Decade Consultative Meeting
on
Water Supply and Sanitation

Sector Paper on Water Supply and Sanitation
in Communal Lands

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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](image)

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.
ORGANIZATIONAL STRUCTURE, NAC

- MPA
- MFEPD
- MEWRD
- MOH
- MCCD
- NAC
- DDF
- NCU
- MLGRUD

Sub-Committees:
- Planning & Budgeting
- Cost Recovery
- Training & Education
- Technical
- Research & Development
- Information Management
- Procurement
2) DEVELOPMENT STRATEGY

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 sector 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.

- **MFEPD** Ministry of Finance, Economic Planning and Development
- **MLGRUD** Ministry of Local Government, Rural and Urban Development
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
4.2.1) Local Manufacture
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 at least one 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 decentralised 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.

Number of protected water supplies

<table>
<thead>
<tr>
<th>Type of Supply</th>
<th>1985</th>
<th>1989</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piped schemes</td>
<td>291</td>
<td>307</td>
</tr>
<tr>
<td>Shallow wells</td>
<td>5000</td>
<td>7660</td>
</tr>
<tr>
<td>Deep wells</td>
<td>2873</td>
<td>6955</td>
</tr>
<tr>
<td>Boreholes</td>
<td>3050</td>
<td>7799</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9540</td>
</tr>
</tbody>
</table>

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%.

Number of Blair latrines constructed (1984 to 1989)

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 6000 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 9500 SWUs per annum.

**Average Annual Output of SWUs by Type of Project**

<table>
<thead>
<tr>
<th>TYPE OF PROJECT</th>
<th>AVERAGE ANNUAL OUTPUT OF SWUs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donor funded: Integrated</td>
<td>1311</td>
</tr>
<tr>
<td>Government funded</td>
<td>4638</td>
</tr>
<tr>
<td>Donor funded: Non-Integrated</td>
<td>839</td>
</tr>
<tr>
<td>NGO Implemented</td>
<td>1361</td>
</tr>
<tr>
<td>Other (Gulu, Mat South)</td>
<td>1413</td>
</tr>
<tr>
<td><strong>OVERALL AVERAGE</strong></td>
<td><strong>9562</strong></td>
</tr>
</tbody>
</table>

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
5 x District Field Officers
5 x Supervisors
1 x Pump Minder (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 continuously. 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 PFSIP projects and now with the Matoke 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$ 64.5 million (1 Z$=0.40 US$). Relative contribution from the various ESA's are indicated below:

committed ESA support to district projects 1987-1992

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

committed 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

Government PSIP and Maintenance Provisions

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.
8) MAJOR CONSTRAINTS

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 Agritec 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 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 limited 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 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 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 the 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 constrain 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 AGRITECH 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 problems 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 undertakings 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.
9.2.5) Transport Constraint

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.