita	1 268	36
Gutu	1 420	23
MANICALAND PROVINCE		
District		
Makoni	7 780	368
Nyanga	2 509	59
Mutare	1 176	64
Chipinge	1 435	37
Chimanimani	1 072	20
MAT. NORTH PROVINCE		
District		
Bubi	1 140	101
Nyamandhlovu	325	19
MAT. SOUTH PROVINCE		
District		
Bulilima Mangwe	702	35
Filabusi	574	32
Mzingwane	442	16
Gwanda	259	17
Beitbridge	114	9
MIDLANDS PROVINCE		
District		
Gweru	467	12
Shurugwi	2 132	70
Mberengwa	429	12
Chirumanzu	1 166	32
Kwekwe	1 046	49

APPENDIX II contd/.....

	Total Settler H/H	No. of Boreholes
MIDLANDS PROVINCE		
District		
Gokwe	2 044	36
Chivhu	548	19
Zvishavane	23	1
MASH. WEST PROVINCE		
District		
Kadoma	4 079	159
Chegutu	1 192	41
Makonde	410	17
Hurungwe	1 845	107
MASH. CENTRAL PROVINCE		
District		
Centenary	774	34
Mt. Darwin	1 012	34
Shamva	628	27
Guruve	4 807	388
Bindura	249	7
MASH. EAST PROVINCE		
District		
Beatrice	382	50
Wedza	396	11
Marondera	1 090	36
Mutoko	4 027	187
Grand Total	**52 000**	**2 299**

APPENDIX III

RESETTLEMENT SCHEMES IMPLEMENTED PRIOR TO 1985 AND HAVE NO SANITATION COMPONENT BUDGET

PROJECT NAME	PROVINCE	DISTRICT	ESTABLISH
Sengezi I	Mash. East	Wedza	Jun - 80
Simba Youth Co-op.	Mash. Central	Shamva	Sep - 80
Mpudzi I	Manicaland	Mutare	Oct - 80
Mufurudzi I	Mash. Central	Shamva	Oct - 80
Soti Source	Masvingo	Gutu	Oct - 80
Nyajezi	Manicaland	Nyanga	Nov - 80
Nyagundi	Manicaland	Mutare	Dec - 80
Chakoma Co-op	Mash. Central	Mt. Darwin	Apr - 81
Batsiranai Co-op	Mash. Central	Shamva	May - 81
Kwaedza Co-op	Mash. East	Marondera	Jun - 81
Mguza	Mat. North	Nyamandhlovu	Jun - 81
Accelerated Schemes	Zimbabwe	Zimbabwe	Aug - 81
Mukorsi	Masvingo	Masvingo	Agu - 81
Tokwe I	Midlands	Shurugwi	Aug - 81
Mt. St. Marys Co-op	Mash. East	Wedza	Sep - 81
Nyamuzizi	Mash. East	Mutoko	Sep - 81
Sengezi II	Mash. East	Wedza	Sep - 81
Mayo Kudhara	Manicaland	Makoni	Oct - 81
Dombodema	Mat. South	Bulilima Mangwe	Nov - 81
Mutanda I	Manicaland	Makoni	Nov - 81
Nyagadza	Manicaland	Chipinge	Nov - 81
Deure	Masvingo	Bikita	Dec - 81
Copper Queen I	Midlands	Gokwe	Jan - 82
Mbembezi	Mat. North	Bubi	Jan - 82
Sessombi I	Midlands	Kwekwe	Jan - 82
Tabudirira Co-op	Mash. East	Mutoko	Jan - 82
Chirimutsitu	Manicaland	Makoni	Feb - 82
Shandi Pfungwa Co-op	Mash. East	Marondera	Feb - 82
Kushingirira Co-op	Mash. Central	Mt. Darwin	Mar - 82
Mauya Co-op	Mash. East	Hurungwe	Mar - 82
Nyahombe	Masvingo	Chiredzi	Mar - 82
Nymakate Co-op	Mash. West	Hurungwe	Mar - 82
Kumhanya Co-op	Mash. East	Mutoko	Apr - 82
Murare	Manicaland	Mutare	Apr - 82
Chizwirizwi	Masvingo	Chiredzi	May - 82
Mafurudzi II Sanye	Mash. Central	Guruve	Jun - 82

APPENDIX III/ cont.....

RESETTLEMENT SCHEMES IMPLEMENTED PRIOR TO 1985 AND HAVE NO SANITATION COMPONENT BUDGET

PROJECT NAME	PROVINCE	DISTRICT	ESTABLISH
Nyamazura A	Manicaland	Mutare	Jun - 82
Nyamazura C	Manicaland	Mutare	Jun - 82
Takawira	Midlands	Chirumunzu	Jun - 82
Kuenda Co-op	Mash. Central	Mt. Darwin	Jul - 82
Ruwaka Co-op	Manicaland	Chimanimani	Jul - 82
Zingondi Co-op	Manicaland	Makoni	Jul - 82
Kubatana Co-op	Manicaland	Makoni	Sep - 82
Kurima Inhaka Co-op	Mash. Central	Mt. Darwin	Sep - 82
Mkuwapasi Co-op	Mash. West	Chegutu	Sep - 82
Shurugwi East	Midlands	Shurugwi	Sep - 82
Tanhi Co-op	Manicaland	Makoni	Sep - 82
Vimbayi Rufaro Co-op	Midlands	Shurugwi	Sep - 82
Chinyika	Manicaland	Makoni	Oct - 82
Hoyuyu I	Mash. East	Mutoko	Oct - 82
Mt. Darwin	Mash. Central	Mt. Darwin	Oct - 82
Mvimvi	Masvingo	Gutu	Oct - 82
Gowe Co-op	Mash. West	Kadoma	Nov - 82
Nyamhanje Co-op	Mash. Central	Centenary	Nov - 82
Jompani	Mash. West	Kadoma	Dec - 82
Jondale Bumbe	Mash. West	Kadoma	Dec - 82
Pastures Masema	Masvingo	Bikita	Dec - 82
Mutanda II	Manicaland	Makoni	Jan - 83
Muzvezve I	Mash. West	Kadoma	Jan - 83
Shinja I	Manicaland	Chimanimani	Jan - 83
Zezayi Co-op	Midlands	Chirumanzu	Jan - 83
Masvori	Midlands	Gweru	Feb - 83
Bethel Co-op	Manicaland	Makoni	Mar - 83
Lower Gweru Buda	Midlands	Gweru	Mar - 83
Nyadiri	Mash. East	Mutoko	Mar - 83
Hatinei Co-op	Midlands	Chirumanzu	Apr - 83
Marova Co-op	Mash. East	Mutoko	Jun - 83
Acton Reynolds	Mash. East	Beatrice	Jun - 83
Kubidirira Co-op	Mash. Central	Shamva	Jul - 83
Rujeko Co-op	Manicaland	Makoni	Jul - 83
Filabusi Tombo	Mat. South	Filabusi	Sep - 83
Gutsa Ruzhinji Co-op	Midlands	Shurugwi	Sep - 83

APPENDIX III/ cont.....

RESETTLEMENT SCHEMES IMPLEMENTED PRIOR TO 1985 AND HAVE NO SANITATION COMPONENT BUDGET

PROJECT NAME	PROVINCE	DISTRICT	ESTABLISH
Hamamaoko Co-op	Manicaland	Mutare	Sep - 83
Kuedza Masimba Co-op	Manicaland	Makoni	Sep - 83
Magura Batanai Co-op	Manicaland	Makoni	Sep - 83
Magura Batanai Co-op	Manicaland	Makoni	Sep - 83
Maringowe Zunde	Manicaland	Makoni	Sep - 83
Maungwe Gwindingwi	Manicaland	Makoni	Sep - 83
Mpudzi II	Manicaland	Mutare	Sep - 83
Mtoronhanga Doornhk	Mash. West	Hurungwe	Sep - 83
Mutanda III	Manicaland	Makoni	Sep - 83
Nyanga South	Manicaland	Nyanga	Sep - 83
Ruponeso Co-op	Manicaland	Makoni	Sep - 83
Rusitu	Manicaland	Chipinge	Sep - 83
Shurugwi Tana	Midlands	Shurugwi	Sep - 83
Chioneso Co-op	Manicaland	Mutare	Oct - 83
Dangarendove Co-op	Mash. East	Harare South	Oct - 83
Chikomba I	Midlands	Chivhu	Jan - 84
Shungu Dzevhu Co-op	Midlands	Shurugwi	Feb - 84
Tamuka Co-op	Mash. East	Mutoko	Apr - 84
Tashinga Co-op	Mash. West	Kadoma	Apr - 84
Shingirirai Co-op	Manicaland	Makoni	May - 84
Ganyungu Co-op	Mash. West	Kadoma	Jun - 84
Musirizvi	Manicaland	Chipinge	Jun - 84
Charehwa Co-op	Manicaland	Makoni	Sep - 84
Sessombi Co-op	Midlands	Kwekwe	Sep - 84
Makwikwi Co-op	Midlands	Shurugwi	Oct - 84
Pote II	Mash. West	Hurungwe	Oct - 84
Hoyuyu II	Mash. East	Mutoko	Nov - 84
Kuvamba Co-op	Masvingo	Masvingo	Nov - 84
Toke IV	Midlands	Shurugwi	Dec - 84

Decade Consultative Meeting on Water Supply and Sanitation

Sector Paper on Water Supply and Sanitation in Urban Areas

Prepared by:
Department of Urban Councils
Ministry of Local Government,
Rural and Urban Developmnt

WATER AND SANITATION IN URBAN AREAS

1. BACKGROUND TO WATER AND SANITATION PROVISION IN URBAN AREAS

1.1 Definition of Urban Areas

Urban areas are towns, as opposed to rural areas, with a population of 3077200 as per 1990 figures. They range from Local Boards and cities depending on the size, population and industrial growth. At present there are 23 Urban Local Authorities in Zimbabwe. These are grouped as follows:

- 4 Local Boards,
- 8 Town Councils,
- 7 Municipalities, and
- 4 Cities

1.2 Brief History of Water and Sanitation Programmes in Urban Councils

Urban Councils are administered through the Urban Councils Act Chapter 214, Section 131 of the said Act provides that a Council may provide and maintain a supply of water within or outside the council area. The water should be protected from pollution. Section 116 of the same Act provides that a council may, whether within or outside the council area, take such measures and, construct such works as it considers necessary for the collection, conveyance, treatment and disposal of sewage, provided that the council shall not discharge or permit the discharge of any sewage into a public stream in contravention of the provisions of Part IX of the Water Act, 1976.

No development in urban areas can take place without water and sewage infrastructure. The pipes should also be maintained or replaced when they are old to avoid frequent bursts.

2 INSTITUTIONAL RESPONSIBILITIES

List of All Agencies in Sector Provision

2.1 Ministry of Energy, Water Resources and Development (MEWRD)

This Ministry has the overall responsibility for sector policy planning and development of energy and major water resources in the country. The Department of Water Resources in the same Ministry is responsible for all water resources development including planning, design and construction of major dams.

2.2 Ministry of Local Government Rural and Urban Development (MLGRUD)

The Ministry is the supervising and controlling body for Development activities in all Municipal and other Local Authorities. These include water and sewage for the cities

and towns. Each local authority draws up its plans and cost estimates and submits them for budgetary approval by MLGRUD. This ministry, which always insists that councils should prepare balancing budgets and clear their deficits, then vets the requests and seeks eventual approval for funds by the Ministry of Finance, Economic Planning and Development (MFEPD). The Ministry plays a central role in development, planning and coordination although it is not itself directly involved in the provision of water and sanitation.

2.3 Urban Councils

These are responsible for all sewerage disposal within their areas and the final effluent must meet the strict standards enforced by the MEWRD before it is discharged to the rivers.

2.4 Engineering Services Department

This Department is involved in water supply and sanitation. It usually consists of the following branches:

Town Planning Branch
Water and Sewerage Branch
Roads Branch

3 KEY POLICIES

3.1 Borrowing Powers

In terms of Section 238 of the Urban Councils Act, Urban Council can borrow money for various undertakings which include water and sewage, with the approval of Minister of Local Government Rural and Urban Development. The money can be borrowed:

(a) from the State, the Local Authorities Pension Fund, a municipal provident fund, a municipal medical aid society or sick fund or a local authority; or

(b) with the consent of the Minister and the Minister of Finance, Economic Planning and Development, by issue of stock, bonds, debentures or bills or from any other source not mentioned in paragraph (a).

The Minister of Local Government before he approves the loan, has to be satisfied that the Council would be able to service the loan in loan repayments plus interest, while at the same time reducing the accumulated deficit in its final accounts.

3.2 Cost Recovery

Water and Sewage tariffs are based on full cost recovery to cover all pumping, purification, delivery, conservational installation and administration costs, water costs are recovered from water tariffs.

3.3 Service Level

The water is mostly metered to each household, but there may be communal taps. As for sewerage, areas, if not all, are annotated to Municipal Sewer. The same applies to some people in Low Density Areas. Other Low Density Areas are connected to Private Septic tanks.

3.4 Sewer Reticulation

The installation of reticulated sewerage is currently standard practice for new high Density Urban developments in Zimbabwe. The sewer pipes run in a straight downhill direction between manholes to ensure adequate flows through sewers to avoid blockages. Sewers are generally laid at 1,0m offset from the mid-block boundary, on the Tower side of the block. Ideal depths for the laying of sewer are:

0,75 m for 100mm diameter pipes;
0,9 - 1,2m for 150mm pipes
Depths greater than 1,5 are not desirable

The average domestic raw sewerage strength is calculated as follows:

- High Density Housing BOD = $\frac{7 \times 0,05}{600 \times 0,85} \times 10$ = 686mg/l

- Medium Density Housing BOD = $\frac{7 \times 0,05}{1400 \times 0,7} \times 10$ = 357mg/l

- Low Density Housing BOD = $\frac{6 \times 0,05}{1800 \times 0,5} \times 10$ = 333mg/l

B.O.D. means (Biochemical Oxygen Demand) usually measured over a five day test. The total BOD contribution per person is basically static (0,05kg/day), but the strength of raw sewerage may vary between 300 ppm and 1000 ppm BOD depending on the quantity of water used.

3.5 Water Reticulation

75mm and 50mm reticulation pipes carry water from larger pipes to the house blocks. they are laid usually at 1,0m offset on the higher side of the mid - block boundary, minimum cover 0,75m and 1,0m under roads.

To ensure that all houses are supplied with water during times of peak demand all reticulation pipes should be designed in a loop network (except for short branches serving up to 12 houses). A looped 50mm pipe should, if sufficient pressures are available, be able to serve up to 160 high density stands (80 pairs of stands back to back). A looped 75mm pipe should be able to serve up to 320 high density stands.

House Connections

House connections comprise a cash iron saddle, positioned to minimize connection lengths to the house, with a minimum ground cover for the connection pipe of 450mm. House connections taken off a 75mm pipe can serve groups of four houses. Connections off a 50mm pipe can serve only a single pair of houses.

In high density low-income areas reticulation can be based on 600 litres per fully pumped house per day, excluding wastage and leakage allowance. Minimum residual pressure at house connections should be 10m water head.

For medium and low density housing assessed water demand is 1400 and 1800 litres respectively per stand per day.

For individually connected properties, supplies will be metered and the tariff structure will provide for a basic minimum quantity at a fixed rate before application of a charge per m consumed per month. Records indicate that in high density housing areas where a tariff structure operates, average usage is restricted by the basic minimum. There is evidence of only limited garden watering in these areas. In other areas (e.g. mines housing), where water is available in any quantity without further charge, actual usage is considerably higher.

In many areas the basic minimum quantity is approximately 14m/month.

3.6 The following table, shows that it is not possible to measure the investment rate of both water and sanitation because the application of funds to projects is not uniform or consistent.

3.6 TARIFF STRUCTURE

	LOCAL AUTHORITY	1990 POPULATION	POPULATION GROWTH RATE	SEWERAGE CHARGE	MINIMUM WATER CHARGE	SEWERAGE COVERAGE		MINICIPAL WATER	SEWERAGE INVESTMENT RATES	WATER INVESTMENT RATE
						MUNICIPAL SEWER	SEPTIC TANKS			
1)	Harare C.C.	950 000	15%	$5.20	$4.00	85%	15%	100%	-	-
2)	Bulawayo C.C.	750 000	6%	$8.70	$5.60	85%	15%	100%	-	-
3)	Chitungwiza T.C.	700 000	8%	$5.65	$4.40	100%	-	100%	-	-
4)	Gweru C.C.	120 000	5%	$5.10	$6.36	95%	51%	100%	-	-
5)	Mutare C.C.	100 000	5%	$8.40	$3.80	96%	4%	100%	-	-
6)	Kadoma Mun.	61 000	8%	$7.45	$8.00	70%	30%	100%	-	-
7)	Kwekwe Mun.	60 000	4%	$7.00	$3.00	97%	3%	100%	-	-
8)	Hwange L.B.	60 000	5%	$7.00	$5.00	95%	5%	100%	-	-
9)	Marondera Mun.	58 200	9%	$4.50	$6.80	98%	2%	100%	9%	9%
10)	Masvingo Mun.	50 000	6%	$8.05	$6.90	98%	2%	100%	-	-
11)	Chinhoyi Mun.	35 000	7%	$6.00	$4.00	93%	5%	100%	-	-
12)	Redcliff Mun.	35 000	8%	$12.00	$5.00	100%	-	100%	2%	2%
13)	Chegutu Mun.	30 000	6%	$5.30	$5.00	80%	20%	100%	5%	5%
14)	Shurugwi T. C.	25 000	6%	$7.22	$8.80	40%	60%	100%	-	-
15)	Kariba T. C.	22 000	6%	$5.50	$2.50	97%	3%	100%	-	-
16)	Victoria Falls T.C	21 000	3%	$8.24	$5.00	100%	-	100%	-	-
		3 077 200								

3.7 Water Quality Guidelines

Potable water quality is based on the WHO guidelines for drinking water. The reclaimed water quality is treated to conform to the 1972 Public Health (Effluent) Regulations which stipulated maximum effluent of 10mg/1 and conform count of 1000/100ml.

3.8 Peri-Urban Areas

Generally, Council's policy is that water supply under its jurisdiction is soley for its citizens or rate payers. However on compassionate ground water is made available to residents for peri-urban areas through which the town water mains pass.

3.9 Financial Incentives

At present, councils have no water or sanitation policies that offer any financial incentives. The present tariff structure is entirely based on unit charge and does not vary regardless of the quantity of water consumed. This is so because of the limited water reserves and pumping capacity and costs.

4 PROGRAMME OBJECTIVES AND TARGETS

4.1 Programme objectives

Urban Councils water and sanitation programmes are to develop the infrastructure to a level adequate to meet the requirements of the respective citizens. This entails the construction of more dams in some cases, to meet the increasing water demands of cities as their population and industries increase in size. The overall objectives include the development of treatment plants for both water and sewerage and the provision of the conveyance systems for these.

4.2 Programme targets

The Public Sector Investment Programme has been prepared for five years to be funded by the World bank. One of the requirements to qualify for this money is that Councils should have up-to-date audited final accounts and should clear the accumulated deficits by the end of the plan period, that is after this five years. To this end, all councils have prepared their Recovery plans which should be up-dated every year due to changing circumstances which may affect their budgets. Below is the schedule showing the P.S.I.P. under the World bank to meet the present and future requirements of Urban Councils.

SEWERAGE INVESTMENT PROGRAMME

	LOCAL AUTHORITY	90 - 91	91 - 92	92 - 93	93 - 94	94 - 95
1)	Bulawayo C.C.	2 270 000	2 925 000	3 245 000	2 280 000	1 245 000
2)	Gweru C.C.	150 000	1 255 000	305 000	0	0
3)	Bindura T.C.	0	507 000	313 000	0	0
4)	Chegutu Mun.	180 000	240 000	120 000	30 000	0
5)	Kwekwe Mun.	445 000	145 000	435 000	435 000	0
6)	Kadoma Mun.	0	80 000	29 500	195 000	60 000
7)	Mutare C.C.	405 000	3 025 000	3 378 000	200 000	200 000
8)	Shurugwi T. C.	30 000	60 000	0	0	0
9)	Masvingo Mun.	270 000	2 488 000	1 512 000	100 000	0
10)	Kariba T. C.	30 000	20 000	0	0	0
11)	Victoria Falls T.C.	528 000	0	0	0	0
12)	Gwanda T.C.	90 000	445 000	136 000	0	0
13)	Redcliff Mun.	75 000	0	0	0	100 000
14)	Hwange L.B.	0	0	0	100 000	0
15)	Chitungwiza T.C.	0	1 850 000	1 050 000	1 650 000	1 650 000
16)	Chinhoyi Mun.	969 000	377 000	0	0	0
17)	Harare C.C.	0	4 200 000	8 700 000	7 050 000	5 050 000
18)	Marondera Mun.	100 000	0	0	100 000	0
	Totals	**5 542 000**	**1 5 952 000**	**20 787 000**	**13 680 000**	**8 460 000**

WATER INVESTMENT PROGRAMME

	LOCAL AUTHORITY	90 - 91	91 - 92	92 - 93	93 - 94	94 - 95
1)	Bulawayo C.C.	13 085 000	29 105 000	22 197 000	4 204 000	2 029 000
2)	Gweru C.C.	4 764 000	5 450 000	3 420 000	3 149 000	610 000
3)	Bindura T.C.	124 000	162 000	0	50 000	50 000
4)	Chegutu Mun.	155 000	615 000	45 000	20 000	0
5)	Kwekwe Mun.	270 000	0	0	0	0
6)	Kadoma Mun.	200 000	620 000	80 000	0	0
7)	Mutare C.C.	1 056 000	1 098 000	386 000	0	0
8)	Shurugwi T. C.	30 000	80 000	0	275 000	0
9)	Masvingo Mun.	300 000	572 000	644 000	625 000	0
10)	Kariba T. C.	116 000	336 000	410 000	30 000	116 000
11)	Victoria Falls T.C.	30 000	0	0	0	0
12)	Gwanda T.C.	0	0	115 000	50 000	0
13)	Redcliff Mun.	168 000	168 000	300 000	0	0
14)	Chitungwiza T.C.	0	150 000	150 000	860 000	610 000
15)	Chinhoyi Mun.	40 000	480 000	737 000	75 000	730 000
16)	Harare C.C.	4 500 000	4 000 000	6 000 000	7 700 000	6 700 000
17)	Marondera Mun.	75 000	650 000	550 000	620 000	0
	Totals	**25 957 000**	**43 486 000**	**35 034 000**	**17 685 000**	**10 845 000**

Other projects are as follows:

Masvingo Municipality

Council is looking for $15 million to embark on a huge water Augmention Scheme necessitated by continous drought. The level of water in the Kyle Dam has dropped so much that pipes have to be moved towards the dam wall for water to be drawn.

Chinhoyi Municipality

Extension of the raw water pumping station - $600 0000

Victoria Falls Town Municipality

•	Water Augmention	-	$3 000 000
•	Sewerage Treatment Plant	-	$3 000 000
•	Offsite Services	-	$2 000 000
			$8 000 000

The required projects above are really necessary due to massive development by Delta which is building Elephant Hills Hotel in preparation for Common Wealth Conference in 1991.

Gweru City Council

The Council has already embarked on a $39 million Water Augmention Scheme and Harare City Council on a $133 million Water Works.

Hwange Local Board wishes to upgrade the sewerage plant to the tune of $100 000 and servicing of stands which would cost $300 000.

Marondera Municipality

The Council want funds for Nyambuya Water Scheme to cost $2 800 000 and Northern Sewerage treatment works to cost $3 500 000.

Kwekwe Municipality

The following offsite services have to be installed prior to any new development in 1990 - 91:

• Duplication of Mbizo Pump Station	$ 780 000
• Duplication of existing main	$ 440 000
• Mbizo outfall sewer	$1 560 000
• Extension of Northern Sewerage treatment works	$ 720 000
Total	$3 500 000

8 MAJOR CONSTRAINTS

Generally, the demand for water and sewerage services has increased substantially during the plan period since independence. However, the supply side of the services has been constrained by a multiplicity of factors such as foreign currency shortages, financial resources and shortages in the economy. The end result has been considerable delays in completion of projects, heavy costs of extra financing and increased demands for tariffs and rates to the rate-payers.

8.1 Institutional Constraints

Certain instances of institutional arrangements have placed Urban Councils in uncertainties as to the supply of the funds e.g. - delays in Urban II Signing, Building Societies financing under Urban I where in the latter, funds were allocated to Councils to service stands but funds for super structures was coming from the societies. The result of lack of co-ordination was, Councils completed the servicing of stands but people allocated stands could not put structures from which Councils could charge rates and tariffs. Associated also with the above is the aspect of integrated approach to financing where in some instances funds are allocated to a sector with a complementary sector not allocated e.g. superstructure sector allocated funds but primary infrastructure not.

8.2 Manpower Constraints

Implementation of some projects is sometimes delayed by lack of experienced project planners and designers. Generally there is a shortage of skilled manpower at management level. As a consequence of this deficiency in manpower needs the concept of value for money cannot always be realised by the water undertaking. Staff turnover within the water and sanitation sector continues to be high because of low levels of remuneration as compared to the private sector.

8.3 Financial Constraints

The supply of funds to projects has not met fully the requirements of Local Authorities bids. On a yearly basis, Councils have complained of shortfalls which have lengthened their implementation period and at the same time cost them considerably.

8.4 Forex

The failure to allocate foreign currency at the time of Public Sector Investment funds disbursement has contributed heavily to delays in completion of projects. Councils have had to wait long to obtain foreign currency from suppliers who at times do not appreciate their problems. In other instances, allocations have been inadequate to meet their requirements thus again result of the above are the extra costs such as the financing costs caused by the need for extra borrowing and loss of revenue from projects. The cases described above have been experienced in Bulawayo, and Gweru Water Schemes where local financing was available but foreign currency could not be

Redcliff Municipality

• Sewer Treatment Plant	$ 2 500 000
• Training Centre Offsite Services	$ 1 130 000
• Water Treatment Plant	$ 3 205 000
• Sewer (Reticulation, Trunk Sewer and Treatment Plant)	$ 5 020 000
	$11 855 000

Mutare City Council

Gimboki Sewer treatment Plant (10ml/day)	$ 6 489 000

Chegutu Municipality

• Storage tank	$1 700 000
• Offsite Services	$1 500 000
• Water Trunk	$ 310 000
	$2 510 000

Chitungwiza Town Council

• Industrial Estate Infrastructure	$ 800 000
• Servicing of Industrial Stands	$2 366 000
	$3 166 000

Kadoma Municipality

• New Trunk Sewer Line & 1 additional pond	$2 500 000
• Water Main 150 mm Industrial area - Ngezi	$ 230 000
• Rimuka New Water Main 250 mm	$ 368 000
• Upgrading of pumps at Blue Rangers Works	$ 373 000
• Rimuka outfall pumping station	$ 138 000
	$3 609 500

5 CURRENT PROGRAMME STATUS AND ACHIEVEMENTS

The situation in Masvingo Municipality is critical because their current water Augmention Scheme has been seriously affected by drought. The Water Level has dropped such that current water pipes can no longer draw their water. New pipes have to be layed close to the dam wall where the water level is still high.

In Bulawayo, the existing pumping and water conveyance systems are barely adequate to meet the growing consumption levels in the City. Plans are therefore afoot to duplicate the existing 840mm diameter Ncema to criteria water pipeline soon. The water works are expected to cost $60 million. The long term target for Bulawayo is to

use Zambezi's River water. This would consist of pumping from the Zambezi to the nearest of the dams constructed under the medium term target.

On sanitation, Victoria Falls has got a serious problem because currently the effluent is disposed into the Zambezi River since the Town has no sewer treatment plant. This situation does not auger well for Victoria Falls as this is a tourist area. Council is trying to get a grant for the works from MFEPD but it appears Council will not be lucky to get this funding.

6 PROGRAMME ACHIEVEMENTS

Achievements in relationship to objectives and planned targets have been constrained by constraints to be cited below. In investments not calling for forex components, allocated funds have been fully utilized and targets achieved only when supply of funds match the demand of the bids put forward. In the case of forex related projects, targets have varied from planned as implementation period is prolonged by the need to source the forex.

Councils which have had their Water Augmention completed are, Kwekwe Municipality, Shurugwi Town Council. Other Councils like Marondera Municipality have completed water schemes but need to extend the distribution system to cater for the increased demand.

Gweru and Chinhoyi are about to complete their Sewerage Treatment plants.

7 PRIOR AND EXISTING INVESTMENTS AND FUTURE REQUIREMENTS

7.1 Government Investments

The Government's involvement in investment in the Urban Areas water undertakings and sanitation is by way of facilitating arrangements for borrowing loans either from External Agencies or from the Private Sector and Government it self, at reasonable interest rates i.e. 10,5% for government loans.

Government through MEWRD is responsible for all major water resources development work, including planning, design and construction of major dams.

7.2 ESA Support

No direct support can be made to the Urban Councils without the approval of MFEPD through MLGRUD.

obtained. It would be appreciated if forex could be made available at the time projects are considered for Public Sector Investment Programme discussions.

8.5 Equipment, Materials, Transport etc.

The non-availability of water resources without suitable disforce to the towns constitute another major constraint. Equipment and materials have to be sourced from outside Zimbabwe at times in order to implement a project. This is not always easy because of shortage of foreign currency.

Non availability of plans and transport at times also hinder the implementation of projects. Most of the plant and equipment has outlived their design life but cannot be replaced. This complicates the situation as in fact some of the equipment will be absolete. Import substitution and pragmatism of the maintenance techniques have averted many a crisis situations.

Efforts to standardise plant and equipment, are constrained by the multiplicity of ranges that merchant importers bring into the country through various dealers including barter deals. This also affects maintenance programmes as the equipment or plant becomes inserviceable before that artisans are familiar with it. Sometimes the imported plant and equipment is not backed with appropriate spares. The financial saving on spares stocks cannot be realised because of the disruption in the standardisation programme.

9 FUTURE STRATEGIES TO OVERCOME IDENTIFIED CONSTRAINTS

Following the skills drain since independence, intensive training programmes are required to create the necessary national pool of qualified personnel. In time the newly trained will gain experience and satisfy the manpower needs. The training should be both within and outside the country.

The import substitution programme should be strengthened by Government deliberately allocating more foreign currency to replace ageing machinery to manufacture spares.

The water sector is vital for industrial growth and should therefore be allocated more foreign currency if investors are to be attracted.

There is need for a single authority to control all water affairs to reduce beaurocratic tendencies, and co-ordinate all water and sanitation programmes. At the moment there are too many institutions involved with water and sanitation programmes and sometimes they operate at cross purposes.

The financial base for most local authorities who by and large provide the water and sanitation in Urban Areas is diminishing fast. More financial resources should be made available by Central Government to finance the water undertaking programmes.

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URBAN COUNCILS

Community Participation and Health Education
A KWAHO Experience in Kenya

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COMMUNITY PARTICIPATION AND HEALTH EDUCATION

1. INTRODUCTION

During the Decade that is coming to an end now, there is evidence that there can be no total development for the unserved unless, questions related to correct analysis of what a community is and what binds them, promotion of their self actualization and corrective measures towards the searching of available and external resources in helping them to provide solutions that would remain sustainable, were a waste of resources, time and manpower. A thorough survey of issues that surround the community where the development is geared to take place, such as existing traditional management and leadership structures, informed as they may be, must be taken account of, if the change agencies are to be registered as participants and not from the periphery, but rather from the inside, where the project exists. As of now, we all know that participation must now include decision making, planning, implementation, self evaluation and replanning that superceeds the lessons learnt, towards the new achievable goals by and with the same communities.

When the community is involved in every step, choice of projects, technologies, methodologies, and applications will be easier and manageable. These are among the very principles among many, that would lead any community to SUSTAINABILITY that bears its meaning and definitions. Areas to consider are the involvement of women, effective communication systems that which must be dual throughout collecting and disseminating of information. One other crucial factor is the form of improving their income in whatever style of management they choose, i.e. merry go rounds, water societies, charging fees etc... etc... If they choose the management style, then it will stay.

2. COMMUNITY INVOLVEMENT THROUGH HEALTH EDUCATION, CULTURE SPECIFIC AS AN INSTRUMENT FOR CHANGE

Community health is by all means a subject that will remain abstract for many years to come. Many programmes that are

expected to show health impacts, and particularly so in Africa, have not been successful. Reasons among many , include inadequate capacities in our approaches, unclear definitions, as it is a subject that is highly sociological in nature, thereby demanding quite intensed and professional handling. Health Programmes also take a great deal of time to sink its roots within the communities we are involved in. As such, institution giving grants for the said programmes should be encouraged to have patience to allow quantifiable returns. Use of health developed material is created that bring about traditional, natural and well felt need discussions on the health issues facing them. They also create personal relationship with the people that are leading them.

Group Leaders in this subject should be assisted to decist from using available materials, that would quite often not fall within the criteria of whatever is intended to be delivered as well as avoiding substitution.

(a) Culture Specific

In East Africa, the diversity of people, custom, mode of dress, and type of house and environment, demands a more sensitive approach to illustration. Pastoralists and farmers cannot look at the same picture and both be able to identify with it. What is appropriate in town will obviously not be appropriate in the rural areas.

(b) On the other hand, if villagers see themselves depicted, complete with correct details as regards their particular types of cooking pots, dress, livestock, and housing , there will be a sense of importance, that their own area has appeared in print. An equivalent pleasure is felt in an urban situation when one can recognize one's home town depicted in a film, or one's own friends in the crowd scenes.

(c) If training material is developed specifically for the area concerned, drawing on local knowledge, and building on good local customs, the messages are more likely to be accepted by that community.

(d) This "Culture Specific" approach to developing training materials obviously calls for a novel type of "development art". The artist's powers of observation, his ability to depict what he observes faithfully demands a sociologist's eye for relevant detail. Documenting a traditional society visually demands a tactful respect for rural ways, and a knowledge of public health issues. Ideally the artist should be involved from the beginning with the research and development of health messages. Convincing results cannot be obtained by relegating the artist to the status of technician producing drawings to order.

3. PARTICIPATORY METHODOLOGIES TO BE USED WHEN PRODUCING HEALTH MATERIALS

(a) Drawings Attract Attention:

People are irresistibly attracted towards pictures and pretesting usually draws a large crowd of on-lookers. Although only 40 people may be interviewed directly for their response to the pictures, ten times that will have listened to the procedure and will come away with something to think about. It creates a growing curiosity as people see the drawings, are asked to interpret them and then see them changed to suit their own specifications. People become more informed and ask questions about the project and how it will help them.

(b) Health Education is Mobilization:

By receiving individual attention, many people become personally convinced of the need for change. Thus the need, in this case for clean water, is already identified, and mobilization for project implementation is a natural result. This avoids the often mindless type of "community mobilization" where people are told to participate for their own good.

(c) What is Pretesting?

All illustrations have to be assessed in detail by the "target audience". In this case typical members

of the community, including a cross section of ages, sex, education and area, are asked individually to to point out every feature of the drawing, without any help from the interviewer. They are not asked to interpret new ideas or technologies depicted. It is merely to make sure that the drawing are accurate and suggest the right message. The results are systematically gathered and assessed. Any problem areas are quickly highlighted and can be altered. Each illustration must gain at least 80% comprehension rate before it is acceptable for use.

(d) Pretesting Becomes Health Education:

The pretesting should be used not only to collect data for the training material team, but be an exercise in health education itself, so that the respondents benefit from their interview and come away with an added understanding of the health hazards around them. Seldom do rural women have the undivided attention of a field worker for half an hour, and many women have expressed their pleasure at having received such a personal explanation on how diseases are spread. By the end of their interview, they invariably ask how they can join the project.

(e) Pretesting Helps Identify Leaders:

The natural leaders of the area tend to make themselves apparent and many of these men and women go on to become field workers or form future water committees.

(f) Pretesting Trains Field Workers:

KWAHO uses a system of community mobilization that recruits local men and women from the project area to become field extension workers. Often, they have only slightly better education than their neighbours, but are required to perform as teachers. Without a text book to follow, their teaching is often met with resistance as their peers questions their credibility.

If these field workers are involved in the pretesting exercises during the development of training material for their area, they become well grounded in the health issues they are required to teach. It gives their teaching a structure and sense of direction. During pretesting they also learn to listen, and how to draw out answers from their students. This is a radically new approach for most people who may have attended a dictatorial schooling system. Teaching adults requires a more complex approach.

(g) Collecting of Data while Pretesting:

Evaluation of the health impact that a Water and Sanitation programme has had in a particular area is very lacking because insufficient base line data had been collected before the implementation. During pretesting it is relatively easy to collect information on hygiene habits, whilst discussing a picture depicting these subjects. Instead of a series of personal questions on a sensitive subject such as sanitation, questions can arise naturally from the discussion over the picture code.

4. THE NEED FOR SELF IMPROVEMENT PROMOTED BY INTELLECTUAL STARVATION IN THE RURAL AREAS

(i) Functional Reading Matter:

During the pretesting sessions, it was realised that health education could serve another important need in the rural areas. Not only would it directly serve to improve family health but indirectly it would help provide some family reading material.

Of the women that were tested, many asked for personal copies when the booklet was ready. They complained that training material was usually reserved just for the trainers. Many could read the text easily understand the pictures. Those who couldn't read it themselves all had some member of the family who could.

(ii) A New Literacy, The Quiet Revolution:

In the rural areas, we are dealing with a new generation. The largely illiterate post-independent rural communities of ten years ago, have undergone a gentle transformation. The mothers of the sixties are now grandmothers, and and their children are now mothers of between twenty and thirty years of age. To a large extent today's rural mothers, in Kenya, are at least semi-literate.

It stands to reason that mothers, provided they are well informed themselves, are the best and most committed teachers available to society. it is wrong to assume that a "Teach Yourself Home Hygiene" is beyond their range. A well known saying states "Teach a man and you teach an individual : teach women and you educate the nation." Nowhere can it be more obvious than in home hygiene.

(iii) Very few rural families possess any printed matter and the status that a booklet of this sort gives is in itself an incentive to join the "Water for Health" movement. Education, and those who even have a taste of it, are held in high esteem. A woman walking to her group with a text book in her hand, that she herself can read, will represent to others someone who is part of the mainstream of progress.

This love of education and the enthusiasm for self improvement is a resource that the world of project managers would do well to focus on. Developing training material for health education is one of the ways in which the interest of the community can be captivated, prior to project implementation.

There is an intellectual starvation in the rural areas and because of the vast numbers involved, donor agencies tend to focus on institutional learning. To-date the general trend has been to economize by producing training material, such as flip charts, only for the use of the trainer who may use it for four or five hours a week. By providing copies for every interested individual the material is constantly in use. Of course, it may occassionally be used to wrap mandazis (doughnuts), but the chances are that it will have been subconsciously absorbed by many people beforehand!

People's health, the size of their families, their ability to learn new skills and maintain new technologies all depends on a basic education. This education has been available to an increasing number in recent years and the slow struggle to master the 3 R's is being achieved.

More should be spent providing individuals with informative printed matter is ideas amongst the rural poor are to change. Evangelical Church groups have assessed the situation correctly, and have a network of laymen selling cheap publications on foot around the villages. Newspapers for rural areas are being set up all over Africa to meet the demand for reading matter. Health Education programmes should print for the rural mother, not only for the trainers. This type of functional reading meets the needs of rural communities of the 90's.

It would be an enormous waste of time and energy if the intellectual effort that has been demanded to produce a literate mind, is now to be wasted for lack of reading material. Health education programmes should nourish this need.

5. PARTICIPATORY PREPARATION AND PLANNING WITHIN COMMUNITY HEALTH

Once the community has identified the production of that particular health material to be their priority, there is need to sit down with the community who together with their leader will identify steps to be followed throughout the development of the final product.

Approach to Material Development:

(i) A multi-disciplinary approach to material development is advocated where each material is subjected to certain professional sensitivity and ganged by various professionals for different technical aspects.

(ii) A Sociologist will have to look into the aspects of sociological nature and critize them in his/her understanding of the community norms and practices. He/she will pay particular attention to the implications that this material will generate in the community and shape them to suit the cultural ways of living and their known beliefs.

(iii) Technical personnel will have to look into aspects technology that is being deployed in the programme and assess the applicability, adaptability and replicability at the community level. The health material being developed must depict the utilization of the locally available material, equipments and technologies. The technical implementation of the project should be moulded within the health education time frame.

(iv) Health professionals have to develop the messages that are consistent with the identified problems. Subject them to critical analysis in compliance with the existing health principles, policies and procedures. A health education material must have messages that do not contradict the the health rules and practices of the Health Ministry and World Health Organization.

6. FOLLOW-UP AND FUTURE STRATEGIES

The common practice has been that once such materials have been circulated, no follow-up has taken place, as such, the effectiveness of the developed material has been left at the hands of the communities who in many cases have no idea, how the impact of such material could be measured, for improvement or with-drawing of the material altogether. May be there should be a time frame to determine this.

As regards to the future strategies, it is crucial that the communities be assisted to make frequent use of such materials at their disposal, for greater enhancement of health prorammes within the communities. On the the other hand, donors should be encouraged to fund the development of health materials in many vanaculars which can be used as tools for eradicating iliteracy.

This will greatly promote and develop their goals by making people literate in their own affairs which remain so crucial if reliable, durable, affordable SUSTAINABILITY surrounding health for ALL is to be realised. Thus can now be termed as one of the leading paths towards effective community participation in Health Education, a key factor towards healthy communities and Nations alike.

The slides we are presenting here are a brief illustration on how water needs can bring a solution not only to good HEALTH, but also developing a more meaningful collective participation, commitment and above all community ownership, which for now remain the best way to help the communities assist their governments in cost sharing at grassroot level.

Many thanks.

KENYA WATER FOR HEALTH ORGANIZATION (KWAHO)

November, 1990

Technology Choice, Operation and Maintenance in Water and Sanitation The Malawi Experience

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PAPER TO BE PRESENTED AT THE DECADE CONSULTATIVE MEETING ON WATER AND SANITATION IN ZIMBABWE, 26TH TO 30TH OF NOVEMBER,1990

TECHNOLOGY CHOICE, OPERATION AND MAINTENANCE IN WATER AND SANITATION - THE MALAWI EXPERIENCE

BY

R.D. KAFUNDU & Y.C. MHONE

1. BACKGROUND

1.1 Geography

Malawi is dominated by Lake Malawi which covers about one-fifth of Malawi's area. The landscape is greatly diverse, comprising of flood plains, marshes, hills, plateau, escarpments, and the mountain ranges; the altitude varies from less than 100m above sea level to more than 2,500m in the rugged peaks.

1.2 Climate

The climate varies from warm to hot with annual average temperatures lying between 15°C in the north and 27°C in the south, and is marked by a distinct wet and dry season. The average annual rainfall over the whole country is about 1,200mm but varies from place to place, and from year to year. The relatively dry areas of the Lower Shire Valley and other rain shadow areas receive an annual rainfall of less than 700mm, whereas the high rainfall areas such as the Mulanje Massif, Zomba and Nyika Plateau receive over 2,000mm a year. In the extreme northern border region the rainfall is even higher due to the influence of the Mbeya ranges in Tanzania with annual figures of around 3,000mm. Ninety-five percent of the rainfall falls during the wet season which runs from November to April.

1.3 Population

According to the 1987 Population and Housing Census the total population of Malawi was 8.0 million and growing at an average annual growth rate of 3.7%. Of this figure people 12% lived in the urban areas, of which the four main urban centres of Blantyre, Lilongwe, Mzuzu and Zomba account for two-thirds. This indicates that Malawi's population is predominantly rural and will remain so for sometime to come.

1.4 Health

Malawi's infant mortality rate is estimates at 150 per 1,000 live births, and an under-five rate of 270 per 1,000 live births. Although children under five years old comprise less than 20% of the population, they account for more than 50% of all deaths. The general life expectancy at birth is on average a little less than 50 years.

The country's high infant and child mortality reflects endemic malnutrition and widespread morbidity. In fact, the nutritional deficiency is the leading cause of death among children under five years of age. The general public health status is lowest in rural areas, where services and outstation support need to be strengthened and expanded.

The most common infective and parasitic diseases encountered in Malawi are: measles, malaria, diarrhea diseases, tuberculosis/pneumonia, bilharzia, hookworm, dysenteries, infectious hepatitis and typhoid. It is clear from the above list that the means to obtain better public health is not only through the provision of "safe" water, but importantly to link the water component to sanitary measures and effective health education.

1.5 General Economic Situation

Malawi's economic activity is dominated by agriculture which employs 85% of the population and contributes 37% of the gross domestic product (GDP). The GDP per capita as in 1986 was US$150.00. Although the country is small, landlocked and has little trained manpower and industrial development, from the late sixties to the early eighties the GDP per capita grew at an average of 6% per year. But of late the GDP has been growing at an average rate of 3%.

2. RURAL WATER SUPPLIES

2.1 Rural Supplies in General

The provision of potable water to urban and rural population is accorded top priority by the Government of Malawi. Even before the proclamation of the International Drinking Water Supply and Sanitation Decade, Malawi has successfully undertaken development programmes of water supplies both in rural and urban areas. With the consolidation of all water related matters in the Department of Lands, Valuation and Water in 1978, development activities gathered momentum and it is quite feasible that the goals of the Decade would have been achieved if the necessary external capital and technical corporation was forthcoming. Since October, 1984, the Water Department has operated within the Ministry of Works.

2.2 Rural Groundwater Supplies

Rural groundwater supplies comprising dug wells and boreholes equipped with handpumps are developed under three programmes, viz: the dispersed borehole programme, integrated projects and shallow wells programme. There are at the moment close to 10,000 handpumps serving approximately 2.1 million people i.e. 6,500 boreholes and 3,500 shallow wells. It is estimated that 75% of the rural population will need to be served to groundwater supplies where no suitable protected sources exist for gravity fed piped-water schemes. It is likely, therefore that up to 30,000 boreholes and shallow wells equipped with handpumps will be required as physical and financial resources will allow. This will then call for an efficient handpump maintenance system to keep such a large number of pumps working.

2.3 The Dispersed Borehole Programme

The first boreholes were drilled in Malawi in the 1930's under the dispersed borehole programme. The programme is implemented by the Department of Water in reaction to individual borehole requests by Government Departments, private institutions and individuals. Different types of handpumps are installed. By nature of the programme, boreholes are very expensive mainly due to transport costs. To maintain the different types of handpumps has also been a big problem logistically.

2.4 The Shallow Well Programme

This programme is largely self-help in nature. The communities are authorized to dig their own wells for the village and a simple direct action pump is installed.

A water point committee is then set up to look after the well and a caretaker chosen among them for simple and preventive maintenance. The caretaker only reports to the Government maintenance assistance for the major repairs.

2.5 The Integrated Groundwater Projects

During the last few years the Ministry of Works has established the integrated approach to groundwater development, combining the rehabilitation of existing wells and boreholes, construction of new wells and boreholes and the establishment of a community-based maintenance system. This approach was first developed in the Livulezi Valley Project in Ntcheu District, and has since been implemented or is planned for several other areas of the country. These integrated projects have included many advantageous modifications to well and borehole designs, and handpump installations. There is still a need for further improvements and flexibility in response to local constraints and conditions, perhaps most particularly in the locating and design of boreholes and wells to give the required yields with national pumping drawdowns as well as sand-free discharge. Small drawdowns i.e. improved efficiency would mean smaller pumping lifts and this should reduce both pump and borehole maintenance requirements. Within the project proposal, consideration is also given to the overall potential of groundwater for a range of uses. Livestock rearing and agriculture are both important in many parts of the country and have different water requirements. The need for low cost, dispersed supply sources for livestock favour shallow groundwater or readily accessible surface water. The aquifers of the crystalline basement rocks and residual overburden which dominate most parts of the country are unlikely to provide yields sufficient for full scale formal irrigation of significant areas, but might provide sufficient for small areas or supplementary irrigation. The potential for collector wells (large diameter dug wells with drilled radial collectors) could be feasible in many areas.

2.6 Piped Water Schemes

2.6.1 Completed Projects:

Malawi has taken great strides and achieved high level community involvement in construction of rural piped water schemes. These gravity fed piped water schemes started in 1968 in Chingale in Zomba with a small scheme serving 5000 people. To date, 55 other schemes have been completed serving nearly 1.3 million people.

2.6.2 On Going Project:

One such large scheme, Mpira/Balaka Project, is under construction is expected to be completed in 1992. The project has a design capacity of supplying 263.000 people through its 1800 taps.

The project will have 43 reinforced - concrete storage tanks and piping totalling 1400 Km. An earth dam was constructed in 1987/88 with a reservoir capacity of 3.6 million cubic metres. Roughing and slow sand filters were constructed as a treatment to the water.

3. TECHNOLOGY CHOICE

3.1 Rural Water Supply Handpumps

Groundwater supply to the rural areas is mainly by handpumps. The choice of the type of handpump for a particular project is of prime importance to its successful operation and maintenance. Since the early 1930's different types of handpumps have been installed in the country. These pumps require a very big truck to pull them out when need for maintaining them arises. Most of the trucks and the diversity of pump models community based maintenance is difficult to implement. The Government of Malawi realized the need for standardization and new approach to borehole and shallow well construction in order to minimize the maintenance problems. To develop Village Level Operation and Maintenance system (VLOM) only certain types of pumps are suited to this system. The Afridev handpumps or its derivative has been adopted as the pump to be installed on all water point for rural water supply in Malawi, this includes the Afridev direct action handpump for shallow wells.

The other pumps considered for installation are the Maldev, India Mark II and the Climax handpumps. The Indian Mark II has proved successful worldwide while the Climax has the advantage of pumping water to overhead tanks. The Ministry of Works has been able to develop VLOM with the introduction of the Afridev handpump.

3.2 Piped Rural Water Scheme

3.2.1 Organisation in Implementation

The request for piped water scheme normally comes from the local people themselves channelled through the District Development Committee (DDC). On receipt of the proposal from the DDC, the water Department then makes technical feasibility study, detailed designs and identification of funds. Once all is done, the local people are informed of their project through the DDC for implementation preparation. Various meetings are conducted to explain the roles of the community and Government on the project. The Government is to supply materials, transport and expertise necessary for the project. While the community plays major role in providing labour for digging and backfiling the trenches, excavation of foundations for storage tanks and any other labour assistance as may be required. At the meetings are elected the main committee ensuring full participation by their own leaders in every aspect of the project. The project then starts being monitored by the main committee.

3.2.2 Technology Choice

Realising that the schemes are implemented and operated by the local community the technology used is simple and geared towards the skills of the local people. Simple structures are made for an intake. All the schemes are based on gravity. No pumps are used. This is done to minimise operation and maintenance costs. Most of the schemes have their catchments protected and hence the water does not require chemical treatment. However, most of the streams from protected catchments are used up. The mode of treatment for projects with streams from unprotected catchments are slow sand filters which are very simple to operate and are easily managed by the communities.

4. OPERATION AND MAINTENANCE

4.1 Operation and Maintenance of Handpumps

The provision of groundwater supplies especially boreholes did not encourage community participation in maintenance and construction with the beneficiaries. However, in the Shallow Wells Programme the potential for community participation in siting and construction is very high. The programme was initiated by the Ministry of Community Services in 1975 and only got transferred to the newly created Water Department in 1980.

There are at the moment 25 borehole maintenance units throughout the country equipped with heavy trucks. This was as a result of diversity of the handpumps and the poor borehole design and therefore pose a great problem in the centralised maintenance system.

Some of the problems on handpump maintenance at present are:-

(a) The pumps installed are very heavy and require a truck with a winch to carry out the simplest repairs on the downhole components.

(b) Lack of pump spares which are imported. Due to procurement procedures it takes a very long time to obtain spares.

(c) Some of the available trucks are old and require frequent repairs.

(d) Once a borehole has been constructed most communities do not keep the access clear and good enough for trucks, and boreholes remain unrepaired due to bad access.

(e) There is a diversity of pump models and therefore maintenance experience at community level has to be diversified too. There is need for pump standardisation.

As a means to minimise the maintenance problems a new approach to construction of boreholes and shallow wells was adopted 1981, taking advantage of the development of VLOM type handpump (Afridev). This approach, which also improved other technical and economic issues, was geared at involving the community in some stages of the provision of safe water i.e. construction and maintenance. It was hoped that the involvement would increase their sense of ownership and hence that they would take care of the water point to ensure a continuous supply of potable water.

This programme has been implemented in 5 areas, the largest area serving 100,000 people. In these areas a community based maintenance system was established. This system has different teams with different roles. These are:-

1. Pump committee which is responsible for the care of the pump surrounding and correct operation of the handpumps.

2. Pump caretakers who ensure that the pump is operational all the time by weekly inspection and carrying out preventive maintenance monthly.

3. Village repair team which maintains the pump when it is non functional.

4. Maintenance Assistant who is a government employee based in the area. He assists the repair team with major repairs.

5. District repair team which is a back up team.

6. Regional repair team also a back up team.

The system described above exists only in areas with heavy down hole components. Where there are light downhole component components the hierachy ends with the pump caretaker who is now responsible for changing worn out parts and repairs. Where major repairs are needed the district team will assist.

The Water Department is responsible for training the caretakers and repair teams so they can carry out their duties efficiently. The 2 day training covers in simple terms: groundwater occurence, pump parts, faults to look for and how to rectify these faults, and hygiene. Subsequent refresher courses should be held after six months and yearly thereafter, but this programme of refresher courses has stopped in some projects due to staffing constraints.

In Malawi, it is mostly women who are trained as caretakers. This is because women are the prime users of water and it is in their best interest to have a continuous supply of potable water. The first such training was conducted in 1982 in Livulezi where 138 women and 5 men were trained.

The caretakers are provided with spanners and a diary for recording pump faults and repairs. The spares are kept by a Maintenance Assistant who provides them on request and assisting with difficult repairs. All spares are provided free. There is no contribution of cash towards the maintenance of groundwater supplies.

In Malawi self-help construction is emphasized heavily. It is expected for people to organize themselves somehow and get the work done. It is essential however, that for purposes of gaining effective results the approach in mass mobilization should take due consideration of the cultural values and forms of conduct of the societies which are to be respected. These differences which must be taken into account during the mobilization and construction phase have a subsequent influence on the organization of maintenance.

4.2 Operation and Maintenance of Piped Schemes

Community based Operation and maintenance for piped schemes are more established than in groundwater projects because of users involvement from the start of the schemes and the use of simple technology which the community can afford.

Normal maintenance like cleaning of the intake works are undertaken by the people, organised by the committee. After a few years of this, the people of some schemes have decided to employ someone as caretaker for the intake works. Money is raised from all those served by the system. When a tap needs replacing, the tap committee raises the funds and gets the Monitoring Assistant to help with tools. For broken pipes or larger repairs, the Water Department supplies the materials. Apart from these incidentals, no payments are made for water by beneficiaries.

This exemplary programme is not without problems mostly of the long term kind. These relate to three areas:

(a) Insufficient water supply to meet demand, due to design error or large population increases (in migration).

(b) Delays or unavailability of materials for repair and Monitoring Assistant having too large an area to cover.

(c) Committee structure falls apart.

Recent working papers produced by the Centre for Social Research document these problems especially pointing at the need to improve support to the community management and action structure.

5. SANITATION

5.1 Sanitation Policies

The policy objectives on sanitation are covered under the overall policy on health. The policy objectives on health are outlined in the "National Health Plan of Malawi 1986-1995". In this plan the following seven priority health programmes are to be addressed during the course of the period:-

- Child Spacing
- Combating Childhood Communicable Disease
- Expanded Programme of Immunization
- Bilharzia Control
- Leprosy control
- Tuberculosis Control
- Environmental Health and Sanitation.

It is important to note in relation to this plan that one of the priority areas of effort identified by the Government is a programme approach towards environmental health and sanitation.

Primary Health Care (PHC) and Health Education are two "programme-like" activities that are identified in the National Health Plan as priority areas to be addressed. PHC, being multi-sectoral, is very much supported by improvements in environmental health and sanitation conditions. Sanitation improvements, as has been internationally recognized, on their own will not significantly improve the overall health standards of a community. Improvements in the water supply (quantity and quality) situation and overall changes in hygienic habits through health education efforts need to be integrated with improved sanitation in order to appreciably improve the health status of a community. This approach is clearly supported by the Government.

5.2 Sanitation Goals

The Ministry of Local Government indicates that as a goal 80% of the total population should be served with improved type latrines by the year 2000. This seems to be an achievable goal given the general existing awareness amongst the population in relation to sanitation, e.g. the fairly good coverage (with unimproved latrines) in rural areas already. This goal in the rural areas is irrespective of the modest increases which can be expected in waterborne sewerage service. For the urban areas an increase to 30% coverage for waterborne sewerage is assumed in the following projections, giving a 100% coverage in the urban

areas and approximately 80% coverage in the rural areas when considering both waterborne and non-waterborne forms of sanitation service. It is also assumed that all existing latrines require some form of upgrading and are therefore included in the implementation projections which is the "worst case" scenario. The goals translated into population and households give the following figures:

Year 2000	Urban Population	-	1,784,000
	Urban Households	-	356,800
	70% Coverage (on-site)	-	249,800 say 250,000
Year 2000	Rural Population	-	11,753,000
	Rural Households	-	2,350,600
	80% Coverage	-	1,880,500 say 1,900,00
Year 2000 On-Site Sanitation Goals		-	2,150,000 Improved Latrines to be Constructed.

In order to achieve these goals implementation rate would be as high as 350,000 improved latrines constructed per year by the mid-1990s.

5.3 Legislation

The "Laws of Malawi" contain several areas of legislation which are relevant to developing a sanitation strategy. These are listed below for information purposes only. Legislation and the imposition of fines are however not envisaged as the means to achieve the targets/goals as outlined in the above section. The current Government attitude is to attempt to persuade individual householders to improve their sanitation situation through promotion and health/hygiene education. Legislation would be enforced in this respect in very rare cases against individual householders only when an extreme situation would arise which threatened the well-being of the community as a whole. Most of the legislation which is listed below would be applied more towards commercial and industrial enterprises.

The relevant legislation is as follows:

CAP 22:01 - Local Government Act (Urban Areas). Part VIII of this section of the Act allows urban authorities to promulgate By-Laws some of which pertaining to public health (relating to CAP 34:01 below).

CAP 22:02 - Local Government Act (District Councils). Part VI of this section of the Act describes the powers and duties of District Councils (paragraphs 27-39) again some of which do relate to public health and sanitation issues.

CAP 72:01 - Waterworks Act. Mostly applicable to water supply but affecting public health and indirectly sanitation.

CAP 33:01 - Estates Act. Sets out sanitation facilities standards for settlements within estate areas.

CAP 34:01 - Public Health Act. Part IX of this section of the Act relating to sanitation and housing nuisances; Part X relating to sewerage and drainage; and Section 75 of the Rules stipulating that every latrine within councils' authority must be constructed and maintained as per council direction. (This Act is currently under revision).

Generally speaking the legislation as cited above is adequate for dealing with problems on sewerage and sanitation nuisances. The fines stipulated within the Acts above are very much outdated and need review and revision but as stated above legislation is not a solution to improving the overall sanitation situation throughout Malawi - proper promotion, education, and technical advice are the recognized means to achieve this goal.

6. INSTITUTIONAL ARRANGEMENTS WITHIN THE SANITATION SECTOR

6.1 Government Institutions

The planning and delivery of on-site sanitation infrastructure services to households in urban and rural Malawi is dependent upon several ministries, departments, donors, and non-governmental organisations (NGOs); and of course upon all local authorities. There are currently moves to form an inter-ministerial coordinating committee.

6.2 The Ministry of Health (MOH)

The Ministry of Health is responsible for the planning and provision of improved health conditions for the population of Malawi through many different interventions. In relation the sanitation sector the MOH has played the dominant role to date in the promotion of the concept of improved sanitation in both urban and rural areas. Through its field staff the MOH has promoted the construction and proper usage of improved latrines (ventilated improved type latrines).

Unfortunately, the MOH is not geared towards technical engineering aspects of latrines construction nor experienced with the logistical details which are essential in order to provide a real latrines construction programme approach towards improving the coverage of sanitation facilities throughout the country.

The MOH's strongest capabilities in respect to sanitation improvements are in the monitoring of the quality of environmental health conditions throughout the country; programming improved sanitation activities into an overall Primary Health Care (PHC) approach to better community public health; and the promotion of latrines construction activities within communities followed-up with health education support activities. The Hygiene Education and Sanitation Promotion (HESP) Programme has focused attention onto these fortes in the past several years.

6.3 The Department of Water (DOW)

The Department of Water within the Ministry of Works does have a Sewerage Section within the Water Supply Branch. This section assists Government institutions (schools, colleges, hospitals, etc.) presently operating waterborne sewerage schemes with technical advice relating to planning and sizing of such facilities. As such the DOW presently has no connection with the provision of low cost on-site non-waterborne sanitation facilities.

The DOW's function however within the rural and urban areas in terms of their responsibility towards the provision of a safe and ample supply of potable water has major implications related to improvements in community health through an integrated approach for improved water supply, adequate sanitation facilities, and health/user education.

Recently a change in approach by DOW towards the implementation of new water supply schemes has incorporated sanitation promotion and health/hygiene education components (in collaboration with MOH) in an attempt to move towards the integrated programme approach of project implementation.

6.4 The Ministry of Local Government (MLG)

The Ministry of Local Government has long recognized that improvements in technical advice to the local authorities in relation to sanitation infrastructure options was lacking and in 1987 established a Low Cost Sanitation Unit within Ministry to assist the local authorities. Sanitation Centers (San Centers) have been set up in four urban areas under the local authorities direction to promote and demonstrate several options of low-cost non-waterborne sanitation; advise householders on technical issues related to these options; and supply (at a cost) householders with essential components required in order to construct or improve their sanitation facility on their own. This programme, although quite new, shows good potential in terms of providing a replicable model for delivery of such services to individuals at a very reasonable cost with mostly individual householders' efforts involved.

A new project to be implemented by MLG with funding from UNDP will basically copy this urban model and apply it to the rural areas. Once in full swing this project would be the start of addressing the physical goals set forth in a multi-sectoral approach.

The MLG together with the United Nations High Commissioner for refugees (UNHCR) are working together to provide adequate sanitation facilities for the large number of displaced people from Mozambique mainly in the southern part of the country. It is estimated that roughly 10% of the 1987 Census recorded population in the Southern region are refugees.

6.5 The Ministry of Agriculture (MOA)

The Ministry of Agriculture through its integrated National Rural Development Programme (NRDP) within the eight Agriculture Development Divisions (ADD) is assisting in the promotion and

delivery of low-cost sanitation options. They have as their biggest advantage, in terms of assisting in the improvement of sanitation coverage throughout the country, their extension network which is so extensive throughout the country. These extension staff are currently helping to disseminate multi-sectoral development messages throughout the country and have been very successful in some of the ADDs in promoting and implementing latrine construction projects.

6.6 The Malawi Housing Corporation (MHC)

The Malawi Housing Corporation constructs pit latrines for any of their housing developments which are not serviced by waterborne sanitation as part of the initial site services.

6.7 The Rural Housing Project (RHP)

The Rural Housing Project is currently operating out of 27 Rural Housing Centers throughout the country. This project was formulated with the objectives of training locally based artisans who would contract out their skills to improve national housing conditions (quantity and quality of housing). As part of the programme the artisans are taught how to construct a ventilated improved type of latrine for the housing schemes they are contracted to build.

6.8 The Ministry of Community Services (MCS)

The Ministry of Community Services is assisting the sanitation sector in promotion/mobilization activities at household level, adult education in the area of functional literacy, income generation activities for women, and in organization of community committees and financial arrangements. MCS staff (community development officers and assistants) are requested by implementing ministries to be seconded to work within major projects which integrate water supply, sanitation and health education. It was the MCS which initiated the acclaimed rural piped gravity-fed program back in 1968 and managed it up to 1980.

6.9 Local Authorities

In relation to sanitation the twelve urban councils and twenty-four district councils are responsible for ensuring that the best technical advice is delivered to all householders within existing Government policy in order to improve the sanitation coverage throughout the country. To date very little has been able to be achieved in relation to sanitation programmes in the rural areas other than simple promotion of the concepts of improved sanitation. The Health Inspectorate staff within the district councils have been the primary motivators but have had very little, if any, financial and technical support in order to launch sanitation programmes.

Within the urban areas, a more focused approach towards demonstrating low-cost sanitation options to urban dwellers is being carried out. Presently San Centers are to various degrees actively operating in Lilongwe, Blantyre, Mzuzu and Zomba under council supervision and Ministry of Local Government co-ordination. The Low-Cost Sanitation Unit within MLG has been instrumental in setting up these San Centers which are supplying householders with technical advice and essential materials.

6.10 Donors and Non-Governmental Organisations

The major donor involved with the Hygiene Education and Sanitation Promotion (HESP) Programme through the Ministry of Health is USAID. It has in the past also been the largest single donor involved with the Rural Piped Water Supply Programme within the Department of Water. They have been instrumental in integrating the HESP Programme with the water supply activities which they have been supporting. In a recently proposed extension to the water supply projects the primary focus has been directed towards the MOH with secondary funding going towards DOW for water supply construction activities.

UNICEF is also very much involved in the HESP Programme through the MOH, and is running some three area based Child Survival Projects through the Ministry of Local Government. One of the components of the Child Survival Projects is the improvement of sanitation.

Not much has been able to be ascertained as to the extent of Non-Governmental Organization (NGO) activities within the sanitation sector. Africare is one of the NGOs carrying out sanitation activities as part of its rural development programme. Presently NGOs are coordinated by the Ministry of Community Services through the Council for Social Welfare. NGOs should play an active role in the future in promoting and assisting to deliver proper sanitation facilities throughout the country.

7. LOW-COST SANITATION TECHNOLOGIES

7.1 The Sanitation Platform (Sanplat)

Malawi has been experimenting with low-cost sanitation alternatives since the early 1980s and has come up with some tested and accepted technical solutions. The following lists all forms of sewerage/sanitation currently in popular usage in Malawi today:-

- Conventional Waterborne Sewerage Reticulation and Treatment
- Waterborne to Septic Tank
- Ventilated Improved Pit (VIP) Latrine
- Sanitation Platform (Sanplat) Type Non-Ventilated Latrine
- Traditional Type Unimproved Latrine

Only the last three alternatives can be considered to be in the low-cost grouping and of those three the VIP cannot be considered to be low-cost to all groups of people in Malawi. The San Plat and the traditional latrines are the low-cost forms of sanitation in the Malawi context.

The sanplat is simply a reinforced concrete slab with a cover which fits tightly over the drophole when not in use, which is used as a squatting plate for a latrine. This small element when properly fitted onto a traditional type latrine greatly improves the sanitary conditions of the latrine. If ventilation can be added then this provides another improvement to the latrine but the MLG engineers are recommending that the sanplat alone should be the minimum basic standard which Government should endorse. If a householder then wishes to go beyond this standard - all the better.

Two sizes of sanplat are being recommended by MLG at this time; one used in the urban areas which measures 200mm x 1200mm x 75mm and weighing roughly 220 kilograms, and one used in rural areas measuring 600mm x 600mm x 50 mm and weighing roughly 40 kilograms. The San Centers which do presently exist in the urban areas supply these sanplats at a cost which recovers all costs of supplying the slabs. The smaller sanplat is recommended by MLG as the basic infrastructural element which should be made available throughout the country through many more San Centers. The input material costs of the smaller San-Plat is approximately MK20.00 (US$9.00) per slab and that for the larger San-Plat is MK50.00 (US$20.00).

The concept is that through promotion of hygiene/sanitation and technical advice together with these San Centers throughout the country large improvements could be made in terms of environmental health conditions at a fairly reasonable cost both to the recipients and Government.

If the next level of sanitation infrastructure were to be chosen by Government as the basic minimum standard of service, i.e. the VIP latrine, the costs of supply of just the essential elements (vent pipe and slabs) would cost four to five times more than the smaller sanplat and have serious logistical problems with transport which could drive the cost up even more. One of the major advantages of the sanplat is that weighing only 40 kilograms it can relatively easily be transported from the San Center to the recipient's house.

7.2 San-Plat Option

The cost of the basic minimum level of service, i.e. with the 600 mm x 600 mm sanplat in an area "somewhat accessible by a road"' is:

- 3 days labour for excavation	=	MK25
- Traditional flooring (1 day labour + materials)	=	MK15
- San Plat	=	MK20
- Superstructure construction (4 days labour materials)	=	MK50
Total		MK110

This is equivalent to US$41.00.

Of course the further away from reasonable roads, the higher would be the sanplat cost. This very rough costing for an improved type latrine suggests that the majority of the cost is borne by the householder in the form of labour inputs and locally available materials. The only outside input would be for the sanplat which has been inflated to MK20 to reflect the worst case possibility with high transport costs.

The above costs are meant to reflect costs in the rural areas, where the soils are stable and no lining is required. Some areas within the alluvial plains require lining to stabilise the hole from collapsing. In the urban areas the costs for the superstructure will generally be elevated mainly due to the fact that local materials for roofing may not be available and corrugated steel sheeting may have to be used.

Given the above costs this approach to improved sanitation is indeed "affordable" to the majority of people. Income data, particularly for the rural areas, is not readily available but in general it can be stated that incomes are low. If indeed the MK20 reflects the true cost of the sanplat then a large percentage of the population should be able to afford this cash element of the project costs. Government can also choose to subsidize this element of the cost (to some degree) in order to encourage better coverage levels.

7.3 Other Types of Improved Latrines

Alternative costs of other types of improved pit latrine are quoted below for comparative purposes:

- Ventilated Improved Pit Latrine in unstable soil (lined) MK650
- Family type double ventilated pit latrine MK800
- Septic tank based latrine MK1400

The above costs include labour materials and transport.

8. IMPLEMENTATION STRATEGIES IN SANITATION

Woven throughout the "Statement of Development Policies 1987-1996" are the cross sectoral elements of self-help and community participation. Government objectives are to have these integrated into all development projects where feasible. Activities within the low-cost sanitation sector lend themselves to such inputs. These two elements are very much a part of current implementation practices in Malawi, and they are recognized internationally as essential elements for a successful water and/or sanitation programme.

8.1 Urban Areas

In the urban areas the sanplats are provided on a cost recovery basis through the San Centres by the Local Authorities. The slabs are sold to the communities and this is followed up with technical advise and health education through the extension workers.

The emphasis in these areas is on the improvement of existing latrines and the construction of extra ones (where the existing facilities are not adequate) since most households already have traditional pit latrines with concrete platforms.

There is also a move to encourage the construction of lined pit latrines with facilities for emptying due to limited areas for future construction. The cultural conditions dictate that emptying should be done mechanically.

8.2 Rural Areas

Three implementation strategies have been tried out in the rural areas of the country covering various social and cultural communities. The three areas where the different methods have been used are Karonga, Kasungu and Liwonde. All the methods have been developed by the technical staff in conjunction with the local communities.

In Karonga, sanitation has been implemented as part of the Karonga Rural Integrated Groundwater Project (KRIGP) in the north of the country through the Department of Water with technical support from Ministries of Local Government, Health and Community Services. The whole project is funded by DANIDA. The technical personnel responsible for sanitation were initially trained by MLG.

The implementation strategy employed in this project took advantage of the organised community participation. The Project supplied cement, reinforcement bars, tools and transport to site. A number of villages are then organised for a seven day training course to which they bring sand, aggregate and water for making the sanplats. The training covers health education and sanplat making. Each participant makes his/her own sanplat by the end of the training which is carried home to be installed in their latrine. The technical staff later follow up on the participants to check the installations.

In Kasungu, sanitation has been implemented by the Kasungu East Primary Health Care (KE-PHC) Area Committee in the central part of the country through the Ministry of Health with technical support from the Ministry of Local Government. The project was funded by the Federal Republic of Germany. The technical personnel were trained by the Ministry of Local Government.

The KE-PHC supplied materials (cement and reinforcement bars) and tools, and also erected a San Centre where production was carried out. The KE-PHC also employed a builder. The community supplied sand, aggregate and water. The villages had each a Village Health Committee (VHC) which organised the communities. The sanplats were then give out to each household after the whole village had dug a new pit latrine onto which the sanplats would be installed. The sanplats were only given out after the KE-PHC had satisfied itself that every household in the village had a new pit dug. The VHC was responsible for health education and organising the digging of the pits.

In Liwonde, sanitation has been implemented by the Liwonde Agricultural Development Division (LADD) as part of its National Rural Development Programme, with technical support from the Ministries of Health and Local Government. This project was funded by the Federal Republic of Germany. The technical personnel were trained by the Ministry of Local Government.

In this project, LADD opened up a San Centre in each Primary Health Care Area Committee. LADD employed builders and labourers, and also supplied cement, reinforcement bars and tools. PHC Area Committee members were also trained in health education to support the programme. Each household was then required to bring sand, aggregate and water for the making of the sanplat by the builders. When the sanplat was ready the household would collect it and have it installed in the pit latrine. Health education was followed up by the health personnel.

9. FUTURE PLANS

9.1 Rural Water Supplies

Malawi is to develop a National Groundwater Master Plan on which basis future projects will be implemented. Large scale borehole rehabilitation projects have been drawn up and one such projects will be funded by IDA for 1050 boreholes in certain parts of the country. The VLOM type of handpumps (the Afridev) will be installed in all these projects and VLOM established. This is aimed at reducing operation and maintenance costs by Government and create a sense of ownership by user.

At the end of the day 75% of the rural population will be served from groundwater supplies utilizing some 30,000 handpumps installed in boreholes and shallow wells.

Thirteen small piped schemes are to be implemented in the next 6 years employing the same technologies as in the other schemes. These will supply another 400,000 rural population.

9.2 Sanitation

The Ministry of Local Government is about to embark on a nation-wide Rural Sanitation Project. This project will institutionalise the current procedures of coordination especially with the Ministry of Health, Water Department, Ministry of Community Services, and NGOs. The project will concentrate on the social software with the hardware being provided by other on-going projects in an integrated manner.

The Ministry of Health has just started the Primary Health Interventions for Child Survival (PHICS) Project. One of the large components in this project is the support to the Health Education and Sanitation Programme. Under this Project the health education campaigns will be expanded.

One of the issues to be addressed will be the sustainability of the various implementation methods tried out. A considerable effort will have to be spent on the transfer of the technical expertise to the local communities.

10. DISCUSSION AND CONCLUSIONS

10.1 Rural Water Supplies

This brings us to consideration of what are the essentials for adequate maintenance of a water supply system. Maintenance means regular input of attention, materials, labour and skill. The burden of maintenance falls on the beneficiaries and the Government.

A basic requirement is that the technology chosen for supplying the water will not have maintenance costs beyond the capacity of the system. For example boreholes already equipped with heavy pumps require a team with truck and winch from the Water Department when any work or maintenance of down the hole components are required. These pumps although very durable are not acceptable for continued installation on new boreholes

because the maintenance cost is too high and there are problems with procurement of imported spares. The maintenance cost is borne totally by the Water Department since it is not amenable to village input.

Because voluntary commitment is not costed and often quantified, the long-term maintenance input from the community has not received sufficient attention. There is a general acceptance of the principle that community maintenance is "the answer" because Government maintenance is definitely not possible on a 100% coverage basis within the funds likely to be available. However, community maintenance is affected by the effectiveness of the structures for community cooperation, and how important the maintenance of the safe water supply is to those people. It is also very much affected by inputs that are the responsibility of Water Department: dependable and speedy supply of spare parts, availability of Monitoring or Maintenance Assistants, and training of the village people in relevant maintenance tasks. Therefore to improve the maintenance, inputs from both community and Government must be looked at.

The supply of spare parts within the government system is not very flexible being part of a large bureaucracy. This causes difficulty to the Water Department in having spares available in a reliable way at District level.

The alternative for supply of spare parts is the free market or even an "assisted market". This has not been looked into in Malawi since at present spares are provided free.

The community commitment to and management of the system can flag, committees die and there may be no coherent move to get a new one elected. In many cases external input is required. One recent suggestion (Centre for Social Research working paper) is that local Area Action Committees or at least the District Development Committee be given the responsibility for ensuring that these elections occur every 3 or 4 years. They should also mobilize inputs from the Ministry of Community Services (Leadership Training) and Water Department (increased in-service training of Maintenance Assistants). This suggested increased input from Government has not yet been costed, and the involvement of the Area Action Committee have not been widely discussed as yet. In some areas served by piped water schemes the Area Action Committees have already taken a role in revitalizing the committees. We expect that this issue of maintaining the community involvement will receive more attention in forthcoming strategy and policy decisions.

In conclusion, community based maintenance is very attractive to donors and Governments because:-

1. The maintenance responsibility of the Government is reduced.

2. The maintenance cost per water source to the Water Department is reduced.

3. The possibility of wider coverage with limited funds therefore increases.

4. Community involvement is a good idea that is favoured by donors.

5. The role of women in society is recognized.

6. The Community as beneficiaries attains a sense of self reliance.

However, the challenge is to ensure that it remains attractive to the users. After all most people with sufficient funds (you and me) prefer to pay money for water supply and maintenance rather than get involved in communal action to do the task.

10.2 Sanitation

The various projects where sanitation has been a component have shown that the sanplat is an appropriate solution to improve the traditional latrines, and that it is possible to implement at a large scale. But the key issue to eventual success is health education. Presently the technical and engineering aspects have been developed, but there is still need to further develop the health education and information systems for delivery to the communities. Even if the people are able to afford the sanplat unless they are able to appreciate the health benefits associated with it, coverage will still be low. Health education has been dragging behind in most cases due to poor coordination and the challenge in the new projects to be implemented will be to improve the institutional coordination especially with the Ministry of Health.

The awareness to having pit latrines in Malawi is high with the present coverage (in terms of traditional pit latrines) being almost 60%. But the awareness on the health benefits associated with pit latrines is still very low. Therefore the future success in terms of coverage and useage is highly dependent on the efforts to be put in health education.

DOCF: PAPERZIM

Lesotho's Urban Experience on Loans and Cost Recovery

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LESOTHO'S URBAN EXPERIENCE ON LOANS AND COST RECOVERY

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This paper is a brief description of what the Urban Sanitation Team is doing to assist the communities with finances to improve their sanitation.
Low cost Sanitation policy in Lesotho has been developed over the past few years by the Urban Sanitation Improvement Team (USIT) and the National Rural Sanitation Programme(NRSP). It has been agreed that it is not currently appropriate to provide grants or material subsidies for the purpose of building improved sanitation facilities. Nevertheless it is accepted that people do not always have sufficient cash to pay for the latrine all at once. With this in mind a credit scheme has been set up in conjunction with The Lesotho Bank.

Urban Sanitation:Lesotho's Experience with Loans on Cost Recovery (Loans for Sanitation Improvements)

Introduction

On-site sanitation development in Lesotho is based on self reliance in both Urban and Rural areas. This obviously raises concerns about affordability and the capacity of the less well off to afford VIP Latrines. During 1980 the possibility of developing loan schemes to assist householders to construct latrines was investigated.

In the Urban areas a latrine construction credit programme operating through a revolving fund in the Lesotho Bank has been underway since 1987.

Planning to meet the goals of the "Water Decade" has led most governments and international agencies to re-think their criteria in terms of a "Decade Approach" in which, developments are designed to be affordable by the community to be served and are thus replicable by that community without relying on large injections of funds from outside.

Background to the Project (USIT)

The Urban Sanitation Improvement Team was launched in 1981 as a small department of the first Urban Development Project (PCU). By 1984 the department had grown in size hence it became independent of PCU. In 1987 the department had strong aims of providing appropriate, affordable, acceptable and hygienic sanitation facilities for all urban areas of Lesotho. The main activities being to:

- Develop the Sanitation Team
- Construction of Demonstration Units
- Promotion of Sanitation facilities
- Provision of technical advice for supervision and construction of sanitation facilities
- Provision of loans to enable construction of latrines
- Provision of pit emptying service

The Urban Sanitation Improvement Team which is now fully developed is divided into two main sections : The Technical and the Community Development Sections. The Technical Section advises on technical aspects of latrine construction, location, pit digging and designs of superstructure, supervision on construction latrines. The technical section also supervises pit emptying service.

The Community Develoment section on the other hand is responsible for the promotion of adequate sanitation within the community through the design of educational and promotional materials. The section advises people who come and enquire at USIT about the details of the loan programme being implemented at USIT and develops material for Health and User education.

The Urban Sanitation Improvement Team has been operation on Capital Expenditure provided for by two Donors, The British Government (ODA), and the German Government (KFW). The donor money finances all activities except paying of wages/salaries, vehicle running costs and office costs which are financed by Lesotho Government. Figure 1 shows flow of funds and some information.

The loan Scheme

The operations of USIT are guided by a financial policy which developed over several years and is consistent with that of other Government departments working in low cost sanitation. This policy discourages sanitation subsidies through grants for the general public, but encourages the construction of latrines by providing loan facilities. The reasons for this policy which are outlined below :

a) To provide a provide programme that is consistent with National Rural Sanitation Programme (NRSP) . Usit does not wish to provide urban dwellers with financial assistance that is not available to rural dwellers.

b) To provide via the Lesotho Bank a type of revolving fund assistance for sanitation improvements to more households over a longer period of time.

c) Experience in such matters emphasises that people maintain and look after facilities that they have paid for themselves better than those that are given to them, which they tend to view as belonging to the "giver"

d) The cooperation of the Lesotho Bank (which has branches in all the urban centers) in the collection of repayments has also proved that the system is viable.

e) It has however been proposed, that after 3 to 4 years some grants will be made available to people with very low incomes. This would help those who clearly have not or will not be able to participate in the loan scheme. To introduce it earlier would no doubt mean people able to afford the repayments would try to qualify for the grant.

g) In each town USIT has built "demonstration " latrines so that people can see exactly what VIP and VIDPs are. These have been built on cost sharing basis with 50% paid by the project and 50% by the client.

Basically the system operates as follows:

-Seed money is placed in the current account from which building material and service for loans are disbursed.

-Loan Account Numbers are assigned from the computer print out given to USIT by Lesotho Bank. USIT is responsible for their allocation.

- Client applications must be provisionally approved by the Loan Approval Committee and the requirements fulfilled before the client is allocated a number.

- GoL /USIT establish what goods and services are needed by the beneficiary and prepare purchase orders for the acquisition of materials and services.

- Beneficiaries hand in purchase orders to suppliers in exchange for goods or services. Suppliers then are paid by Lesotho Bank from the current account

- USIT prepares the set up forms, Lesotho Bank on receipt of the "loan set up forms" sets up the loan account for each beneficiary and deposit the full amount in a USIT Loan Collateral Account.

- Beneficiaries make loan repayments directly to the nearest branch of the Lesotho Bank.

- Lesotho Bank monitors repayments, giving regular computerized reports to USIT who will follow up defaulters.

8. The USIT officer meets with the clients and informs them that the loan has been provisionally approved. The client must get the pit dug and collect the concrete blocks and sand before final approval.

9. When the conditions of 8 are fulfilled, the client obtains quotations for materials from local suppliers. A loan docket is opened containing all papers relevant to the particular client.

10. The Senior Technical Officer examines the quotations for materials, labour etc. and draws up a Loan Computation Form, which tells the client how much the monthly repayments will be and how much interest is to be charged.

11. At this point the client must confirm that he/she will be taking up the proposed loan (or agrees to return when a decision has been made) The client is told to bring a M10.00 fee to the next meeting for the Loan Set-up and administration costs and for small materials supplied by USIT e.g flyscreen, posters, roofing screws, etc.

12. On the next visit the client is then asked to sign two copies of "Acknowledgement of Debt". A simple explanation of the form in Sesotho is given to the clients so they know exactly what they are signing. A loan number is then allocated to the client and purchase orders are written and given to the client.

13. The amount owed entered in the Acknowledgement of Debt is the estimated total based on the quotations and the Loan computation forms. The officer retains both copies of the Debt in the Loan docket until exact amount owed is known.

14. The client can then obtain materials and commence construction. Any other arrangements needed (e.g return visit for supervision etc) are made . The client receives materials and also delivery notes which are passed on to the officer. Invoices are sent by suppliers directly to the Regional Offices.

15. Delivery notes and invoices are checked and approved for payment. Cheques are then prepared and send to suppliers for payment through Lesotho Bank.

- Loan repayments are deposited in a call account.

- Periodically, repayments are "revolved" by transferring them to the current account for disbursement as sanitation improvement loans.

USIT LOAN PROCEDURES IN ALL URBAN AREAS OF LESOTHO

1. Potential Client is motivated to enquire about sanitation improvements.

2. Potential client approaches USIT for advice. USIT gives the Client an application form and if necessary, help the client to fill the form. The client is given a leaflet in Sesotho, that explains the Loan Scheme.

3. The USIT officer meets with the client and discusses his/her precise needs , available resources and any other items offered as security (collateral) for the proposed loan following which the client completes filling of the application form.

4. It should to be pointed out that the loan is for a portion of the total cost. The client must provide sand and concrete blocks (or bricks) and also dig a pit.

5. USIT officer visits the client's site and verifies the existence of the stated collateral, sees if blocks are already on site etc. and makes technical recommendations e.g if the bucket latrine can be converted. Any additional information that the Loan Approval Committee might need is written on the application form. The pit is then set out for digging.

6. All suppliers should have been approached in each urban centre to establish their willingness to participate. Supply contracts should also be negotiated centrally with major firms or suppliers.

7. The completed application form must be discussed at the next meeting of the Loan Approval Committee which should meet every 2 -3 weeks or more often depending on the number of applications to be approved. The application is judged according to agreed criteria and the USIT officer is instructed to convey the decision to the client.

16. If the office finds discrepancies between orders and invoices alterations and recalculation on the Loan Computation form are made and the amount on the Acknowledgement of Debt can then be finalised. The client's copy of the completed Acknowledgement of Debt form can then be given to the client. The client must countersign the amount entered into the Acknowledgement of Debt form especially if it has been altered.

17. On receipt of all papers The Accountant draws up a Loan set up form and submits it to Lesotho Bank where a Loan Account is set up in that clients name.

18. The client is issued with a loan Repayment Booklet which has on it his/her name , account number and a monthly installment. This he /she has to produce at the Bank when repayments are made so payments can be recorded.

19. Lesotho Bank computer automatically produces reminders if payments fall due over 30 , 60 and 90 days in arrears.

20. For clients who fail to respond to a 90 day threatening reminder , at 120 days the bank computer issues a Collection Notice to USIT. USIT will then request a Loan Statement printout from the Bank. This will be handed to the Lesotho Bank's lawyer for drawing up summons.

One major attraction of the loan scheme is that the loan is between the bank and the client and not between the client and the Government. It is considered that there is a much higher incentive for the client to repay the Bank than to repay the Government particularly if it became known that the government had received the money as grant aid.

People are afraid to be taken to court and the legality of the whole system allows very little room for defaulters. There are a few defaulters who have come up and given acceptable reasons for defaulting.

No doubt, one of the first things people will say is " Is all this necessary to get a latrine built?" Usit has at all times tried to simplify the procedures and paper work, but there is a need to be accountable to the donors who have made funds available for USIT to operate the scheme. Also USIT has had to ensure that legal documents, enforceable in court, are used so that debt collection is feasible.

The project appears to be playing an increasingly important role in the rate of growth of VIP latrines. There may be fewer people taking up loans for construction of latrines but the message has been spread and individuals constructing latrines on their own are on average more than those who opt for a loan.

The following table briefly shows a record to date of what has been done.

Loans set up to date	No of inquiries	Loans approved	Loans paid up	% of Default	%cost recov'd
252	4500	600	81	12%	45%

Attached are specimen of different important documents used through the scheme.