The role of the state in the provision of domestic water supply and sanitation in rural Botswana

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The Role of the State in the Provision of Domestic Water Supply and Sanitation in Rural Botswana.

by

Anthony M. Land.

A Doctoral Thesis submitted in partial fulfilment of the requirements of the Loughborough University of Technology.


ABSTRACT

This thesis examines the role of the state in the provision of domestic water supply and sanitation in rural Botswana. The delivery of these services reflects wider international commitment to this sector. Support has been directed through the United Nations' International Drinking Water Supply and Sanitation Decade, which has provided member governments with policy recommendations and financial and technical assistance. These recommendations have prescribed the use of bottom-up delivery systems based upon community participation and local government intervention to ensure the achievement of policy objectives.

The thesis considers how far the recommendations of the Decade have been implemented in Botswana in providing rural water and sanitation and assesses the extent to which policy objectives have been met. By means of a political economy approach to investigate the role of the state in rural development and fieldwork carried out to investigate the implementation of two specific projects, attention has focussed on the constraints to policy formulation and implementation in achieving these objectives.

It is suggested that the managerial informed prescriptions provided by the Decade are often inappropriate to the policy arena of specific countries. This is because policy formulation and implementation are determined by factors which are politically motivated and which are not necessarily compatible with managerial or technocratic considerations. It is this inconsistency which has in large part been responsible for the non-attainment of policy objectives.

Through detailed field investigations carried out in Botswana, the roles ascribed by the state to different institutions at the local government and community levels in rural policy formulation and implementation are examined in the context of the concept of decentralisation. The suitability of this policy arena for the delivery of the water and sanitation projects is then considered. From the analysis the conclusion is reached that the context in which rural policy formulation and implementation takes place is not conducive to supporting a bottom-up strategy as prescribed by the Decade. Reasons for this lie in colonial history and in the political and economic circumstances of contemporary Botswana. In consequence, the provision of domestic water supply and sanitation has been affected in two important ways. First, the state has been unwilling to adopt the comprehensive prescriptions offered by the Decade. Second, where it has, constraints rooted in the state's unwillingness to decentralise rural development has prevented the achievement of policy objectives.
I would like to extend my thanks to all the following who were either directly or indirectly involved in the preparation of this thesis. Research was carried out in both the United Kingdom and Botswana and therefore it is appropriate to acknowledge individuals from each country separately.

In the United Kingdom -

To my supervisor, Dr Morag Bell, for having made this research possible and for all the support and enthusiasm that she has provided during the course of my research. To the Geography department at Loughborough University and post-graduate colleagues for all their support and assistance in the preparation of this thesis - especially to Anne Tarver for cartographic assistance and to Susan Ford for computer graphics assistance. To my family for all the emotional and practical support that they have provided, especially during the preparation of the final draft. Finally, to all others who read and made comments to earlier drafts of this thesis.

In Botswana -

To the Government of Botswana for making my research possible during my stay in Botswana. In particular, I wish to thank Mr J. Gadek (Senior Public Health Engineer), Ms N. Mbere (Head, Applied Research Unit), and Mrs S. Kimaryo (resident programme officer, UNICEF), for providing support and advice in the preparation of fieldwork. To all colleagues in the Ministry of Local Government and Lands, Kweneng District Council and Kgalagadi District Council for all the assistance that they provided and for making my stay in Botswana such an enjoyable and memorable one. I would like to thank especially my research assistant Ms Wapula Raditloaneng, and also Ms Letty Sekoboane, Mr Eric Dipate, Mr Francis Masenya, and Mr Trevor Machell. Thanks also to my enumerators Dineo, Matlhapi, Tuli, Senwelo and Ontuetse without whom the research could not have been carried out. I must also thank all those who provided accommodation during fieldwork in the survey villages, and especially to Ms Segakweng Madisa in Mochudi, and Mr Niall Maclnnes in Gaborone for providing a place to live. Finally, a special thanks to all the
residents and extension workers who agreed to participate in the village surveys in Molepolole, Thamaga, Mankgodi, Gabane, Olifants Drift, Artesia and Mabalane, and to their headmen for welcoming us to their villages.

The opinions expressed in this thesis are my own and do not necessarily correspond with those of sources consulted or of people interviewed. The work is based on fieldwork carried out by the author in Botswana, as described in the body of the thesis and on the analysis of primary and secondary sources.
TABLE OF CONTENTS.

<table>
<thead>
<tr>
<th>Acknowledgements</th>
<th>i</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table of Contents</td>
<td>iii</td>
</tr>
<tr>
<td>List of Tables, Figures and Maps</td>
<td>viii</td>
</tr>
<tr>
<td>List of Acronyms</td>
<td>xi</td>
</tr>
</tbody>
</table>

CH 1: INTRODUCTION TO THE THESIS.

INTRODUCTION................................................................................. 1

ARGUMENT................................................................................. 8
  Merging Theory and Practice............................................. 8
  A Definition of Terms............................................... 11
  The Role of the State in Rural Development.................. 15
  The Radical Political Economy Approach.................... 17
  Rural Policy Formulation & Implementation............... 20

ORGANISATION OF THE THESIS.................................................. 24

A GEOGRAPHICAL PROFILE OF BOTSWANA................................. 27
  The National Context.................................................. 27
  Kweneng and Kgatleng Districts................................... 29

CH 2: RURAL DEVELOPMENT - HISTORICAL ROOTS AND CONTEMPORARY POLICY

THE FOUNDATIONS OF RURAL DEVELOPMENT POLICY: THE COLONIAL LEGACY... 31
  Colonial History in Southern Africa............................. 32
### CH 3: SOCIAL INFRASTRUCTURE PROVISION, INSTITUTION-BUILDING AND SOCIO-ECONOMIC DEVELOPMENT

**INTRODUCTION**

**THE ROLE OF THE STATE IN SOCIAL SERVICE PROVISION.**
- Colonial Policy
- Contemporary Policy
- Summary

**THE ROLE OF INSTITUTIONS IN POLICY FORMULATION AND IMPLEMENTATION.**
- The Historical Background
- Institutions in the Contemporary Context

**THE SOCIO-ECONOMIC TRANSFORMATION OF THE RURAL HOUSEHOLD.**
- The Impact of Colonial and Post-Colonial State Policy
- Contemporary Socio-Economic and Spatial Characteristics

### CH 4: THE UNITED NATIONS INTERNATIONAL DRINKING WATER SUPPLY AND SANITATION DECADE

**THE DECADE.**
- Background to the Water and Sanitation Decade
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Water and Sanitation as Basic Needs</td>
<td>134</td>
</tr>
<tr>
<td></td>
<td>Goals of the Decade</td>
<td>136</td>
</tr>
<tr>
<td></td>
<td>Results - A Mid-Decade Assessment</td>
<td>139</td>
</tr>
<tr>
<td></td>
<td>Examples from Africa</td>
<td>145</td>
</tr>
<tr>
<td>CH 5:</td>
<td>RURAL WATER SUPPLY AND SANITATION PROVISION IN BOTSWANA</td>
<td>149</td>
</tr>
<tr>
<td>INTRODUCTION TO THE PROGRAMMES</td>
<td>149</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Village Water Supply Programme</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>The Self-Help Environmental Sanitation Project</td>
<td>153</td>
</tr>
<tr>
<td>FIELDWORK METHODOLOGY</td>
<td>159</td>
<td></td>
</tr>
<tr>
<td>THE VILLAGE WATER SUPPLY PROGRAMME - POLICY FORMULATION,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMPLEMENTATION AND OPERATION / MAINTENANCE</td>
<td>171</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Central Government Intervention</td>
<td>171</td>
</tr>
<tr>
<td></td>
<td>Local Government Intervention</td>
<td>174</td>
</tr>
<tr>
<td></td>
<td>Community Participation</td>
<td>176</td>
</tr>
<tr>
<td></td>
<td>Factors Determining the VWSP Delivery System</td>
<td>179</td>
</tr>
<tr>
<td></td>
<td>THE SELF-HELP ENVIRONMENTAL SANITATION PROJECT - POLICY FORMULATION,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AND IMPLEMENTATION</td>
<td>192</td>
</tr>
<tr>
<td></td>
<td>Central Government Intervention</td>
<td>192</td>
</tr>
<tr>
<td></td>
<td>Local Government Intervention</td>
<td>195</td>
</tr>
<tr>
<td></td>
<td>Community Participation</td>
<td>198</td>
</tr>
<tr>
<td></td>
<td>Factors Determining the SHESP Delivery System</td>
<td>201</td>
</tr>
<tr>
<td>SUMMARY</td>
<td></td>
<td>213</td>
</tr>
<tr>
<td>CH 6:</td>
<td>POLICY IMPLEMENTATION - EVIDENCE FROM THE FIELD</td>
<td>215</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>215</td>
<td></td>
</tr>
</tbody>
</table>
# LIST OF TABLES, FIGURES AND MAPS.

## Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Access to Wage Incomes &amp; Ownership of Cattle - Kweneng District</td>
<td>108a</td>
</tr>
<tr>
<td>2</td>
<td>Households Without Access to Cattle, Livestock or Lands - Kweneng District</td>
<td>108a</td>
</tr>
<tr>
<td>3</td>
<td>RIDS - Levels &amp; Sources of Household Income</td>
<td>112a</td>
</tr>
<tr>
<td>4</td>
<td>Sex and Marital Status of Household Heads - Kgatleng District</td>
<td>113a</td>
</tr>
<tr>
<td>5</td>
<td>Sex and Marital Status of Household Heads - Kweneng District</td>
<td>113a</td>
</tr>
<tr>
<td>6</td>
<td>Level of Provision of Water &amp; Sanitation in the Third World - 1980</td>
<td>137a</td>
</tr>
<tr>
<td>7</td>
<td>Level of Provision of Water &amp; Sanitation Provision in Africa - 1980-1983</td>
<td>137a</td>
</tr>
<tr>
<td>8</td>
<td>The VWSP - The Extent of Village Coverage by 1984</td>
<td>152a</td>
</tr>
<tr>
<td>9</td>
<td>District Council Recurrent Budget Status - 1985/86</td>
<td>227a</td>
</tr>
<tr>
<td>10</td>
<td>ESPP Latrine Inventory: State of Completion - Kgatleng District</td>
<td>230a</td>
</tr>
<tr>
<td>11</td>
<td>Household Participation in Village Institutions - Kgatleng District</td>
<td>234a</td>
</tr>
<tr>
<td>12</td>
<td>Household Perceptions of the VDC - Kgatleng District</td>
<td>234a</td>
</tr>
<tr>
<td>13</td>
<td>Household Participation in Village Institutions - Kweneng District</td>
<td>236a</td>
</tr>
<tr>
<td>14</td>
<td>Household Attendance of Kgotla Meetings - Kgatleng District</td>
<td>236a</td>
</tr>
<tr>
<td>15</td>
<td>Household Perceptions of the FWE - Kgatleng District</td>
<td>241a</td>
</tr>
<tr>
<td>16</td>
<td>Households Having Received a Visit from the FWE - Kweneng District</td>
<td>241a</td>
</tr>
<tr>
<td>17</td>
<td>Household Perceptions of the VHC - Kgatleng District</td>
<td>241a</td>
</tr>
<tr>
<td>18</td>
<td>Reason For Wanting a Latrine - Kgatleng District</td>
<td>245a</td>
</tr>
<tr>
<td>19</td>
<td>Factors Determining Type of Materials Used in Latrine Construction - Kgatleng District</td>
<td>246a</td>
</tr>
<tr>
<td>20</td>
<td>Source of Building Materials Used - Kgatleng District</td>
<td>246a</td>
</tr>
</tbody>
</table>
21: Livestock Ownership by Village & by Socio-Economic Group - Kgatleng District
23: Number of Wage Income Sources by Socio-Economic Group - Kgatleng District
24: Number of Total Income Sources by Socio-Economic Group - Kgatleng District
25: Monthly Household Income by Socio-Economic Group - Kgatleng District
26: Number of Wage Income Sources by Village - Kgatleng District
27: Number of Total Income Sources by Village - Kgatleng District
28: Monthly Household Income by Village - Kgatleng District
29: Awareness of ESPP but Reason Given for Non-Participation - Kgatleng District
30: Socio-Economic Status of Households which Cannot Contribute to SHESP - Kweneng District
31: Socio-Economic Status of Households which Can Contribute Fully to SHESP - Kweneng District
32: Socio-Economic Status of Households which Already Own a Latrine - Kweneng District
33: Socio-Economic Status of Single, Divorced and Widowed FHHs Which Can Either Make a Full Contribution or No Contribution to SHESP - Kweneng District

A1: Number of Buckets of Water Collected by Households Per Day - Kweneng District
A2: Type of Container Used to Store Water - Kweneng District
A3: Cost of ESPP Superstructure: Completed Latrines Only - Kgatleng District
A4: Cost of Non-ESPP Latrine Superstructure - Kgatleng District
A5: De Facto Population by Type of Settlement 1971 & 1981
Figures

1: Organisation Chart of Main Institutions 88a
2: The VWSP - Hierarchy of Provision 150a
3: The VWSP - Institutions & Direction of Delivery 171a
4: The VWSP - Resource Allocation Criteria 175a
5: The VWSP - Factors Influencing the Delivery System 179a
6: The SHESP - Institutions & Direction of Delivery 192a
7: The SHESP - Resource Allocation Criteria 197a
8: The SHESP - Factors Influencing the Delivery System 201a
9: District Development Planning - The Consultation Process 272a

A2: Composition of Real Output 1977/78 & 1982/83 349
A3: Exports & Imports 350
A4: Value of Main Exports 1978-1983 351
A6: Formal Sector Employment 1971-83 353

Maps

1: The Republic of Botswana 27a
2: Kweneng District - The Survey Villages 29a
3: Kgatleng District - The Survey Villages 30a
4: The Bechuanaland Protectorate 34a
**LIST OF ACRONYMS**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACDO</td>
<td>Assistant Community Development Officer.</td>
</tr>
<tr>
<td>AD</td>
<td>Agricultural Demonstrator.</td>
</tr>
<tr>
<td>AED</td>
<td>African Economic Digest.</td>
</tr>
<tr>
<td>ALDEP</td>
<td>Arable Lands Development Programme.</td>
</tr>
<tr>
<td>ARDP</td>
<td>Accelerated Rural Development Programme.</td>
</tr>
<tr>
<td>BDP</td>
<td>Botswana Democratic Party.</td>
</tr>
<tr>
<td>BMC</td>
<td>Botswana Meat Commission.</td>
</tr>
<tr>
<td>BPP</td>
<td>Botswana People's Party.</td>
</tr>
<tr>
<td>CAD</td>
<td>Communal Area Development.</td>
</tr>
<tr>
<td>CDO</td>
<td>Community Development Officer.</td>
</tr>
<tr>
<td>CFDA</td>
<td>Communal First Development Area.</td>
</tr>
<tr>
<td>CIDA</td>
<td>Canadian International Development Agency.</td>
</tr>
<tr>
<td>CPO</td>
<td>Council Planning Officer.</td>
</tr>
<tr>
<td>CSO</td>
<td>Central Statistics Office.</td>
</tr>
<tr>
<td>DC</td>
<td>District Commissioner.</td>
</tr>
<tr>
<td>DDC</td>
<td>District Development Committee.</td>
</tr>
<tr>
<td>DDF</td>
<td>Domestic Development Fund.</td>
</tr>
<tr>
<td>DDP</td>
<td>District Development Plan.</td>
</tr>
<tr>
<td>DET</td>
<td>District Extension Team.</td>
</tr>
<tr>
<td>DO (L)</td>
<td>District Officer (Lands).</td>
</tr>
<tr>
<td>DO (D)</td>
<td>District Officer (Development).</td>
</tr>
<tr>
<td>DPC</td>
<td>District Plans Committee.</td>
</tr>
<tr>
<td>DWA</td>
<td>Department of Water Affairs.</td>
</tr>
<tr>
<td>EEC</td>
<td>European Economic Community.</td>
</tr>
<tr>
<td>ESPP</td>
<td>Environmental Sanitation Protection Project.</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organisation.</td>
</tr>
<tr>
<td>FAP</td>
<td>Financial Assistance Policy.</td>
</tr>
<tr>
<td>FHH</td>
<td>Female-Headed Household.</td>
</tr>
<tr>
<td>FWE</td>
<td>Family Welfare Educator.</td>
</tr>
</tbody>
</table>
GDP  Gross Domestic Product.
GNP  Gross National Product.
GOB  Government of Botswana.
HMSO  Her Majesty's Stationary Office.
IBRD  International Bank for Reconstruction & Development.
IDWSSD  International Drinking Water Supply & Sanitation Project.
IRC  International Reference Centre.
ILO  International Labour Organisation.
ITDG  Intermediate Technology Development Group.
JC  Junior Certificate.
KDC  Kweneng District Council.
KgDC  Kgotleng District Council.
LGSC  Local Government Structure Committee.
LIDRP  Labour Intensive Drought Relief Programme.
LUPAG  Land Use Planning Group.
MFDP  Ministry of Finance & Development Planning.
MLGL  Ministry of Local Government & Lands.
MMRWA  Ministry of Mineral Resources & Water Affairs.
MOA  Ministry of Agriculture.
MOE  Ministry of Education.
MOH  Ministry of Health.
MOOD  Ministry of Overseas Development.
MOW & C  Ministry of Works & Communications.
NDDC  National District Development Conference.
NDP  National Development Plan.
NMS  National Migration Study.
NORAD  Norwegian Agency for International Development.
NSP  National Settlement Policy.
PTA  Parent Teachers Organisation.
RADP  Remote Area Development Project.
RDC  Rural Development Committee.
RDU  Rural Development Unit.
RECC  Rural Extension Coordinating Committee.
RIDS  Rural Incomes Distribution Survey.
SDU  Small Dams Unit.
SHESP  Self-Help Environmental Sanitation Project.
SIDA Swedish International Development Agency.
SPHE Senior Public Health Engineer.
TAG Technology Advisory Group.
TGLP Tribal Grazing Lands Policy.
ULGS Unified Local Government Service.
UN United Nations.
UNCTAD United Nations Committee on Trade & Development.
UNDP United Nations Development Programme.
USAID United States Agency for International Development.
VDC Village Development Committee.
VET Village Extension Team.
VHC Village Health Committee.
VIP Ventilated Improved Pit.
VLOM Village Level Operation & Maintenance.
VWSP Village Water Supply Programme.
WUC Water Utilities Corporation.
WHO World Health Organisation.
WMU Water Maintenance Unit.
Chapter 1: INTRODUCTION TO THE THESIS:

INTRODUCTION:

Since the beginning of the 1980's, the United Nations has been encouraging the provision of domestic water supplies and sanitation in developing countries as a means of reducing the incidence of environmental disease and social drudgery. Despite widespread support at the international and national levels, results to date have been disappointing. This thesis examines the provision of water supply and sanitation in a particular developing country - Botswana - in order to consider how far the prescriptions of the international community can be transferred and translated into action in the field and considers constraints that are experienced in achieving policy objectives. Specific examples of the implementation of associated projects in a particular country are used as the basis for explaining why policy objectives set out by the United Nations have not been achieved. Evidence of practical constraints to implementation, gathered in the field, is complemented by a consideration of the wider context of rural development within which these projects take place. This is based on a theoretical explanation of the role of the state in determining development-related policy in post-colonial societies. It is precisely this approach to explanation which appears to have been overlooked in existing evaluations of project implementation.

The analysis of rural water supply and sanitation provision in Botswana is, therefore, undertaken against the background of significant international commitment to these sectors focussed through the United Nations' International Drinking Water Supply and Sanitation Decade (UNIDWSSD) for the period 1981 and 1990. The aim of the Decade is to increase access to clean water supplies and improved sanitation facilities for the rural and urban populations of the Third World as part of a broader Primary Health Care strategy to reduce infant mortality and debility resulting from environmental disease. In order to achieve its objectives, the Decade prescribes the use of bottom-up project delivery systems based on community participation and local
government coordination. This bottom-up approach, modelled on the guidelines for Primary Health Care delivery, is considered to be the best means of ensuring widest access to health benefits at the lowest cost.

At the mid-point of the Decade, however, the results of related projects around the world have, generally, been disappointing. There is evidence of poor standards of implementation, high levels of breakdown or misuse of installed systems and insufficient attention paid to health education, with a consequent low awareness of health issues by recipients. Furthermore, there is evidence of inadequate overall support for these sectors. In particular, sanitation, and provision to rural areas have received less attention than water supply and the urban sector and it for this precise reason that this study focusses on sanitation as well as on water supply and focusses on the rural sector rather than the urban sector.

The focus of attention in this thesis are the delivery systems prescribed by the Decade and used in the provision of community water supplies and sanitation in Botswana. A delivery system is understood to consist of the resources, decision-making processes, implementation procedures and institutions, which through functionally defined responsibilities provide the means for the achievement of policy objectives. The Decade places emphasis on a number of components of their recommended delivery system. These include self-help contributions by recipients, institution-building at the community level to support the mobilisation of participants and the long term replication of services, decentralised project coordination through local government and direct resource allocation to the recipients. To achieve these objectives, it is necessary to support the development of appropriate technologies which are affordable, are socially acceptable and which can be maintained and operated by the community, and simultaneously to support a health education campaign to encourage mobilisation and behavioural changes in household and community hygiene practices. These components constitute a bottom-up formula for ensuring that projects can achieve their long term objectives.

A bottom-up delivery system, of the kind prescribed by the Decade, demands a commitment to decentralised decision-making and implementation
by sub-national institutions. Participation in decision-making is considered a pre-condition for building up an implementation capacity which can be replicated, for encouraging self-reliance and for motivating recipient groups to support objectives. It is argued here that in the case of Botswana, the commitment to decentralised decision-making has not been achieved and that this is principally due to the policy of the government in rural development. While it supports the concept of bottom-up delivery, in reality this has been restricted to encouraging wider participation in implementation by local government and the rural community. Decision-making, however, has remained centralised. As a result, the bottom-up prescriptions of the Decade are being used in the most restricted sense and in some cases the choice of project delivery system has been entirely top-down.

The case study of Botswana focusses on two projects for which these observations are relevant. One is the Self-Help Environmental Sanitation Project (SHESP) in which a limited bottom-up form of delivery has been adopted and which has received support from the Decade. The other is the Village Water Supply Programme which has been organised from the centre and implemented from the centre. The examination of these two programmes provides a case study for identifying the problems associated with the Decade in achieving its goals. The case study shows to what extent a specific country has been willing to follow the prescriptions of the Decade both in terms of the objectives set and the methods used to achieve those objectives. It examines why policy objectives of a host country may differ to those of the Decade and why the adoption of a bottom-up approach might be unsuitable or in fact undesirable. In examining the experience of the Decade in a particular country, it is possible to identify the type of constraints that may more generally be encountered in putting into practice the policy prescriptions of the international development community.

The explanations of these constraints in Botswana are supported by an examination of the role of the state in rural development. It is necessary to identify the reasons why it is that the government has been unwilling to decentralise decision-making to sub-national institutions. This can only be achieved by examining the influence of wider political and economic factors in influencing policy in this field. This approach can be constrained to existing explanations which commonly are
restricted to an examination of technical and managerial factors specific to project implementation, which have ignored the influence of broader political and economic factors in determining the environment in which those projects take place.

Rural policy formulation and implementation in Botswana is characterised by a high level of central government intervention. At the sub-national level, a number of institutions have been created to support state policy but are restricted to policy implementation. A degree of conflict and confusion resulting in non-cooperation is also apparent between these institutions. This is most serious at the community level which has served as an obstacle to community mobilisation. Moreover, rural development objectives have been biased towards the provision of social infrastructure without at the same time providing for the establishment of productive activities. As a result, resources have had to be allocated from outside the sector which has made it more difficult for the rural sector to be self-reliant and to be able to support bottom-up delivery. This is apparent at the district, village and household levels. Increasingly, the state has been perceived as the sole provider of social services. In these circumstances, the sort of project delivery system prescribed by the Decade faces many obstacles.

The case study of Botswana highlights a situation in which project objectives are frustrated when the prescribed delivery system is incompatible with the indigenous system of rural development formulation and implementation. On the basis of these findings, it is suggested that when designing project delivery systems from outside, awareness and sensitivity must be demonstrated towards local circumstances and the influence of specific policies on the implementation of rural development. The two projects examined in this thesis can be outlined here.

The Self-Help Environmental Sanitation Project (SHESP):

This project seeks to promote the construction of on-site pit latrines in rural villages and to mobilise an accompanying health education campaign. It is the more recent of the two programmes and uses a delivery system which closely resembles the prescriptions of the Decade. It is based on a nominally bottom-up approach which depends upon
community participation, self-help, local institution-building and decentralised coordination. However, experience in the field has so far demonstrated the limited success of this bottom-up approach.

The Village Water Supply Programme (VWSP):

This programme aims to provide all recognised rural villages with reticulated public water supplies. It is considerably older than the SHESP project, representing one of the first programmes established by the government for its rural development programme. Influenced largely by internal factors, the programme uses a top-down delivery system designed to ensure the rapid installation of infrastructure. Factors, such as the government's rural policy of providing social infrastructure, and the water sector implementation capacity inherited at independence, have influenced the delivery system adopted, rather than the prescriptions of the Decade. The programme has been relatively successful in achieving the limited goals that were originally set. In the future, however, it is probable that the programme will become more decentralised as a result of the current influence of the Decade and an awareness of the long term problems associated with project operation and implementation which were not addressed in the original policy. Yet, in decentralising the programme, the constraints experienced in the SHESP project are likely to be faced by the VWSP unless the existing system of rural policy formulation and implementation is changed.

WIDER RELEVANCE:

Beyond its immediate objectives, this thesis can be of wider relevance to both pure and applied research. First, the approach used here, and the conclusions reached, can be of assistance to wider research on the Decade by providing explanations of the constraints involved in applying general prescriptions in any one locality. Second, the examination of water supply and sanitation can be of relevance to the study of rural development and community participation more generally by emphasising the problems that can be encountered in translating policy into action within a bottom-up framework. The example of community water supply and sanitation is especially appropriate for several reasons. It requires the mobilisation of international, government and community institutions, the provision of both physical infrastructure and
education/training while seeking to change sensitive culture-bound customs of the recipient populations.

Moreover, the emphasis placed on the analysis of delivery systems and on the impact of institutional capacity on policy implementation are highly topical. The recommendation and prescription of delivery systems which require institutional restructuring and economic and financial reform has become an increasingly accepted component of aid assistance packages provided by international institutions such as the World Bank (IBRD). They argue that a major factor responsible for poor achievement is inadequate planning and implementation capacity. In particular, inadequate manpower and financial resources have been identified as the cause of low institutional capacity. This is so at the central government level but is also a serious problem at the local government level. Therefore, aid packages increasingly include an institution-building component to support capital and technical investments. Criticism has been made of swollen central government bureaucracies which are unable to manage major projects due to inefficiency and over-burdened staff. Recommendations have, therefore, been made to devolve responsibility from central government to parastatal organisations, local authorities and the private sector (Cohen et al, 1986).

Such prescriptions for institutional reform and reorganisation, commonly referred to as "conditions-precedent" (Cohen et al, 1986), are inspired by an administrative or organisational rationale which seek to establish the most efficient delivery systems. It is suggested here that the delegation of decision-making and implementation capacity necessarily involves political considerations. These are often overlooked by technocratic planners, who fail to recognise that such prescriptions for institutional reform may threaten political interests by exposing or destabilising the organisation and distribution of political and economic power. Institution-building must, therefore, be examined from the perspective of political economy, since institutional reform fundamentally affects the way in which the state shares power. It is, therefore, not uncommon for host governments to reject reforms advocated by aid agencies when it is felt that to do so might compromise discreet vested interests (Ayres, 1983; Cohen et al, 1986). In this respect, it becomes necessary to recognise the socio-political and administrative
structures of particular countries in the context of their wider political economy.

Third, the thesis answers the call for more research to be undertaken which reconciles theories of the post-colonial state, undertaken in the abstract, with practical evidence from the field, particularly as it affects the study of the implementation of policy. The state in post-colonial society must be understood to be largely responsible for the design and implementation of development objectives (Higgott, 1983).

Fourth, in examining the process of project delivery, the thesis complements research on public access to state-provided goods and services. Schaffer et al (1975) have examined how different approaches to policy implementation affect the distribution of and access to public services. This is examined, in particular, in relation to the bureaucratic-administrative state in developing countries. Attention focusses on the politics of implementation, and how, depending on circumstances, obstacles can be placed to restrict access. These issues have also been discussed in terms of spatial access concerning location, and social access concerning the way in which eligibility is determined by socio-economic parameters (Antipode, 1971).

While this thesis does not address the issue of access as a primary concern, the examination of institutional performance in the delivery of water and sanitation complements the subject. In particular, the issue of quality is discussed as it affects the user while the analysis of community participation in decision making has clear implications for resource allocation. The choice of a top-down or a bottom-up approach will affect both the quality of provision, the nature of distribution and the rules of access. The choice of approach is, therefore, political. Top-down allows the state to define needs and determine distribution and access while bottom-up extends decision making to the recipient.
ARGUMENT:

MERGING THEORY AND PRACTICE:

This thesis combines a study of the design and implementation of specific projects with a study of the structure and political economy of a post-colonial African country, within which those projects are implemented. Analysis, therefore, includes at one end, practical research on project delivery in the field, based on participant observation and action research, and at the other end, a more theory informed examination of the state and development in post-colonial societies. This approach can be used to overcome the existing gulf between empirical or practical studies which examine specific policies in the field, and theory-laden research on the Third world which focusses on abstract notions of structure, power and class.

On the one hand, practical and often short-term evaluations or appraisals, based upon narrowly defined terms of reference which are based on a restricted view of development, are used as the basis of policy analysis and for the provision of future guidelines. On the other hand, lengthy academically informed explanations are generated often in an atmosphere of isolation, which more often than not, are shelved in academic institutions where they rarely filter through to the policy makers. There is, therefore, an all too apparent rift between the former and latter modes of explanation. They appear to be mutually exclusive when in fact they ought to be of mutual benefit (Conyers, 1986).

In this thesis, an attempt is made to overcome the separation between theoretical and practical explanations. In so doing, it is recognised that this may only be achieved by compromising some of the guiding principles of theoretical and applied research (Conyers, 1986). Yet, in so doing, it is hoped that a thorough but broad explanation informed by theoretical argument and practical experience, can go some way to explaining the constraints which prevent the achievement of policy objectives in the field, especially when they are prescribed by an outside agency.
The adoption of this approach is appropriate to academic research on development in the Third World. This is especially so at a time when development studies as a discipline has had to reappraise its objectives, scope and methodology, seriously (Conyers, 1986). Within academia, research on the development process has been polarised between abstract theorising which has focussed on political and economic issues at the international and national scales (see for example Gutkind & Wallerstein, 1976; Gutkind & Waterman, 1977), and in-depth anthropological or environmental studies which have focussed on micro-scale case studies (Baldwin, 1957; Hill, 1970). Rarely has the former informed the latter and vice-versa.

A major criticism which can be levelled against much theoretical work concerned with the development process is that it is highly abstracted, making few references to actual examples of policy making and implementation in the field. It, therefore, lacks adequate empirical evidence (Conyers, 1986) and suggests the need to pay attention to more practical orientated studies. Higgott (1983) argues that:

"Since World War 2, all theorising about political development, be it positivist or Marxist, has in many ways emphasized 'thought' at the expense of material life." (p1).

While development studies has developed some invaluable explanatory theses, including the identification of inequality and structural imbalance in post-colonial society, it has generally failed to provide realistic solutions for overcoming the complex network of constraints which confront development practitioners (Higgott, 1983). The over-abstract economistic theories characteristic of both the modernisation school (Rostow, 1960) and radical school (Wallerstein, 1979), developed in the post-war period, have failed to take sufficient account of the particular contingent factors which characterise specific Third World regions and states, particularly at the sub-national level and of particular policies, and in so doing have failed to provide guidelines for the development practitioner, or solutions to the challenge of development (Conyers, 1986; Higgott, 1983). With reference to theoretical work:
"...most analyses of the state and class formation have tended to be largely sociological in character and have made little or no effort actually to investigate specific cases of decision-making and policy implementation." (Higgott, 1983: p84)

Radical political economy (Gutkind & Wallerstein, 1976; Gutkind & Waterman, 1977), in particular, lacks empirical evidence and, moreover, fails to provide solutions to the problems that it identifies. This can be contrasted to the approach of the modernisation school which while asking fewer questions, provides prescriptions to the policy makers which are more readily accepted (Higgott, 1983).

By contrast, studies concerned with specific technical and administrative issues relating to the design and implementation of policy tend to be based on weak theoretical notions. Such studies, in particular, tend to overlook the influence exerted by structural forces and more especially by the central state as a major agent of change (Higgott, 1983). In the case of most of the literature which addresses the technical and administrative problems of policy implementation in the Decade, for example, this criticism holds true. The literature does not address the sort of questions which seek to explain why communities are unable or unwilling to participate with the state in development programmes, or why the state is not prepared to share responsibility for policy making with client or recipient groups, and why certain sectors of the economy receive greater state support than others. These issues must be discussed in order to evaluate why certain policies are adopted and how objectives are achieved.

However, the practical issues that they do address are real and important, and it would be unrealistic to expect a working report to provide a thoroughly researched explanation for the underlying causes of the constraints that they have identified. This is not, after all, their responsibility.

Theoretical studies can be more meaningful and provide a basis for practical applications if they are supported by case studies of policy in action. At the same time, practical evaluations can be more accurately presented if there is a background of more theoretically informed research. The two approaches can, therefore, be of benefit to
each other (Conyers, 1986). It is, consequently, all the more important to use a framework of analysis which is based on a wide range of theoretical and practical disciplines. The framework of analysis for this thesis drawn from a wide body of theoretical literature of a political, economic and sociological nature can be used to complement an investigation, based on fieldwork, of the practical constraints to the realisation of particular development policies.

In trying to provide explanations for the limited success of the Decade, existing literature has concentrated on providing technical and managerial explanations for implementation in the field. It has not, generally, considered the influence of political, economic, social, cultural and environmental factors which determine the context in which these projects are implemented. This is because such evaluations are not based on a theoretical argument which can assess the likely influence of these contextual factors. As a result, explanations for the constraints experienced in policy implementation remain incomplete. In addressing the issue of institution-building, for example, inadequate attention is paid to the influence of political motives in determining how far a host country is prepared to decentralise decision-making as policy prescriptions recommend.

A DEFINITION OF TERMS:

In this thesis, reference is made to a number of terms and concepts which represent key units of analysis. These need to be defined at this stage, at least on a preliminary basis. At later stages, some of these definitions are further discussed and refined.

The Developing Country.

In using this term, reference is made to the majority of Latin American, African and Asian countries which do not belong to the groups of western capitalist economies, the eastern communist states or the Oil Producing and Exporting countries. While the term is a general one which obscures the reality of wide socio-economic, political, cultural and environmental variation, it also underlines a common political and economic status which these nations share at the global level.
Fundamentally, one is referring to the poor, non-industrialised world of post-colonial societies. They are equally referred to as Third World, less-developed, underdeveloped or just poor nations. With the rise of more economically prosperous nations within this broad category, new methods of differentiation have, however, been adopted. The World Bank, for example, differentiates between low, medium and high income countries, while a special category of Newly Industrialised Countries has been used to refer to the rapidly expanding economies of countries such as South Korea.

The State.

The state is understood in terms of the political, judicial and administrative components of central government which have been granted the responsibility for governing a political unit. In this thesis, the relevant political units discussed include the colonial territory and the post-colonial independent country.

Institution.

The term institution is used to refer to specific organisations which have been given a responsibility for representing a section of society in the formulation and implementation of policy. These can be differentiated according to whether they are governmental or non-governmental, and according to their scale of operation from the international to the village level. Institutions at the local government and community levels are examined in particular.

Local government.

In defining local government, reference is made to a system of administration with portfolio responsibilities and in instances political rights too, which operates at the sub-national level on behalf of a district or region. The different forms of local government which can exist are examined in later sections.
Community.

In defining community, there is a particular risk of ambiguity and misinterpretation. According to the United Nations (1971), a community is defined as an organic and physical entity. Members are in regular face to face contact with each other, share common values and objectives and share a basic harmony of interest and aspirations. It is suggested that in rural Botswana, the spatial and social organisation of society is such that the concept of community can be used synonymously with the concept of village. The rural village is, therefore, the unit of differentiation used to define a community. This is because it provides a defined geographical area within which a high level of social interaction occurs while village members share common tribal, language and cultural characteristics. Indeed, one finds that community institutions in Botswana are organised on a village basis. However, there is evidence that community members do not necessarily share common interests and aspirations. This issue is discussed throughout the thesis and is considered a major factor in explaining the constraints to community participation in development.

Community Participation.

The concept of community participation is frequently associated with rural development, by governments, aid agencies, fieldworkers and consultants. Community participation can provide a key input to a range of policy interventions ranging from small scale infrastructure projects to regional agricultural programmes (Conyers, 1982). It is most commonly associated with the sort of projects which seek to achieve behavioural change and which depend on the cooperation of the recipient in order to achieve policy objectives. Community participation is recommended under these circumstances to achieve a number of benefits ranging from the reduction of costs to government, to ensuring proper use of technology or of achieving behavioural or attitudinal change. Therefore, one finds community participation associated with Primary Health Care Strategies and in projects associated with the Decade where it has assumed a central importance (Whyte, 1984).
The importance of community participation as an integral part of rural development was acknowledged in 1971 by the United Nations which defined the concept as a combination of government intervention and community self-help to achieve improvements to local conditions and to contribute to national development (United Nations, 1971). Therefore, the major features of community participation are that participants must provide self-help contributions while government must provide technical and financial assistance (Conyers, 1982). Beyond this point, definitions of community participation are ambiguous regarding the extent to which it should involve decision-making or just implementation.

Moreover, while there appears to be a consensus over the need and desirability to encourage community participation, insufficient attention has been paid to defining what it actually means (Whyte, 1984). Many attempts have been made to categorise the concept according to means used and ends sought (White, 1981) while there is more general consensus that it is not possible nor appropriate to reduce the concept to a single definition (Oakley & Marsden, 1984; Whyte, 1984). Here, the concern is to provide a definition which is relevant to the role of the community in rural policy formulation and implementation.

The definition used differentiates between community participation as an input or 'injection' into a specific development project or as a broader process of empowering the community to determine policy itself (Oakley & Marsden, 1984). In the former, community participation is restricted to implementation, while in the latter, it involves decision-making. The extent to which one or other approach is used depends on the policy objectives of the state (Gilbert & Ward, 1985).

The Household.

In using the term, "household", reference is made to the concept of the extended family based upon the household plot, as the physical unit of differentiation. Yet while many households are indeed symbolised by distinct homesteads, it is recognised that members of the extended family may have their own temporary or permanent place of residence, within the same village, or elsewhere, but still contribute to the social and economic well-being of the principal homestead (MFDP/CSO, 1982). These interrelationships can of course create problems when it
comes to analysing socio-economic characteristics of rural families. There is the risk that by focusing on the plot as the unit of differentiation, that sources of household income or labour, for example, may be under-estimated, or over-estimated. Notwithstanding these limitations, the decision was taken to use the household as unit of differentiation in accordance with standard methodology used in Botswana for the collection and analysis of socio-economic data (see MFDP/CSO, 1976).

THE ROLE OF THE STATE IN RURAL DEVELOPMENT:

It has been increasingly recognised that in order to explain the process of policy formulation and implementation in the developing world context, an examination of the state is indispensable (Gilbert & Ward, 1982; Grindle, 1980; Higgott, 1983). The state has primary responsibility for creating the institutions and mechanisms for policy formulation and implementation. It determines which institutions can influence policy and in what capacity. It also responsible determines national development objectives such as policy towards economic generation, and the provision of social welfare and economic infrastructure such as health, education, roads and communications (Conyers, 1982). As such, the central state can represent the principal agent of change in post-colonial society.

In most of post-colonial Africa, the state is particularly powerful because it has considerable access to available resources, manpower and information, which enables it to control the definition of needs and policy objectives (Mawhood, 1983). Moreover, it is not challenged by any serious non-government economic, political or religious lobby groups. One can note the general absence of alternative lobby groups such as trades unions, business interests and farmers unions especially in rural areas. The majority of the population are politically and economically weak and, therefore, lack adequate lobbying power (Tendler, 1982). In particular, they lack access to information and tend, moreover, to be socially and culturally alienated from modern state institutions (Mawhood, 1983).
It has been argued, therefore, that the central state enjoys significant political power (Sandbrook, 1986). It does not need to be accountable to broader society if these other interest groups cannot effectively challenge its authority. In such circumstances, the state is autonomous. This relationship between state and society in the post-colonial situation provides the basis for examining the role of the state and non-state institutions in rural policy formulation and implementation (Grindle, 1980). In this context, the state, uniquely, has the power to determine the allocation and management of resources in a way that no other institution can (Gilbert & Ward, 1982). In its capacity as the major policy maker, the state is able to determine the extent to which policy formulation and implementation can be delegated to institutions at the local government and community levels. It is, therefore, in a position to determine how far a top-down or bottom-up delivery system should be used in rural development.

However, the power of the state to determine policy objectives and the methods used to achieve those objectives, do not necessarily mean it can ensure the effective implementation of policy. There is evidence that the achievement of policy objectives can be constrained by participants who may be excluded from the decision-making process, but who can influence the implementation of policy. Indeed, it is possible to contrast the relative strength of the state's decision-making capacities to the relative weakness of its implementation capacity (Higgott, 1983). It is argued, for example, that the 'peasantry' can as a group frustrate state ambitions, by choosing to opt out from policies designed to transform their way of life (Hyden, 1980). In another context, the political objectives of the modern state are frustrated by continued political activity of traditional leaders (Picard, 1979). Therefore, the ambitions of the state to extend its influence over peripheral rural society through development programmes may face obstacles against which the state can find itself powerless. In such circumstances, a climate of political over-control and economic under-control tends to pervade (Sandbrook, 1986). In its search for legitimacy, the state finds it easier to achieve control of the political arena than control over the management of the economy. In this way, the state may resort to a policy of "coerced compliance" to ensure that policy objectives are met (Sandbrook, 1986). The context of policy formulation and implementation
and the respective role of institutions must, therefore, be examined in relation to the role of the state in post-colonial developing countries.

THE RADICAL POLITICAL ECONOMY APPROACH:

In order to identify the factors which influence state policy towards rural development formulation and implementation, the motives of the state and the interests that it supports must be identified. The approach which may best suit this type of analysis is that of radical political economy. In this, political economy is understood as a method for explaining the structure of society and the organisation of political and economic power in terms of an underlying struggle for power between economic interests, the effects of which can be traced over time. This approach is used because it recognises the importance of political and economic factors in determining the behaviour of the state in relation to wider society. The state, according to this approach is a tool serving specific interests with the power to dominate (Pettman, 1979), or to further class interests of those who are able to use a variety of mechanisms to affect policy formulation and implementation (MacPherson, 1982).

While the political economy approach has sometimes placed too much emphasis on the state as an agent of change, the approach can be contrasted to the modernisation school which has generally overlooked the role of the state in development altogether (see Part 2). More recently, adaptations of modernisation theory have acknowledged the key role played by the state in determining resource allocation (Higgott, 1983). Yet, their power of explanation is poor and, consequently, they provide inadequate interpretations of the state in the post-colonial context. This is because their analysis is based upon normative assumptions which have been influenced by Western experience of state institutional behaviour (Gilbert & Ward, 1982). Little attempt is made to examine power relationships within the state and between the state and other interest groups in specific political, cultural and historical circumstances. It is assumed that the state inevitably defends the interests of all groups and as such overvalues the influence and good faith of the state assuming it to be autonomous, efficient and just. It, therefore, perceives of the state in, "...the pluralist sense of
'neutral arbiter'" (Higgott, 1983:p78). While this definition may characterise the state in Western democracies, where notions of representativeness and political pluralism are more of a reality, this is not on the whole the case in the developing world context (Gilbert & Ward, 1982).

By contrast, explanations of the state provided by the radical political economy literature are more far-reaching, based on the structural examination of the interaction of political and economic forces over time and of their effect on the organisation of society and the distribution of power. It is on this body of literature that the theoretical analysis of policy formulation and implementation in this thesis is based.

Of particular importance in this approach, is the emphasis placed on the historical dimension in explaining contemporary issues. In order to explain post-colonial state and society, it is necessary to examine the history of the colonial period to provide explanations for the behaviour of the state and its relations to wider society. Political economy demonstrates how the particular features of the post-colonial state and society have been influenced by the specific history of colonial rule. Contemporary institutions and the structure of the rural economy have resulted from the impact of colonial policy and by the responses made by the indigenous society. The specificity of historical events is, therefore, responsible for the great variation that exists in the nature and relationship of the state and society in the post-colonial period.

Definitions of the state in post-colonial society have increased in sophistication and refinement since the subject was first addressed during the 1960's by the dependency school (Frank, 1969) (see ch 4). This has reflected an increased awareness of the great complexity of, and variation in the characteristics of post-colonial states and society in Africa, South America and Asia. It has had to be acknowledged that no single definition of the state can be provided and that the earlier definitions provided by the dependency school which focussed on the role of the state in exchange relations between 'core' and 'periphery' nations, have had to be rejected (Alavi, 1970; Cardoso & Faletto, 1979). It defined the state solely in terms of international relations paying scant attention to the role of indigenous society in determining change.
(Bell, 1986). At the same time, a number of common political and economic characteristics are shared by developing countries at the macro-scale and these can be contrasted to the major features of the developed world countries (Morowitz, 1966). They tend to be primary commodity producers, oil importers, aid recipients, financial debtors, have weak political and economic institutions and display high levels of socio-economic inequality. It is in this respect that the concept of "North-South" is relevant (Brandt, 1980). However, a more in-depth investigation of a particular developing country or region and of its links to the developed world shows clearly the limits of using a single ubiquitous definition of the state. Case studies are, therefore, required to identify the specific features of individual countries.
RURAL POLICY FORMULATION AND IMPLEMENTATION - THE ROLE OF CENTRAL GOVERNMENT, LOCAL GOVERNMENT AND THE COMMUNITY:

It is now possible to consider the policy of the state towards rural development and sub-national institution-building. The manner in which the state distributes decision-making and implementation responsibility to sub-national institutions depends on the particular relationship that exists between the state and society. This relationship will vary according to the characteristics of a country's political economy. Hence, it is important to examine the colonial period in order to explain the contemporary structure of society.

In circumstances where interest groups outside of the state are weak, as is normally the case, the state is able to determine how far policy formulation and implementation should involve sub-national institutions. It is possible to identify five approaches to the organisation of institutional participation in rural development (Vengroff, 1977). Where the state seeks to maximise control over resource management, a top-down approach is used under which decision-making and implementation remains centralised. This scenario is most likely to be adopted by authoritarian regimes. In contrast, where the state seeks to share control over resource management, a bottom-up approach is used in which decision-making and implementation is devolved to local government and community institutions. Such a scenario is more likely to be supported by socialist or revolutionary governments, which advocate populist mass mobilisation, or by governments which are confident of their authority and support at the local level.

Between these extremes are three moderate scenarios in which a degree of decision-making and implementation responsibility is shared by central government with sub-national institutions. This limited devolution of responsibility can be exercised through modern local government institutions which represent central government, through modern local government institutions which represent sub-national interests, or through existing institutions which are based on a competing political culture such as the tribe. The key issue is to determine how far decision-making rather than implementation responsibility has been devolved to institutions which represent sub-national interests rather than those of the state.
To achieve this, a framework of analysis which can measure how far decision-making responsibility is devolved from the centre, is required. The framework used here is based on the concepts of "Deconcentration - Decentralisation" (Mawhood, 1983). In adopting this approach, it is recognised that the level of devolution authorised is influenced by the nature of the state in relation to the interests that it defends and the objectives it pursues. The approach addresses two fundamental issues:
- to what extent is local government an autonomous decision-maker?
- how far have community institutions influence over the decision making process?

This investigation of decentralisation in rural development is pertinent to an investigation of the constraints to the implementation of Decade prescriptions in a particular country. Prescriptions based on technical and managerial criteria have recommended the decentralisation of decision-making to local government and community institutions as the best means of achieving policy objectives. However, the analysis of decentralisation in post-colonial societies suggests that it is primarily political factors which dictate the extent to which decision-making is decentralised. It, therefore, explains why the context of rural development in which Decade projects are implemented may not be suitable for supporting bottom-up delivery. Local political considerations, therefore, override managerial ones resulting in the outright rejection or modification of prescriptions. The investigation of decentralisation can also be used as the basis for explaining why in the circumstances where a token commitment to bottom-up delivery has been made, objectives are not met, when, in reality, the bottom-up approach is restricted to the implementation of policy. Where decision-making remains centralised, the implementation capacity of sub-national institutions remains restricted and this will be reflected in the performance of the projects. An examination, therefore, of the politics of rural development in a particular country is necessary to complement an explanation of the constraints to the implementation of specific projects.

A "Deconcentrated" Policy Arena:

Where the policy arena is "deconcentrated", decision making is controlled by central government or by representatives of central
government at the district level. By contrast, local government and community institutions are only responsible for the implementation of policy which has been determined from the top down and have only restricted access to the decision making process. "Deconcentration" is a system designed to decongest administration at the centre and to maintain closer supervision of activities taking place away from the centre (Mawhood, 1983). The emphasis is, therefore, on extending implementation capacity away from the centre while retaining decision-making authority at the centre.

In a "deconcentrated" system, local government represents an extension of central government administration into the districts (Mawhood, 1983). Resources are allocated to local government according to policy decisions taken at the centre. The "deconcentrated" bureaucracy is, moreover, accountable to the centre. As such, the 'political' constituency is the nation rather than the district. In this way, it does not represent local political interests but is rather bound to the directives of central government.

In such a system, community participation represents an input used to achieve specific policy objectives (Oakley & Marsden, 1984). It is used to support the implementation of specific development projects though in certain instances, a degree of decision-making in project design may exist. It is normally associated with self-help projects through the provision of cash, labour and materials for small-scale infrastructure projects. It can also be used as a way of building up a village implementation capacity to promote and support government sponsored development projects more widely. Yet the major feature is that central government remains the principal decision-maker, while the community is restricted to supporting the implementation of policy.

This form of community participation is encouraged for political as well as pragmatic reasons. The state can, for example, use community participation to legitimise itself in remote areas by being seen to cooperate in development (Gilbert & Ward, 1985). More importantly, community participation serves as a means to an end. As such, it represents one of several inputs to facilitate the attainment of policy objectives by ensuring that the project is cheap, accessible and socially and technically acceptable.
Community participation is, therefore, defined and organised by the state. It represents bottom-up development imposed from above (Gilbert & Ward, 1985). It is for this reason that it can be defined as a tool for social control notwithstanding the material benefits which a particular project can provide (De Kadt, 1983; White, 1981).

A "Decentralised" Policy Arena:

Where the policy arena is "decentralised", decision making authority as well as implementation authority is devolved to local government and community institutions. As such, power is shared between central government and sub-national institutions which can influence rural policy formulation. "Decentralisation" is, therefore, as much a political as an administrative approach.

In a "decentralised" system, local government represents an autonomous decision-making body which is accountable to the local constituency, and which is responsible for policy decision-making and administration on behalf of that constituency only. It has been granted decision-making rights by law, which includes control over investment and manpower allocations (Conyers, 1982; Mawhood, 1983). Therefore, it is a political as well as an administrative system which provides the district with a degree of autonomy within the nation-state. As such, central government control over district affairs is substantially reduced. Power is devolved away from the centre.

In a "decentralised" system, community participation represents an objective in itself (Oakley & Marsden, 1984). It represents a more extensive development process which empowers communities to be involved in participatory planning in order to be able make decisions concerning development in their community and more generally, too. Therefore, community participation goes well beyond simply providing an input to the implementation of specific projects. It is a political process designed to extend decision-making authority away from the centre. The achievement of a planning mechanism which permits devolved decision-making represents an end in itself.
Community participation represents a long-term process of empowering and raising the consciousness of the rural community through local institution-building and education rather than representing a short-term input to a specific project (Oakley & Marsden, 1984). The primary objective is to provide a degree of economic and political power so that the community may be in a position to determine and control its own development. Emphasis is placed on increasing participation in the decision-making process over the allocation of resources as well as encouraging participation in implementation of policy. Such a concept suggests that development is far more than economic growth, but stands in addition for political determination, equity and an improvement in the quality of life (Seers, 1969).

According to these definitions, a "decentralised" policy arena is one which extends implementation responsibilities alone to sub-national institutions while decision-making continues to be organised in a top-down fashion. A "deconcentrated" policy arena is one which extends decision-making responsibility to these sub-national institutions so that planning is influenced from the bottom-up. The degree to which the policy arena approximates to either a system of decentralisation, or of deconcentration is determined by the political objectives of the state and of the relationship between state and society.

The analytical approach reviewed here is, therefore, used to examine the policy of the state in Botswana towards rural development policy. This theoretical analysis is complemented by field investigation and by direct participation in the rural water supply and sanitation programmes. The fieldwork examines the respective delivery systems, used by the two programmes, and considers in detail the experience of each in the implementation of policy. Fieldwork methodology is reviewed in chapter 5.

ORGANISATION OF THE THESIS:

Chapters 2 & 3:

These chapters provide the background to the analysis of water supply and sanitation provision in Botswana. They introduce the major
components of rural development relevant to the investigation of the delivery systems used and of the constraints experienced in implementation. On the basis of primary and secondary documented sources, policy and the effects of policy on social infrastructure provision, institution-building and socio-economic development are considered. Each aspect of policy is investigated separately after a broader review of colonial and post-colonial rural development policy. Political economy is used to demonstrate how contemporary policy and resultant features of the rural economy have been influenced by earlier colonial policy and the responses made by indigenous society. The chapters, therefore, introduce the major units of analysis used in the examination of rural development in Botswana which support the field investigation of specific project implementation.

Chapters 4 & 5:

These chapters examine the Village Water Supply Programme (VWSP) and the Self-Help Environmental Sanitation Project (SHESP) against the background of the United Nations' Water Decade. First, the Decade is introduced. The major elements of development theory and practice which have influenced the thinking and ambitions behind the Decade are discussed. Attention then focuses on the major objectives and policy recommendations of the Decade with particular reference to the delivery systems prescribed. It explains why decentralisation and community participation are recommended to achieve the long term health benefits sought. Results to date at the mid-point are then examined and tentative explanations of the non-achievement of policy objectives are considered.

Second, the VWSP and SHESP programmes are examined. Fieldwork methodology used in the investigation of these programmes is discussed. An outline of the major objectives of each programme and of the delivery system used is presented. Then, the role of central government, local government and community institutions in the formulation and implementation of each programme are described. The final section considers the relative importance of internal factors relating to rural development and external factors, reflecting the international aid community, in influencing the delivery systems used in each programme.
In so doing, it is possible to assess how far the Decade has been able to influence rural water supply and sanitation provision in Botswana.

Chapters 6 & 7:

These chapters examine the performance of the institutions involved in the implementation of the two programmes and considers what factors have determined their effectiveness in supporting the delivery systems used. This is based upon fieldwork which focussed on the implementation record of local government and community institutions in the two programmes. Evidence from the field is then compared to the record of the implementation capacity of those same institutions in rural development more generally.

Constraints to implementation can be explained by examining how far the institutions involved in implementation have access to decision-making and to the control of resources in rural policy formulation. Therefore, the system of rural policy formulation directed through the preparation of a district development plan is examined. The extent to which mechanisms have been created to support decentralised decision-making is considered. Using the concept of "deconcentration-decentralisation" the analysis considers how far local representatives have been empowered to participate in rural policy formulation and how far decisions reached can influence resource allocation at the centre. On the basis of conclusions reached, the implications for the implementation capacity of sub-national institutions involved in rural development and the water and sanitation programmes are considered.
A GEOGRAPHICAL PROFILE OF BOTSWANA.

THE NATIONAL CONTEXT:

Physical Geography:

Botswana is a landlocked country located on the Southern African plateau, bordered by Zambia, Zimbabwe, South Africa and Namibia (see Map 1). With a Surface area of 582,000 Square kilometres, it straddles the Tropic of Capricorn, extending northwards to latitude 17 degrees south, southwards to latitude 27 degrees south, eastwards to longitude 20 degrees east and westwards to longitude 29 degrees east.

The country has an arid to semi-arid climate. Rainfall is low and highly variable, both temporally and spatially, with an average of 475 mm per annum, almost all of which falls between the summer months of October and April. Temperatures are high throughout the year but there are important seasonal and diurnal variations. In the summer months, from October to April, temperatures can reach in excess of 40 degrees centigrade, while in the dry winter months, clear skies ensure moderately warm day time temperatures of up to 25 degrees centigrade and cold nights with temperatures which can drop as low as 5 degrees centigrade.

The country which is at an elevation of 1000 meters above sea level, is almost totally flat with only a few rocky outcrops rising from the plateau in the south east corner. Within this vast plateau, three distinct ecological zones can be identified. Along the eastern portion of the country which borders South Africa, is the rocky hardveld which supports a mix of tree and shrub savanna, and which possesses most of the country's perennial and ephemeral rivers - notably the Limpopo and the Molopo. To the north is a wetter and more forested region which supports large areas of game, two major water ways - the Chobe and Okovango rivers, and the Okovango swamps. The remaining two thirds of the country, comprising the central and western areas, is accounted for by the Kgalagadi desert. Within this vast area, sub-surface layers of sand can be up to 120 meters deep. The area supports scant shrub savanna while there is almost no surface water at all.
Map 1: The Republic of Botswana.
(Source: DTRP/GOB)
The Human Geography:

Botswana is an independent republic based on a multi-party democratic system with a President and a National Assembly. The country has a population of approximately 1 million giving it one of the lowest population densities in the world. However, 80% of the population is concentrated in the eastern hardveld area where the population density is much higher. 82% of the population is rural-based living in settlements which range in size from small hamlets of just a few households to major villages with over 20,000 inhabitants. The majority of the population, however, continues to reside in settlements of under 1000 inhabitants. The capital, Gaborone, has a population of 75,000 and has recently been designated the status of a city. The annual rate of national population growth is 3.4 %, while there is a high level of rural to urban migration, causing rapid urbanisation.

The population is comprised of the Tswana people, who constitute the majority of the population and who can be divided into eight sub-tribes. There are also a number of minority tribes such as the Kalanga, Sarwa and Herero who live in the border areas and who have retained their own culture and language. There are also small groups of Europeans who have settled as farmers and ranchers, or who have come as expatriate workers, and a small Asian community too. The first language of the country is Setswana though English is normally used for official business outside of the districts.

Botswana has become the fourth wealthiest country in Africa south of the Sahara, with a GNP per head of $960. The economy depends on revenues earned from the export of diamonds and livestock. Revenue is required to cover the importation of most basic hard and soft commodities. Only 5 % of the total land area is suitable for cultivation, while 20 % is used for livestock grazing. The formal sector of the economy provides less than 20 % of employment needs and these are located in the urban and mining sectors. Employment in the South African mines continues to present an important alternative source of employment.
KWENENG DISTRICT:

Kweneng district is located in the south-eastern part of the country but straddles both the hardveld in the east, and the sandveld in the west (see Map 2). It is, therefore, a large district covering an area of 38,000 square kilometres and has a dispersed and low density population. The vegetation in the district displays both the features of the hardveld and the sandveld, while it supports only one major perennial river - the Metsemotlhabe.

The district has a population of 88,000 inhabitants settled in 31 major localities and several hundred smaller localities. However, 75% of the population is concentrated in the more fertile part of the district in the south-east while a further 17% is located in the grazing areas of the north east around Lephepe. Therefore, only 6% of the district's population live in the vast expanse of the Kgalagadi, west of Letlhakeng. The district capital is Molepolole where 28% of the district population reside. The Bakwena represent the major tribal group in Kweneng, with smaller representations of Bakgalagadi and Basarwa in the west, and of Bakgatla, Bangwato and Bangwaketse in the east.

KGATLENG DISTRICT:

Kgatleng district is located in the eastern hardveld, bordering South Africa to the east, Central district to the north, Kweneng district to the west and South-East district to the south (see Map 3). It covers an area of just 7,580 square kilometres making it one of the smallest districts in the country, and supports a mix of tree savanna and shrub grassland. It has two rivers - the Limpopo which provides the frontier with the Transvaal, and the Notwane which transects the district.

The district has a population of 45,000 inhabitants who are settled in 20 villages and numerous smaller settlements. However, 90% of the population are located in the southern most portion of the district which covers only 25% of the surface area, but 80% of the district's cultivable land. 41% of the population live in the district capital,
Map 2: Kweneng District - The Survey Villages.
Mochudi. The Kgatla people represent the majority of the population but there are smaller groups of Bangwato, Bakwena, Batlokwa and Basawra too.

There are few formal sector employment opportunities within the district and those that do exist are almost exclusively found in Mochudi. While the rural sector continues to provide the main source of livelihood, over 25% of the working age population is employed outside of the district in Gaborone or South Africa.

(see the appendices for a description of the survey villages.)


NOTE:

Citizens of Botswana are Batswana and an individual citizen is a Motswana. When reference is made to individual Tswana tribes or to members of a Tswana tribe, rather than to citizens of Botswana, the prefix is not used.

The currency used in Botswana is the Pula. During the period of research in 1984/5, £ 1.00 = Pula 1.70. With the more recent devaluation of the South African rand, the value has dropped considerably to a present exchange rate of Pula 2.98.
Map 3: Kgatleng District - The Survey Villages.
Chapter 2: RURAL DEVELOPMENT - HISTORICAL ROOTS AND CONTEMPORARY POLICY.

THE FOUNDATIONS OF RURAL DEVELOPMENT POLICY: THE COLONIAL LEGACY:

This section provides an historical review of the major features of colonial policy in Southern Africa and the Bechuanaland Protectorate. It examines features of Tswana society, the colonial state and major colonial policies based upon the concept of the interaction of modes of production (Taylor, 1979). A mode of production is understood as a specific set of social, economic and political relations organised to produce and reproduce a particular society. Moreover, modes of production are organised according to distinct social relations of production - the relations of those who produce and those who control the means of production - and productive forces - resources, workforce and technology level (Coquery-Vidrovitch, 1976).

When different modes of production interact, a process of transformation occurs whereby the more powerful system comes to dominate, but does not necessarily destroy, the weaker system completely (Taylor, 1979). Rather, a state of 'conservation-dissolution' (Bettleheim, 1972) is achieved in that specific features of the subordinate mode of production required to support the development of the dominant mode of production are maintained. The interaction of modes of production necessarily leads to a destabilisation of previous socio-economic and political relations and the creation of transformed relations.

In the African context, the features of the post-colonial state can be understood by examining the impact of colonialism on indigenous African societies. Colonial experience varied from region to region according to the characteristics and ambitions of the colonising power and the characteristics of the colonised societies. Therefore, the features of particular post-colonial societies reflect the form of interaction and transformation experienced during the colonial period in that particular place (Brett, 1973).

"Under the aegis of the colonial state, African societies were subjected to contradictory patterns of transformation, destruction and
preservation of their internal structures which resulted in a wide variety of intermediate and hybrid forms." (p166) "The resulting variations emerged from the particular forms of external capitalist penetration, the heterogenous structures and responses of the indigenous societies, and the diversity of local ecology and resource endowments." (Berman, 1984, p166)

While the colonial experience was common to most African societies and while many shared the similar effects of political, economic and social dislocation, the structural transformation that resulted from the interaction of these social systems was different in each situation. The political economy inherited at independence in Botswana reflects the process of "conservation-dissolution" manifested in the spheres of economic, social and political life. This political economy is the product of the interaction of modes of production resulting from colonial penetration during the 18th and 19th centuries. Tswana tribal states were subjected to the force of British colonial interests in the region expressed in terms of the development of a capitalist economy based on the mining sector in South Africa, and the establishment of Protectorate rule over the Tswana tribal states. Societal transformation of the Tswana can, therefore, only be examined in the wider context of the Southern African region.

It is, therefore, necessary to examine how policies implemented during the colonial period have influenced the policy options available and the choices made in the post-colonial period. Interaction between the indigenous society and the colonial administration created new political, economic and social relations which were inherited at independence. These included a series of policies and institutions in rural Botswana which have influenced development strategy since independence. This examination is followed by a presentation of the major features of rural development policy in the contemporary period illustrating how it has been conditioned by the colonial period.

COLONIAL HISTORY IN SOUTHERN AFRICA:

The penetration of Africa by the major European colonising powers during the course of the 17th, 18th and more especially 19th centuries
gradually introduced features of the capitalist mode of production and of European culture, to a continent characterised by various forms of tribal-based modes of production. Amin (1977) suggests that colonial penetration took three dominant forms, each of which was established in different parts of the African continent. These were;
- the colonial trade economies of west Africa.
- the concession-owning company economies of central-equatorial Africa.
- the labour reserve and settler economies of eastern and southern Africa.

Colonial interest in southern Africa was aroused relatively late compared to the other regions of Africa. It was the discovery of diamonds at Kimberley, South Africa in 1867, and the settlement of European farmers in the fertile plains of the Rhodesias which heralded the penetration of European capitalism into this part of Africa.

While the Portuguese had established coastal contact with Africa, in Mozambique by 1600, the establishment of the Cape Colony in 1652 marked the first stage of European penetration into the region. However, it was not until the mid-18th century that these Boer settlers started to migrate northwards, and in their path came into conflict with a number of Bantu tribes migrating southwards from eastern and central parts of the continent. Britain's decision to take possession of the Cape Colony, and their bid to outlaw slavery in 1806 then prompted the famous 'great trek' by the Boers, who sought to establish a new homeland in Natal. Again they came into contact with a number of Bantu tribes who this time were fleeing northwards from the might of the Zulu kingdom.

By 1854, the Boer farmers had migrated further inland and established two new territories, the Orange Free State and the Transvaal, while the British extended their control over Natal. They did not, however, try to annex the new Boer provinces on this occasion. During this period, contact between Europeans and African tribes had amounted to no more than a number of conflicts over the possession of land and the theft of livestock. While traders, explorers, hunters and missionaries began to make contact with a number of tribes, the respective social systems of both the African tribes and the Boer settlers remained unchanged. It was only in 1867, with the discovery of diamonds at Kimberley and the subsequent extension of the Cape Colony northwards, prompted also by the discovery of Gold, that colonial capitalist penetration into the region
began. Soon afterwards, British capital and immigrant workers poured into South Africa, while others followed Cecil Rhodes to establish a new colony in the Rhodesias (McEvedy, 1980). This period marked the birth of the South African peripheral capitalist economic system.

Early Tswana contact with Europeans can be examined in a little more detail. Sotho-Tswana tribes arrived in southern Africa during the 16th century, though it is argued that as early as 500 AD, the region which is presently Botswana, had been settled by Bantu herdsmen (Picard, 1985). However, the three major Tswana tribal groups, the BaRolong, the Bakwena and the Bakgatla, migrated into the region during the 18th and 19th centuries (Colclough & McCarthy, 1980; Picard, 1985). Migration from the Transvaal veld, into the Kgalagadi region was prompted by sporadic confrontations between the Tswana, and both the Boers, who as noted above had begun their northward trek to escape British domination, and the Ndebele tribe. The first reported clash with the Boers was apparently in 1852 (Picard, 1985). In fact, the Bakgatla only crossed the Limpopo in 1871, at the invitation of the Bakwena, to settle at Mochudi, some twenty years after the creation of the Transvaal province (Schapera, 1980). However, a considerable portion of the tribe remained in the Transvaal region where they were subsequently subjected to Boer rule. In 1880, a formal agreement was reached concerning the delineation of the frontier between the Transvaal and the Kwena territory where the Bakgatla had settled (Schapera, 1980). Subsequently, through a process of political fission, the BaNgwato and BaTawana tribes split away from the Bakwena and established their own tribal territories (Parson, 1984; Parsons, 1977).

It was then in 1884 that the British proclaimed a Protectorate over an area extending north from Kimberley to the Molopo river (see Map 4). A year later, the Bechuanaland Protectorate was extended further north as far as the Chobe river, to include all the major Tswana tribes - the Bakwena, Bakgatla, BaNgwaketse and BaNgwato. This action followed negotiations with Tswana chiefs who invited the British to extend protection over their territory, fearing intimidation and likely annexation by the Boers should they be left alone (Schapera, 1980). Therefore, the Protectorate was created as a means of blocking the northward migration of the Boers and, at the same time, of keeping the trade routes open between Cape Province in the south, and the Rhodesias
Map 4: The Bechuanaland Protectorate.
(Source: Colclough & McCarthy, 1980)
to the north (Colclough & McCarthy, 1980; Parson, 1984). As such, there were no plans for economic resource exploitation nor for settlement by British farmers, though economic motives were not totally absent. The potential for investment in communications infrastructure and in the development of a livestock sector to service the Kimberley mining township did not go un-noticed (Parsons, 1985). At the same time, Britain's long term commitment to the Protectorate was uncertain. While political sovereignty over the Protectorate was established by 1891 (Parsons, 1977), in 1895, the southern half was handed to the British South Africa Company and it was only a trip to London by a delegation of Tswana chiefs to protest at the possibility of complete annexation, that the northern half of the Protectorate remained under British protection until independence in 1966 (Picard, 1985; Schapera, 1970).

The history of colonial policy in Bechuanaland in reality only began after 1895, by which time administrative control had been extended over all the Tswana tribal reserves by statute (Schapera, 1980). Although the intention had been to limit interference in internal Tswana affairs, colonial policy towards the economic development of the Protectorate, while modest, inevitably led to the transformation of Tswana tribal society (Picard, 1985). By contrast, while Tswana society had come into contact with Europeans since the mid-19th century, through missionaries, traders, explorers and hunters, this contact had not undermined the integrity of the Tswana polity. As such, the social relations of production which characterised Tswana society remained un-altered (Parson, 1985).

**TSWANA SOCIETY:**

In order to explain how colonial policy transformed Tswana society, the major features of the Tswana mode of production are examined. The specific features of Tswana social organisation in the pre-colonial period can be examined in relation to the major features of what has been termed the African mode of production (Coquery-Vidrovitch, 1976, 1977).

The Batswana represent the major tribal group inhabiting the region which is today Botswana. While the tribe comprises a number of
sub-tribes which were politically independent of each other prior to the creation of the Protectorate, they did share a common political economy. Of the eight Tswana sub-tribes the most powerful have been the Kwena, Kgatla, Ngwato, Ngwaketse and Tawana (Picard, 1985; Schapera, 1970). Non-Tswana tribes include the Herero from Namibia, Kalanga from Zimbabwe and Sarwa (Bushmen) from the Kgalagadi region.

The African mode of production is founded on a number of key practices bonded by a web of social, economic and political relations (Coquery-Vidrovitch, 1976). These practices are characterised by the customs of reciprocity and redistribution and by the principle of communality over individualism. In this context, access to resources is of greater importance than is ownership. African tribal society can be understood to function as a collective unit which aims to satisfy the needs of tribal rather than individual social reproduction.

Economic production is geared towards achieving community subsistence. This system of production is based on a satisfying rationale according to which emphasis is placed on ensuring the social reproduction of the tribe on the basis of self-sufficiency and of risk aversion. This approach can, for example, be contrasted to the principle of production maximisation where the production of a surplus for sale, rather than for subsistence, is the major incentive (Lipton, 1968).

This economic system is bonded together by a socio-political tradition based on kinship. However, while the principles of private property, rent, landlordism and production for market may not be relevant, as in the case of a feudal mode of production, the system of kinship is by no means egalitarian. There is a distinct social hierarchy dividing the tribe between nobility, commoners, settlers and serfs, and a distinct division of labour controlled by the nobility (Cliffe & Moorsom, 1979), who are also responsible for controlling land allocation, tribute payments, seed and grain provision, organisation of labour, livestock distribution and trading.

The basic means of production, land, water and livestock are collectively held by the tribe though controlled by the nobility. While no individual property rights exist (Coquery-Vidrovitch, 1976), land is allocated to individual households according to their need. Normally
the nobility neither taxes, nor demands a surplus from the individual household, although individuals might be expected to provide labour to work land that is collectively held by the tribe and tribute may also be paid for social events (Coquery-Vidrovich, 1976). At the same time, it is common for the nobility to distribute their own wealth (mainly food surpluses) amongst the commoners particularly during the period before harvest when food supplies are low. The nobility, however, accumulate personal wealth through trading relations and plunder with other tribes. This often involves livestock but also items of luxury and of status. These exchange relations between tribes do not, however, affect the form of production within the tribe, nor do they provide an investible surplus which might be used for providing economic or prestige infrastructure (Coquery-Vidrovitch, 1976, 1977).

The Tswana social system was likewise divided between a nobility, which had hereditary rights and which governed by absolute decree, commoners and vassal groups. Authority was exercised through a hierarchy of relatives and officials down to the ward level. There was also a distinct division of labour, differentiated by age and by gender (Parson, 1984).

In particularly marginal environments such as the semi-arid and arid tropics of the Sahara, Sahel and Kgalagadi regions, where pasture areas, land for cultivation and water sources may be seasonally scarce, this mode of production is a critical survival system, finely tuned to local environmental conditions. Tswana social and economic behaviour and customs have developed in relation to environmental constraints, particularly after the migration of the tribe away from the more fertile veld of the Transvaal, into the margins of the Kgalagadi. These characteristics represented a socio-cultural response to a harsh environment and a means of ensuring economic security and tribal harmony at times of conflict (Mtetwa, 1982).

**COLONIAL POLICY IN THE BECHUANALAND PROTECTORATE:**

The way in which Tswana society became transformed as a result of European penetration into the region can be traced to two major processes. First, European activity increasingly exposed Tswana society
to the money economy and to western goods and customs. Second, specific Protectorate policies directed towards the economic and political development of the territory and implemented in response to increasing economic activity within the Cape Province, focussed on the mining sector, served to destabilise the indigenous mode of production in a profound way. Both processes are reviewed.

The Monetisation of the Economy:

The regional economy of southern Africa had already begun to be monetised by the time the Protectorate was established in 1884, but this process did not in itself transform existing social relations of production to any significant degree (Parson, 1985). Already by 1830, traders and hunters had followed the path of missionaries and explorers who had ventured north from the Cape, introducing western goods, and in particular clothing, to the Tswana tribes. This growth in trading reflected the development of a flourishing mercantile economy in the Cape at this time (Parsons, 1977). Mine recruitment too, began to take place on a small scale (Picard, 1985; Schapera, 1970, 1980) while tribesmen had been selling cattle informally to traders in return for western goods (Schapera, 1970). While these external relations with Europeans did not go so far as to transform the social organisation of production, they did serve to introduce new and luxury western goods, the principle of cash exchange, and the broader influences of the South African mining economy to the region. Increasingly, access to cash, or to an equivalent form of exchange became highly desirable. Indeed, with the increase of movement between the Cape and the Rhodesias, after 1887, trade became an important component of the Tswana economy, with important sales of livestock, crops and wagons being made by the Tswana to the new settlers.

The Impact of Protectorate Policy:

The Tswana polity was rapidly destabilised in the period after 1884 as a result of both the rapid development of the South African economy and specific economic and political policies introduced by the Protectorate administration. These processes had a profound impact on the rationale of Tswana society affecting the organisation and interrelationship of social, economic and political life.
Progressively, the capitalist mode of production began to transform a society characterised by the African mode of production. In particular, colonial state policy served to destabilise the indigenous system by exposing it to a cash economy and to market forces.

The effect of this process was to transform, rather than destroy, the organisation of Tswana society. The new social, economic and political relations which emerged reflected a process of 'conservation-dissolution' (Bettleheim, 1972). In this respect, the capitalist mode of production maintained key features of the indigenous mode which could support the interests of the colonial state. Tswana society was, therefore, not fully transformed into a capitalist society though its existence became dependent on the South African capitalist peripheral economy (Parson, 1984).

COLONIAL ECONOMIC POLICY:

It was in particular, colonial economic policy which had the greatest impact on societal change and left the most marked legacy on the independent country. Economic policies created a new economic system which determined the policy options available to the post-colonial government for national and rural development.

The economic legacy inherited by the post-colonial state represented the outcome of policies pursued by the colonial administration. A number of specific policies formed the basis of an economic strategy designed to support the broad ambitions identified for the territory by the colonial office. These policies are reviewed in order to demonstrate how contemporary policy has been influenced by the effects of colonial policy on the structural transformation of Tswana society.

Aims of the Protectorate Administration:

The colonial office in London had no clear ambition to exploit the Protectorate either for settlement, or for the extraction of raw materials. Bechuanaland would only serve to defend Britain's wider interests in the region - namely to safeguard the trade routes between the Cape Colony and the Rhodesias and to block Boer ambitions to
continue their northward migration (Colclough & McCarthy, 1980; Parson, 1984). While an agreement had been reached with Tswana chiefs to provide protection over the area, the British were at no stage fully committed to supporting it over a long-term period. There was always the strong possibility that the territory would be conveniently annexed to South Africa. Consequently, economic ambitions were quite modest and of short-term duration. The major task facing the Protectorate administration was to ensure that the territory could be self-supporting and that it would do what ever possible to support British interests in the Southern African region as a whole (Parson, 1984). The economic strategy which followed was, therefore, based upon these limited colonial objectives.

**Economic Strategy:**

The strategy was based on four major policies which served to harness the indigenous economic system to the colonial political economy. It was based upon the exploitation of livestock and human resources and upon linking the economy to that of South Africa's. In this way the indigenous economy became structurally dependent on a capitalist economy founded on the mining sector. At the same time, these policies ensured that the Protectorate would be self-financing. Within this strategy, there was little scope either for strengthening the internal economy of the Protectorate, nor of extending a range of basic infrastructure facilities to support and integrate this economy.

**The Commercialisation of the Livestock Sector:**

The commercialisation of the livestock sector offered the administration the best opportunity for exploiting the indigenous economy in order to earn sufficient revenue to cover administrative costs for protecting the territory and for reducing dependence on the metropole (Colclough & McCarthy, 1980; Roe, 1980). This decision was taken in the belief that local environmental conditions were inappropriate to permit the exploitation of the arable sector beyond subsistence levels and that the environment could better support the intensification of stock rearing.

This attitude towards the livestock and arable sectors was reinforced by evidence of a functional relationship between cattle rearing and crop
cultivation in Tswana society. It was recognised that traditionally, grain shortfalls experienced in drought years would be balanced by the sale of livestock in exchange for imported grain. It was reported that by 1890, livestock had replaced hunting and trading as the main source of cash earnings (Schapera, 1970). However, this practice reflected the extent to which cash exchange had already penetrated the local economy, since this form of exchange clearly did not pre-date the arrival of the Europeans. Therefore, the colonial administration decided to parallel this practice at the regional level by encouraging cattle sales so as to earn revenue which could then be used to pay for the importation of grain. In this respect, the Protectorate administration presumed that there would always be a grain deficit (Roe, 1980). Such assumptions were turned into a reality as colonial policy served to marginalise crop cultivation.

A policy to promote the commercialisation of cattle was pursued. It involved support in innovation, research and funding in to water provision (see later section), animal husbandry techniques and disease control. As early as 1905, a Veterinary department was set up. This was subsequently strengthened and expanded in 1925, with the addition of a dairy inspector and then in 1940, when new facilities were provided (Colclough & McCarthy, 1980). During the 1930's, the administration introduced boreholes for commercial ranchers permitting the exploitation of new grazing land (Cliffe & Moorsom, 1979). During the 1950's, further facilities were built including the Lobatse abattoir in 1955 (Roe, 1980). By contrast, the arable sector was largely neglected. It was only in 1934 that an Agriculture department was set up, some 30 years after the veterinary department (Roe, 1980). While further efforts were made to encourage the use of European tools and farming techniques, the level of intervention in arable production remained limited and tended to be directed to a small number of European commercial farmers in the concession areas (Colclough & McCarthy, 1980). For the vast majority of the rural population, crop cultivation continued to be influenced by the Tswana chieftaincy (Schapera, 1970).

The Introduction of Taxation:

Between 1899 and 1932, a number of laws introduced local taxation to the tribal reserves. This process began in 1899 with the introduction of
the Hut Tax (Colclough & McCarthy, 1980). This had been accepted by the Tswana chiefdom as a form of compensation to the British for having decided against annexing the Protectorate to the British South Africa Company (Schapera, 1980). In 1919, a native tax was then introduced (Vengroff, 1977) as a means of generating revenue to support public works programmes (for education, health and the livestock sector), and then in 1932, these two taxes were brought together as the "African" tax (Colclough & McCarthy, 1980). The purpose of taxation, it was argued, was to support the financing of the Protectorate administration, which could not alone be supported by the livestock sector, as well as to contribute to the social and economic development of the tribal reserves (Parson, 1984).

By contrast the major impact of the imposition of these taxes was to increase the need of the household to have access to cash. In this way Protectorate policy institutionalised cash exchange in the local economy. Under such circumstances, participation in the cash economy was transformed from a discretionary activity into a mandatory one (Parson, 1984).

The Encouragement of Mine Employment:

Records of mine employment can be traced back as early as 1844 (Picard, 1985) and had spread to most parts of the Protectorate by 1885. However, mine recruitment only took off on a large scale after the turn of the century with increased overseas investments into the South African mining sector (Parson, 1985). In 1899, the Protectorate administration encouraged recruitment to the mines by setting up mine recruitment agents in the major centres or "settlement (Hesselberg, 1985; Schapera, 1970). It was more than a coincidence that this occurred in the same year that the Hut tax was introduced. Indeed, the administration recognised that mine employment could provide the Protectorate with a ready source of income, which could ensure tax payment for local administration and the funding of local public works too (Schapera, 1970). Therefore, the introduction of taxes supported both the colonial administration and the South African mine owners (Massey, 1978).
The development of the mining sector depended on a plentiful supply of cheap labour. Labour could, however, only be released through policies to monetise the economy or through the use of political force. Accordingly, this could be achieved by either appropriating land, imposing taxation, or through enslavement (Cliffe, 1977). In Bechuanaland this labour pool was made available through the inducement of the cash incentive. In this respect, policy towards cattle commercialisation, taxation and membership of the South African Customs Union (see below), provided these conditions by destabilising the indigenous mode of production and by creating a need to have cash (Parson, 1979).

Increasingly, during the course of the 20th century, the importance of recruitment to the mining sector grew. By the 1930's, wage employment in the mines had become a major facet of the indigenous economy to the extent that the Protectorate could begin to be described as a "Labour-Reserve" (Parsons, 1985).

Participation in the Southern African Customs Union:

In 1910, the Protectorates of Bechuanaland, Basutoland and Swaziland entered into economic union with South Africa. This economic union paralleled the Act of Union of the same year which effectively made the Protectorate an appendage of South Africa, politically and administratively (Parson, 1984; Parsons, 1977). The Customs Union had a significant impact on the Bechuanaland economy by increasing the marginal status of agriculture and by promoting the commercialisation of the livestock sector. It has been argued, moreover, that it served to institutionalise "depression" in the indigenous economy, thereby creating structural dependence on mine employment (Parsons, 1977).

Apart from the environmental conditions which favoured the development of the livestock sector, it was the opening up of unrestricted South African markets and also of markets in the Rhodesias, following the Union, which provided the economic incentive to develop the sector (Colclough & McCarthy, 1980; Roe, 1980). Access to this larger economic system was essential since the market within the Protectorate was inadequate to sustain the expansion of the sector. At the same time,
the South African Customs Union provided South African traders and farmers the opportunity to exploit the Protectorate market at preferential rates. Western goods which had already been arriving through small traders for over half a century began to flood the local economy. By 1941, preferential tariffs for South African goods had managed to destroy the indigenous manufacturing economy consisting mainly of textiles, wagon building and building materials. It was reported that by this time it was no longer possible to find even remote dwellers wearing Tswana clothing (Roe, 1980). The South African Customs Union, therefore, served to speed up the monetisation of the Tswana economy to the extent that it became increasingly necessary as well as desirable to have access to cash in order to purchase western goods and pay taxes.

Summary:

The implementation of these four economic policies had the effect of transforming the indigenous mode of production, rendering it increasingly dependent on the peripheral capitalist economy, based in South Africa. Under these circumstances, a condition of underdevelopment was created in which the indigenous economy was rendered dependent on the capitalist sector, but in itself was unable to break away from a state of poverty (Palmer & Parsons, 1977; Parson, 1984). The economic strategy outlined in this section had considerable bearing on specific policies towards social welfare provision, power sharing and decision-making, and the socio-economic development of the Batswana (see ch 3).
RURAL DEVELOPMENT: POLICY SINCE INDEPENDENCE:

In this section, the way in which the legacy of colonial economic policy has constrained policy options for national and rural development is examined. Attention focusses on policy towards social infrastructure provision, institution-building and socio-economic development.

THE SITUATION AT INDEPENDENCE: THE COLONIAL LEGACY:

At independence in 1966, Botswana was one of the poorest and least-economically developed countries in Africa. It could boast a GNP per head of only P50 (Stevens, 1981) which qualified it as one of the twenty least developed countries in the world. The economy was weak, unintegrated and dependent on the South African mining sector while the country's resource base was considered poor. The gross domestic product of the nation at the eve of independence was P32.8 million (Dahl, 1981) and the country was dependent on budgetary support from Britain (Stevens, 1981). Over 65% of the labour force depended on subsistence arable production for their income. However, only 5% of the total land area of the country was suitable for crop cultivation (GOB, 1985), while there was evidence that yields from local arable production had been declining. As a result, 20% of the population found itself dependent on food aid to subsist. The South African mines provided jobs for about 25% of the labour force (GOB, 1985) while the domestic formal sector could provide employment for up to 12% of the labour force, primarily in the public sector (Parson, 1984). Internal manufacturing had to contend with fierce competition from South African producers who were better able to exploit the terms of the Customs Union. The drought which lasted between 1961 and 1965 resulted in the loss of one third of the national cattle herd (Dahl, 1981).

Physical and social infrastructure were almost non-existent, while the population was largely illiterate and unskilled. There was an extreme shortage of economic and social infrastructure. The railway running north to south was the only major line of communication. Apart from the construction of the new capital at Gaborone, there was inadequate infrastructure to support the most basic industrial or commercial activity (Parson, 1984). Education and health facilities were also lacking. There were only five private secondary schools which provided
places to only 3% of school age children (Colclough & McCarthy, 1980). While 50% of children were attending primary school, there was only a 40% completion rate due to inadequate facilities and teachers (Colclough & McCarthy, 1980). There were no vocational training institutions and a severe shortage of trained manpower (Stevens, 1981). Finally, there were seven hospitals in the urban centres but only 24 staffed dispensaries in the rural areas. Even within the urban sector, there were severe manpower and financial shortages (Colclough & McCarthy, 1980).

There was, therefore, serious undercapacity in all domains which threatened the very viability of this new country. Beyond this bleak internal political economy scenario, Botswana was born into a region characterised by political and economic instability arising from white minority rule in South Africa and Rhodesia. At the same time, it was clear that these two states dominated the region from an economic point of view, forcing the weaker new states to tie their economies to those of their powerful neighbours. Finally, Botswana inherited a hostile and harsh environment, symbolised by the onset of the worst-recorded drought at independence.

Confronted with this poor inventory, the government was compelled to lay the foundations on which to develop a viable nation. The challenge was made harder by the political climate in the region and the debilitating effects of the drought, both of which would constrain options available to government.

THE EMERGENCE OF A NATIONAL DEVELOPMENT STRATEGY:

The prospects for national development were not encouraging. In particular, the pre-conditions necessary for implementing a national development strategy were lacking. The government recognised that its first priority had to be to create a financial and economic base in order to cover basic administrative running costs and to provide a platform from which further investments could be made. The implementation of a more broadly based development strategy was recognised to be premature until these preconditions had been satisfied (Parson, 1984). Thus in the immediate years after independence,
government policy focussed on trying to generate as much revenue as possible by exploiting the most productive sectors already in existence, while continuing to rely on financial support from the British government. In the short-term, investment in constructive development would have to wait until the country was able to service its immediate running costs.

In the first instance, revenue was earned from the productive sectors inherited from the colonial administration. By and large, this meant the commercialised part of the livestock sector (inspite of the great losses brought about by the drought), and remittances earned by migrant mine labourers in South Africa. The post-colonial government was, in this respect, obliged to accept an economic system which had been created to serve colonial interests, as the basis for establishing the economy of the independent state.

Economic fortunes changed dramatically, however, at the end of the 1960's when attractive diamond deposits were discovered. Subsequent prospecting around the country identified further deposits of diamonds and other exploitable minerals, especially copper and nickel. It was quickly realised that these mineral deposits could provide an un-anticipated opportunity to generate rapid economic growth, through the investment in industrial plant, associated infrastructure, job creation and earnings from the export of the extracted deposits. The mining sector was, therefore, able to provide the foundations of a coherent economic development strategy and to transform expectations of what the country was capable of achieving. Policy was, henceforth, directed to ensuring that maximum support was provided to this sector to serve as the principal engine of growth and source of national wealth. In the short-term, the discovery of diamonds and also the re-negotiation of the Southern African Customs Union (SACU), which provided the smaller partners a greater share of aggregate revenue (GOB, 1985) meant that the government was able to achieve its primary objective of attaining financial self-sufficiency by 1973, well in advance of all expectations (Parson, 1984; Stevens, 1981).

Botswana's drive towards socio-economic development was further boosted by wide-ranging offers of assistance from the international donor community. Aid agencies were encouraged to support her internal
development programme for several reasons. First, the dearth of infrastructure inherited at independence had to be rectified in order to support the country's development strategy. Without adequate funds available locally, external assistance from outside was indispensible. Donors were especially attracted to proposals to support the provision of economic infrastructure to the mining sector and associated townships. Second, donors were confident that resources would be well spent and that investments would be maintained, in view of the long-term forecasts of economic buoyancy. Together with evidence that the government was committed to safeguarding democracy, donors saw Botswana as representing a sound investment opportunity. Third, financial support to Botswana provided western aid agencies with a convenient way of displaying their support for Black African countries in the face of Apartheid and colonial rule in the region, without having to directly interfere with those rogue nations (Stevens, 1981).

Thus by 1970, the foundations of an economic development strategy, the impact of which would be felt for the next decade, had been laid. The mining sector would serve as a growth pole providing revenue and momentum for the rest of the economy. The livestock sector and SACU revenues would continue to play an important part in boosting national income. The revenue earned from these sectors could then be used in a number of ways - to be ploughed back into those same sectors to support further growth, to absorb the rising running costs of an expanding public sector, or to be deposited into a domestic development fund. This fund would be assisted by international contributions in order to support the provision of infrastructure, primarily in the urban sector but increasingly in the rural sector too.

The strategy had all the markings of a "Redistribution with Growth" approach. Indeed, the government stated that it sought to plough the returns from the mining sector to those sectors which had not benefitted directly from this growth strategy and that this would provide the basis for future economic activity (GoB, 1985). The Botswana government sees its role as one of providing support to the private sector, through the provision of basic economic infrastructure, of setting up and administering a legal, fiscal and monetary framework and for being responsible for the education, training of manpower, as well as participating in all major economic ventures (GOB, 1985).
Within this equation, the arable subsistence sector has been attributed only a minor role. The rural economy, at large, has not been included as a major partner in this development strategy. At best, it has been targetted to receive the indirect benefits from the growth sectors in the form of infrastructure provision. At the same time, this strategy has increased dependence on South Africa for the provision of foodstuffs, manufactured goods and services, as rural production has declined in the face of competition and inadequate incentives. Moreover, mine and farm employment in South Africa has remained a major source of revenue both for the national exchequer and for the rural household.

During the late 1960's and early 1970's, a high proportion of available resources were invested into the development of the mining sector. Diamond mines were established at Orapa and Letlakane, and a huge copper-nickel plant was built at Selibi-Pikwe. Private capital from South Africa accounted for most of the investment in associated plant, technology and manpower (Parson, 1984; Picard, 1985), while the Botswana government provided supportive infrastructure in association with the donor community (Lewis, 1981).

The importance of the mining sector to the growth of the economy cannot be underestimated. Between 1966-73, 45% of all development expenditures were allocated to the copper-nickel complex alone. By contrast, only 13% of expenditure was allocated to the agriculture, commercial, industrial and water sectors over the same period (Parson, 1984). The project also provided a focal point for donors to concentrate their financial support and served as a means of making an entrance to the Botswana economy. Canada, the USA and the World Bank played major roles here. Similar levels of investment have also been made in relation to other mine projects at Orapa, Letlakane and more recently, Jwaneng.

The impact of the mining sector on the national economy has been far reaching. Aside from the economic spin-offs that occurred primarily during the construction phase, the mines have transformed the financial status of the national economy. By 1984, the sector accounted for 30% of national revenue (Parson, 1984) and up to 70% of export earnings (AED, 1985; GOB, 1985). Diamonds now account for 96% of mining-derived revenue (Picard, 1985), yet as recently as 1971, it only accounted for
$5.3 million in export value. By 1979, this figure had rocketted to $182.9 million (Parson, 1984).

The indigenous mining sector has transformed Botswana from being one of the poorest countries in the world, facing an uncertain future, into a country which in 1985 could claim to have almost attained the status of a middle-income developing country. Between 1966 and 1983, GDP/capita increased five times (GOB, 1985). It can now boast a GNP/capita of $900, ranking fifth in sub-Saharan Africa (AED, 1985). Between 1970-77, Botswana had the fastest growing economy in the world recording an average annual growth rate of 15.8% (AED, 1985). The development of these leading sectors has permitted the recurrent budget to increase from P10.3 million in 1966/7 (Dahl, 1981) to P424 million in 1985/6 (GOB, 1985), while over the same period the development budget has increased from P3.7 million to P272 million (Dahl, 1981; GOB, 1985) (see Figs A1-A6).

RURAL DEVELOPMENT WITHIN THE NATIONAL STRATEGY:

Before 1972, no explicit rural development strategy existed as the government lacked adequate resources to invest in the development of the rural sector at the same time as concentrating efforts on exploiting the urban sector. The only exception was the commercialised livestock sector based upon the production of beef for the Lobatse abattoir, which continued to provide the government with a significant source of income. During the period of NDP 1 (1966-1970), while a large part of the development budget was allocated to infrastructure projects, the majority of these funds supported the development of productive activities in the urban sector (Colclough & McCarthy, 1980).

A formal strategy for the rural sector only emerged in the mid-1970's, by which time mining revenues were on tap and donor organisations had negotiated assistance programmes with the government. However, the investments which began to be made to the sector were dwarfed by the huge sums being directed to the mining sector from both public and private sources. Consequently, in the immediate post-independence years, the rural sector did not experience any significant improvement in social and economic conditions.
The rural strategy was presented in two government papers in 1972 and 1973 (GOB, 1972; 1973). It stressed the relationship between economic growth achieved through investment in the mining sector and redistribution and social justice, achieved through the re-investment of mining revenue into the rural sector. It also noted that rural development could not be undertaken without assistance from the donor community.

The policy statement issued in 1972 (GOB, 1972) outlined the four major objectives of the rural strategy. These were to create the opportunities for increasing rural incomes, to provide basic social services, to promote social justice and to solve the problem of overgrazing in communal areas. The strategy addressed both issues of production and infrastructure provision, which would be supported by finance generated from the mining and livestock sectors and from external donor sources (Picard, 1979). A major underlining theme was to redistribute national wealth from the urban to the rural sector. This objective would be achieved through a number of specific sectoral projects and programmes coordinated by central government and representative bodies at the district level. It was felt that the newly created District Councils (see below) lacked the implementation capacity to supervise this strategy effectively. Government's decision to take full charge of rural development reflected its awareness of the political significance of being seen to be investing in the rural sector. A commitment to rural development was spelt out in no uncertain terms:

"We must make every effort to ensure that our strategy for development is based on social justice and this means that rural development must have a high priority." (President S.Khama, quoted in GOB, 1972:p2)

From within this strategy, the three major policy areas presented in the introduction can be identified. These concern:

**Social Infrastructure Provision:**

For the vast majority of the rural population, rural development has come to stand for the provision of social and physical infrastructure. A primary objective of government's rural investment programme has been
to use domestic revenue and donor funds to provide a range of basic services in the most populated rural settlements. These have included health dispensaries, primary schools, and domestic water supplies. Such services have been provided by and large without cost to the recipients with government taking on the responsibility to fund both the provision and operation of such services. On the whole, services have been provided on a hierarchical basis with higher levels of service being given to the larger and more important rural settlements.

Production-related investment:

By contrast, state intervention in the rural productive sector has been, until most recently, restricted to the livestock sector. Here, investment has remained relatively high, especially in the period preceding the mining boom. Benefits have accrued at the national level through the exportation of processed beef products. However, at the household level, benefits have been unevenly distributed reflecting the skewed distribution of livestock ownership.

Support for the livestock sector has been symbolised by the Tribal Grazing Lands Project introduced in 1975. It was the only major production related rural project at the time aimed at establishing commercial ranches outside of the communal areas (Colclough & McCarthy, 1980). The sector has also benefitted from a number of other projects, such as the upgrading of the Lobatse BMC slaughterhouse and processing factory, the construction of a new vaccination centre and the provision of supportive infrastructure (Parson, 1984).

The continued support for the livestock sector is based on the important contribution that it makes to the GDP through export earnings. In 1980, livestock sales accounted for 20% of total GDP (Picard, 1985), to 80% of agricultural GDP (GOB, 1985), while the processing of beef products accounts for over a third of manufacturing's contribution to GDP (GOB, 1980). Beef sales, however, have depended heavily on the European Common Market which is responsible for absorbing 80% of exports, and in particular on preferential tariffs agreed upon under the Lome Convention (Jones, 1981). The profitability of the livestock sector is, therefore,
dependent on the goodwill of the EEC and its policy towards import levy rebates (Parson, 1979).

By contrast, assistance to the arable sector, on which over three-quarters of the rural population depend in part for their livelihood, has received little support. During NDP 4, for example, only 27% of the budget allocation to agriculture was allocated to the arable sector, with the remainder going principally to the livestock sector (GOB, 1980; Parson, 1984). This policy has reinforced the bias away from arable production started during the colonial period. Moreover, the emphasis on livestock commercialisation has further marginalised crop cultivation by further separating cultivators from the holders of livestock. By 1985, crop yields were only sufficient to cover 30% of domestic food needs, while the agriculture sector (excluding cattle) accounted for only 10% of total GDP (AED, 1985). By 1985, 365,000 people were receiving supplementary food rations due to the impact of drought on an increasingly marginalised sector (GOB, 1985). Therefore, prior to 1978, there had been no major investment programme to support the arable sector. For the majority of the rural population, the only tangible benefit of government's rural policy had been the provision of social services.

The Role of Sub-National Institutions in Rural Development:

During this period, central government assumed a major responsibility for directing and implementing development policy. While investment was focussed on the urban sector, the district level institutions inherited and created at independence (see below) had almost no opportunity to influence policy. Following the establishment of a rural strategy, the role of these institutions in development became politically important. While central government continued to assume a major responsibility for policy formulation and implementation, some attempts were made to extend participation to sub-national institutions, albeit in a limited capacity.
A RE-APPRAISAL OF POLICY OBJECTIVES:

NDP 5 and 6 symbolised a significant change in government strategy to national development (GOB, 1980, 1985). A redirection of policy has been prompted by changing social, economic and political circumstances which made the existing strategy no longer suitable. To an extent, the need to redirect policy may be interpreted as evidence that the original objectives set out at independence had been achieved. Of relevance here, is the new importance that has been attached to rural development in overall national development and, in particular, to the effect that this has had on the balance between investment in social infrastructure and in production-related sectors, and on the role of sub-national institutions in policy formulation and implementation.

The New Strategy:

Rural development has now become the major focus for national development. Its status has been elevated from that of a sector of secondary importance to a sector of primary importance, thereby replacing the urban sector as the target for major investment (Parson, 1984).

Within the new rural strategy, production rather than service provision has been emphasised, with attention drawn to the need to encourage employment creation and income earning opportunities within the rural sector. Investments have been directed to both the arable sector, in order to help the small subsistence producer, through the Arable Lands Development Programme (ALDEP), and to the commercial sector in order to stimulate non-arable production, through the Financial Assistance Policy (FAP). Social and physical infrastructure will increasingly be provided to those sectors which can provide production-related opportunities. Emphasis has been placed on spatial rather than sectoral planning as a means of shifting investment towards defined regions, as the focal point for economic generation. This policy has been introduced in terms of a Communal Area Development programme (CAD), and a broader National and District Settlement Policy (GOB, 1980). By contrast, the relative emphasis placed on infrastructure provision has been reduced even though in absolute terms, the resources available for all sectors under NDP 5
increased threefold over NDP 4 (Parson, 1984). The new strategy has been accompanied by changes in the administration of rural policy formulation and implementation between central government, local government and the rural community.

The Motives for Policy Change:

By the end of the 1970's, it became clear to the government that the levels of economic growth enjoyed during most of the decade could not be guaranteed for the future, while at the same time, demands on the economy were continuing to grow rapidly. It was realised that the mining sector could no longer sustain economic growth at the same rate, as the sector began to experience diminishing returns on the investments for mining infrastructure and as world diamond prices remained unstable. Demands on the economy were increasing from several directions and, consequently, were imposing considerable strain on it.

First, public sector borrowing was increasing rapidly as government activity within the economy continued to expand. Second, it was recognised that economic performance and the benefits of unprecedented growth had benefitted too few and had done too little to activate the rural economy on which most of the population depended. Polarised development in modern growth centres and the parallel neglect of rural areas, apart from the provision of infrastructure, was creating characteristic Third World socio-economic conditions. The rural economy was depressed offering few formal sector employment opportunities while the arable sector remained marginalised. While primary education facilities were widely available, higher education was restricted to the townships and a few of the major villages. An increasingly young and literate rural population with high expectations was entering the labour market, especially in the urban sector, but here too, opportunities were few. Migration to the urban sector has also increased pressure on housing and service provision. Therefore, as the urban sector has continued to grow rapidly against the background of a high rate of population growth and rural out-migration, the government has recognised that in the future, the economy must be able to satisfy employment demands. Yet, under existing circumstances, the structure of the economy is inappropriately equipped to meet these challenges.
It is, therefore, viewed as imperative that this urban drift be arrested by generating increased opportunities within the rural sector. This is recognised to be all the more important in light of the South African government's decision to reduce its annual intake of rural migrant workers (Lipton, 1978). The government would also like to reduce its dependence on the South African economy by becoming more self-reliant in food production and manufacturing. Stimulating these sectors is essential given that the rates of growth experienced during the mining boom are unlikely to be repeated (GOB, 1985). This new strategy must be pursued, therefore, in a climate of more modest economic growth. Government has been forced to impose strict limits on recurrent spending and is, therefore, reticent to support investments which are not self-liquidating, or which demand high recurrent costs. This, particularly, concerns infrastructure projects which are non-productive while it is also hoped that better standards of operation and maintenance of infrastructure can lead to a reduction in recurrent budget overheads. As a result, the government is more concerned to support existing assets and services rather than to invest in new ventures (GOB, 1985).
Chapter 3: SOCIAL INFRASTRUCTURE PROVISION, INSTITUTION-BUILDING AND SOCIO-ECONOMIC DEVELOPMENT: THREE ELEMENTS OF RURAL DEVELOPMENT.

INTRODUCTION:

This chapter investigates colonial and post-colonial state policy towards the provision of social infrastructure, institution-building and socio-economic development in the rural sector. Contemporary policy objectives and the impact of policy on the rural economy are considered against a review of specific policy in these areas during the colonial period and against the review of rural development presented in chapter 2.

Social Infrastructure Provision:

The provision of rural water supplies and sanitation constitute components of government's rural development programme. This programme is based upon a social infrastructure provision strategy for recognised rural settlements. Within this strategy, a clear set of policy objectives and a distinct system of delivery has been developed. In order to explain which factors have determined the nature of water and sanitation provision, a wider review of social infrastructure provision within rural and national development is required. This forms the basis for comparing Botswana's experience in water supply and sanitation provision with the prescriptions of the Decade while contributing to the analysis of institutional capacity in policy implementation by illustrating the relationship between policy objectives and the means used to obtain those objectives.

Institution-Building:

The principal institutions at the local government and community levels which contribute to rural development are introduced as the basis for examining their role in the delivery of water supplies and sanitation. The characteristics of each institution and their responsibility towards the formulation and implementation of rural development is described.
This analysis provides a background to chapters 5, 6 and 7. The analysis of delivery systems in chapter 5 identifies how these institutions are involved in policy formulation and implementation. The constraints facing the individual institutions in executing policy are then examined in chapter 6.

Socio-Economic Development:

The rural household and the rural village represent both the recipients and participants in the water supply and sanitation programmes. The analysis of the socio-economic status of the rural household and community is, therefore, important in order to understand the capacity of the household as participant. The analysis below identifies who the recipients are and where they live. This is necessary in order to understand what the programmes are trying to achieve. More importantly, the analysis of household socio-economic status helps to explain the constraints to community participation within project delivery. It is suggested that socio-economic status influences both the capacity and willingness of the household to participate directly through self-help contributions and indirectly through support for community development groups.
THE ROLE OF THE STATE IN SOCIAL SERVICE PROVISION:

In the post-colonial period, the government has accepted the responsibility for providing non-productive infrastructure as a major element of its development strategy. Subsidised social infrastructure provision has formed the basis of rural development while in the urban sector, provision has been organised on a partially subsidised basis. This approach to infrastructure provision can be contrasted to that pursued during the colonial period. Policy was limited in absolute terms and was restricted to the urban sector and to those few productive sectors, while the rural sector was largely overlooked. Examples of primary education, health care, water supply and sanitation are provided to illustrate the features of policy in the two periods.

COLONIAL POLICY:

The colonial administration paid little attention to the provision of basic economic and social infrastructure. Provision that was made was restricted to the few townships where the European population lived and to the few sectors of production such as livestock, which had been exploited. Responsibility for 'welfare' was left to the tribes themselves, or to the missions, while any public works that were undertaken by the administration were restricted to the urban areas. It was only after 1945, and more especially in the decade prior to independence that a more concerted effort was made to provide the territory with the basic infrastructure that would be desperately needed to support the economy of the future independent country.

Expenditure on Social Infrastructure:

The lack of attention paid to the provision of social and economic infrastructure was reflected in the extremely low levels of investment allocated to such provision. Between 1911 and 1957, the colonial office provided no funds at all to support the recurrent budget of the Protectorate administration. Expenditure had to be supported from revenue generated locally through the export of livestock and through
the taxation of the indigenous population. Yet most of the revenue
earned this way was used to cover routine administrative overheads and
was not invested in developmental activities (Colclough & McCarthy,
1980). Between 1900 and 1925, almost 90% of government expenditure was
accounted for by administrative needs - more especially to support the
police force. Capital investment expenditure only began to be recorded
after 1935, yet even during the period of more intensive investment in
developmental projects, after 1955, still over half of the
Protectorate's total expenditure was accounted for by administrative and
police recurrent costs (Colclough & McCarthy, 1980).

Indeed, it was only after 1955 that the colonial office agreed to extend
financial support to the Protectorate. By 1964, the colonial office was
responsible for providing half of the Protectorate's recurrent needs,
while it had also substantially increased its support to the territory's
development programme (Colclough & McCarthy, 1980). Between 1954 and
1965, a total of R 8.5 million was allocated exclusively for productive
development projects (Parson, 1984), representing 25% of the total
budget for the Protectorate. Previously, it had never surpassed 10%
(Colclough & McCarthy, 1980). However, this additional development
finance was used primarily to support the livestock and urban sectors.
Livestock-related investments, for example, accounted for 30% of such
expenditures, while the construction of the new capital at Gaborone
accounted for 11% of the budget. At the same time, increased concern
for improving education during this period was reflected in the
allocation of 16% of the budget to this sector (Parson, 1984).

Social Service Provision: Education and Health:

Policies towards the provision of social and economic infrastructure can
be illustrated by examining the education and health sectors during this
period.

The development of primary education relied almost entirely on the
efforts of the tribal authorities and missionary societies. The
colonial administration only began to provide assistance after 1910 and
in only the most indirect fashion. Between 1875 and 1903, the missions
were wholly responsible for providing elementary education to the
indigenous population. The first missionary school had in fact been
established in 1847, at Kolobeng by David Livingstone. By 1900, missionary zeal ensured that up to 1000 children were enrolled in mission schools (Colclough & McCarthy, 1980). After 1903, missions began to receive financial assistance through the 'native' tax system, and through contributions made by individual tribal leaders. The payment of official levies for such activities as education was formalised after 1919 with the establishment of the 'Native Fund'. Further funds were provided by the Tswana themselves after 1938 with the establishment of Tribal Treasuries. Yet, at no time did the Protectorate administration provide financial assistance, even though enrollment had increased to over 8000 pupils (Colclough & McCarthy, 1980).

Colonial intervention was limited to the setting up of and participation in school committees. These were created in 1938 in order to prepare and monitor curricula standards (Colclough & McCarthy, 1980). This action reflected growing concern that attendance in missionary schools had started to decline rapidly (Schapera, 1980). The committees were designed to bring together representatives of the administration, the missions and the tribes in the hope of establishing better policy. After 1955, the administration also began to increase financial support to primary schooling to the extent that by 1964, its contributions matched those of the tribes'. Additionally, capital funds were provided by the Commonwealth Development and Welfare Fund to boost the investment programme (HMSO, 1965).

Secondary education received still less attention from the administration and likewise depended on missionary and tribal contributions. In several of the larger tribal capitals and townships, a number of schools were built through the efforts of missionary societies and tribal leaders after 1930. By contrast, colonial support was restricted to the supply of a limited number of teachers in the years before independence (Schapera, 1980). This action was prompted by the administration's realisation that with the prospects of impending independence, it was of some urgency to ensure that educated Batswana would be ready to inherit localised administrative posts (HMSO, 1965). At the same time, no effort was made to set up either teacher-training, or vocational establishments to support the education sector after independence. This lack of support for human resource development
during this period accounts in large part for the contemporary problems facing the country in filling both public and private sector posts with well-qualified manpower and in developing a strong institutional capacity to support development in the rural sector.

Policy towards health care provision during the colonial period very much mirrored the education sector. Although colonial state intervention began at an earlier date, support was almost exclusively directed to the urban sector. Before 1930, 'modern' health care depended on the missions while indigenous medicine continued to be widely used in tribal society (Colclough & McCarthy, 1980). The missionaries were responsible for introducing modern medicine to the Tswana and by 1930 had established four hospitals in major village settlements. In 1924 the first nurse arrived in Mochudi, the capital of the Kgatla, and in 1927 the first doctor arrived (Schapera, 1980).

After 1930, support from the administration increased. This was reflected in the construction of three hospitals in two townships and one major village. While almost all effort was concentrated on providing facilities to the urban sector, an attempt was made to extend elementary services to rural communities through the provision of staffed and un-staffed clinics and dispensaries (Colclough & McCarthy, 1980). While expenditure on health almost reached 10% of the recurrent budget by 1955, which was almost double that of education, it remained well below the allocations made to the veterinary department, the police department and the administration at large (Colclough & McCarthy, 1980).

Colonial Policy Towards Water Supply and Sanitation Provision:

In line with colonial policy towards social infrastructure provision generally, water and sanitation provision was restricted to the principal townships and productive sectors. Domestic water consumers were better serviced in the urban sector, while in the rural sector, livestock received a higher level of service than did the human population. On the whole sanitation received far less attention than did water supply.
Water Supply:

Contemporary policy towards rural water supply has been influenced by a number of important features of colonial policy towards this sector.

- water resource management was focussed almost exclusively on the livestock sector representing a key part of the Protectorate's policy of encouraging cattle ranching as the mainstay of the economy.

- investment was based on the exploitation of underground water sources through the use of borehole technology, rather than of surface sources or of shallow wells.

- the state assumed full responsibility for providing water supply facilities in this sector.

The colonial administration became actively involved in water resource management during the 1930's. Prior to this date, intervention in this field was insignificant. Water resources were managed largely by the Tswana chiefs, according to tribal law (HMSO, 1965), who were responsible for building and maintaining wells and dams in their tribal reserves (Schapera, 1980). Manpower was provided by members of the tribe according to customary practices - the age regiments - while money was obtained through the levying of local funds (Schapera, 1970). By 1930, dams had been built in the tribal centres of Molepolole, Kanye, and Serowe. However, these were built primarily for livestock watering although in all certainty, they were used for domestic purposes too. Although a Native Fund had been created in 1919 to support public works programmes in the reserves, the administration was reticent to extend support to the sector. So, for example, in the Kgatla reserve, the administration only provided a small grant to support Chief Isang's borehole drilling programme which involved the sinking of 16 boreholes for human and livestock purposes. Additional funding was obtained from an internal levy on Kgatla tax payers amounting to £6 10s or an ox per taxable household (Schapera, 1980). As a result, seven successful boreholes were installed in and around the Kgatla capital, Mochudi.
After 1929, events changed dramatically. In response partly to Chief Isang's borehole programme, and partly out of concern for the fact that shallow wells were rapidly drying up through over-use and the effects of drought, the Protectorate administration made a commitment to provide water for livestock through the exploitation of underground sources. Increasingly, the colonial state took full responsibility for providing water and in so doing introduced a new technology. Conversely, the influence exerted by the Chief in managing water resources declined substantially. As reliance on borehole technology increased, the use of traditional wells and dams declined in those areas where new supplies were installed. The new borehole technology also offered the opportunity for opening up hitherto inhospitable areas to human settlement and livestock rearing in the western sandveld.

The new commitment to providing water supplies was based on the Pim report prepared in 1933 on behalf of the colonial administration. It stated that the improvement of existing water supplies and the provision of new water supplies was essential as the basis for livestock and arable development, and for human health (Roe, 1980).

The recommendations of this report were to influence policy for the following 35 years. By 1966, the colonial administration had installed 700 boreholes (Copperman, 1978). Yet, these were provided primarily for the livestock sector rather than for human consumption. Already, by 1940, 120 boreholes had been drilled. This rapid implementation reflected the way in which borehole technology could transform the exploitation of water resources. Yet it could only have been achieved at this scale through the active intervention of the colonial state.

In 1945, a major new groundwater investment programme was started with the financial assistance of the Commonwealth Development and Welfare Fund. As a result, by 1955, a further 220 successful boreholes were installed while the private sector also provided a further 395 boreholes. Roe (1980) notes that these were provided almost exclusively for livestock use, reflecting the increased profits that were accruing from this sector. A smaller grant was also allocated to a Surface Water Development Scheme to finance the construction of 65 stock watering dams.
However, it was between 1956 and independence that the Protectorate made its most concerted effort to provide water supplies. This increase in activity coincided with more wideranging provision of basic infrastructure facilities in anticipation of independence. It introduced a new groundwater project in the Eastern hardveld and on the margins of the Western sandveld, funded through the Commonwealth Development and Welfare Fund. By 1960, a further 270 boreholes had been drilled by the administration, representing a substantial increase in the rate of provision so that almost as many boreholes were drilled between 1956-1960 as had been drilled between 1946-1955 (Roe, 1980).

Again, the majority of these boreholes had been drilled for stock watering purposes. However, the programme had gained so much momentum and the cattle population had increased so alarmingly that by 1959 concern began to be expressed about the possibility of overgrazing in Eastern communal areas. Consequently, in the immediate period leading to independence, support for the drilling programme was reduced substantially. At the same time, efforts were made to encourage cattle herders to sink their own private boreholes in the western sandveld were opportunities for opening up the land for grazing had been identified.

The unprecedented exploitation of water resources in the period after 1930 can be attributed to two factors. First, to the introduction of borehole technology which provided the opportunity for exploiting vast reserves of groundwater throughout the Protectorate. As a result, settlement and ranching was no longer restricted to locations which had access to surface and sub-surface water sources. Second, to the substantial financial and political support provided to the programme by the Protectorate administration. The colonial state was instrumental, therefore, in orchestrating this programme of resource exploitation on a scale which had hitherto been impossible. The decision to pursue this policy reflected the major economic objective of the Protectorate to develop the livestock sector as the basis of the economy (Roe, 1980).

By contrast, few boreholes had been sunk at the lands areas where cultivation was undertaken. In Kgatleng district, for example, by 1940, only one of forty boreholes was located at the lands. Inspite of the Pim report which had drawn attention to the need to provide water for human as well as livestock consumption, almost no attempt was made to
provide water specifically for human consumption. While a number of
dams were constructed for general use in the major villages, almost none
were provided at the lands or in smaller village settlements. Rural
residents continued to rely on traditional sources such as open wells
and sand river wells. Domestic supplies were restricted almost entirely
to supplying government buildings and the residences of colonial
officers (HMSO, 1965). More comprehensive provision was also given to
the townships. The new capital, Gaborone, was supplied by a new earth
dam while surface supplies were reticulated to Lobatse, Francistown and
Mahalapye (HMSO, 1965).

Sanitation:

Colonial intervention in sanitation provision was modest and limited
almost exclusively to the urban sector and to government buildings in
the district centres. There was no coherent policy to provide
sanitation facilities to the rural population until well after
independence. Facilities that did exist resulted from private
initiatives, but for the vast majority of the population, the bush
remained the appropriate location for faecal disposal.

Even until the 1960s, sanitation policy in the urban sector was on a
small scale. However, when the British first arrived in the region
during the 1880s, public health engineering and epidemiology were
relatively new fields of action and enquiry in health care in the
metropolitan countries so it was of no surprise to find that there was a
lag between public health intervention in the metropoles and provision
in the colonies (Watson, 1915). Furthermore, given the nature of
colonial policy in the Bechuanaland Protectorate, it was unlikely that
funds would be made available for public health engineering for a
considerable time unless it could directly benefit the administration or
production-related activities. It was, therefore, only in the decade
prior to independence that an effort was made to provide basic
water-borne sewerage to the main townships such as Gaborone (HMSO,
1965). A public health unit was also established but was poorly funded
and operated under the more powerful medical department (HMSO, 1965).
Public health workers operated from regional teams located in Gaborone,
Lobatse, Francistown, Mahalapye, Maun and Serowe. These comprised a
medical officer and two public health assistants. Most of their work
was restricted to these major settlements with only the occasional trip made to some of the outlying rural areas (HMSO, 1965).

Summary:

Social infrastructure provision was a low priority within the colonial administration's development strategy. It was left to missionary societies and to the tribes to provide basic services. The administration only began to intervene in this sector in the decade prior to independence but then concentrated efforts on supporting the production and urban sectors. The provision of economic infrastructure had also been limited. It was only after 1955 that any real effort was made to provide elementary economic infrastructure. Besides the railway, built in the 1890's to link the Rhodesias to the Cape Colony, little else was constructed apart from facilities for the administration and infrastructure for the livestock sector. It was only the 1963-8 development plan which set out a coherent infrastructure building strategy for the first time. This included a major investment package to support the construction of Gaborone, the new capital, funds for providing major utilities and communications in the main townships such as Francistown and funds for the construction of an un-metalled highway along the line of the railway (HMSO, 1965).

Consequently, at independence, the inventory of existing social infrastructure was particularly poor, especially in the rural sector. Given the low level of investment in this sector, Botswana represented the least-developed ex-British colonial possession at independence (Colclough & McCarthy, 1980).
CONTEMPORARY POLICY:

Social infrastructure provision has formed the basis of rural development. A number of explanations have been offered to account for the bias towards the provision of social infrastructure and the comparative neglect of production-related investments.

Government has argued that the provision of infrastructure is necessary to create the conditions for investing in productive activities. Because so little infrastructure had been provided by the colonial administration, it was imperative that government rectify this situation by laying down the foundations of the rural economy as soon as resources were available. This argument formed the basis of the Accelerated Rural Development Programme undertaken in 1973 to boost investment in the rural sector (Chambers, 1977; GOB, 1972, 1973). Government has also argued that the provision of social services is the best way of redistributing income in favour of the rural poor, who have not benefitted from economic growth in the urban sector (GOB, 1985) and that such provision serves to maximise rural welfare (Parson, 1984). Accordingly, government has stressed that the provision of such 'Basic Needs' is a pre-condition to ensuring health and human dignity (GOB, 1985). One can contrast this subsidised approach with government's policy towards social provision in the urban sector where parastatals have been appointed to administer public utilities (with the exception of health and education) and where recipients are obliged to pay service charges.

However, the emphasis on social infrastructure provision has been criticised for being politically-motivated, designed to divert attention away from the fact that the government has done little to improve employment and income opportunities within the rural economy (Noppen, 1982; Parson, 1984). It is argued that increased attention only began to be paid to rural development when it became apparent that the rural electorate and political opponents were starting to criticise government for not extending the benefits of mining revenue to the rural majority of the population. For this majority, social and economic conditions had not changed appreciably since independence. From a political point of view, it was, therefore, expedient for government to invest a larger proportion of resources into the rural economy in order to ensure
electoral support during the 1969 election (Picard, 1979). It can also be argued that but for the assistance provided by the donor community, the scale of service provision to the rural sector would have been far more limited. It can be noted that a major part of the infrastructure programme has been funded by the Norwegian and Swedish aid agencies, both of which have emphasised their commitment to supporting exclusively the rural sector.

The provision of social infrastructure has been directed through a number of sectoral and cross-sectoral development programmes. Investment in this area was greatly boosted by the Accelerated Rural Development Programme in 1973 and has more recently been included within the Village Development Programme (LG17) the Communal Area Development programme (CAD) and the Remote Area Dwellers Programme (RADP) (Egner, 1981; Isaksen, 1980).

The level of service provided in the rural sector is determined by the status of particular settlements. A hierarchy of provision has, therefore, been developed according to which priority action and higher levels of service are provided to large settlements such as the major villages, or to smaller settlements which, however, support large catchment areas (GOB, 1985; KgDC, 1984). By contrast, smaller and remoter villages receive simpler services and tend to be serviced last of all. This hierarchy can, however, be superceded by priority provision under one of the multi-sector programmes such as CAD and RADP. The allocation of resources is also supposed to be influenced by rural residents who can express their opinions in the preparation of the District Development Plan (see ch 7).

Priority has been given to extending primary schooling, health care and water supplies, but the programme also includes sanitation, postal service, radio or telephone communication, road improvements, police force and extension services.

**Primary Education and Health Care:**

Enrollment in primary and secondary education has increased substantially since independence as a result of government investment in the sector. Enrollment in primary schools increased from 71,546 in 1966
to 168,000 in 1982, while secondary school enrollment increased from 1,531 to 18,000. However, secondary schooling has been concentrated in the major villages and townships. The effort to improve access to elementary education (and to the construction of a university) is reflected in the figures for investment. By 1977, education was absorbing 20% of the national recurrent budget while primary schooling in the districts has absorbed up to 50% of Councils' recurrent budgets (Colclough & McCarthy, 1980). The building programme has been supported by the World Bank and by a number of bi-lateral agencies. However, the country still faces a major shortage of classrooms and an even greater shortage of qualified teachers for all levels of instruction.

Until 1977, health care provision remained biased towards urban areas. Between 1968 and 1973, for example, only 10% of the health budget was allocated to the provision of rural health centres and clinics, while the total budget for the sector remained low as a proportion of the total national recurrent and capital budget (Colclough & McCarthy, 1980). More recently, policy objectives have been directed to the provision of a hierarchy of health facilities in the rural sector as part of a Primary Health Care strategy. During this period, the rural sector has been receiving 60% of the capital budget. With assistance from the Norwegian government, access to health care has been greatly improved. Nevertheless, successes in the building programme have been counter-balanced by a continuing problem of staff and equipment shortages to service these facilities.
An Overview of Policy Towards Water Supply and Sanitation Provision:

Water Supply:

The government has accepted a major responsibility for the management of water resources in Botswana through the Ministry of Mineral Resources and Water Affairs. The management of this resource has, until recently, been discreetly divided between the urban and rural sectors and between domestic and production-orientated consumption. Against evidence of growing demand for water in all sectors for water, competition over access to such a scarce and often non-renewable resource has intensified. As a result, government has called for the preparation of an integrated long-term plan of future water needs, which will consider water demands in all sectors and the implications for future policy (GOB, 1985). While this thesis is concerned with domestic water consumption in the rural sector, an overview of urban and rural policy is presented here, to contrast government's approach.

- The Urban Sector -

Government is only indirectly responsible for providing water supplies to the urban sector. While it determines policy, the management of urban supplies has been delegated to a parastatal organisation, the Water Utilities Corporation (WUC). This corporation operates on a commercial basis so that investments made must be self-liquidating. It is responsible for the installation, operation and maintenance of water supplies on behalf of the Town Councils for both domestic consumption (urban residents) and industrial consumption (commercial and mining sectors). All users are charged tariffs in order to support the operation of this sector.

Within the domestic sector, the level of service provision is commensurate to housing status. High and medium cost housing have individual on-site reticulation and levels of consumption are metered. Within the low cost and self-help housing areas, standpipe water is provided on the basis of one standpipe for every twenty plots. Residents contribute to the cost of this service through a general service charge which supports a range of municipal urban services.
Residents do have the opportunity to apply for on-site reticulation, but the service is expensive.

The urban sector, comprising the major townships (Gaborone, Francistown and Lobatse) and the mining sector (Jwaneng, Orapa, Selibe-Pikwe) accounts for the largest concentration of water demand. The domestic sector which comprises 190,000 residents, accounts for 11.6% of total demand, while the mining sector accounts for 12.6% (GOB, 1985). However, because the urban sector requires a more sophisticated and much more widely reticulated system, it has been allocated 61.1% of the total water sector budget under NDP 6 (GOB, 1985). This investment is fully self-liquidating and, therefore, does not represent a government subsidy.

While a number of water sources have been used to meet urban sector demand – notably, dams, boreholes and sand river wells – supplies have often been exhausted especially during drought years. Through legislation and increased tariffs, government hopes to discourage further migration into urban areas by rural residents and to encourage commerce and industry to locate in areas such as Pikwe and Francistown where water resources are more plentiful. During the NDP 5 period, the government was forced to channel funds away from the rural sector in order to support the raising of the Gaborone dam, as demand exceeded possible supply (GOB, 1985).

- The Rural Sector -

This sector is discussed as a background to the Village Water Supply Programme (VWSP). Government has accepted the responsibility for providing water supplies for domestic consumers only through this programme. Non-domestic consumers must provide their own supplies.

Provision is based on the fully subsidised installation of communal standposts in rural settlements. Recipients are neither called to contribute to the installation of supplies nor to pay service charges. Consequently, the 27% share of the total water budget which this sector receives is not recoverable. Provision, therefore, represents a major concessional investment, all the more because this sector only accounts
for 5.1% of total demand, divided between a population of some 300,000 inhabitants (GOB, 1985).

By contrast, the arable and livestock sectors receive little state support and must, therefore, be self-financing. The low level of support is reflected in the budget allocation. While, in fact, the livestock sector represents the single largest, but most widely scattered consumer of water, accounting for 35.6% of demand, it has only been granted 1.4% of the total water sector budget for the NDP 6 period. Owners of livestock must rely on their own resources and the services of private drilling contractors to install boreholes, though the government does provide a subsidised borehole cleaning service.

The arable sector is a small water consumer, relying primarily on rain-fed cultivation techniques. Demand on water resources is low while government assistance is modest. Under the recent ALDEP programme, the Ministry of Agriculture has been directed to subsidise the improvement of water points at the lands through the Small Dams Unit (Classen, 1980). This unit has been allocated a modest budget in order to build and improve dams, haffirs and underground catchment tanks, for both domestic and productive purposes. Commercial farmers in the Tuli block and Barolong areas who rely on irrigated cultivation and depend primarily on abstraction from permanent rivers are also large water consumers, but receive no state support.

The emphasis that has been placed on only subsidising the rural domestic consumer reflects government's national objective of providing services as a means of achieving greater equity and better resource distribution between the urban and rural sectors and between rich and poor. Domestic water supply provision, therefore, forms part of a more wideranging programme of "basic needs" provision to the rural sector, while it is also argued that such provision is a pre-condition to providing other services and for generating economic activity (GOB, 1985).

Sanitation:

Government's policy towards sanitation provision has been undertaken on a far more modest scale. It has, moreover, been viewed primarily as an
engineering concern and has been only indirectly linked to the water sector. Until the late 1970's attention focused almost exclusively on the urban sector, although more recently, a more determined effort has been made to address the issue of sanitation in rural areas too.

- The Urban Sector -

Urban sanitation falls under the responsibility of the technical unit of the MLGL and the individual Town Councils with whom they work. The post of senior public health engineer was only established during the mid-1970's and has been supported through the appointment of UN-sponsored expatriate personnel. The public health engineer has now assumed responsibility for overall management of sanitation policy, previously administered by the ministry's senior engineer. There is no formal working relationship between this ministry and the ministry responsible for water affairs, as one might expect, and as is found in some other countries, although they do contribute to joint committees.

Sanitation is provided at several levels of sophistication in accordance with user-needs and capacity to pay and with settlement characteristics. Water-borne trunk sewers linked to treatment ponds have been installed in the major townships where they service the industrial sector, the public sector and the high and medium cost housing sectors. Many of the systems are now over-burdened while some older settlements still rely on individual septic tanks, some of which have been, or in the future will be, linked into the mains sewer.

For the vast majority of residents who live in low cost and self-help housing, the pit latrine is the only available system. At first, households were obliged to provide facilities for themselves but since the early 1970's government has been undertaking to provide a standard high quality latrine facility to all such residents, with scope allowed for future up-grading. Double pit Ventilated Improved Pit latrines (VIP) are now installed as standard in all new and up-graded residential areas, while earlier versions of aqua-privy and dry pit latrine have been phased out. In the self-help housing sector, government has been responsible for providing the latrine substructure while residents are under legal obligation to construct the superstructure, before they can even begin to build their own living quarters. A loan scheme is
available to all self-help residents in order to purchase building materials, while the cost for installing the substructure and for emptying the pits is covered by the service charge which all residents must pay (DAG, 1983; GOB, 1985).

- The Rural Sector -

Government concern for rural sanitation is a recent phenomenon dating back to 1979 and stemming from the experience of low-cost sanitation provision in the urban sector. Presently, government efforts to support rural sanitation are channeled through the Self-Help Environmental Sanitation Project (SHESP) which is joint-subsidised by the government, the rural participants and an international donor. Before the start of the project, only 25% of rural residents in the major rural settlements had access to some type of latrine, built either by themselves or by a contractor. Apart from such on-site facilities, sanitary systems have been provided in municipal buildings. Primary schools and health posts are provided with communal pit latrines while some local government buildings, hospitals and a few homes have water-borne sewerage. It is not likely that rural settlements will ever be able to enjoy comprehensive water-borne sewerage due to the chronic shortage of water and the high maintenance costs involved.

Sanitation falls under the responsibility of the District Council's Public Health Departments. The inspection and emptying of latrines forms part of their environmental health duties, though installation is undertaken by building contractors or by individual residents. However, responsibility for the current self-help rural sanitation project has been distributed between central government, a district-based project team and extension workers at the community level. Once again, there has been no formal cooperation between those departments responsible for sanitation and those responsible for water supply. As an on-site facility, government believes that sanitation provision should depend as much on efforts by the residents themselves as on government, especially when the pressing urgency to provide facilities from a public health point of view is less apparent than in the urban sector.
SUMMARY:

This review of social infrastructure provision has illustrated how far the policy options available to the independent government have been determined by the effects of earlier colonial policy. The near total neglect of infrastructure provision demanded a reversal of policy at independence. At the same time, the urgency to make up for this lack of provision provided the government with a convenient means of demonstrating its concern for the welfare of the rural population, while it continued to concentrate productive investment in the urban sector. It is against this background that the provision of water and sanitation must be considered.
THE ROLE OF INSTITUTIONS IN POLICY FORMULATION AND IMPLEMENTATION:

This section introduces the local government and community institutions which participate in the machinery of policy formulation and implementation, in rural development (see Fig 1). The discussion illustrates how contemporary local government and community institutions have evolved out of the interaction between the colonial state and indigenous society. The first section traces the history of institutional development while the following section describes these institutions and the functions they perform in contemporary circumstances.

THE HISTORICAL BACKGROUND:

The Pre-Colonial and Colonial Period:

The discussion starts by focussing attention on the nature of power and decision-making responsibility within Tswana tribal society, the broad characteristics of which were introduced in chapter 2. It then traces the history of institutional development during the colonial period, identifying a struggle between tribal and state interests over the right to exercise authority in political, economic and social affairs.

While the Kgotla provided an element of democracy in Tswana society, the behaviour, responsibilities and entitlements of individual members and households were governed by strict social laws based on ethnicity, age and sex, which were determined by the tribal chief and his headmen (Schapera, 1980). They were vested with absolute power which extended socially and spatially over the peoples and territory belonging to the recognised tribe. While the paramount chief enjoyed power over the whole tribe, individual wards and smaller villages were governed by their own headman, accountable to the paramount chief. The chief or headman was the recognised decision-maker responsible for social, economic and political policy for his tribe and tribesmen. He determined and interpreted laws and settled disputes, as well as enjoying complete authority over the use of natural resources and labour power. The chief determined water and land rights, organised the
ploughing season and oversaw the distribution of livestock through the system of 'Mafisa' (Mtetwa, 1982) (see the next section for an explanation). He also determined 'foreign' policy in relation to war and plunder while also presiding over social and, in particular, religious ceremonies. As such, the tribal leader was wholly responsible for the welfare of his tribe. At the same time, his subjects were dependent on him to provide access to cattle and to give food (Parson, 1984) and for providing defense and guidance.

The Early Period 1884 - 1930s:

The establishment of the Protectorate marked the beginning of the transformation of indigenous political culture and the source of contemporary relations between tribal and modern state institutions. In theory, the limited political and economic ambitions that the colonial office had set for the Protectorate suggested that the tribal system of government would remain largely unchanged. To an extent, this proved to be true, yet it was inevitable that underlying tensions between the rationale of the colonial state and that of the tribal system would lead to a compromise in the status of the latter.

The establishment of the Protectorate created a new spatial political unit - the colonial state. This new geographical entity included the parallel institutions of the colonial state and those of tribal society. They were not wholly compatible. The Protectorate administration had sought to restrict its activities to foreign policy and the domestic affairs of the European population present in the region. According to the principle of 'parallel' rule, Tswana chiefs would continue to administer over their own tribes, without interference from the colonial administration (Parson, 1984). Yet interference in tribal life, economically and politically, inevitably followed (Picard, 1985a). As a result, a system of 'indirect' rule developed in which Tswana leaders became incorporated as junior civil servants within the Protectorate administration. Their traditional powers were subordinated to the authorities of the District and Resident Commissioner. Thus the colonial state functioned through a political hierarchy descending from the colonial office in London, through the Protectorate administration, to the Tswana chief. For the tribal leader, this new political context meant that their right to determine external policy was circumscribed
while it appeared that their power over internal affairs remained intact.

Progressively, colonial policy interfered in the internal politics of tribal society in both direct and indirect ways. Since Tswana society was based upon a sensitively balanced interrelationship of social, economic and political life, changes to socio-economic life, imposed by capitalist economic forces and by colonial political forces, necessarily de-stabilised the foundations of indigenous political life. As such, the coherence of the fabric of Tswana political culture was undermined. This was achieved through a number of direct and indirect processes, which challenged the chief as the omnipotent decision-maker.

Policies which Compromised Tribal Authority:

The only direct policy which sought to challenge the status of tribal authority was the decision to turn the chief into a junior civil servant, accountable to the district administration after 1934 (Colclough & McCarthy, 1980). The chief was also given responsibilities to collect tax from his tribesmen and to encourage employment in the South African mines. There were, however, several indirect policies which went further to compromise the traditional responsibilities of the chief. These included the imposition of taxation and the active encouragement of mine labour, but also policy towards the commercialisation of the livestock sectors and policy towards social infrastructure provision. The role of the chief was changed in three important ways.

First, and most importantly, these policies compromised the rationale of tribal authority. The whole issue of legitimacy was raised in the sense that the rationale which justified the power relationship between noble and commoner was weakened. This was evident at several levels. As a junior civil servant with specific responsibilities to undertake and in receipt of a salary, the chief was no longer solely accountable to his tribe but had to be answerable to his employer so that his allegiance had to be shared between the colonial state and his people (Vengroff, 1977). Respect amongst his subjects suffered for this reason but also because it was all too evident that the figure who represented the most esteemed individual in tribal society had become the most humble and
junior employee within the colonial administration. Indeed, the chief could be hired and fired by his employer in much the same manner as any other government officer.

Furthermore, the control enjoyed by the chief over the determination of economic policy, and which formed the basis of his political strength was progressively lost. This had the effect of reducing his control over tribesmen as their dependence and reliance on the nobility waned. On the one hand, increased mine employment provided tribesmen with an independent source of income, while their absence from home reduced the chief's ability to direct their lives and determine their behaviour. On the other hand, the response of chiefs and nobility to the commercialisation of livestock, as documented earlier, compromised the customs of reciprocity and redistribution, especially with regard to livestock, which had formed the basis of the bond between nobility and commoner. Increases in personal wealth resulting from the salary now received, the commission earned from tax collection and revenue from livestock sales also served to distance the elite from their tribesmen. Additionally, some less scrupulous leaders imposed unauthorised levies on their tribes, while insisting that tribute payments be paid in cash (Schapera, 1970).

Second, and somewhat in contradiction with this trend, tribal authority was given the opportunity to strengthen their decision-making responsibilities in a number of ways (Vengroff, 1977). In particular, the absence of any concerted effort by the administration to provide social infrastructure to the tribes, presented the tribal leaders with the chance to play a leading role, together with the missions, in this domain. Furthermore, the tribal leaders were able to increase their standing amongst their tribesmen by opposing colonial policies which they considered to be harmful to their tribe. As such, the apparent dissolution of traditional political authority should not be over-exaggerated. Indeed, in chapter 6, attention is drawn to the continued support traditional political authority still enjoys in contemporary Botswana. So, while in certain instances, elites abused their new political and economic power and while respect for traditional leaders waned in some places, in others traditional leaders maintained strong relations with their tribe (Schapera, 1970).
Certain chiefs, including Isang of the BaKgatla were instrumental in promoting social and economic development within their tribe (see section on social services), while at the same time trying to preserve Tswana culture (Schapera, 1970, 1980). Indeed, many chiefs were innovators responsible for organising economic development programmes (Schapera, 1970). Moreover, tribal authority was concerned to ensure that the cash economy did not unduly exploit their subjects, though they were eager to encourage migration to the South African mines. Schapera (1970) provides examples of a law limiting the sale of cattle in exchange for western goods considered frivolous and of a law restricting the sale of crops during periods of drought when foodstocks were down.

Third, while the political strength of the tribal elite was in cases weakened considerably, their individual economic power was strengthened. New found wealth was derived from the commission earned from tax collection, the receipt of a salary after 1934, and the sale of livestock.

In these respects, colonial state policy redefined the role of the chief in Tswana society. While no concerted effort was made by the administration to destroy the basis of Tswana society and while indeed individual chiefs and headmen benefitted under colonial rule, it was apparent that the decision-making responsibilities of tribal authority over the affairs of its tribe and territory had been both transformed and weakened.

The Later Period 1930s - 1966:

This period witnessed the emergence of a new interest group which came to threaten the relatively stable relationship built up between the British colonial administrator and the Tswana tribal chief. The new interest group was the indigenous educated nationalist elite. After 1920, a rift began to develop between tribal and national elite interests which would have serious repercussions in the distribution of power in the future independent state. On the one hand, were the senior tribal leaders who had accepted subordination to colonial rule but who had energetically defended the right to rule over their own tribes. On the other hand, were the younger members of the Tswana nobility who had been educated and drawn into the colonial administration as junior civil
servants, or teachers, or who had engaged in modern commercial activities, as far as this was permitted (Parson, 1984). While they owed their existence to the colonial state, they were committed to achieving independence. More articulate and aware of the structural barriers imposed by the colonial state to their further emancipation (Parson, 1979), they aspired to build a future independent state which would be modelled on a western style parliamentary system and which would not necessarily accommodate Tswana political institutions. The rise of Tswana nationalism in the post-1945 period of global decolonisation must be attributed to this new middle class (Parson, 1984).

This new force presented a challenge to the legitimacy of colonial rule on a national basis rather than on a tribal basis. The nationalist cause accepted the modern nation-state as a legitimate geo-political unit on which to fight. The issue it defended was the right for Batswana to rule this political unit and to disband the colonial state. The nationalists argued that within an independent nation administered by Batswana, there would be no room for a system of 'indirect' rule. As such, they were committed to weakening the authority of the Tswana chiefdom (Picard, 1985). Accordingly, the tribal elite would have to face a challenge from fellow Batswana, who would seek to go further than the British had ever risked going, in dismantling the system and culture of tribal authority.

By contrast, the traditional Tswana leaders were less committed to obtaining independence, being concerned rather to defend their traditional right to rule over their tribe (Parson, 1984). Therefore, in the post-war period, this group lost the political initiative to the younger and more articulate nationalists. By contrast, the majority of the rural population who in effect had been the victims of colonial rule and who, therefore, had a justifiable motive to counter the colonial state, remained to the periphery of this nationalist struggle lacking the means to articulate a common political stance in a coherent manner (Parson, 1984). However, their affinity to traditional Tswana political authority remained strong.

During the 1950's, the new middle class continued to assert itself as the defender of the nationalist cause (Picard, 1985). The result was
the creation of the African Advisory Council which provided a forum for expressing Tswana opinions on a national basis. As the colonial administration increasingly came to accept the inevitability of independence, especially after the colonial office had refused a South African request to annex the territory, the administration began to prepare for the eventual transfer of power by enlisting the support of the indigenous middle class in an interim government based on a counter-part system, as it was recognised that it was from this new middle class that the future independent government would be comprised (Picard, 1985). A Legislative Council was created which provided a forum for grooming the future leaders (Vengroff, 1977). At the same time, more radical young nationalists formed the Botswana Peoples Party (BPP) to try to hurry along the pace of transition fearing that the new Council was a stalling device designed to delay independence (Vengroff, 1977). However, the party was too volatile and lost coherence due to internal disputes. Its disarray prompted the formation of an alternative and more moderate party, the Botswana Democratic Party. This party was founded by some of the key members of the Legislative Council and, therefore, had the backing of the colonial administration.

When elections were held in 1965, the Botswana Democratic Party (BDP) won with an impressive majority, taking 28 of the 31 contested seats (Colclough & McCarthy, 1980). The near unanimous victory of the BDP can be attributed to a number of key factors which go far to explaining the socio-political complexion of the post-colonial state.

First, and most fundamentally, the BDP reflected the political aspirations of both the young nationalists and the older generation tribal leaders. As such, it was able to obtain the support of a broad spectrum of political and economic interests. While it advocated nationalist policies, it did not at the same time condemn Tswana political culture. There was no direct talk about doing away with the tribal system altogether, as had been promised by the BPP. In this way, the party was able to enlist the support of the traditional elite and in so doing, the support of the vast majority of Batswana whose political behaviour imitated that of their tribal leaders. To them, the BDP appeared to represent a modern party which although based on an alien political system, was firmly entrenched in the traditional political culture with which they were conversant (Parson, 1984). Indeed, a
majority of top party members were related to traditional noble families.

Second, the BDP remained sufficiently radical to satisfy the aspirations of the young middle class radicals, but at the same time, sufficiently pragmatic and conciliatory to win the support of the Asian and European expatriate communities, who wished to safeguard their business and commercial interests (Parson, 1984).

The characteristics of the BDP were crystallised in the personality of the party leader, Seretse Khama (Vengroff, 1977). He was a young nationalist who had been educated in England and who, furthermore, married an English woman (much to the embarrassment of the British and the outrage of the South Africans). However, he was also the legitimate heir to the BaNgwato tribe (Picard, 1985). He, therefore, symbolised the alliance between the old - Tswana political culture - and the new - the educated modern state elite with nationalist and commercial aspirations.

The BPP by contrast was made up almost uniquely of young nationalists who sought more far-reaching radical policies. However, they lacked a broad political base, appealing only to other young elites and a small number of urban workers. It had no roots in traditional political culture - moreover, it sought to dismantle tribal political structures - while it advocated economic policies which threatened the expatriate business community (Picard, 1985). Furthermore, there was a significant divergence of views expressed within the party which failed to be reconciled and which led to its eventual downfall and to the creation of the BDP by its more moderate members.

At independence, the BDP took office. It reflected a coalition of interests which had emerged out of the specific history of colonial penetration and the articulation of modes of production. It supported economic and political modernisation based on a capitalist model of change and on western political institutions, but at the same time respected the tribal system which for the majority of the population remained the legitimate and recognisable system of authority. Indeed, a majority of BDP candidates and party workers had and continue to have
high traditional status, as well as being educated and commercially active (Parson, 1984).

Given the apparent consensus of opinion which seemed to exist between the nationalist and tribal elite, what were the implications going to be for the distribution of power and decision-making in the post-independence period? It is evident that a clear policy has been pursued to weaken the relevance of tribal authority while at the same time providing it with token status at the national and district levels.

The Post-Colonial Period:

Modern state institutions, born out of the colonial administrative structure, and blueprints imported from Britain, have been used to manage the new state. At the central government level, tribal authority plays no effective part at all. Its presence marked by the House of Chiefs, the second chamber of parliament, is largely symbolic although its opinions are not totally ignored. While there has been no legitimate challenge made by tribal authorities to extend their influence at this level, reflecting a certain incongruity between the demands for managing a modern state and the culture of tribal-based political authority, a more serious challenge has been waged at the sub-national level. It is here that a conflict has been focussed between the forces of the modern state and tribal authority.

The degree of authority enjoyed by tribal leaders under the Protectorate was challenged by the new government which sought to extend its own influence directly into the rural periphery and in so doing, to render the tribal system of authority redundant. This was seen by government as a necessary part of nation-building. It was concerned to ensure that it represented the sole legitimate power base in the country, in a way that the colonial administration never was. The dual system of colonial and tribal authority had to be replaced by a single one which extended all the way to the grass roots level. This objective was achieved through the reform of the local government system and through legislation.

District administration was, therefore, reformed comprehensively. Both the Tribal and District Administrations were weakened by the
establishment of the District Council. The new system served to transfer authority and decision-making power from tribal authority to the modern state, and in so doing, to strengthen the bond between the modern state and tribal society by creating a national identity and by integrating the rural periphery into the new nation (Picard, 1979b, 1979c). As a political institution, the District Council was designed to provide representation for the rural population through the election of councillors, who could lobby district opinion through the Council and in turn to central government. The Councils were also given certain responsibilities for decision-making in district affairs. A direct attack had, therefore, been made by the new political leaders on the indigenous tribal system.

This objective could have been achieved through the District Administration but the colonial links with this institution as the bastion of indirect rule made it unsuitable. Moreover, it could not symbolise genuine representation of district interests since it was directly accountable to central government. At the same time, it was not completely disbanded. Rather, the District Administration was re-constituted to serve as a major component of the local government system together with the District Council, though with considerably reduced powers.

It was, without doubt, the tribal administration which had the most to lose and which lost the most. As a result of legislation, the effective powers of tribal authority were transferred to the District Council while in compensation it was granted a glorified symbolic place within the local government system. The new tribal administration is notable for its exclusion from all the major decision-making fora, except in an ex-officio capacity. Consequently, its ability to determine policy over tribal affairs in an official capacity has been destroyed.

It is only at the village level that the rights and responsibilities of tribal authority have been respected. While no serious effort has been made to dislodge the Kgotla, the modern state has endeavored to extend its influence at the grassroots levels through a number of institutions. While it has been unable and unwilling to establish a local party system, it has sought to transfer decision-making responsibilities such as for development programmes to modern institutions such as the Village
Development Committee and Village Extension Team. At the same time, it has accepted that the Kgotla still enjoys wideranging support at the community level and has, therefore, tried to exploit this popularity by appealing to tribal leaders both to support the modern state politically and the modern institutions which it has introduced (Noppen, 1963).
INSTITUTIONS IN THE CONTEMPORARY CONTEXT:

This section profiles the major local government and community institutions involved in rural development by describing their organisation and major responsibilities (see Fig 1). Government policy towards the devolution of decision-making and implementation authority is then reviewed as an introduction to the analysis of District Development Planning in chapter 7.

Modern State Institutions - The Local Authority Level:

The local authority system functions around three modern state institutions: the District Council, the District Administration and the Land Board. (The Land Board is not relevant to this thesis and is, therefore, not discussed). The role of these institutions in development planning is focussed through the District Development Committee. The local authority system is also represented by the Tribal Administration (discussed in the following section on tribal institutions).

The District Council:

Nine District Councils were created in Botswana at independence. Each Council is responsible for an administrative district, based on the ethnic and spatial boundaries of the major sub-tribes. In the larger districts such as those of Central and North West, sub-districts have been created with their independent administration centres. The Councils have both political and administrative responsibilities.

As a political institution, the District Council provides a forum for decision-making over district affairs through locally elected councillors. The political wing of the Council comprises three elements; i) elected councillors, ii) nominated councillors, iii) the paramount chief, as well as the Council Secretary. Nominated councillors are important because they can allow the government to ensure a favourable political bias within the Council. At the same time, Councils can serve as useful platforms for criticism of government policy at the national level (Picard, 1979b). As the forum for local political discussion and decision-making, the District Council has the
Fig. 1: Organisation Chart of Main Institutions.

(After Reilly, 1983)
final vote in proposing and approving district policy such as the District Development Plan (Wheeler, 1979).

The Council is also responsible for the implementation and administration of statutory duties prescribed by government. These are; primary health care, primary education, water supply maintenance, rural roads and community & social development (GOB, 1985; Wheeler, 1979). Councils have also become responsible for wider duties such as non-formal education, physical planning and public health.

The Councils are, in particular, responsible for the preparation and final ratification of the District Development Plan. The preparation of this Plan is shared with the District Administration, under the auspices of the District Development Committee (see ch 7).

The District Administration:

The District Administration can be described as an extension of central government into the districts. Its role is to interpret and implement all government policy within the districts, which lies outside of Council's statutory responsibilities. Responsibilities include agriculture, drought relief, land-use and industrial planning. It also has a judicial responsibility with the District Commissioner acting as local magistrate. The District Administration does not normally formulate policy itself. However, the District Officers responsible for district development and land use planning who work for the District Administration, do play a central part in the preparation of the District Development Plan. Otherwise, its role is very much one of fulfilling certain administrative and judicial routines (Picard, 1979c).

The responsibilities of the District Commissioner (DC), who is the most senior individual in local government, are, however, more extensive, though considerably reduced since independence. First, the District Commissioner oversees the Tribal Administration and has judicial power over it. He has the right to reprimand or dismiss tribal representatives, but would rarely do so. It is suggested that the DC monitors political activity of opposition groups in the district and particularly of traditional adversaries, on behalf of the government (Picard, 1985b). At the same time, the DC recognises that he is obliged
to consult the Tribal Administration in order to address the tribal assembly, the 'Kgotla' on any particular issue. Second, the DC maintains a formal link with the District Councils in an advisory capacity although this relationship has caused ill-feeling (Picard, 1977, 1979c). Third, the DC is secretary of the District Development Committee (DDC) and, therefore, can substantially influence decisions taken by it concerning District Council affairs. The role of the DC remains central to district level politics despite significant reductions in overall duties since independence. Formal power remains only in the areas of legal, judicial and administrative responsibility (Reilly, 1981).

The District Development Committee (DDC):

The DDC was set up in 1971 to support the District Council in the implementation of its statutory responsibilities. Presently, the District Development Committee (DDC) is a technical advisory group (Noppen, 1982), responsible for formulating and coordinating policy, particularly with respect to the drafting and implementation of the District Development Plan. District-based projects involving various Council departments and other ministries are reviewed in this forum on a quarterly basis, while the development plan is drafted by the DDC before being submitted to a full Council meeting for ratification. It is, therefore, primarily responsible for district development planning and for the implementation of government rural development programmes. The DDC comprises the following personnel:

- District Commissioner; Secretary of the DDC and joint manager of the District development Plan (DDP).
- Council Secretary; Joint manager of the DDP and senior officer in the Council.
- District Officer (Development); Technical advisor to the District Commissioner and joint planner and coordinator of the Annual plan and DDP. Member of the District Extension Team.
- Council Planning Officer; Technical planning advisor to the Council Secretary, responsible for coordinating all Council statutory duties and joint coordinator, with the DO(D) of the Annual plan and DDP.
Modern State Institutions at the Community Level:

The modern state is supported and represented by a number of institutions at the community level. A number of important non-governmental institutions also operate at this level. This section pays attention to those modern institutions which have most directly influenced the course of community participation in rural development.

A vast array of modern community groups can be found working in settlements throughout rural Botswana. Obviously, they are not all represented in every settlement. In the smallest communities, there may be no groups at all, while in the largest villages, a full spectrum might be found. Such community groups can be divided into a number of categories, according to their status and responsibilities. These include government-sanctioned committees such as the Village Development Committee, charity-supported associations such as the Red Cross, school groups such as the PTA and 4B club, and a number of church-affiliated groups (Brown et al, 1982). Most of these groups function on a voluntary basis though some receive support from a central coordinating body such as the Botswana Council of Women, or the Red Cross.

This section focuses on the Village Development Committee, an institution created by the modern state for the purpose of promoting small-scale village development activities and which has been directly involved in the water and sanitation programmes. This committee merits more detailed examination because its official status as a forum for community decision-making has served to challenge the traditional responsibilities of tribal authority. Moreover, it is the most widely supported village voluntary group and can be found in the largest number of villages.

The Village Development Committee (VDC):

The VDC functions as a sub-committee of the Kgotla (see definition below). Committee members, of which there are normally ten, must be elected at the Kgotla by the community. Elections are usually held every 2 years. The link to this tribal institution serves to provide it with customary legitimacy (Noppen, 1982). Moreover, the headman is normally appointed as an ex-officio member of the committee. Other
ex-officio committee members include the local councillor and Assistant Community Development Officer (ACDO) (Brown et al., 1982). In turn, the VDC is composed of a number of sub-committees such as the Village Health Committee (VHC). The VDC is the only village institution which is linked to the district planning process or which has access to central government funds. However, it remains a non-statutory, non-political voluntary committee without legally enforceable powers to raise funds or to invoke sanction (Fortmann, 1983).

The first VDCs were established by the Protectorate administration as a measure to overcome the crippling effects of drought in the early 1960's. They were set up to organise community self-help schemes on behalf of the District Administration, on the basis of a "Food For Work" scheme whereby food aid was provided in return for labour undertaken on designated public works. Since independence, supervision of the VDC has been transferred to the Social & Community Welfare Department of the District Council and to the village extension team at the village level.

In 'normal' non-drought years, the VDC is expected to promote more extensive development initiatives in the area of social infrastructure, based on the principle of community participation or 'Self-Help'. The independent government, therefore, set out to encourage a spirit of self-help to contribute to collective nation-building (Noppen, 1982). During the mid-1970's, a special fund was created by government in association with NORAD, the Norwegian aid agency, to stimulate greater self-reliance and development in the remoter communities and to reduce dependence on central government and the District Councils which were handicapped by an inadequate implementation capacity. With the introduction of district development planning in 1977, a new role was assigned to the VDC (see ch 7). It became a forum for decision-making on issues concerning village development and, more significantly, district development (Noppen, 1982).

Therefore, the role of the VDC was transformed from that of a low-key village committee responsible for the implementation of small-scale infrastructure projects, to that of a decision-making body responsible for lobbying resources from the district development budget within a broader planning process. This has had implications both in terms of the technical and managerial requirements of the committee to operate.
effectively and in terms of the balance of political decision-making at the community level between itself and traditional authority. Nevertheless, it continues to be a voluntary organisation which depends on the participation and cooperation of the village community and in particular of the Kgotla for its success.

The Village Extension Team:

The other major government institution responsible for promoting community participation is the Village Extension Team (VET). In contrast to the traditional and modern village institutions, village extension workers are full-time government employees, who represent particular line ministries at the community level. Their status is, therefore, fundamentally different, though they provide an important input to village decision-making on development matters. The majority of extension workers are Junior Certificate or Cambridge school certificate graduates, employed and trained by government to serve in rural areas. They are neither volunteers, nor necessarily native to the communities in which they work. They are employed by the government's recruitment department as local government officers but are primarily accountable to the line ministry which they represent.

The extension worker is responsible for servicing community development groups by providing technical and administrative advice. Moreover, they supervise the implementation of government projects at the community level, as well as vocalising community needs and demands, at the district level. The extension worker, therefore, represents the principal link between the community and state institutions in the design and implementation of community-based projects. In this respect, the behaviour and attitude of the extension worker towards different community groups and, in particular, the support s/he extends to either the traditional or modern institutions can influence the level of cooperation that might be achieved within the community (Noppen, 1982). However, many villages have to share extension workers who must circulate between three or four villages. In remoter areas, some communities are not serviced at all by extension workers while in larger communities, access is considerably better. The most important extension workers are as follows:
Assistant Community Development Officer (ACDO)

The ACDO is responsible for general aspects of community development and well-being. Responsibilities include the provision of technical and administrative support to the VDC in the drafting of project proposals and in project implementation, participation in the plan consultation process, the provision of a formal channel of communication between the community and the District Council and the care of destitutes. An ACDO is normally responsible for several villages within a district but is not usually locally recruited. Smaller villages may have a junior officer such as the Community Development Officer (CDO) who supports the ACDO. ACDO's receive a 2 year training course at the Sebeli agricultural college on community development and participation before being sent to the field.

Family Welfare Educator (FWE)

The FWE is responsible for encouraging community health and Primary Health Care. She services the village health committee (a sub-committee of the VDC) where one has been set up and also provides support to the nursing staff at the clinic or health post. She is accountable to the Ministry of Health and the Public Health Nurse in the District Council. Unlike the ACDO, she is normally employed from the community in which she works and only receives an 11 week training course. She is supposed to spend at least half the day carrying out house to house visits advising the household on health and hygiene matters, while in the afternoons she is expected to administer simple medical treatment at the clinic or health post. More recently, these duties have been over taken by the need to distribute and prepare drought relief food. The FWE, who is the best known and most widely found extension worker, tends to have closer links with the community in which she works, while also having access to more qualified health personnel, at the village health facility.

Agricultural Demonstrator (AD)

The AD is responsible for providing technical advice on ways of improving agriculture and horticulture in the village and at the lands. He normally provides assistance to farmers' committees, particularly in
relation to government's arable development programmes such as ALDEP. The AD is accountable to the Ministry of Agriculture, through the Agricultural Officer who is stationed at the district level.

Together with the local primary school headteacher, who probably carries the highest status at the village level (Noppen, 1982) these extension workers are supposed to operate as the Village Extension Team (VET) (Wheeler, 1979). This organisation is non-statutory but was created to overcome sectoral divisions between ministries and to operate on a community basis (Noppen, 1982). As such, the VET is supposed to provide an input to district development planning by working with community groups in identifying problem areas and priority needs. The VET has the potential to play an important role in plan consultation, by mobilising village community groups, and by providing a communications link with the District Council (Noppen, 1982).

Tribal Institutions:

Tribal authority has only been able to retain its influence at the village level. The post-independence period has witnessed a process whereby the modern state has attempted to reconcile Tswana political culture, expressed through tribal institutions to the context and demands of the modern state. In the contemporary context, tribal authority is represented through the following institutions at the local government and community levels. However, tribal authority does not fit neatly into the modern functional divide between district and community level jurisdiction. The system of tribal administration straddles the two levels as part of a larger hierarchy of tribal authority.

Institutions at the Local Authority Level:

A Tribal Administration was set up to institutionalise traditional authority at the district level. It represents the fourth institution in the local government system. However, the extent of its influence is limited and does not include participation in development planning nor in district political affairs to any significant degree (Odell, 1985). At the same time, it has been provided with its own administration and budget and operates under the leadership of the paramount chief. Its
Statutory responsibilities are limited to the administration of justice in the customary courts, to community law enforcement through the tribal police force, to the settlement of land disputes and organisation of ceremonies. While it is represented on the DDC by an ex-officio member, it has no decision-making authority.

Institutions at the Community Level:

Traditionally, the village headman was the most senior individual within a community representing a particular ward or sub-tribal group of a village. His position was inherited within a class of noble households to which the rest of the community 'commoners' were bound. The village headman holds the most junior position in a hierarchy of chiefs which culminates in the tribal Paramount chief. Traditionally, any decision of a political, economic or social nature, concerning the tribe, sub-tribe or ward would be taken by the chiefdom.

Today, each recognised village is entitled to a tribal representative, in the form of a headman. These representatives are appointed according to either traditional procedures - based on hereditary lineage - or in the case where a new village has been formed, a decision taken by the Tribal Administration. However, in most cases, the headman is, today, a salaried employee of local government and can be, therefore, reprimanded, or even dismissed by the state. The headman has jurisdiction over his village or ward and over the lands areas and grazing areas belonging to his community. In many remoter settlements, the headman remain the only symbol of authority and commands the respect of the whole community. However, the level of respect for the headman tends to be less clear in those communities where the headman has been appointed, rather than elected according to traditional custom. More generally, the status of the headman has suffered as a result of his inclusion within the local government service and the recognition that many of his traditional responsibilities such as land allocation, have been taken over by the modern government (Brown et al, 1982).

The 'Kgotla' is the traditional assembly or council where the presiding headman and village elders meet to discuss community issues and to preside over legal disputes. Such community issues range from discussion over the allocation of land and water rights, participation...
in government projects, the election of committee members, or legal cases over the theft of cattle, crop damage or personal assault (Noppen, 1982). Each village, or ward in a larger village, has its own Kgotala, while in the district capital, the Tribal Administration headed by the Paramount chief, has its own supreme Kgotala. Speeches, notifications and public statements are also delivered at this meeting place. Normally, any government official, or any outsider who wishes to work in the village must be introduced at the Kgotala. It is customary for all members of the village to attend a kgotla debate and people are encouraged to make their own point of view heard. However, strict social rules govern behaviour at these meetings. As a general rule, it is the senior male population who are the decision-makers and who speak first, while the young, the women and Basarwa (Bushmen) groups normally assume a subordinate position and may only speak when invited to (Brown et al, 1982; Vengroff, 1977). Therefore, the Kgotala is the 'government' of the community. It is a forum with distinct social rules which are embedded in the history and culture of Tswana society. In this sense, it is truly indigenous (Odell, 1985).

The DDC and District Council Autonomy:

Since independence, the status of local government and community institutions in relation to the formulation and implementation of rural policy has been changing, varying between degrees of centralisation and decentralisation. These changes have been determined by the state according to the changing political importance that it has attached to rural development.

In the immediate years after independence, the state paid little attention to institutional development at the sub-national level as rural development generally was treated as a low priority sector (Picard, 1979). Greater attention began to be paid after 1972 when government introduced its rural development strategy. Recognising the low implementation capacity of the District Council in relation to its statutory duties, and aware of the political significance of orchestrating its rural strategy successfully, government sought to both strengthen the local government system and increase its influence over it, by establishing the DDC (Picard, 1979c). The District Councils had
been facing acute manpower problems. Colonial expatriate staff were leaving and were being replaced by poorly trained Batswana of low calibre who had been transferred from the old Tribal Administration (any high calibre Batswana were immediately transferred to central government). Furthermore, there were serious financial constraints. It was recognised that Councils could not generate their own revenue as had been envisaged, due, in particular, to the absence of a local taxable base.

Of perhaps equal importance was the political pressure that was being applied by the Ministry of Finance and Development Planning (MFDP) on the Ministry of Local Government & Lands (MLGL), to recentralise rural policy formulation and implementation. While MFDP was the most powerful ministry, it was poorly represented at the local government level and, therefore, sought to increase its influence over district affairs through centralisation (Picard, 1977, 1979c). The creation of the DDC, therefore, served to satisfy these managerial and political considerations. The decision to do so was based on the findings of two separate reports, commissioned in the 1970 by the two ministries (Picard, 1979). Both reports recommended the establishment of the DDC to coordinate rural development policy. In the long term, MFDP hoped that the DDC would lead to the creation of a prefectural system within which the power of central government would increase, while the Councils would be dissolved (Picard, 1979). The MLGL, by contrast, firmly supported decentralisation on the basis of the existing District Council structure and felt that the creation of the DDC should serve to bolster up the fragile Councils until they could be more suitably staffed by trained Batswana. In this respect, the MLGL proposed a 'Scaffolding' system, to be provided by the District Administration, but which would be dismantled progressively as the Councils gained strength (Picard, 1979c).

In practice, the creation of the DDC became a source of conflict between the District Administration and the District Council which feared that its autonomy had been seriously threatened by the DDC. In particular, attention was drawn to the fact that the District Commissioner had been placed in charge and that the DDC had been provided with higher calibre manpower who remained accountable to central government (Picard, 1977; Picard, 1979c). At the same time, the MLGL sought to improve the
institutional capacity of the District Councils. The problem of manpower was addressed by establishing a centralised Unified Local Government Service, which was designed to remove the tribal basis of recruitment, offer higher salaries and base promotion on merit. The problem of finance was addressed by providing districts with direct grants from central government. Yet, in its bid to strengthen District Councils and to secure their future as autonomous institutions, MLGL effectively centralised control over district resources through these measures. These actions have had far-reaching political implications for the status of the District Council as an autonomous decision-maker, which are further discussed in chapter 7.
THE SOCIO-ECONOMIC TRANSFORMATION OF THE RURAL HOUSEHOLD:

This section examines the rural household within contemporary rural Botswana. First, the impact of colonial and post-colonial economic policy on the coherence of the Tswana mode of production is examined. The analysis focusses on the effects of this transformation on the socio-economic and welfare status of the rural household. Major socio-economic and spatial characteristics in contemporary circumstances are then described as a basis for examining the capacity and willingness of the household to support community participation.

THE IMPACT OF COLONIAL AND POST COLONIAL POLICY ON SOCIO-ECONOMIC TRANSFORMATION:

Socio-economic relations in pre-colonial Tswana society:

The economic security of the Tswana commoner was guaranteed by the interrelationship of social, economic and political life according to the principles of the "African" mode of production (Coquery-Vidrovitch, 1977). While there was unequal ownership of resources such as livestock, reciprocity and redistribution ensured that access to such resources was available to the whole community. Access to resources was of greater importance than was their ownership. Indeed, the tribal elite had a responsibility to guarantee the welfare of their subjects, in terms of food security. The commoner, therefore, depended on the tribal elite to provide access to resources, especially land, water and livestock as well as leadership and defense.

Tribal subjects enjoyed a natural right of access to land and environmental resources. Natural water sources could not be privately owned for example (Schapera, 1970). Access to grazing land was unrestricted, though the construction of a cattle post required the approval of the chief (Schapera, 1970). Land was allocated to individual households by the chief according to their subsistence needs. In this respect, entitlement to land was an inalienable right. In addition, certain areas of land were set aside for communal farming whereby commoners provided free labour in exchange for seed and other inputs supplied by the chief (Cliffe & Moorsom, 1979). However, a
degree of economic differentiation was created by patterns of cattle
ownership. While ownership varied little between commoners, the
nobility owned large herds. Indeed, cattle ownership was the
traditional symbol of the Tswana aristocracy. Social status was
measured in terms of herd size. Herds were often built up as a result
of the appropriation of strays and plundering during war (Cliffe &
Moorsom, 1979; Schapera, 1980). As a result, it was not uncommon for
chiefs to own many thousand head of cattle (Cliffe & Moorsom, 1979).

The system of 'Mafisa', in particular, permitted commoners who owned few
cattle to hire cattle belonging to the nobility. In return for looking
after them, the cattle could be used for ploughing, while a form of
payment in kind may also have been made to the commoner (Colclough &
McCarthy, 1980). According to Mtetwa (1982), this practice provided the
opportunity of extending the benefits of livestock to a maximum number
of people within these social relations of production. Vassal groups
could, for example, learn skills for livestock rearing and could slowly
build up their own herds. It is argued that the practice of 'Mafisa'
served as the basis of political relations between the nobility and
commoners. The Tswana state structure reflected this particular
relationship based on access to cattle (Parsons, 1977). The system of
'Majako' was another example of reciprocity. It offered payment in kind
(usually food), in return for labour provided during the ploughing and
harvest season, especially for women (Vierich & Sheppard, 1980). It was
also common for large cattle owners to lend livestock during the
ploughing season. The elite would also distribute food from their
private reserves during periods of hardship.

Spatial characteristics:

Tswana society was characterised by a distinct spatial pattern of
settlement which reflected the social, economic and political features
of that society. It was divided between three interrelated tiers of
settlement: the permanent village, the lands and the cattle post.

- The Permanent Village -

The village was the focal point of the tribe. It served as a place of
permanent residence with each household entitled to its own plot. It
was located close to a source of reliable water supply (Hitchcock & Smith, 1982) but also had to be strategically located for purposes of defense (Hesselberg, 1985). Normally, the winter months were spent in the village. It also served as the political and social centre for the tribe with the chief and nobility having their residences at the centre of the village. The traditional tribal assembly - the Kgotla - was also located at the village centre. During the six months of residence in the village, major political and social issues could be discussed. Above all else, the village served as a place of residence and a symbol of tribal cohesion, rather than a place of work.

Once the Tswana had settled permanently in the region which became Bechuanaland and after the establishment of Protectorate rule, the individual Tswana sub-tribes achieved a significant level of social and spatial permanency. This was reinforced by administrative legislation which created tribal reserve boundaries and later District boundaries according to the territorial claims of the different tribes (Schapera, 1980). At the same time, within each tribe, significant change occurred. Increasingly, the major tribes which had migrated as a single unit in order to maintain strategic and political coherence, became disbursed as groups broke away to establish their own settlements away from the tribal capital. These moves were prompted both by political and economic motives (Palmer & Parsons, 1977; Parson, 1984; Schapera, 1980) though in most cases, allegiance to the paramount chief was maintained.

- The Lands -

The lands were the farming areas located outside of the village. Each tribe had access to communal land partitioned between village households. Plots were allocated commensurate to household subsistence needs. The lands could be located as few as 5km or as much as 50km away from the permanent village, according to the availability of good soils and population density. It was common for households to build a secondary dwelling at their lands since they would spend up to five months of the year residing there, cultivating the land and harvesting the crops. During this period, the permanent village was abandoned, except for the old and very young who would stay, and all political and social events would be suspended, or transferred to the lands.
The Cattle Post served as a base for tending livestock. Either individual households or groups of households would share a Cattle Post. Normally its location was governed by the following factors; access to water, access to good grazing land (normally land that was not suitable for cultivation) and distance from the lands (in order to prevent cattle from damaging crops). Cattle posts, therefore, could be over 100 km away from the village. Usually, cattle were kept in the vicinity of the cattle post all the year round. They were tended by male members of the household or by Basarwa serfs and trekked between water points during the dry season. During the ploughing season, they would be brought to the lands.

It was common, therefore, for a household to have three residences. As such, the tribe must be understood to extend beyond the permanent village to encompass a socio-spatial system which included distinct lands and cattle post areas.

Socio-Economic Transformation During the Colonial Period:

Colonial economic policies had a profound impact on the coherence of the Tswana economic system throwing it into a state of disequilibrium. While the administration did not interfere directly with land and water resources within the communal areas, it destabilised the balanced relationship between arable production, livestock rearing and labour, which together formed the basis of the indigenous subsistence system. The introduction of market forces to the Tswana economy exposed it to the competition of the South African market and encouraged tribesmen to seek their fortune in employment outside of the boundaries of their tribal society. Increasingly, the Tswana were drawn into the cash economy and into the sphere of influence of the South African economy.

The major impact of colonial economic policy on the household was to create a need to earn cash and to destroy the reciprocal relationship between cattle and crop production as the basis of subsistence. In order to explain how this was achieved, the relationship between livestock rearing and crop cultivation must be examined.
It is calculated that a household must cultivate at least 6 hectares of land in order to meet basic subsistence needs. To plough such an area, a team of at least 12 oxen is required. In order to reproduce such a team, a cattle herd of around 40 is recommended. An arable producer can then expect to be self-sufficient in terms of inputs and, therefore, not have to depend on external support. As a result, fewer costs are incurred, while ploughing can take place without delay when the rains arrive. In the event of drought, cattle can be sold off without endangering the productive capacity of this farming method (Vierich & Sheppard, 1980).

Colonial economic policy exerted a number of pressures on the subsistence economy which prompted different responses from elite and commoner groups. The two major pressures were the imposition of taxation and the commercialisation of livestock production. Taxes could be paid in three possible ways - through sale of livestock, through the sale or exchange of agricultural products, or through mine labour. The first choice appealed mostly to the elite while the third choice was the only realistic option for the vast majority of commoners, sale of agricultural products did not represent a viable alternative.

Arable subsistence production depended on access to livestock and labour. In good years, it was possible that a small surplus could be earned but even under ideal conditions, agricultural production could never provide sufficient income to pay taxes. In practice, the sector faced less than ideal conditions. Increasingly, the major resources which supported it - livestock and labour - and which had been guaranteed by customs of reciprocity were removed.

Policy towards the livestock sector attracted elite groups to sell cattle on a commercial basis. While such elites were able make personal financial gains, the practice had a profound effect on the viability of the arable sector and in turn on the livelihood of the commoner.

Increasingly, cattle owners adopted a profit-maximising rationale and in so doing distanced themselves from their traditional obligations to the subsistence economy (Cliffe & Moorsom, 1979). The practice of "Mafisa" became less popular as cattle owners preferred to slaughter cattle for cash rather than to lend their herds for draught work in the fields.
Moreover, incomes from cattle sales tended to be used for the further accumulation of livestock and was not generally fed back into the arable sector (Roe, 1980). Income for cattle sales could also be used for investing in commercial activities or for buying education in South Africa (Cliffe & Moorsom, 1979), or could simply be invested in conspicuous consumption.

The effect of this trend was to compromise the fundamental traditions of redistribution and reciprocity. Ownership of assets such as livestock became more critical to subsistence than simply having access to them. Yet, without access to livestock guaranteed, ploughing could not be undertaken at the appropriate time and this meant that yields could not be maximised. Even those households which owned a few head of cattle were often obliged to sell them in order to pay taxes or to cover other financial obligations. Arable production was further compromised by a lack of support from the administration for arable research, while the Customs Union exposed indigenous producers to the more efficiently and cheaper produced South African goods. Under these circumstances, crop cultivation became an increasingly marginalised activity which offered low returns on labour. At the same time, the rural household had to confront an increasing number of financial obligations. For example, traditional marriage payments increasingly involved money exchanges, while the practice of mutual labour exchange was replaced by hiring relationships (Mtetwa, 1982). Increasingly cattle could only be obtained in return for cash as the local economy was monetised. This process increased pressure on households to seek wage employment.

Faced with the compulsion to pay taxes and increasingly dependent on cash for the exchange of goods and services and with restricted access to cattle, and few alternative employment opportunities, the rural commoner was attracted to mine employment. This was, moreover, actively encouraged by the Protectorate administration, the mining companies and some tribal elites too. Migration to the mines further reduced the viability of crop cultivation. First, the loss of male labour had a serious effect as labour was unavailable at key periods of the agricultural season and unavailable to tend to the task of ploughing — traditionally a male responsibility. Second, wages earned in the mines were rarely re-invested in the arable sector, but were rather used to purchase cattle or consumer goods. As a result, during the colonial
period, crop yields hardly improved save for a short period during the 1950's (Roe, 1980). Even the sale of cattle could not cover all financial needs. Livestock sales were restricted by both environmental constraints - drought and a devastating rinderpest epidemic - and political constraints - after 1924, restrictions were placed on livestock sales to South Africa, for African traders (Parson, 1984).

Progressively, the fabric of Tswana socio-economic relations were torn apart as rural commoners were drawn into the capitalist economy in South Africa where they became part of a larger southern African labour-reserve (Palmer & Parsons, 1977), while the rural elite grew richer on the proceeds of the livestock sector.

Dependence on mine employment was intensified during drought periods when the subsistence economy was no longer able to protect the rural producer (Cliffe & Moorsom, 1979; Roe, 1980). Under such conditions, two responses could be made. For the majority of households who might have managed to accumulate a few head of cattle, the drought would probably destroy the herd, or force the sale of cattle in order to purchase cereals and other foodstuffs. They too, would then be forced to seek employment in the mines. Certainly, any modest accumulation of cattle would have been lost during the severe droughts of the 1930's and 1960's (Roe, 1980). By contrast, those better-off sections of the community - particularly the tribal nobility - who already owned large herds, were in a position to survive the drought and in fact to increase the size of their herds. This was because cattle could be sold in order to invest in boreholes and hence to exploit new grazing land. Without access to water, these areas could not be used for grazing and more cattle would have perished. However, borehole technology was expensive. In this respect, these owners of large herds were subsidised by the administration's borehole exploitation programme. In this way, drought served to exacerbate the increasingly skewed distribution of cattle ownership and forced further migration to the South African mines.

While mine labourers were able to earn incomes which were far higher than the returns that could be obtained from crop cultivation alone, security of tenure was not assured while wage rates remained inadequate to cover the critical subsistence needs of their families (Parsons, 1985). Alternative employment in the rural sector was still necessary
inspite of the constraints that the arable sector now faced. In this way, the arable subsistence sector subsidised the mining sector by being responsible for the social reproduction of mine labour. A state of mutual dependence was created between the rural subsistence sector and the mining sector, which provided the mining industry with the opportunity to earn super-profits (Parson, 1984). The indigenous subsistence economy was transformed into a sub-subsistence sector (Hesselberg, 1985). The transformed indigenous mode of production was, therefore, characterised by the following features:

- a commercialised livestock sector, the benefits of which were enjoyed by a small minority of cattle owners.
- an arable sector relegated into a sub-subsistence activity which faced major economic constraints.
- households dependent on mine employment in South Africa and on arable production in order to achieve basic subsistence and to cover tax obligations.

Socio-Economic Transformation during the Post-Colonial Period:

The development strategy pursued by the government since independence has reinforced rural poverty and inequality and structural dependence on the mining sector while supporting the commercial interests of the cattle-owning elite. The impact of national and rural development policy on the rural household is reflected in socio-economic data which portrays an increasingly skewed distribution of livestock ownership, continued marginalised crop production, continuing household dependence on formal sector employment outside of the rural economy and a general trend of rural out-migration.

Inequalities in livestock ownership in pre-colonial Tswana society, increased progressively during the period of colonial rule and continued to rise after independence. This trend has been intensified by prolonged periods of drought during the 1960's.

Since the beginning of colonial rule, ownership of cattle has become progressively oligopolistic. A growing proportion of rural households no longer own cattle while a small number of wealthy households have
accumulated large herds. During the 1940's, no more than 10% of rural households had no cattle, yet by 1979, this proportion had increased to 45% (Colclough & McCarthy, 1980). Within the group of survey villages investigated for this thesis, almost half of the households interviewed claimed that they did not own cattle (see Tables 1 & 2). Of those households which own cattle, herd size varies substantially. Only 45% actually own over 5 head of cattle (Cliffe & Moorsom, 1979). It has been calculated that 15% of rural households own 75% of the national herd, while 40% divide between themselves, the remaining 25% (Colclough & McCarthy, 1980). According to Hesselberg (1985), 6% of the national herd can be traced to just 19 farms where the average herd size is 10,000 head. It has been calculated, therefore, that 40% of all cattle are owned by 5.1% of all cattle owners (all having at least 100 head), while a further 1.7% own 13% of the national herd (all having at least 400 head) (Cliffe & Moorsom, 1979).

Arable agriculture has become progressively marginalised. Crop cultivation has become a low return but nevertheless essential activity for the 45% of households which do not own cattle and the 40% who own no more than five head of cattle. Cattle production can only be profitable with herds of over 50 head. Yet only 15% of rural households have this number. While 85% of rural households engage in some form of cultivation, agriculture only contributes to 4% of GDP (Brown, 1983). The relative contribution to GDP has continued to decline since independence against the growth in importance of the mining and livestock sectors. While in 1968/9, arable production accounted for 45.3% of GDP, by 1978/9, its contribution was only 15.5% (MFDP/CSO, 1980). For the majority of households, crop cultivation has become a secondary activity but a critical source of income subsidised by incomes from other sources (Hesselberg, 1985).

Alternative employment has, therefore, been sought in the urban formal sector, primarily in mining and public service (Hesselberg, 1985). Mine employment has grown in importance since the mid-nineteenth century, but more especially after the introduction of taxation. Up until the 1970's, South Africa provided the only major source of wage employment although the Protectorate administration did employ some 20,000 Batswana. Yet since independence, increased opportunities have been created in Botswana, especially in the public sector but also in its own
### Table 1: Access to Wage Incomes & Ownership of Cattle - Kweneng District

<table>
<thead>
<tr>
<th></th>
<th>Thamaga</th>
<th>Tsekgodi</th>
<th>Gaborone</th>
<th>Molepolo</th>
<th>Aggregate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wage + Cattle</td>
<td>26 (30)</td>
<td>17 (30)</td>
<td>7 (20)</td>
<td>112 (37)</td>
<td>(31)</td>
</tr>
<tr>
<td>No Wage + No Cattle</td>
<td>22 (25)</td>
<td>5 (11)</td>
<td>8 (23)</td>
<td>73 (24)</td>
<td>(21)</td>
</tr>
<tr>
<td>Others</td>
<td>42 (45)</td>
<td>23 (51)</td>
<td>20 (57)</td>
<td>120 (41)</td>
<td>(40)</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td>80 (100)</td>
<td>45 (100)</td>
<td>35 (100)</td>
<td>305 (100)</td>
<td>(100)</td>
</tr>
</tbody>
</table>

### Table 2: Households Without Access to Cattle, Livestock or Lands - Kweneng District

<table>
<thead>
<tr>
<th></th>
<th>Thamaga</th>
<th>Tsekgodi</th>
<th>Gaborone</th>
<th>Molepolo</th>
<th>Aggregate</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Cattle</td>
<td>10 (30)</td>
<td>15 (35)</td>
<td>21 (55)</td>
<td>142 (47)</td>
<td>(44)</td>
</tr>
<tr>
<td>No Livestock</td>
<td>15 (25)</td>
<td>10 (20)</td>
<td>13 (29)</td>
<td>99 (31)</td>
<td>(25)</td>
</tr>
<tr>
<td>No Cattle No Lands</td>
<td>5 (6)</td>
<td>3 (7)</td>
<td>2 (5)</td>
<td>35 (12)</td>
<td>(9)</td>
</tr>
<tr>
<td><strong>Sample Size:</strong></td>
<td>35</td>
<td>45</td>
<td>35</td>
<td>305</td>
<td>(100)</td>
</tr>
</tbody>
</table>

[N.B. In Kweneng Survey, percentages in brackets]
mining sector (Hesselberg, 1985). At the same time, South Africa has reduced its intake of migrant mine workers although some additional opportunities have been created in the commercial farming sector. Nevertheless, the creation of jobs domestically has only served to offset the loss of recruitment in South Africa. Despite these circumstances and also evidence that real wages from mine employment have been declining (Palmer & Parsons, 1977), employment in South Africa has remained a more attractive proposition than crop cultivation at home.

During the Protectorate, mine recruitment to South Africa increased from 4,000 in 1930, to 18,000 by 1940 (Parson, 1984). By 1960, 50,000 Batswana were employed in the sector out of a total population of little more than 400,000 (MoDD, 1965). By 1970, this number had increased to 70,000. Formal sector employment in the region reached a peak in 1976, of over 90,000, with the growth of opportunities in Botswana. Still half were employed in South African mines. In 1976, 23% of the rural population was engaged in mine work (Brown, 1983). By 1981, South African recruitment had been cut to only 20,000 workers (Picard, 1985). These figures can be compared to opportunities available for alternative formal sector employment in Botswana. In 1964, prior to independence, the formal sector provided only 20,000 jobs (or 8% of labour force demand). With rapid growth in economic activity, this figure rapidly increased so that by 1977, it accounted for 62,000 jobs (or nearly 19% of labour force demand), mostly in the public sector (Colclough & McCarthy, 1980; Hesselberg, 1985) and over 100,000 in 1983 (GOB, 1985). In fact, government has been responsible for providing over 50% of formal sector jobs. This growth occurred, however, at a time when South African recruitment was declining so that the growth in the domestic labour market served only to offset reductions in recruitment to the South African mines. As such, total formal sector employment opportunities in the region for Batswana reached a peak in 1976, when it was able to provide jobs to 25% of the labour force (GOB, 1980). The remainder have had to look to the informal sector to supplement their household incomes.
CONTEMPORARY SOCIO-ECONOMIC AND SPATIAL CHARACTERISTICS:

This section examines the ways in which the rural household achieves subsistence and discusses levels of socio-economic differentiation between households and between rural villages. Attention focusses on access to employment opportunities in both the rural and urban formal and informal sectors and considers the relative importance of different sources of employment on household income. The impact of colonial and post-colonial economic policy has obliged the rural household, formerly part of tribal society, to adjust to an economic system based on the modern state and the wider regional political economy of Southern Africa. These policies have transformed the rural household in the following manner:

- increased socio-economic differentiation at the household level within and between rural settlements.
- reduced household capacity to achieve subsistence from the arable sector, while stimulating few alternative employment opportunities. This has created dependence on formal sector wage employment, especially in the mines, outside of the rural economy.
- transformed village settlements into transitory meeting places for various household income earners, while the rural village has experienced the effects of rural out-migration. The traditional status of village, lands and cattle post has, therefore, been transformed as well.

As such, the effect of state policy and of the responses made by rural communities has been to create a transitory socio-economic formation. Salient features of this formation, of direct relevance to an evaluation of community participation are reviewed.
A Transitory Socio-Economic Formation:

The "Multi-Active" Peasant Household:

The majority of rural households must seek employment outside the rural economy in order to satisfy basic subsistence needs. Households have, therefore, come to depend on a number of different income sources derived from both the rural and urban economies. Most households have at least one family member who is working outside the rural economy. As a result, the household has become a transformed and destabilised unit of production and consumption. With the able-bodied mostly working away, it is only the old, the very young and the infirm who reside in the village homestead on a permanent basis. It is, therefore, appropriate to consider the household as the meeting point of several income sources (Kerven, 1981).

The rural household has become structurally dependent on the cash economy for its livelihood and this dependence extends geographically across tribal and national boundaries. While the rural household provides a market for cash goods and commodities, it also serves as a source of cheap labour to the mining and commercial arable sectors in Botswana and South Africa. However, incomes earned in wage employment only go some of the way to achieving household subsistence. Alternative source of income must be sought to supplement remittances from wage employment while crop cultivation is inadequate (Colclough & McCarthy, 1980; Hesselberg, 1985; Parson, 1984). The majority of rural households depend on more than one source of income. However, the form and number of income sources that a household has access to varies spatially between settlements and between socio-economic groups within rural society.

At least 33% of rural households depend on three sources of income; the sale of cattle, crop cultivation and wage employment. Moreover, 66% of all households receive support from at least one wage earner (Kerven, 1981). By contrast, no more than 25% of rural households depend wholly on arable production for subsistence needs (MFDP/CSO, 1982). Some of the poorest households depend on handouts, gathering and informal work such as beer brewing, in order to survive.
It is estimated that in the multi-active household, the arable and mining sectors combined, contribute up to a third of household income each (Cliffe & Moorsom, 1979; Colclough & McCarthy, 1980). Each source is, therefore, in itself inadequate to provide full subsistence and this fact thereby reinforces the dependence of the one source on the other. The employment of the able-bodied in the mines, for example, restricts access to labour for farm work (Hesselberg, 1985) and this can lead to reduced yields. However, in the long-term, income earned from mining employment can be used to purchase cattle for draught power (Colclough & McCarthy, 1980). However, the wage rates in the mining sector are set at such a level as to provide the subsistence needs of the wage earner, but not of his family. Moreover, there is evidence to suggest that only a third of wages earned are remitted to the household (Colclough & McCarthy, 1980). The difference must be made up from crop cultivation and other formal and informal incomes that might be obtained. As such, structural dependence of this kind has created a "low level equilibrium trap" (Brown, 1983). By contrast, a minority of very wealthy cattle owners who have invested their wealth in the private commercial sector are no longer engaged in crop cultivation at all (Colclough & McCarthy, 1980), although they may well continue to reside in the rural sector.

The features of the multi-active household can be best portrayed by examining table 3 which illustrates the socio-economic status of rural households according to sources and levels of income.

Rural Inequality and Poverty:

In 1974, an attempt was made to assess the impact of socio-economic differentiation on levels of relative and absolute poverty and on the ability of different socio-economic groups to satisfy basic subsistence needs (MFDP/CSO, 1976). A poverty datum line was established, based on the calculation of likely monthly expenditure for a five member household, to cover subsistence needs. This was set at P555. It is noted, however, that 45% of households have incomes which fall below this level. A median annual rural income of P630 was calculated (MFDP/CSO, 1976). More recently, this measure of poverty was revised upwards to take account of inflation and new consumer tastes. However, in 1981, it was calculated that still 33% of rural households had incomes below this level (Hesselberg, 1985).
Table 3: The Rural Incomes Distribution Survey: Levels and Sources of Household Income.

(Source: MFDP/CSO, 1976)
Income is also very unevenly distributed. A Gini coefficient of 0.52 was calculated in 1975, suggesting a high level of rural household inequality (Colclough & McCarthy, 1980; Hesselberg, 1985). While the richest 20% of households account for 58% of rural income, the poorest 40% account for no more than 12% of rural income (Colclough and McCarthy, 1980). Within the rural economy, the poorest 5% of households earn less than P182 per annum, while the richest 5% earn in excess of P3,163 (GOB, 1980). It may be noted by comparison that the lowest wage rate within government services is over P700 (GOB, 1980).

Poorest members of the community depend usually on only a single source of income which is outside of the formal sector. This might involve beer brewing, gathering or casual agricultural labouring (Hesselberg, 1985; NMS, 1982). By contrast, the more well-off households depend on a combination of incomes which comprise wage employment, crop cultivation and the tending of some cattle (Hesselberg, 1985). The wealthiest depend almost exclusively on the sales of livestock.

Female-Headed Households:

The process of rural transformation has produced a new and distinct socio-economic phenomenon - the Female-Headed household (FHH). These are households headed by an adult female either on a temporary or permanent basis. Such households are found where the senior able-bodied male member is absent working in the urban sector, or where the female is un-married, widowed or divorced (Kossoudji & Mueller, 1983).

These households have emerged as a common feature of the rural village, primarily as a result of the labour migration system, and to the progressive marginalisation of the rural economy. The FHH represents a disadvantaged group within the rural community representing amongst the poorest households to be found with incomes at least 25% lower than those of households headed by male members (Hesselberg, 1985; Kossoudji & Mueller, 1983). The authors own survey data supports this evidence of the growing importance of the Female-Headed household in the rural sector (see Tables 4 & 5).

Female-Headed households face a number of constraints in trying to obtain a subsistence income and must rely on the informal sector in
### Table 4: Sex and Marital Status of Household Heads - Kgatleng District

<table>
<thead>
<tr>
<th></th>
<th>Olifants</th>
<th>Artesia</th>
<th>Mabalane</th>
<th>Aggregate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>24 62%</td>
<td>16 26%</td>
<td>25 29%</td>
<td>32 32%</td>
</tr>
<tr>
<td>Female - married</td>
<td>14 25%</td>
<td>14 23%</td>
<td>32 35%</td>
<td>29%</td>
</tr>
<tr>
<td>Female - single</td>
<td>8 16%</td>
<td>15 21%</td>
<td>15 16%</td>
<td>21%</td>
</tr>
<tr>
<td>Female - divorced</td>
<td>1 2%</td>
<td>- -</td>
<td>- -</td>
<td>1%</td>
</tr>
<tr>
<td>Female - separated</td>
<td>- -</td>
<td>- -</td>
<td>- -</td>
<td>-</td>
</tr>
<tr>
<td>Female - widowed</td>
<td>6 11%</td>
<td>6 13%</td>
<td>13 20%</td>
<td>15%</td>
</tr>
<tr>
<td>Don't know</td>
<td>3 5%</td>
<td>4 7%</td>
<td>- -</td>
<td>3%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>57 101%</td>
<td>61 100%</td>
<td>91 100%</td>
<td>101%</td>
</tr>
</tbody>
</table>

### Table 5: Sex and Marital Status of Household Heads - Kweneng District

<table>
<thead>
<tr>
<th>Sex Marital Status</th>
<th>Thamaga</th>
<th>Moshokgodi</th>
<th>Gaborone</th>
<th>Molepolo</th>
<th>Aggregate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>32 (52)</td>
<td>24 (48)</td>
<td>10 (38)</td>
<td>11 (38)</td>
<td>(56)</td>
</tr>
<tr>
<td>Female</td>
<td>40 (45)</td>
<td>16 (32)</td>
<td>11 (42)</td>
<td>13 (59)</td>
<td>(40)</td>
</tr>
<tr>
<td>Married</td>
<td>40 (45)</td>
<td>16 (32)</td>
<td>11 (42)</td>
<td>13 (59)</td>
<td>(40)</td>
</tr>
<tr>
<td>Female</td>
<td>10 (11)</td>
<td>7 (14)</td>
<td>7 (22)</td>
<td>4 (13)</td>
<td>(16)</td>
</tr>
<tr>
<td>Widowed</td>
<td>6 (7)</td>
<td>2 (4)</td>
<td>2 (5)</td>
<td>17 (56)</td>
<td>(6)</td>
</tr>
<tr>
<td>Single</td>
<td>- (-)</td>
<td>1 (2)</td>
<td>2 (5)</td>
<td>9 (2)</td>
<td>(2)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>88 (97)</td>
<td>45(122)</td>
<td>35(122)</td>
<td>305(100)</td>
<td>(100)</td>
</tr>
</tbody>
</table>
order to earn cash. Opportunities within the rural sector, especially for the unmarried, the divorced or the widowed are bleak. The arable sector is unattractive. For the FHH, the capacity to subsist from cultivation is constrained by Tswana custom and economic circumstances which restrict their access to livestock and labour power. The able-bodied male household members traditionally responsible for ploughing and tending livestock are absent, either at the mines, or in the domestic formal sector. Labour may, therefore, be absent at critical periods during the crop season and ploughing may indeed have to be abandoned. Alternatively, labour and cattle can be sought from other households within the community. However, with the breakdown of customs of reciprocity, cash is increasingly required to pay for such services.

Crop yields are, therefore, likely to be poorer than average and provide no opportunities for selling surplus. Cattle could be used to obtain loans and cash through sales in exchange for goods and services. Yet, Tswana custom restricts women's access to cattle by denying them the right to own and tend livestock, although this custom is no longer observed with such diligence.

Access to cash is indispensable yet opportunities to earn a cash income, either in the rural or urban sector are few. While some women receive remittances from relatives employed in the mining sector, these payments tend to be irregular and insufficient to cover household needs (Colclough & McCarthy, 1980). Often, remittances from male migrants are not sent back to the household, but are rather sent to the migrant's own family or spent by the migrant himself (Brown, 1983). For those households which are not supported by a male member at all, the problem is all the more serious. Alternative employment must be sought in the urban sector where there is stiff competition for too few jobs. At best, domestic work provides a regular if small income. Increasingly, women must resort to the informal sector (Hesselberg, 1985) and often are forced to abandon arable production altogether. Yet to do so reinforces their dependence on wage employment as the sole means of satisfying subsistence needs.

At the same time, Female-Headed households are faced with a number of social responsibilities linked to Tswana culture, which compound the need to have money but at the same time constrain them from being able
to earn an income. They are often responsible for maintaining a three generation household without the support of a male member. They are, moreover, responsible for paying school fees, and purchasing school uniforms for school children, caring for elderly parents who may be destitute, and for illegitimate children belonging to un-married relatives. The increasing incidence of illegitimacy has been linked directly to instability in rural communities and in particular to the breakdown of traditional customs relating to marriage, resulting from the migrant labour system (Brown, 1983). Such households are also faced with a series of household and social expenses which prevent the opportunity to save or invest in any other area. More than any other socio-economic group, the Female-Headed household has been caught in a poverty trap and is most vulnerable to changing social and economic circumstances.

Spatial Transformation:

Socio-economic transformation have been accompanied by significant changes in patterns of settlement. While the Tswana hierarchy of settlement can still be detected today, its functional importance within the post-colonial state has changed considerably. This change reflects the emergence of new forms of settlement and land use such as the modern township, the mining township and the commercial farm. The importance of the link between village, lands and cattle post has declined as a direct result of colonial and post-colonial state policies which have, in particular, encouraged internal migration to the urban sector and international migration to the mining sector. Changes in the spatial pattern of Tswana society, therefore, reflect the broader socio-economic processes of societal transformation.

The Rural Village:

The rural village has retained its function as the social and political centre of a particular tribe, sub-tribe, or ward. Households belonging to one of these tribal sub-categories normally have a permanent residence in their respective village. The village represents home to individual households while symbolising the centre of Tswana culture where tribal authority can exercise its influence over its people.
On the whole, there is little in-migration to these villages with the exception of government officers such as teachers and extension workers and households which have abandoned the lands altogether. As a result, villages maintain a tribal identity. However, many such villages have experienced out-migration by the able-bodied on both a temporary and permanent basis. Migration reflects the shortage of economic opportunities within the village and the rural economy at large. Within the average village, the only evidence of formal sector activity is the general store, the bottle store and the bar (MFDP/CSO, 1984). Apart from occasional employment opportunities within the informal sector, formal sector employment must be sought outside the rural economy. The able-bodied have, therefore, migrated to the urban sectors in South Africa and Botswana townships in search of work. The marginalisation of arable cultivation has also hastened the pace of out-migration from the village as the incentive to stay within the rural economy has declined. This has resulted in the breakdown of seasonal patterns of migration between the village, the lands and the cattle post. Out-migration also reflects the absence of secondary school opportunities in most villages. Indeed primary school leavers are forced to leave their village to attend secondary school either in their district capital, or in the townships, or occasionally in the few village-based community secondary schools.

The only benefits that are provided by the village are an assortment of social services - primary schools, health centres, clean water supplies and extension workers. The irony is that these services are provided to villages which have become increasingly abandoned as a result of the absence of economic opportunities. This is most apparent during the wet season when resident households which still cultivate migrate to the lands for up to six months. At such times, villages appear abandoned. For most of the year, the village is represented by the elderly, the young, the infirm and the poorest Female-Headed households. As such the village has been reduced to a meeting place and residential base for the multi-active peasant household.

The only villages to have experienced a degree of economic growth and which have attained a new social and political importance are the "major" villages. The status of these former tribal capitals has been reinforced by the location of local authority headquarters in these
villages. They have also received a more generous allocation of resources for infrastructure projects and most can boast a secondary school, a post office, a tarred road and telephone connections (Chambers, 1977). There is also wider economic diversity, with a greater number of stores, services, engineering, construction and manufacturing concerns, and usually a mine recruitment centre too (KDC, 1984; KgDC, 1984). The public sector also represents a new source of formal sector employment in the unskilled and semi-skilled categories. By contrast, skilled jobs are usually filled by government officers recruited from other districts. Nevertheless, formal sector employment opportunities are limited. While the small formal sector which does exist goes some way to absorb local labour demands, there remains a strong incentive to seek more rewarding employment in the urban sector, all the more that the competition for the few jobs that are available locally, is so intensive. The major village population, therefore, comprises the indigenous population, migrants from smaller settlements and public sector employees.

The Lands:

The role of the lands has also changed as a result of the breakdown of customary land use practices. Today, there is evidence of both an increase in permanent settlement at the lands and also an increase in the abandonment of lands areas altogether. It has been argued that a process of permanent settlement at the lands and of village abandonment has been taking place in Eastern Botswana since independence (Hitchcock & Smith, 1982). Others have argued that no such trend can be identified nationally but that important regional distinctions can be found (Hesselberg, 1985). There is also evidence that migration from the lands to the village has also been increasing (Hesselberg, 1985). A number of explanations have been provided to interpret these contradictory trends. It is argued that migration from the lands has been prompted by two major processes. First, the marginalisation of arable production and the breakdown of Tswana custom has forced certain socio-economic groups such as the Female-Headed household to opt out of arable production altogether and to seek alternative employment in the village informal sector or in the urban sector (Fortmann & Roe, 1982; Hesselberg, 1985). Second, state policy towards rural infrastructure provision and the stabilisation of rural settlements has enticed
households to establish a permanent dwelling in the village. Indeed, many lands areas have grown into recognised villages as a result of this process. It has been, in particular, the provision of domestic water supply, health care and primary education which has stimulated this trend of settlement stabilisation (Fortmann & Roe, 1982).

This trend is intensified during periods of drought as crop yields decline and ensuring access to a reliable source of water becomes a priority concern. At the same time, some households have been moving to the lands to settle permanently, while other households have been permanent lands dwellers for a long time. Explanations are also offered as to why this should be so. First, households owning only a few head of cattle cannot afford to maintain a cattle post and, therefore, keep livestock at the lands. As a result, continual supervision is required to ensure that crops are not trampled. There is, therefore, an incentive to settle permanently at the lands and to combine residential, arable and livestock activities in a single location (Fortmann & Roe, 1982; Hesselberg, 1982). Similarly, labour-short households such as Female-Headed households cannot afford to maintain a cattle post and likewise are motivated to combine activities in a single location (Hesselberg, 1982). Second, in areas where population pressure has exhausted available land for cultivation, lands areas have been sought farther afield. Households have been prepared to abandon their home village in order to settle permanently at these new locations, all the more now that the power of tribal authorities over individual households and land allocation has been reduced (Hesselberg, 1982). As a result, the structure of land allocation which would reflect social status has progressively broken down as households have sought less concentrated plots to the periphery of the village (Silitshena, 1982).

Third, more recently, government has been encouraging households to settle at the lands on a permanent basis, by providing economic and social incentives, in order to stimulate food production on a national scale. Generally, the wealthier and more progressive farmers have been the first to settle at the lands, in order to exploit government incentives (Fortmann & Roe, 1982; Silitshena, 1982). Consequently, care must be taken in assessing the socio-economic status of households permanently settled at the lands and of those which reside in the village. It is argued that the village contains both the poorest and
wealthiest members of the community while the lands contain often the middle income groups (Fortmann and Roe, 1982; Hesselberg, 1985). Spatial remoteness does not necessarily correlate with low economic status, though incomes in major villages are on average higher than those in smaller ones (MFDP/CSO, 1976).
Cattle Posts:

As the distribution of livestock ownership has become increasingly skewed, the cattle post has become a far less common component of the Tswana settlement hierarchy. As indicated above, those households which only own a few head of cattle have combined their cattle posts and lands, while others have arranged to jointly manage a cattle post. This arrangement has become attractive as a means of affording a borehole to water livestock. Within communal areas, many cattle posts are located around syndicated boreholes. Within the commercial areas, livestock is tended exclusively around private boreholes particularly in the Western Sandveld areas. Increasingly, those owning cattle employ herders, often Bushmen, instead of children who are sent to school and the able-bodied who are employed in the urban sector.

Summary:

Rural society is characterised by the multi-active household which depends on several sources of income, obtained in both the formal and informal sectors, to subsist. This system has developed as a means of overcoming rural economic stagnation characterised by widespread absolute poverty. Yet while a majority of rural households live at a standard which cannot satisfy basic needs, a small minority have enjoyed considerable wealth. The contrast in incomes between the poorest such as the Female-Headed household and the richest such as the commercial cattle rancher is reflected in a high Gini coefficient.

For the vast majority of the rural population, opportunities for ensuring subsistence and food security have been reduced. This has been particularly serious in the face of near endemic drought conditions. It has been recently recorded that up to 60% of the rural population has had to depend on government drought relief support (AED, 1985). Moreover, the rural household must face additional consumer expenses for comparative luxuries and for public service expenses such as school fees and transport. Therefore, inspite of the significant national economic growth recorded since independence, the majority of the rural population has not benefitted and has grown increasingly dependent on state assistance.
Household welfare has been improved through the provision of "basic needs" such as health, education and water supply, but reduced in terms of income and food security. The provision of social services, as a component of "basic needs" has been non-discriminatory - the vast majority of the rural population have indeed benefitted. By contrast, the support for production-related investments has been highly selective, benefitting only a minority.

Features of rural settlement are also in a process of transformation reflecting broader socio-economic change. The tribal hierarchy of village, lands and cattle post has been subordinated to a larger settlement hierarchy based on the modern state. The village is of most relevance to this thesis. This is because in both the rural water supply and sanitation programmes, the village has been used for targeting resource allocation.
Chapter 4: THE UNITED NATIONS' INTERNATIONAL DRINKING WATER SUPPLY AND SANITATION DECADE.

This chapter discusses the United Nations' International Drinking Water Supply and Sanitation Decade (UNIDWSSD). It examines the background to the establishment of the Decade identifying the theories and practical experiences which stimulated its promotion. Against this background, the major principles and objectives of the Decade are discussed and the major policy prescriptions are identified. The success of the Decade at its mid-point is considered while major constraints to policy implementation are discussed.

THE DECADE:

The concept of an international water and sanitation decade was proposed at the World Water Conference, convened by the United Nations in 1977. Possible ways of reducing the level of infant mortality, the risk of disease epidemics and social drudgery associated with the use of polluted and inconvenient sources of water as well as the indiscriminate disposal of human wastes, were discussed (Bourne, 1984). This conference was inspired by an earlier United Nations Conference on Human Settlement (HABITAT), held in 1976, which drew attention to the interrelationship between health, wealth and welfare (Bourne, 1984).

At the World Water Conference, an agreement was reached to work towards a concerted world-wide effort to manage water resources and as a priority for action, the provision of water for domestic consumption accompanied by sanitation provision was highlighted. Arising from this conference, a decision was taken to establish the United Nations International Drinking Water Supply and Sanitation Decade (UNIDWSSD) for the period 1981-1990. In the spirit of 'Basic Needs', and Primary Health Care, it was launched with the aim of achieving; "water and sanitation for all by 1990" (Bourne, 1984).

The major objective of the Decade is to mobilise awareness of the importance of water and sanitation provision in contributing to the achievement of both improved health and economic productivity, and to
dispel the idea that provision of these services should be viewed as a uniquely technocratic or engineering challenge (Bourne, 1984). In this way, the Decade can be understood as symbolising the new approach to development in the 1970's, which recognised that the provision of social welfare facilities, or of "basic needs", is as important a component of development, as is economic growth. It has also sought to provide technical and manpower support and, in particular, to provide recommendations for effective project delivery. Member countries have been urged to provide strong support for the goal of the Decade by giving high status to water and sanitation provision in their individual development programmes (The Courier, 1986). To date, 90 countries have committed themselves to the Decade by providing their own 10 year Action Plans and by establishing National Action Committees (Bourne, 1984). International aid agencies - multilaterals such as UNDP, UNICEF and WHO, bilaterals such as SIDA, USAID, and CIDA - as well as numerous non-governmental organisations such as Oxfam and WaterAid, have become both directly and indirectly involved in the Decade, to assist member countries.

BACKGROUND TO THE WATER AND SANITATION DECADE:

During the 1970's, increased attention began to be focussed on the need to provide basic levels of domestic water supply and sanitation facilities for the urban and rural populations of Third World countries. The attention given to water and sanitation provision represented one manifestation of broader changes which had been taking place during that decade in attitudes towards development policy and theory. This change of attitude arose out of a growing concern over the failure of development strategies to address the major socio-economic problems associated with extreme levels of poverty and inequality. Evidence of practical failures in the field was linked to a growing rejection of the Western model of development as being necessarily appropriate for Third World Countries, and to the emergence of alternative strategies. It is against this background that the promotion of domestic water supply and sanitation provision in the 1980's within the United Nations' International Drinking Water Supply and Sanitation Decade can be examined. A review of the major ideas and events which have influenced policy and theory during this period are considered below.
From 1945 to at least the mid-1970's, development policy, as advocated predominantly by experts from the western world, and broadly supported by Third World government leaders, was influenced almost exclusively by modernisation theory as propounded by neo-classical economists. It was also true that a number of Third world government leaders looked to the communist world for prescriptions based on Marxist or Soviet economic theory.

Neo-classical economists argued that the development process represented an economic challenge, and it was, therefore, contended that economic theories of growth should form the basis of development policy which in turn would stimulate other aspects of socio-economic change (Mabogunje, 1980). In this sense, the benefits of economic growth were believed to trickle down through the fabric of society by creating a number of spin-off effects. The primary objective was to achieve a high and sustainable level of growth based on increasing output and productivity (Mabogunje, 1980). This model of development, influenced by the works of Rostow (1960) and Lewis (1955) and even by the Soviet model of industrial-led development, assumed that development represented a unique but ubiquitous process which moved in a unilinear fashion through a number of key stages of transformation. A particular emphasis was placed on the need to transform the base of the economy from an agricultural one to an industrial one, by means of transferring labour from the traditional agricultural sector to the modern industrial sector. This model of development was founded on Western Europe's own experience of massive industrial expansion during the nineteenth and twentieth centuries. However, it was widely assumed, especially by economists such as Rostow (1960), that in spite of the fact that this experience had occurred in a specific social and environmental climate, the model was applicable under any circumstance. Development was understood as a one-way process of economic change from a state of poverty and backwardness to one of prosperity and sophistication. By implication, it was argued that the developing world could achieve the material standards of the West by pursuing development strategies founded on the principle of economic growth (Harrison, 1979; Mabogunje, 1980). Furthermore, the notion of modernisation implicitly accepted the adoption of a western lifestyle and culture.
Since the 1950's, development policy in the Third World has been largely inspired by this theory of growth and modernisation. Emphasis was placed on directing investment into large scale agricultural modernisation, industrialisation and urban growth. Attention was focussed on stimulating the development of growth centres, or growth poles to serve as catalysts for more widespread economic activity (Appalraju et al, 1976). This process depended on the importation of sophisticated western technology which was highly capital-intensive, and of technical advisors to install and operate this hardware. National development programmes were biased towards the exploitation of natural resources for exportation in order to pay for these inputs to fuel rapid economic growth (Conyers, 1982). Rural development was given a subordinate position in national development and investments that were made into that sector were designed to serve the needs of the urban sector (Lipton, 1977). Pricing policies, for example, were designed to encourage the production of cheap food for the urban population (Berman, 1984). By contrast, attempts to strengthen the rural economy and to stimulate greater economic cohesion between regions were rare. Investments into social infrastructure and welfare provisions were biased in favour of the urban sector and were again modelled on the latest western technologies (Conyers, 1982). Health care policy was, for example, based upon curative techniques, with the construction of sophisticated hospital facilities in the urban areas, the training of doctors according to the medical needs of the West and the importation of expensive pharmaceuticals (Harrison, 1979). Similarly, in relation to environmental health and water and sanitation provision, the methods used were based on the experience of the temperate western countries. There was, therefore, an emphasis on providing sophisticated water reticulation and water-borne sewerage systems for the urban sector to the general exclusion of the rural sector (Bradley, 1978). The Western model of economic growth, therefore, formed part of a wider invasion of western political, technological, engineering and socio-cultural principles.

However, during this period, increasing evidence suggested that the prescriptions for development advocated by the modernisation school were not achieving their intended objectives. A number of factors pointed to the fact that growth-led development based on western technology and values was inappropriate in the political, economic and social climates
of Third World countries. In particular, a number of serious socio-economic imbalances arising from this concerted effort to model development on western experience were emerging. These included;

- low levels of growth accompanied by increasing inequality and absolute poverty.
- polarised development in the urban sector accompanied by rural stagnation.
- high levels of population growth, rural out-migration and urban growth.
- sectoral imbalances between agriculture, extractive and manufacturing industrial sectors.
- increased dependence on external assistance and rising indebtedness.
- high failure rates in policy implementation and poor records of operation and maintenance.
- political and social instability.

The pattern of development which had been experienced by the West was not being repeated in most of the developing world. Increasingly, the assumed transferability of the Western model of development was brought into question. Criticisms were levelled at several aspects of the modernisation model from both a practical and theoretical point of view. Two major criticisms are pertinent to this thesis.

Development was unbalanced and was in particular biased towards the urban and industrial sectors at the expense of rural areas. Therefore, the benefits of development were being enjoyed by only a small sector of society, while living conditions for the majority of the population which was rural based were deteriorating (Lipton, 1977). Growth poles were in fact intensifying inequality and marginalising the rural economy, rather than stimulating economic activity according to the principles of spin-offs and spread effects (Appalraju et al, 1976; Mountjoy, 1971; Smith, 1977).

Development policy was based on eurocentric assumptions which did not consider the appropriateness of policy prescriptions from a sociological and indeed environmental perspective, in specific Third World settings. Planners tended to overlook or indeed neglect consideration of what has become to be termed, "human factors" in policy design (Conyers, 1982).
Countless development initiatives which have often depended on external aid agency intervention have fallen short of achieving policy objectives. This has pointed to the contextual inappropriateness of projects, an emphasis on technical top-down planning, and a pre-occupation with macro-economic and engineering challenges than with sociological or political issues (Briggs, 1978; Hilton, 1967). There has been, therefore, a tendency to ignore non-economic variables in the belief that these should not affect the implementation of policies based upon sound and 'rational' economic theory. However, the history of the Green Revolution has shown clearly that the design of technology represents only one aspect of development. It cannot ensure that the technology is socially or culturally acceptable, nor can it ensure that improvements in productivity can lead to better distribution of resources within society (King, 1973).

Similarly, there was a growing awareness of the inappropriateness of western-style health care in the Third World context. It was recognised that major health problems were related to environmental diseases stimulated by poor living conditions and general poverty. Major victims were children who succumbed to illness which could quite easily and cheaply be prevented. However, existing health care systems were geared to curative treatment and were located in the modern urban sectors where they were only accessible to the wealthy (Bennett, 1979). It was clear that this form of health care was neither addressing the most pressing health problems, nor the target groups most at risk, while it remained very expensive (Harrison, 1979, 1980).

As a result, during the 1960's and 1970's, criticisms of the modernisation school increased in number. While several alternative schools of thought emerged which were inspired by different intellectual traditions and practical experiences, some criticisms were commonly accepted. Probably the most commonly shared idea was that the modernisation model of development had to be rejected as the sole legitimate model of change. More importantly, it was recognised that development could no longer be understood solely in terms of economic growth (Mabogunje, 1980). Questions of distribution were now considered to be as important as growth in itself. Increasingly, experts were asking the question, development for what and for whom? (Seers, 1969). Development was recognised to be a subjective concept which concerned
qualitative issues as well as quantitative ones (Buchanan, 1977; Smith, 1977). Consequently, development could not be understood simply in terms of economic criteria but had to include due consideration of political and social concerns. The belief in a single model of development based on Western economic principles had to be rejected. Greater attention had to be paid to social planning and to conceiving of development in a broader sense. Growth in itself was but one aspect of development. Of equal importance were issues concerning social and economic inequalities, the distribution of resources and the promotion of justice (Conyers, 1982). This recognition provided the opportunity to extend development studies to a far wider range of disciplines. Emphasis was placed on undertaking multi-disciplinary studies in recognition of this fact (Lipton, 1970).

The major challenges to the modernisation paradigm have been derived from two perspectives. On the one hand, the radical Marxist and political economy school emerged which sought to provide an alternative theoretical explanation of the development process and, on the other hand, the liberal and eclectic "Basic Needs" school which sought to provide alternative practical prescriptions for development. It is argued that while the latter has provided the framework within which water and sanitation for health has been advocated, the former provided the intellectual stimulus to part company with the modernisation model and to seek alternative strategies of development and to explain the causes of underdevelopment (Gutkind & Wallerstein, 1976).

The radical alternative focusses principally on structural constraints to development operating at the global level and on the relationship between political and economic power. It is argued that development in the Third world is constrained primarily by economic forces imposed by the capitalist world economy (Wallerstein, 1976, 1979). In this sense, underdevelopment in the Third World is created by capitalist forces, exerted by the developed countries and supported by discreet political interests (Frank, 1969). States are interpreted as being structurally linked in a relationship of 'core' and 'periphery' (Wallerstein, 1976). The periphery is forced into a condition of political, economic and cultural dependency. This structural relationship can only be understood historically by taking account of the impact of colonial and capitalist expansion on the peripheral areas (Gutkind & Wallerstein,
1976). The major contribution of this approach to the study of development is that it recognises the interrelationship of political and economic forces operating at an international scale. It is, therefore, holistic, global and historical (Buchanan, 1977; Wallerstein, 1979). This can be contrasted to the modernisation approach which neglects these linkages and, therefore, overlooks the structural constraints to development. Moreover, it fails to recognise the influence of power as a determinant variable in directing development (Todaro, 1982). As such, it cannot consider the question of development for what and for whom (Brookfield, 1973; Slater, 1974). The impact of this radical perspective on development theory has been to promote the debate to a new level of sophistication. In this respect, it has inspired other challenges to the modernisation paradigm, such as the "Basic Needs" school, while exposing the basic limitations of the modernisation approach. It has, moreover, exposed the need to consider questions of distribution, social justice and inequality (Conyers, 1982).

"Basic Needs" can be understood as a liberal response to the practical and ideological inadequacies of the modernisation approach. It is primarily concerned to provide prescriptions for development rather than to develop an explanatory theory. While it represents a somewhat broad based alternative development philosophy which has been criticised for its eclecticism (Ghai, 1978), it is recognised to represent part of the general intellectual rejection of the modernisation paradigm (Green, 1978). The concern for water and sanitation provision and Primary Health Care more generally has developed within this school of thought.

The "Basic Needs" philosophy argues that development is a subjective and multifarious concept and, therefore, rejects the primacy of growth and of economics as the basis of development policy. It rejects the neo-classical model of modernisation with its measurement of development in terms of gross national product. By contrast, its focus of attention is the community and the provision of socio-economic needs that the community has identified (Green, 1978). In this respect, it argues that development policy should aim to reduce levels of absolute and relative poverty, by reaching the poor first, while contributing to the overall improvement in the quality of life for the majority of the population (Singer, 1977). It, therefore, goes beyond concern for economic growth to champion the causes of human rights, self-reliant development and
social welfare (Conyers, 1982; Ghai, 1978; Green, 1978). However, while it supports the concept of development from below, and in its most radical form encourages community participation as a means of empowering the poor, it also calls for a high level of government intervention in the provision of social infrastructure and welfare facilities (Dore, 1978). It, therefore, explicitly calls for the satisfaction of the following basic needs: shelter, education, employment, health and security (Bhalla, 1979; Evans, 1979; Jecquier, 1976; Robinson, 1979).

Within the health sector, the "Basic Needs" approach argues for the need to move away from centralised curative forms of treatment, symbolised by the sophisticated modern hospital, to decentralised preventative forms of treatment, based upon community-based health care facilities and extension and upon public health investments in water supply and sanitation improvements (Harrison, 1979, 1980). Combined with immunisation, family planning and nutrition programmes, these approaches form what is known as Primary Health Care (UNICEF, 1985). The major goal of this approach is to reach down to the community level and to provide access to basic preventative health care to as wide a population as cheaply and in as acceptable a form as possible (WHO, 1978). The approach recognises that western forms of health care are inappropriate in the social and environmental context of developing countries where the majority of the population is poor and lives in scattered rural settlements or over-crowded urban squatter settlements, where they are at risk to water and excreta-related disease.

The general support for increased community participation in the formulation and implementation of policy as a means to achieving indigenous and self-reliant development and the satisfaction of "Basic Needs", has been associated with a growing concern to link development with the provision of appropriate technology. Against evidence of the high failure rate of development projects, due largely to the inappropriate application of technology, which has been unsuitable from both a socio-cultural and environmental point of view (Lipton, 1970; Macphearson & Jackson, 1975), it was increasingly argued that appropriate technology should be developed, to suit and take advantage of local skills, materials and finance, to be compatible with local culture and practices, and to be designed to satisfy local needs and aspirations (Dunn, 1978).
Proponents of the Appropriate Technology school of thought argue that technology choice is a major component of any development strategy. It is recognised that alternative technology options are available for achieving any particular policy objective and that the choice of technology made is determined according to the developmental goals that are being sought (Stewart, 1977). So, for example, the choice between opting for a capital-intensive or labour-intensive technology depends on the objectives of the policy to which it is being applied - whether the goal is to maximise economic growth, or to maximise employment creation. As such, technology, as an input to development cannot be understood as an objective science. Rather, technology choice is subjective and cannot be based purely on an assumed objective technocratic rationale. Alternative options exist which reflect broader political interpretations of development. Therefore, the assumption that development requires the exploitation of the most sophisticated technology available, by definition, has to be rejected (Evans, 1979). It is recognised by contrast that different technology options exist according to specific circumstances and the form of development that is sought. Therefore, the Western model can be seen to no longer represent the only and inevitable model of change which must be emulated. In this respect, the Appropriate Technology philosophy can be seen to mirror the arguments put forward by the Basic Needs school in terms of their attack on the eurocentric model of development and its obsession with growth. Both schools of thought reject the explicit assumptions held within the modernisation school that the Western model of economic- and high technology-led growth is inevitable in the context of Third World countries.

The Appropriate Technology philosophy has been inspired by a school of thought which argues that fundamental changes in the way that development is understood by both the developed and developing world are necessary in order to avert social and ecological disequilibrium. Schumacher's "Small is Beautiful" (1973) symbolises this alternative perception. It argues that not only is the Western model inappropriate for the developing world, but that its obsession with growth and materialism will bring about the demise of western civilisation too. This argument was shared by other academics and politicians who argued that present levels of growth and resource depletion were unsustainable in the developed world, let alone in the developing world (Meadows et
al, 1972). It was proposed that alternative or intermediate technology options, reflecting non-growth orientated development models should be encouraged particularly for the developing world (Dunn, 1978). From another perspective, a number of development economists argued that western technology was inappropriate to the Third World context, in terms of the factor endowments characteristic of developing economies (Jequier, 1976; Robinson, 1979; Singer, 1977).

The attack which was fostered on the modernisation paradigm by these schools of thought stimulated and was indeed informed by increasing research interest in identifying appropriate forms of indigenous development. Attention focussed on trying to understand how indigenous rural societies in different parts of the Third World functioned and to identify indigenous perceptions of the meaning of development and of their aspirations for change. A major concern, implicit in this research, was to dispel myths of rural backwardness which had been perpetuated by the eurocentric modernisation paradigm. A growing call for multidisciplinary studies was made to include macro-scale economic and micro-scale anthropological studies (Lipton, 1970). These were necessary in order to dispel myths of peasant irrationality, for example (Hill, 1968; Hutton & Cohen, 1975; Ilbery, 1978), and to recognise the interrelationship of economic, social and political factors (Epstein, 1975). It was only in this way that development planning could become aware of needs and conditions at the community level and so be able to tailor development policies to local circumstances.

These changing opinions concerning the meaning of development and the presentation of alternative models of change were informed by experience from the field and in turn served to bring about change in policy rhetoric. In particular, during the second development decade of the 1970's, most of the major multilateral and bilateral public and private institutions involved in some way in the promotion of development, acknowledged the relevance and insight of these new ideas and joined in the criticism of the modernisation paradigm, seeking to absorb the new concepts into their own policy statements (Harrison, 1979, 1980). Moreover, a number of new research institutes serving as lobby groups, such as the Intermediate Technology Development Group (ITDG), were set up to promote and implement these new ideas.
By the mid-1970's it was clear that the major multilateral donors had taken note of these changes in development thinking and had gone so far as to make public statements confirming their commitment to make greater efforts to promote development which aimed to reduce inequality and encourage rural development. In 1973, the World Bank, pronounced its 'Alternative Development Strategy' which recommended the tying together of growth objectives and redistribution objectives (Chenery et al., 1974). This resulted from the personal convictions of its president, McNamara, who had been instrumental in changing the image and philosophy of the Bank away from the growth-orientated ideals of the 1960's (Ayres, 1983). In 1974 the Cocoyoc Declaration represented an across the board affirmation of the United Nations' commitment to Appropriate Technology, "Basic Needs" and Self-Reliance (Harrison, 1980; UNCTAD, 1978). This pronouncement was followed by individual commitments made by the FAO, ILO and WHO (UNESCO, 1980). Thus, in 1976, for example, the ILO made an explicit commitment to supporting the principles of "Basic Needs" at the World Employment Conference (Green, 1978; ILO, 1976). The EEC also moved in this direction in the planning of its aid programme. By the mid-1970's it had created a micro-project programme and had increased investment allocations for rural development, with the expressed aim of achieving the goals set down by the Basic Needs school (EEC, 1979; Rajana, 1982).
WATER AND SANITATION AS BASIC NEEDS:

The growing attention given to the promotion of domestic water supply and sanitation provision, symbolised by the United Nations' International Drinking Water Supply and Sanitation Decade (UNIDWSSD), can be attributed to a revolution in attitudes and policy towards health and health care provision. Domestic water supply and sanitation are seen as major components of Primary Health Care - a strategy which has been inspired by the concepts and prescriptions of "Basic Needs", Appropriate Technology and Community Participation. The linking of water supply provision and sanitation to Primary Health Care during the 1970's, therefore, occurred against the background of a more profound re-orientation of development theory and practice.

Research on health in the tropics had identified the extent to which major diseases responsible for infant mortality and debility were related to improper water supply and excreta disposal (Bradley, 1978). The provision of improved water supplies and sanitation facilities was identified as an appropriate contribution to a health strategy which sought to prevent rather than just cure disease. Thus, within the framework of Primary Health Care, water supply provision was linked to public health and sanitation as a major component of the strategy. The approach to project delivery in water and sanitation was strongly influenced by the principles of Primary Health Care rooted in the concept of appropriate technology and community participation. As such both the water supply and public health sectors were compelled to adapt to this new approach.

By contrast, up until this period, water supply and public health were treated very much as mutually exclusive sectors. Water supply was largely associated with production-related projects. Water resource provision was perceived, therefore, as part of basic economic infrastructure provision, essential for supporting the modernisation of agriculture (Bourne, 1984). Emphasis was placed on irrigation and on livestock watering, rather than on a concern for domestic water consumption and on improvements to health, except in major urban centres where municipal sewerage and water supply systems were installed (Bradley, 1978). In this context, the United Nations established the International Hydrological Decade in 1970, to encourage member countries
to consider broad aspects of water resource management (Bourne, 1984). On the whole, sanitation received scant attention, except in selected urban areas. The rural sector was largely ignored in the belief that environmental health in rural areas was not a sufficiently serious nor visible problem to merit special attention (Bradley, 1978).

Public health and sanitation had, however, played a key role in opening up the tropics to European exploitation and settlement. In the first quarter of the twentieth century, the building of the Panama canal, the creation of the Malay rubber plantations and the establishment of the Copperbelt in Northern Rhodesia had all depended on public health intervention to clear the region of disease (Bradley, 1978; Watson, 1915, 1953). It was recognised that economic profit depended on ensuring the good health of the labour force which had to confront a number of serious diseases such as malaria, typhoid, cholera and dysentry (Watson, 1915, 1953). Consequently, private companies rather than the colonial administrations were prepared to invest heavily in public health measures in order to improve the health of the labour force. It was common, therefore, to find that the townships associated with mining and plantation concerns were best endowed with clean water supplies, sewerage disposal and drained swamps. The eradication of malaria, however, received priority attention. It is suggested, for example, that the establishment of a sanitation department within the medical division of the administration in Panama signalled a new official attitude to disease with the recognition of the importance of preventative public health intervention (Watson, 1915). This period of activity, moreover, provided an opportunity to carry out research on disease which would influence future policy on water supply and sanitation provision.

However, after 1945, attention moved away from sanitation in the form of public health engineering with the discovery of insecticides and vaccinations which could more efficiently eradicate or stem the spread of environmental diseases (Bradley, 1978). Water supply and sanitation provision was restricted to urban centres or to the productive sectors of the economy (Cairncross, 1986). At the same time, these new discoveries were not available to the people, the majority of whom were rural based. By the 1960s environmental health had been relegated to a low position on the policy agenda (Bradley, 1978) at a time when
increasing interest was being directed to the use of modern curative forms of medical care. Primary Health Care in the 1970s, therefore, provided a new opportunity for public health engineering to reassert itself.

GOALS OF THE DECADE:

It has been recognised that a strong link exists between the incidence of environmental diseases such as cholera, typhoid, hepatitis and shistosomiasis, and inadequate and polluted water supply and sanitation facilities (Feachem, 1984). This is particularly so in areas of high density settlement. The provision or up-grading of such facilities can contribute to reductions in infant mortality and levels of morbidity by breaking the life cycle of water-related and excreta-related infections, which are the major infant and child killers. However, these preventative actions can only have a substantial impact on the control of such diseases, if they are accompanied by other public health and Primary Health Care interventions. These include the alleviation of malnutrition, the improvement of personal hygiene, the provision of better housing and health education (Bourne, 1984; Feachem, 1984). Therefore, the provision of water supply and sanitation facilities is seen to form part of a broader Primary Health Care programme. However, because the reduction of these diseases requires intervention in several forms, it is difficult to measure the particular contribution that can be made by either water supply or sanitation provision (Bourne, 1984). Yet, research suggests that the reduction in the incidence of any of these diseases cannot be achieved without a coordinated programme which includes all of these forms of intervention (Feachem, 1984).

Health benefits, therefore, represent the principal goal of the Decade (Subrahmanyam & Cvjetanovic, 1986). This has been most forcefully argued by Feachem (1984). During the past two decades research has been conducted at the international and national levels to seek ways of measuring the impact that water and sanitation interventions can make on the reduction of the incidence of these environmental diseases, and of identifying ways of maximising the impact of such preventative forms of intervention (Blum & Feachem, 1983; Cairncross, 1980; Feachem et al, 1978; White et al, 1972; Saunders & Warford, 1976). A major concern is
to extend access to these services to as many people as is possible during the Decade, to monitor the impact on health but equally importantly to provide a platform for continued efforts in the future. This is a daunting task. In 1980, water and sanitation facilities were available to only a minority of the population, especially in rural areas (see Table 6). A number of other benefits which can accrue from the provision of these facilities have been identified and represent secondary goals of the Decade.

- The reduction of human drudgery, in terms of the time and effort expended in fetching water in rural areas particularly during the dry season. Time and effort saved can be used for more productive activities such as crop cultivation, as well as alleviating the burden of transporting water over large distances, while latrines can provide convenience and privacy (Baum & Tolbert, 1985; Cairncross, 1980; Hofkes, 1983).

- The creation of infrastructure spin-offs. A water supply can form the basis for the provision of social infrastructure such as primary schools and health facilities and may provide the opportunities for developing small-scale manufacturing, building construction and commerce (Feachem et al, 1978; Saunders & Warford, 1976).

- Institution-building and administrative re-organisation at the local government and community levels can result from the planning, implementation and maintenance of such public utilities (Cairncross, 1980; Glennie, 1983; Feachem et al, 1978; Saunders & Warford, 1976).

Achieving the Goals of the Decade - Community Participation & Appropriate Technology:

The health benefits sought in the Decade can only be achieved through active consultation and cooperation with the recipient community in both the design and implementation of policy (Feachem et al, 1978; White & White, 1984). This is justified for a number of reasons. Research has shown that the provision of these facilities cannot be implemented successfully without a parallel health education campaign directed at personal and community hygiene and public health. Only in this way can
Table 6: Level of Provision of Water & Sanitation in the Third World - 1980

<table>
<thead>
<tr>
<th>TOTAL</th>
<th>URBAN</th>
<th>RURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>NOS (mill)</td>
<td>%</td>
</tr>
</tbody>
</table>

- Water Supplies: 42 986 70 27
- Sanitation: 26 614 49 14

(Based on figures from The Courier, 1986)

Table 7: Level of Provision of Water & Sanitation Provision in Africa - 1980-1983

<table>
<thead>
<tr>
<th>POPN (mill)</th>
<th>WATER</th>
<th>SANITATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nos %</td>
<td>Nos %</td>
</tr>
</tbody>
</table>

- URBAN: 135 160 1 85 66 91 57 73 54 68 55
- RURAL: 334 356 1 73 22 103 29 67 20 64 18

(Based on figures presented in The Courier, 1986)
it be ensured that facilities provided will be used and maintained properly and that the other public health interventions such as personal cleanliness and protection of food sources can be ensured. Benefits cannot be achieved through the provision of infrastructure on its own (IRC, 1984). Recognition of the importance of this health education or "software" intervention has been reflected in a proliferation of literature identifying the ways in which community cooperation can be elicited and how constraints on achieving the desired behavioural changes can be overcome. In particular, it has been recognised how culturally and socially sensitive these issues are, and how the success of any programme depends more on achieving community support and awareness of health benefits than on the simple provision of the facility. It has been recognised that behavioural attitudes to water use and excreta disposal are strongly linked to traditional perceptions and customs and to traditional beliefs about the transmission of diseases. Emphasis has, therefore, been placed on identifying 'Human Factor' and 'Socio-Cultural' variables and on considering the 'Social feasibility' of projects (Cairncross, 1980; Falkenmark, 1982; Perrett & Lethem, 1980; Perrett, 1983; Simpson-Herbert, 1983; White et al., 1972). Therefore, the planning of a "software" package to accompany the provision of infrastructure is essential to establishing the link between water, sanitation and education themselves (Cross, 1983).

Research has focussed on developing the most appropriate technology options and software packages for projects which are socially and culturally acceptable. Community participation is argued to be the most important component for ensuring Decade success. This is because the recipients must make the changes in hygiene and health customs (Cross, 1983; IRC, 1984). They must, therefore, be actively involved in all stages of policy design and implementation. Bottom-up initiatives are called for, though it is recognised that usually such initiatives require support from an external agency too.

Community participation is an essential input to achieving the benefits of health education and at the same time to achieving user acceptibility and cooperation (Van Wijk-Sijbesma, 1981; White, 1981). This must be combined with the development of appropriate technology. The technology must be effective in providing the prescribed service but at the same time must be easily operable and maintainable. The system must be socially acceptable to the community and it must also be affordable.
This is important because in all likelihood, the community will be required to contribute to the cost and maintenance of the programme. The provision of socially acceptable and affordable systems is a pre-condition to achieving long-term benefits. In the water supply sector, for example, the Village Level Operated and Maintained (VLOM) handpump project has been set up to develop a technically appropriate handpump (World Water, 1983), while in the sanitation sector, the "VIP" latrine has been developed in Zimbabwe (Van Damme & White, 1984). The emphasis that has been placed on developing appropriate technology through community consultation has been prompted by the history of past failures of projects which have been poorly designed, inadequately maintained and which have often been unacceptable to the consumer (Baum & Tolbert, 1985). Appropriate Technology has, therefore, come to stand for the design of technically appropriate, socially acceptable and affordable systems.

Finally, community participation and the design of an appropriate technology has been encouraged for reasons of cost reduction. It is recognised that the ambitious goals of the Decade can only be achieved by passing on some of the costs to the consumer, in the form of self-help contributions. At the international level, the Decade has called for an 80% contribution from national governments, with the remainder being provided by the donor community (Bourne, 1984). Therefore, national governments are compelled to reduce costs through the development of appropriate technology and through consumer contributions to the costs of construction, operation and maintenance. As such, governments are normally asking for a 10-15% consumer contribution (Baum & Tolbert, 1985; Kalbermatten & Listorti, 1984). However, while costs can be recovered through the imposition of service charges in urban areas, this is rarely possible in rural areas (Baum & Tolbert, 1985). It is, therefore, all the more important to develop a technology which is cheap but which remains acceptable and effective.

RESULTS: A MID-DECADE ASSESSMENT:

Despite the relatively high political profile that the Decade has enjoyed, the level of investment and the impact that has resulted at the Decade's mid-point have been disappointing (The Courier, 1986). First, it is quite obvious that the goal of achieving, "water and sanitation
for all by the year 2000" is unattainable. In this respect, the provision of new services has only just managed to keep pace with population growth and settlement change. Therefore, access to improved water and sanitation remains limited, while there is even evidence to suggest that fewer people have access to sanitation facilities today than was the case in 1980 (The Courier, 1986) (see Table 7).

Second, there is evidence that than an unacceptable proportion of new facilities have either been abandoned, misused, or are in a state of disrepair. Insufficient attention has been paid to ensuring that appropriate arrangements for operation and maintenance have been made, while it is acknowledged that systems have often been poorly designed (Bourne, 1984; The Courier, 1986). Furthermore, greater emphasis has been directed to water supply provision than to sanitation provision, which has been generally neglected, while health education has often been wholly ignored.

Therefore, from both a qualitative and quantitative point of view, the Decade has fallen short of achieving its major objectives. In particular, it is clear that the long-term health objective of the Decade cannot be met under current levels of investment and provision. At the same time, results have varied considerably between countries participating in the Decade. There are indeed a number of success stories which can be contrasted to examples of failure.

A range of explanations for these disappointing results have been offered by donor agencies, host governments, project officers and the recipients themselves. Indeed, in a publication marking the Decade's mid-term point, several key explanations for the apparent variation in the success of the programme at the intra-national level are considered (White & White, 1984). It is argued that constraints to success can be identified at the international, national and community levels, and concern socio-cultural, institutional and organisational, economic and financial, political and environmental factors.

These are discussed at greater length in the following chapters as they have influenced the provision of water supplies and sanitation in rural Botswana. The precise impact that these different factors have had on achieving policy objectives has been noted extensively in the literature.
and more especially in policy evaluations. Indeed the emphasis which has been placed on community participation, appropriate technology and on institution-building as key components of the Decade reflects the awareness that exists of the potential constraints which may affect the achievement of policy objectives. Particular attention has been focussed on three of these problem areas, which are discussed in more detail in the rest of the thesis.

Socio-cultural constraints;

Arguably, constraints of a socio-cultural nature have presented the most serious barriers to the achievement of the Decade's goals. Socio-cultural factors are defined here as the customs, laws, beliefs and economic circumstances which govern society and the way people behave. Social behaviour towards personal hygiene, community health and excreta disposal can be influenced by religious beliefs, the status of women and local economic circumstances. Acknowledgement of the importance of these factors is reflected in the fact that increasing attention has been paid in the literature to a consideration of the impact of socio-cultural factors on policy implementation (Perrett & Lethem, 1980; Simpson-Herbert, 1983).

Development projects in the past have all too often overlooked these socio-cultural considerations and planners have been surprised when projects have either failed to be completed or have been abandoned by the intended beneficiaries. This has been apparent in relation to small-scale community projects but also in relation to larger scale agricultural projects (Barnett, 1975). It has been against the evidence of the limited success of many schemes, which depended on the use of western technology and the adoption of western values, that the call for appropriate technology gained credence.

Thus, a full consideration of socio-cultural factors is now recognised to be indispensable in the design of projects which require recipients to undertake behavioural changes to well-established customs, or to make personal contributions to the implementation of the project. Indeed, in relation to the specific aims of the Decade, these factors are recognised to be important with reference to;
- achieving behavioural changes in relation to household hygiene, excreta disposal and water use.
- assessing the socio-economic capacity and willingness of recipients to make a self-help contribution to the implementation of the project.
- ensuring that the technology and wider goals of the project are acceptable to and supported by the community.

Failure to consider community attitudes, aspirations and perceptions, and their ability and willingness to take part in Decade projects has now been widely accepted as an explanatory factor for the disappointing results to date (Cairncross, 1980; Falkenmark, 1982; Perrett & Lethem, 1980). However, in addition to these socio-cultural factors which can affect the likelihood of achieving active community support and participation, insufficient attention has been paid to a consideration of the social and political characteristics of recipient communities (Bourne, 1984). Political and social tension at the community level which is often overlooked may determine the possibility of achieving the sort of community-wide participation desired, while often it is assumed that community participation or self-help is a traditional characteristic of rural communities which can be exploited, when in fact it is not (Glennie, 1983). In recognising the critical impact of socio-cultural factors on policy success, WHO, along with a number of other agencies have recently prepared guidelines for undertaking feasibility and ex-post evaluations of projects to assess the precise impact of these factors (WHO, 1983).

Institutional Constraints;

Increased attention has also been paid to problems of administration in relation to planning and implementation capacity and of manpower training at central government and local government levels. It is persistently stated in the literature that inadequate manpower both in skills and absolute numbers represents one of the greatest challenges to the achievement of Decade aims, particularly at the local government level but also at the community level (Baum & Tolbert, 1985; Falkenmark, 1982; Saunders & Warford, 1976). Inadequate manpower constrains the planning and implementation capacity of government and leads to a situation in which donor funds cannot be fully utilised within agreed timespans (Bourne, 1984). Yet it is also noted that organisational
problems exist at the central government level, too. There is evidence of inadequate cooperation between ministries and departments, as well as between central government and local government and a relegation of water and sanitation departments to subordinate positions. As a result, they are frequently under-staffed and under-financed (Baum & Tolbert, 1985; Falkenmark, 1982; Glennie, 1983). Moreover, responsibility for water and sanitation provision often falls under separate departments or even separate ministries. At the field level, there are difficulties in recruiting suitable project officers, who are sufficiently skilled but who are prepared to work at relatively low levels of pay, in a low status sector (Falkenmark, 1982; Glennie, 1983). Others have pointed to the massive logistical and scheduling problems involved in coordinating projects which must adequately cater for donor, central government, local government and community interests (Perrett & Lethem, 1980). At the community level, the problem of institutions which are unable to support the delivery systems recommended has also been attributed to socio-cultural factors.

Financial Constraints;

Financial constraints on the achievement of project goals can be identified at two levels. First, at a general level, constraints are apparent in relation to the funding procedures and arrangements of individual government ministries and departments both at the level of central and local government. It is recognised, for example, that local government capacity to implement policy is constrained by limited opportunities to generate revenue to fund recurrent expenditure and to have access to qualified manpower. Second, at a policy-specific level, financial constraints can be identified in two areas. On the one hand, policy success depends on the capacity of recipient communities and of individual households to make a self-help contribution to the Decade. On the other hand, policy success depends equally on convincing host governments that the provision of water and sanitation facilities represents an attractive investment which deserves political and financial support (Kalbermatten & Listorti, 1984; White & White, 1984).

There is, therefore, an overall shortage of funds to achieve the ambitious objectives of the Decade at the international level (African Business, 1986; The Courier, 1986). Pledges to support the Decade
coincided with the beginning of world economic recession. As a result, international financial support has been reduced while in a climate of economic austerity, available resources have been diverted to more cost-effective projects (African Business, 1986). Governments have been asked to provide 80% of funds and to pass on some of the cost to the recipient by encouraging self-help efforts. As a result, there has been a bias towards allocating resources to the most cost-effective areas which tend to exclude the smaller, remoter and poorer communities (Falkenmark, 1982). Allocations are, therefore, influenced primarily by technocratic considerations. Rural areas generally are perceived as unattractive as compared to urban areas because of the limited capacity to generate revenue for the operation and maintenance of services, and governments are reticent about increasing recurrent budget allocations to local authorities to subsidise these services especially when such projects demand high transport and manpower overheads (Cairncross, 1980). As a result, systems are often left abandoned or in a state of disrepair when resources are not forthcoming (Saunders & Warford, 1976).

More generally, both the water and sanitation sectors, but more especially the sanitation sector, are seen to provide poor returns on investment while generating few direct economic spin-offs. At the same time, the substantial health benefits that can accrue from these investments are difficult to measure in the short term and cannot be quantified according to standard financial or economic criteria (Falkenmark, 1982).

These financial disincentives can be understood more generally in terms of the contradictions between the financial and organisational prerogatives of large aid agencies and governments, and the complex and costly nature of poverty-focussed "Basic Needs" projects of which water and sanitation are examples. There is a fundamental conflict between investors' aims of achieving rapid and assured returns on investments, governments which seek to restrict public expenditure and the characteristics of such projects which are risky from a financial point of view, are time consuming and, therefore, costly, and are certain not to generate attractive financial returns. Moreover, their recurrent costs are high while the potential benefits of the investment cannot be measured in monetary terms (Ayres, 1983; Chambers, 1978; Tendler, 1982). Such projects which have a high 'software' and community participation component are seen by donor agencies and governments as troublesome for
these reasons. In addition there can be administrative problems from
the viewpoint of cooperation between aid agencies and host governments. 94% of World Bank staff, for example, are located in Washington (Ayres, 1983). Field trips which are indispensable for project planning, monitoring and evaluation, are expensive, time consuming, infrequent and often inadequate. They amount to short trips into the 'bush' or to bouts of "rural tourism" (Chambers, 1978). However, on the basis of these field excursions, important decisions concerning the programme have to be taken. Finally, governments are often wary about supporting poverty-focussed projects, which seek to challenge existing inequalities, particularly in rural areas, and which might consequently compromise the interests of rural elite groups on whom they depend for political support (Ayres, 1983; Tendler, 1982).

EXAMPLES OF RURAL WATER SUPPLY AND SANITATION PROVISION IN AFRICA:

Rural Water Supply in Malawi:

Water supply in rural Malawi provides a good illustration of how specific environmental and political economic factors can influence the design of policy in a particular country. Conditions in Malawi appear to be conducive to ensuring that a project delivery system based closely on the prescriptions advocated by the international community can be implemented.

Provision is based upon the use of low-cost technologies and on a high level of community participation. The programme has concentrated on ensuring success through a process of gradual implementation in a few communities, and of ensuring proper operation and maintenance of installed systems, before expanding the programme to cover a wider catchment. It has as such developed from the bottom up. The programme has been divided into two schemes. One is based upon a gravity-fed surface water supply and the other is based upon groundwater supply by means of boreholes and wells.

In the former scheme, which caters for 25% of the rural population, community participation is a major component of the project from start
to finish. Recipient communities are responsible for making the initial request to take part in the project, for installing the supply and for overseeing the operation and maintenance of the supply. Specially elected committees which represent the interests of tribal leaders, party leaders and villagers, are responsible for these tasks. No external project staff are involved beyond the provision of technical support and training. Central government only intervenes as a mobilising force at the outset and for providing training facilities for the elected committee members. It is also worth noting that the ministry responsible for this programme is not a technical one as is often found, but is the Ministry of Community Development and Welfare (Msukwa, 1983).

In the latter scheme, which caters for the remaining 75% of the rural population, provision is based upon the construction of shallow wells where the water table is less than 6 meters below the surface, and the installation of boreholes when it is greater than 6 meters. Emphasis has been placed on limiting costs wherever possible. So for example, low cost, low yielding boreholes have been used which can be installed with manual pumps. These pumps are cheap to construct, easy to install and cheap to operate. Moreover, they can be easily maintained by local mechanics and do not depend on imported parts. The scheme has also depended on community participation to ensure that recipients are willing and able to operate and maintain their supply without external support. While this approach has slowed down the rate of implementation, it is considered an acceptable compromise if it ensures better operation and maintenance in the long term (Smith-Carrington, 1983).

Rural Water Supply in Kenya:

Kenya has committed itself to supporting the objectives of the Water Decade by intensifying its rural water supply programme. While the programme is administered by the Ministry of Water Development, the programme is less systematically organised than in some other countries. This is probably due to the contrasting socio-economic and environmental features of the country which demand different forms of intervention. One can contrast the needs of nomadic groups in the arid areas to those of farmers in the fertile highlands. Policy formulation is centralised
and depends on the support of professionals both from home and abroad, for designing systems (Kabuaye, 1983). At the same time, local authorities are expected to provide financial and administrative support to the implementing ministry, while the international donor community has also provided financial and manpower assistance. Most projects also rely on community participation in the implementation phase as a means of generating user interest and of reducing costs. It is argued that the level of provision should be commensurate with what communities are able to afford, and that effective operation and maintenance can only be realised if the recipient perceives a felt need for the supply (Kabuaye, 1983). To date, the programme has concentrated on providing supplies to the highly populated agricultural areas, while remoter areas have been often ignored because of the prohibitive costs involved.

Rural Water Supply and Sanitation in Zimbabwe:

Rural Zimbabweans depend on both central government and non-governmental organisations for the provision of improved water supplies. State intervention in rural provision has increased substantially since independence reflecting a national commitment to ensuring the provision of "Basic Needs" to the rural sector (Kinsey, 1983). A major water programme (the Water Master Plan) has been established as part of a resettlement and Primary Health Care strategy. Provision is based on the use of an assortment of technologies to suit local environmental conditions. These range from boreholes to dams and shallow wells while most supplies are reticulated to standposts. A major constraint facing the programme is the shortage of drilling equipment for the borehole programme.

Non-governmental organisations have also been active in implementing projects in rural areas. Usually, such projects depend on a high element of community participation and focus on a small target population. A protected well and sanitation project has been established in one district which is based upon cooperation between a medical centre run by a mission, local councillors, teachers, tribal leaders and community members (Walsh, 1983). While government provides support to maintenance work and has provided advice on technical matters - the Blair Institute has been providing assistance in the design of a suitable latrine - the community has played an active role in the
installation, operation and maintenance of facilities. Community participation accounted for 60% of installation costs, while in the long-term it has made the community self-reliant in ensuring the proper operation and maintenance of the scheme. Local skills were exploited in the building programme while a workshop has been provided by the mission. To date, this project has built 300 wells. The sanitation project has been less successful due to initial difficulties in generating enthusiasm for the project. Yet despite a less obvious 'felt need' 500 units have been constructed.

Zimbabwe has made an important contribution to the research and development of low cost water and sanitation systems at the Blair Institute. This centre has received support from the international community and has cooperated closely with United Nations organisations responsible for the Decade. The benefits of innovations made at this institution have been exported to several other African countries such as Botswana and Tanzania who have used the Blair technology as the basis of their own rural sanitation programmes.
Chapter 5: RURAL WATER SUPPLY AND SANITATION PROVISION IN BOTSWANA:

INTRODUCTION TO THE PROGRAMMES:

This chapter examines Botswana's contribution to the Decade. It begins with an introduction to the water and sanitation programmes which support the objectives of the Decade. Major policy objectives, the delivery systems used and results to date are briefly reviewed. The following section discusses the fieldwork methodology used in the study of these programmes before proceeding to examine each in more detail. The respective delivery systems of the two programmes and the role played by central government, local government and community institutions in policy formulation and implementation are then examined. A final section considers the relative importance of political, economic and environmental factors, and the influence of the Decade in determining the delivery systems used in the respective programmes.

The government of Botswana has endorsed its commitment to the Decade through a major water supply programme and a sanitation project for the rural sector. The Decade was launched in 1980 following on from a preliminary report prepared by SIDA/WHO. However, it was clearly stated that the provisions laid down referred to the aspirations and goals of the NDP, forming part of government's wider rural development strategy and not necessarily to those of the United Nations, though the major principles of the Decade were acknowledged (GOB, 1985). Thus, while no Decade plan was prepared, in 1981, an inter-ministerial water and sanitation committee was established, involving the ministries of Local Government and Lands, Finance and Development Planning, Mineral Resources and Water Affairs, Health, and Works and Communications (IDWSSD, 1984). Rural water supply provision is directed through the Village Water Supply Programme (VWSP) established in 1972, while rural sanitation provision is directed through the Self-Help Environmental Sanitation Project (SHESP) which began as a pilot project in 1979/80.
THE VILLAGE WATER SUPPLY PROGRAMME:

Objectives:

The VWSP is a long-term sectoral programme of nationwide proportions funded both by the government and the Swedish aid agency, SIDA, and implemented through the Ministry of Mineral Resources and Water Affairs. It aims to provide potable and reliable water to all recognised villages for domestic consumption purposes. It commenced in 1972 following an agreement reached between the GOB and SIDA (Coppermann, 1978). The original programme ran from 1972 to 1976 but was extended until 1982 under NDP 5 and then again to 1991, under NDP 6 (GOB, 1985). It is now formally referred to as the, "Extended Village Water Supply Programme."

The programme provides the following settlement categories with fully subsidised domestic water supply facilities; major villages, rural villages and some lands areas. The following settlement categories are however excluded; towns, cattle posts, freehold farms and nomadic settlements (Agrell et al, 1984). It is calculated that the programme should eventually reach 63% of the rural population, nationwide, though this may account for as few as 10% of the total number of settlements. However, with rapid population growth and with the recent establishment of small permanent settlements at the lands, it is likely that only 55% of the rural population will be reached by the programme (GOB, 1985). The remaining 45% resident in scattered lands and cattle post settlements must obtain water from alternative unprotected sources.

Government provides some funding for improving surface water supplies at the lands through the Ministry of Agriculture. Otherwise, communities must rely on private boreholes or on traditional sources. The programme is structured around three tiers of provision, based upon settlement size (see Fig 2).

Until 1979, consumers were required to pay a tariff for public water supplies. Since 1979, provision has been free to those consumers using public standpipes. Households which have opted for a private connection must pay a charge similar to the urban tariff (SIDA/FAO, 1983). The decision to discontinue a rural tariff for public consumers was based on a reconsideration of rural pricing policy. This policy change took into
"WB 17" - Major Village Water Supplies.
- Provision to all major villages (pop'n +2000).
- Standpipes no more than 400m from furthest compound and reticulation to government facilities.
- Private connections available subject to installation & consumption charge.
- System to provide 40 litres per capita per day.

"WB 26" - Rural Village Water Supplies.
- Provision to villages with populations between 500 & 2000.
- Standpipes no more than 400m from furthest compound.
- System to provide 30 litres per capita per day.

"WB 30" - Small Village Water Supplies.
- Provision to villages with populations under 500.
- Reticulation to school and health facility only.

Fig 2: The VWSP - Hierarchy of Provision.
consideration the following objectives. First, to conserve scarce water resources, second, to control the growth of recurrent expenditure and third, to reduce urban bias. It was decided that a consumer tariff could not achieve these objectives. Evidence suggests that the rural consumer does not waste water and, indeed, from the point of view of health, uses an insufficient quantity of water. Furthermore, the cost of administering the collection of revenue was shown to exceed the revenue collected. Finally, the provision of free water could be used to re-emphasise government's policy of redistributing national wealth from the mining sector through the provision of subsidised basic needs (GOB, 1980, 1985).

The programme provides villages with reticulated standpost water supply systems. Water is drawn predominantly from deep groundwater sources raised with diesel powered monopumps. In some areas, water is abstracted from surface sources but this is rare. Water is pumped from source to storage tanks and then reticulated to individual standpipes.

Results to Date;

The primary objective of the VWSP has been to install water supply systems to as many villages as possible as rapidly as possible. It, therefore, represents a major physical infrastructure programme. Accordingly, the major parameter that has been used to measure success has been the rate of installation. While, more recently, attention has shifted towards measuring qualitative aspects of the programme (see below), this section considers programme achievements from the point of view of installation rates.

It is recognised that an assessment of the VWSP ought to consider a number of other measures of success. Attention ought to be paid to evaluating standards of installation and of operation and maintenance, and of long-term reliability while the impact of water provision on community health and on household hygiene must also be considered (GOB, 1985). Given the existing bias towards infrastructure provision, results based in installation rates are provided.

By the end of the programme in 1991, a total of 354 settlements should have been provided with an improved water supply system, though it is
likely that further settlements may be brought into the programme during the plan period (Agrell et al, 1984). This will account for 65% of the rural population (Agrell et al, 1984). However, prior to the extension of the programme in 1982, the WSP aimed to service only 45% of the rural population. An additional 154 settlements have had to be included in the programme in view of the results of the 1981 census which identified a number of new and expanding settlements which qualified for inclusion in the programme (GOB, 1985). Within the extended programme, efforts will be concentrated on those smaller settlements which qualify for provision under the WB30 scheme. By September 1985, 254 settlements had been reached, representing 91% of the target population (SIDA/GOB, 1985). Between 35 and 45 villages are provided annually. At this rate, it is estimated that the programme should be completed by 1990 (Agrell et al, 1984; GOB, 1985). More detailed figures illustrate the extent to which the programme has succeeded in reaching its target settlements (see Table 8).

17 of the 254 villages supplied are major villages provided under the WB17 scheme. This accounts for 183,680 people or 18% of the national population (GOB, 1985), while 6,505 private connections have been made (IDWSSD, 1984). The remaining 237 villages have been provided under WB26 and WB30. This accounts for 200,000 people.

The programme has, therefore, successfully reached all the major villages and a high proportion of the medium-sized rural villages with populations above 500 but below 10,000. Now the emphasis is to intensify provision to smaller and remoter settlements under the WB30 scheme, while concentrating on the rehabilitation and extension of facilities in the already serviced villages (SIDA/GOB, 1982). This is particularly necessary in the major villages which have experienced rapid growth since the completion of their water supply systems (Agrell et al, 1984). It is clear that in many of these major villages, but also in some of the expanding smaller villages, reticulation is inadequate (GOB, 1985) and does not fulfil the requirement of ensuring that no household is more than 400m from the nearest standpipe. Furthermore, estimates of consumption have had to be reassessed upwards, as demands on many older systems now exceed storage and distribution capacity, particularly where non-domestic demand has increased in some of the major villages (SIDA/FAO, 1983). In other villages, boreholes
Table 6: The VWSP - The Extent of Village Coverage by 1984

<table>
<thead>
<tr>
<th>VILLAGE STATUS</th>
<th>% RURAL POP</th>
<th>% REACHED</th>
<th>% CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major village</td>
<td>23</td>
<td>23</td>
<td>100</td>
</tr>
<tr>
<td>Rural village</td>
<td>40</td>
<td>23</td>
<td>59</td>
</tr>
<tr>
<td>Other rural</td>
<td>37</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>TOTAL RURAL</strong></td>
<td><strong>100</strong></td>
<td><strong>46</strong></td>
<td></td>
</tr>
</tbody>
</table>

(after Agrell et al., 1984)
have dried up and new boreholes have had to be sunk. At the same time, smaller settlements which previously did not have village status, usually because there was no stable nor permanent population, have now become recognised settlements and require formalised water provision. Therefore, in the future, greater attention is to be paid to maintaining and improving existing facilities in line with government's current policy to support existing investments, rather than to extend services to new settlements. In particular, small and remote villages where the unit cost of provision is extremely high might be excluded (GOB, 1985). In this way, a trade-off between government's goals for the sector between quality and quantity has had to be made (GOB, 1985).

THE SELF-HELP ENVIRONMENTAL SANITATION PROJECT:

This project represents government's first major commitment to supporting rural sanitation provision. Emphasis has been placed on promoting the development of low-cost sanitation options and on coordinating a health education programme through a high level of community participation. The project represents a new dimension to state supported rural welfare provision, inspired both by earlier successes in urban projects and on recommendations from the international donor community. The project is coordinated through the Ministry of Local Government and Lands, and the District Councils, on a district by district basis.

The current project operating in three districts has been developed from the experience of an earlier pilot project. The Environmental Sanitation Protection Project (ESPP), as the pilot project was called, was implemented in Kgatleng and Southern Districts during 1981 and 1982. It was developed as a response to a growing concern on the part of the Government of Botswana and the District Councils that a national effort was required to improve rural sanitation as a means of reducing the increasing incidence of sanitation-related diseases such as diarrhoea, cholera, hookworm and roundworm (Du Pradal, 1982).

The decision to undertake such a project was proposed at the 1976 National District Development Committees Conference. In 1979, USAID, in collaboration with the Government of Botswana, submitted a Project Paper
for ESPP (USAID/GOB, 1979). As a pilot project, it represented the first major effort to address the problem of sanitation in rural Botswana. There was, therefore, no previous experience to learn from apart from an urban site and service project. The project aimed to develop, test and evaluate health education materials and develop latrine and refusal disposal systems which were technically appropriate, socially acceptable and affordable to rural households (USAID/GOB, 1979). Finally, the project was to look at ways in which ESPP could be replicated on a district-by-district basis.

ESPP was implemented in the villages of Mabalane, Artesia and Olifants Drift in Kgatleng District, and Ranaka, Selolokela and Keng in Southern District. The two districts were chosen for the pilot project on the grounds that they had identified the need to tackle the problems of poor sanitation in their respective 1977-82 District Development Plans. The chosen districts were asked by government to select three pilot villages each, on the basis of criteria set down by a consulting social scientist and the Senior Water Engineer and according to their own priorities. A major concern was to select a sample of villages which displayed contrasting social and ecological characteristics (Kjoer-Olsen, 1980). The allocation criteria used in this pilot project has not been used in the follow-on project.

Following initial delays in recruiting the ESPP team and in finalising organisational arrangements, the project was implemented during 1981 and 1982. The first year of the project turned into a period of organisation and mobilisation during which certain health education materials were developed and a limited amount of health education dissemination occurred. A refuse campaign was successfully conducted and the Botswana Improved Trench Latrine was developed. During the second year, the project concentrated almost entirely on household latrine construction. Health education was dropped together with the development of multi-media packages while an effort was made to establish a replicable village-based delivery system (World Bank/UNDP, 1982).

In 1982, discussions held at the annual National District Council’s Conference confirmed that the ESPP project had been a success and moved that the project be replicated nationally on a district by district
basis. A new donor, UNICEF, was found to replace USAID whose contract had terminated and this meant that a new project memorandum had to be prepared. Individual District Councils were to be responsible for mobilising interest in the project at the village level, for including the project within their development plan and for submitting a proposal to government to take part. As a result, three districts were selected: the two original ESPP districts, where the project would be extended to new villages and Kweneng district.

In Kweneng district, four villages were chosen for the first stage of the project: Molepolole, Thamaga, Mmankgodi and Gabane. In Kgalagadi district, the project was extended to the four river villages; Mathubudukwane, Ramonaka, Malolwane and Sikwane (see Maps 2 & 3), while in Southern district, the cluster of villages around Pisane-Molopo were brought into the project (MLGL/UNICEF, 1985). In 1986, Central District was brought into the project albeit on a more limited scale, for the remaining period of the UNICEF-supported project. Assistance to this district has taken the form of a limited supply of materials and technical support, in order to get started, but there has been no manpower nor financial support. Here, the district must rely on their existing resources (MLGL/UNICEF, 1985). The aim is to construct demonstration units in each of the sub-districts.

In Kgalagadi district, the team planned to construct 450 units by the end of 1985 and to construct a number of demonstration latrines in the next cluster of villages in the southern part of the district, which will be the focus of attention in the project's second phase (KgDC, 1985). This represents part of a long-term strategy which has been proposed for the district by the project coordinator, but which has not yet been discussed at a formal level. This plan of operation anticipates coverage of all 22 recognised villages by 1998, providing that manpower and financial support can be guaranteed. The proposal envisages the construction of a further 1200 units which would represent about half of all recognised household plots. However, such a long-term commitment will have to be fully incorporated into the forthcoming District Development Plan and will undoubtedly require a longer term commitment from central government and a donor agency in order to succeed. In Kweneng district, the current project anticipates the construction of 1000 units and a similar number in Southern district (KgDC, 1985).
The Self-Help Environmental Sanitation Project (SHESP), as it is now called, is jointly funded by the Government of Botswana, UNICEF/Government of the Netherlands, the District Councils and the residents themselves. Participation in the project is voluntary. Residents who elect to take part, must provide P30 in cash, labour and building materials for the superstructure. In return, they are provided with logistical support, essential materials (the toilet seat, ventpipe, and cover-slabs) and technical assistance for the excavation of the pit.

The project is coordinated at the national level by the technical unit of the MLGL. At the district level, a coordinator employed by the Council is responsible for coordinating all implementation activities between central government and local government and in the project villages. Additionally, each village is allocated a coordinator, a works foreman and labourers. A health education campaign is to be run in parallel for the duration of the project with support from community health workers.

Results to Date:

It is difficult to compare the achievements of the sanitation project with those of the Village Water Supply Programme. While the provision of domestic water supply and sanitation ought to be closely linked, in reality, the two projects are qualitatively and quantitatively different. This is so in a number of respects, ranging from their organisational set-up, scales of operation and their chosen parameters of success. Moreover, the rural sanitation project is still in its first stages of development while the Village Water Supply Programme is well established and operating as a priority programme on a nation-wide scale. Presently, the sanitation project has only just developed beyond the pilot project stage and operations are restricted to just three districts.

Project achievements measured in terms of total units constructed can be presented. However, these figures represent only one measure of success. ESPP operated in 6 villages in two districts. Approximately, 134 households participated (Du Pradal, 1982). As a result, by the end of the project, the proportion of households with latrines had doubled from about 15% to about 30%. However, a recent evaluation of the
project in Kgatleng district calculated that only 40% of participants had completed their latrines and that 60% of units remained incomplete or not even started (Land & Raditloaneng, 1985b) (see Table 10). It is argued below, however, that these figures are really quite meaningless if they are not considered in the context of the wider goals of the project. Of greater importance is to examine the extent to which the construction and health education programmes have become institutionalised at the district and village levels, so that the project can become self-perpetuating, and to assess the extent to which the latrines that were built are being properly used and maintained by their owners. Yet, on the basis of these limited results, government, District Councils and donors were confident that the project should be extended. From this emerged a revised plan of operations under UNICEF sponsorship.

So far, the extended project which began formally in 1984, following a number of delays, has progressed slowly, but there are strong indications that the rate of implementation is speeding up. The rate of implementation remains a major objective of projects which are funded by external donors, on a short-term basis. In Kweneng district, it has been estimated that up to 200 households have already signed up for the project and most recently, the project has been extended to a further two villages. At least a similar number have already begun constructing their latrines in Kgatleng district where the project began at an earlier date. According to a progress report (KgDC, 1985), by early 1985, over 100 units had already been completed. However, in Southern district, a number of institutional teething problems have so far delayed the start of the project but it is hoped that the arrival of a volunteer should speed developments up. It is probable that the government will cooperate with a SIDA-funded environmental health project in North-West district, which aims to control the spread of Bilharzia through a number of interventions including the construction of latrines.

The total number of latrine units constructed is only one measure of project success. This is because the project aims to achieve a number of wider goals, which clearly distinguish it from a straightforward physical infrastructure project. In particular, the project has focussed on institution-building at the village and community levels and
also on the development of a health education programme. It is recognised that the benefits of improved environmental health can only be achieved providing there is successful coordination of these three facets of the project. However, these non-visible facets of the project take a longer time to develop and cannot be so easily measured in quantitative terms – certainly not within a two year time-span. In the long-term, their success is of far greater importance than immediate achievements in latrine construction. However, there seems to be an over-powering temptation to concentrate efforts on achieving these short-term goals.
FIELDWORK METHODOLOGY:

Fieldwork was carried out in Botswana between August 1984 and July 1985. During this period, I was attached to the Applied Research Unit of the Ministry of Local Government and Lands, and was provided with a sociologist counterpart to work in connection with the joint government-UNICEF rural self-help sanitation project. During my attachment to the ministry, I prepared two socio-economic and attitudinal reports on the project as an integral part of research for this thesis (Land & Raditloaneng, 1985a, 1985b). Attachment to an applied research institute was a condition set by the government of Botswana in order to receive research permission.

OBJECTIVES OF FIELDWORK:

Information was sought in the field to test how far Botswana's rural water supply and sanitation programmes have adopted the approach to delivery recommended by the Decade and to identify constraints in the implementation of policy. Information on the following subjects was gathered:

- the delivery systems used in the two programmes with particular reference to the role of central government, local government and community institutions in policy formulation and implementation.
- the objectives of national and rural development policy and the framework of policy formulation and implementation used.
- the socio-economic and cultural characteristics of rural society and the rural households relevant to the study of community participation in the water and sanitation programmes.

DATA COLLECTION TECHNIQUES:

Fieldwork was based on the use of a number of data collection techniques which ranged from the more general to the specific and from the quantitative to the qualitative, according to the nature of the information sought. At the most general level, a form of participant observation and action research was used to study the implementation of the water and sanitation projects and to study the role of national and sub-national institutions and their personnel in rural development. On
the basis of this approach, more specific information was obtained through the use of more rigorous research techniques based on a household questionnaire survey and the interviewing of individuals in government and at the village level. The former method was used to obtain information about village residents and community organisations to support the investigation of community participation. The information gathered was substantiated through the interviews conducted and the consultation of relevant documentary sources. Government officers were also interviewed in order to discuss wider issues concerning the formulation and implementation of rural policy.

FIELDWORK AT THE VILLAGE LEVEL:

The Household Survey:

Two surveys were undertaken in association with the government. The first was a baseline study for Kweneng district where the project was about to be launched. The second was an evaluation study for Kgateng district where the pilot project had been completed two years earlier. Both surveys sought similar information and used comparable methodologies, although, one focussed on the past and the other on the future. A random household survey based on a questionnaire-interview system was used to seek information on the following subjects:

- socio-economic household data.
- socio-cultural data on household water and sanitation practices.
- the capacity and willingness of households to participate in the sanitation project.
- household attitudes towards community participation and attitude to the use of extension workers.

The purpose of conducting a household survey was to obtain information concerning political, economic and social features of rural society. This was sought for two reasons. First, to contribute to an assessment of the impact of these different factors on the likely success of the sanitation project. Second, to contribute to an examination of community participation in rural development more generally.
The questionnaires used, comprised open-ended and closed questions in order to obtain both factual data and records of subjective attitudes and perceptions of the respondents. In this way, it was possible to accumulate both qualitative and quantitative data. The questionnaires were written in English while Batswana enumerators employed through the Applied Research Unit, and all with previous survey work experience, administered the questionnaires in Setswana, translating and recording the responses back into English (see appendix).

473 households were interviewed in the Kweneng survey in the four project villages: Molepolole, Thamaga, Mankgodi and Gabane, while in the Kgatleng survey, 213 households were interviewed in the three project villages: Olifants Drift, Artesia and Mabalane (see Maps 3 & 4). A random sample was chosen from each village. Aerial photographs were used to identify individual household plots which were used as the sample units. The sample was drawn by numbering the households and drawing lots.

A degree of bias was introduced into each survey. In the Kweneng survey, the sample in each village was stratified. In order to ensure that both old and new areas of settlement were assured of representation, the sampling frame was divided sectorally. A 10% sample was then selected from each sector. In the Kgatleng survey, where it was possible to undertake a more comprehensive sample owing to the small size of the villages, the sample was divided into three socio-economic categories: project participants, of which 54% were sampled; households which already owned latrines, of which 53% were sampled; and households which had not participated and which did not have latrines, of which 56% were sampled. Data collection took seven weeks to complete in Kweneng district and four weeks in Kgatleng district.

Informal Interviews and Participant Observation:

The household surveys were complemented by informal interviews with key individuals and participant observation in the project villages. These methods of data collection provided qualitative data which could be compared with the data obtained from the household surveys. In each project village, the author conducted informal interviews with members
of the tribal authority, modern village institutions and the extension team. Discussion focused both on the specific sanitation project and more generally on community participation and extension at the village level. The author was also able to attend a number of village-based workshops associated with the project, while on numerous occasions was able to accompany the project team in the implementation of the project in both districts. Finally, by living and working in the districts for most of the year in Molepolole and Mochudi, the author was able obtain the sort of insight into the daily lifestyle of rural Batswana which cannot be elicited from either written material or interviews.

Archival Work:

Reference was made to documented research prepared by governmental and non-governmental organisations on community participation and on Tswana history and culture.

FIELDWORK AT THE CENTRAL AND LOCAL GOVERNMENT LEVELS:

Participant Observation:

Advantage was taken of the opportunity of working directly with a government ministry and with personnel responsible for the sanitation project. At the ministerial level, the author was privy to daily discussion and events concerning the project and more generally with daily ministerial business. The author participated in a number of meetings and presentations on the issue of the project. More significantly, the author spent considerable time working at the rural administration centres in the two districts where accommodation and office space were provided. It was, therefore, possible to become familiar with District Council and District Administration functions, as well as to attend meetings and accompany the project team in field implementation.

Informal Interviews:

Attached to the government, the author was able to organise informal interviews with a range of government officers at the central and local
levels to discuss both the projects and more generally wider issues relevant to rural development and policy formulation and implementation.

**Documentary Evidence:**

Governmental and non-governmental reports available within government and in the national archives were used to complement and substantiate information obtained through other data collection techniques.

**DISCUSSION:**

The undertaking of socio-economic and related survey work has become an increasingly important and essential part of social planning (Conyers, 1982) and is recognised to represent a crucial part of work associated with the Decade (Perrett & Lethem, 1980; Simpson-Herbert, 1983). With regard to the Decade, the collection of a wide range of "socio-cultural" and "human factor" data is required in order to ensure that the objective of providing affordable, socially acceptable and technically appropriate systems is possible. It is also necessary to obtain information in order to plan and evaluate project delivery and to identify the most suitable institutions and personnel to work through (Cairncross, 1980; Simpson-Herbert, 1983; WHO, 1984). It is, therefore, common to find social survey work accompanying Decade projects. Usually, baseline, monitoring and evaluation studies are undertaken in this respect.

Reports prepared by UNDP and WHO, such as that of Simpson-Herbert (1983) have provided recommendations for the type of data that should be sought and of suitable data collection techniques that should be used and discuss the possible constraints to data collection that can be encountered in the field. The issues raised can be compared to those raised in discussion, more generally, on the constraints to survey work in the Third World and especially in rural areas (Casley & Lury, 1981; Peil et al, 1982). Attention is drawn to the fact that data is far less accessible and reliable in these circumstances and that, therefore, it is all the more important to use a research methodology which is flexible to accommodate potential constraints and which does not rely unduly on any single technique. The use of a variety of techniques is
recommended in order to reduce the risk of inaccuracy and misrepresentation and at the same time in order to obtain a range of qualitative and quantitative information. With respect to the Decade, emphasis has been placed on the use of four methods: participant observation, case studies, key informant interviews and household interviews (Simpson-Herbert, 1983). No single method in itself is adequate. Full benefits can only accrue through the complementary use of the different techniques.

Particular attention has been drawn to the constraints involved in undertaking purposive village surveys based upon household interviews and questionnaires. The collection of quantifiable data in order to carry out statistical analysis as the basis for making generalisations and inferences, depends all the more on access to reliable and complete data. Results may, therefore, prove inaccurate or misleading if the data source is not satisfactory. Where the collection of statistically testable data is required, great care must be taken to ensure that risks are minimised and that the data obtained and results inferred are treated with caution. The major constraints to the collection of quantifiable data are as follows:

- An inaccurate sampling frame which does not provide a correct representation of the sample population on which to base the random sample.
- The difficulty in identifying an appropriate sampling unit. This in particular concerns the definition of the household.
- Poorly constructed questionnaires which are too long, jargonistic, provide leading questions or are insensitive to culture and to taboo subjects.
- Enumerators who interpret and translate information incorrectly or who resort to the practice of filling out questionnaires while sitting under a tree.
- Respondents who provide inaccurate information or who answer what they believe the interviewer wants to hear.
- The watering down of crude data during the process of data coding and interpretation.
- The disproportionate amount of time that must be spent designing and testing the method, and on processing the data.
Ideally, it is recommended that such techniques are complemented by other techniques which provide less quantitative, but more qualitative information which can be used to substantiate or test quantified data. These include case studies which provide in-depth information on a number of perhaps non-randomly selected households, the interviewing of key informants who can provide detailed and verifiable insights into particular issues and local conditions which might not otherwise be available and participant observation which provides the opportunity for witnessing society in action over a more extensive period of time. These techniques can all provide detailed and revealing qualitative information which the formal survey can normally only scan, or in fact misrepresent. The information is, therefore, highly qualitative. It is even suggested that where resources and time are restricted, that the formal random survey should not be employed and that under the circumstances, more meaningful results could be obtained by using such alternative techniques (Casley & Lury, 1981, 1982; Peil et al, 1982). At the same time, it cannot be used for statistical purposes nor for forming generalisations because the data is neither wholly representative of a population nor collected objectively (Peil, 1982). As such these techniques cannot provide quantitative data even if the actual quality of data and understanding provided is in fact more substantial than that based on the formal survey. Fieldwork in Botswana was, therefore, influenced by the recommendations provided by the Decade and by specific discussions of social science research methodology in the Third world, but also was influenced by the specific circumstances which were encountered in the field.

Practical Evaluation of Fieldwork:

A random household survey was used to investigate community participation in rural development. Problems associated with the design and implementation of the survey were experienced although their effect was reduced owing to the support provided by the ministry (see below). It is appropriate to consider some of the problems experienced.

The Choice of Sampling Frame.

While local government registers and national census data are relatively accessible and recent, information about particular villages is less
complete. For the purposes of choosing a village sample, tabulated data is unsuitable for identifying the precise number of residing households at any one time, or for locating those households on the ground. Aerial photographs were, therefore, used as the best available means of locating village boundaries and individual compounds. The use of aerial photos also presents problems. A complementary ground survey is essential prior to choosing the sample to ensure that identified plots still exist and are actually occupied. With sometimes a frequent turnover of whole households or of their occupancy within and between settlements, even quite recent photographs can become out-dated. Account must also be taken of seasonal variation in occupancy. During the wet season, a majority of household members migrate to the lands leaving only the old, the young and the infirm who may not be suitable for interviewing purposes, or the plot may be abandoned altogether.

The Choice of Sampling Unit.

Difficulties can arise in using the household compound plot as the unit of analysis in socio-economic surveys. While there is a close relationship between an identifiable compound and a distinct household, it is evident that the networks characteristic of the extended family reach beyond a particular compound. Members of a household who might provide financial and social contributions to it, may be resident in another part of the village or in another settlement altogether. By differentiating between individual plots, there is the risk of overlooking important networks of social interaction between and within households which are fundamental to the socio-economic and political status of the household. It is only through the use of case study or participant observation techniques that it is possible to identify the existence and relative importance of such networks.

The Survey Schedule.

The formal questionnaire is not well suited to obtaining detailed and verifiable information about individual households. The quality of the information obtained depends on the questions asked, the quality of the enumerator and the attitude of the respondent. While straightforward factual data can be more easily obtained, attitudinal information can be misrepresented through the manner in which questions are interpreted and
reinterpreted by the enumerator, the respondent and the data analyst. Questions must be addressed which do not offend or mislead the respondent - this is particularly important in relation to taboo subjects such as personal hygiene and personal wealth. Sensitivity to these issues is difficult for the researcher who is unfamiliar with local language and custom.

Interviews of Key Individuals and Participant-Observation.

Given the limitations of the survey technique, a major part of fieldwork was based on conducting interviews with key individuals and on participant-observation.

Informal interviews proved indispensible for the purposes of clarifying, substantiating or rejecting information gathered from the household surveys and from documentary sources. Yet, for an interview to provide useful information, a number of issues must be considered. Obtaining desired information and cooperation depends on the approach used by the researcher. It is too easy to fall into the use of jargon or to presume that the interviewee is familiar or at all sympathetic to one's line of research. Therefore, questions must be simple and direct and presented in as objective a manner as possible to avoid the risk of offending or of appearing to accuse the respondent. However, the initial problem to surmount is to locate suitable people to interview and to convince them that it is worth their while to cooperate. Finding the right people can be a particular problem in remote rural areas. Poor communications and misunderstanding can account for many wasted trips to cancelled meetings. Convincing people to cooperate is more of a problem in government circles where time is at more of a premium, or, at least, is made to appear so.

Participant-observation was employed in a multi-dimensional sense to study the implementation of the sanitation project and rural development more generally. As a participant in the project, albeit on the periphery, this form of observation represented action research. Investigation focussed on investigating implementation at the central government, local government and the community levels. The opportunity of working with a project and of being able to move between the government and community levels was used as the basis for examining the
translation of prescription into action. Direct involvement yielded a breadth and depth of insight which would have been unobtainable as an external observer relying solely on indirect methods of data collection. However, this form of action research can be criticised for yielding undefinable and biased information. It is possible that the researcher loses objectivity by becoming too involved in the immediate needs of the project. It is strongly argued here that such participation provided the sole of means of evaluating the interpretation of theory into practice - of examining the principles of the Decade in action in a specific country. Within this context, it was appropriate to conduct household surveys to obtain more detailed information about field implementation.

Practical Constraints.

Beyond the problems associated with the design of a suitable research methodology, the expatriate post-graduate researcher can expect to encounter a number of not insignificant practical constraints which can limit the scope of anticipated research.

Constraints in particular concern one's status as a researcher and one's status as an expatriate. Regarding the former, the researcher who arrives with no formal attachment to a recognised government or non-government organisation faces serious problems in trying to undertake research. Problems can range from obtaining permission to undertake research to obtaining the elementary supports for fieldwork such as accommodation, transport, cooking facilities and access to translators and enumerators. In all likelihood, the researcher is unfamiliar with on-going research and cannot easily ascertain how relevant or indeed desirable the intended research is to the host government. Regarding the latter status, the expatriate arrives in a new country, unfamiliar with language, customs and culture, and is bound to have to spend time becoming acquainted with the new environment, as is indeed standard practice with most newly arrived expatriates. Personal affairs and administration can become complicated and time-consuming. This is certainly the case with regard to obtaining a residence permit and access to banking and medical facilities too.
These constraints are all the more apparent when research is conducted in remoter rural areas. Yet, they are in all cases particularly serious for the researcher who has limited financial resources and time. The maximum period of time which can be realistically spent overseas is one year. While this should be quite adequate under normal circumstances, one must recognise the constraints noted above which can reduce the effective time spent doing research. Furthermore, there is little opportunity to undertake a preliminary visit, nor to organise a subsequent return visit so that everything must be planned, organised and completed during the one visit.

One must, therefore, consider what the researcher can be expected to achieve in a year. It is strongly argued that the attachment of the author to a government ministry was an indispensable asset which limited the effects of the constraints noted above and ensured that effective research could be undertaken. While some disadvantages were experienced as a result of this attachment, it is concluded that these were far outweighed by the advantages enjoyed. The major disadvantages and advantages are summarised here.

- The disadvantages -

Attachment to the ministry and working in association with a counterpart demanded a degree of accountability to the government and the project team to ensure the completion of survey work. While this did not interfere with my own priorities, a considerable amount of time was dedicated to survey work while it is also recognised that the household survey technique might not have been used if it had not been required by the government. Furthermore, the surveyed districts and villages were determined by the government in connection with the needs of the project. Yet since this was the subject of analysis in any case, this built-in bias was of less importance, while I was assured of complete freedom in the organisation of the questions and issues that I addressed. Finally, it might be argued that my attachment to government took away from the status of an unattached researcher and that this may have affected the attitude of respondents in answering questions. At the same time, it is suggested that as an overseas European researcher, I was immediately associated with government officialdom by rural residents.
- The Advantages -

The most important benefit was the opportunity provided to be a participant observer of government and non-government institutions in the implementation of the projects which was central to the research and which could not have been possible otherwise. The attachment to the ministry also provided ease of access to government personnel and documentation for consultation, which again would have been difficult to organise as a wholly independent researcher. As a member of the project team, it was possible to organise informal interviews with key informants at all levels. Participant observation and informal interviewing provided valuable qualitative information which has been used as the basis for chapters 5 and 6.

The government also provided the essential logistic, manpower and financial support necessary to undertake household surveys in rural areas. The ministry provided transport, bicycles, accommodation, cooking facilities, enumerators, typing and printing facilities, stationary, maps and photos. These would have been far less readily available without governmental support and it is certain that survey work would have proved to be less comprehensive and successful. Furthermore, as a member of the project, it was possible to arrange meetings with village key informants as well as to receive the permission of the village headmen to interview households. This permission may well have been refused, or my presence treated with suspicion if I had arrived as an independent researcher. The status of a government researcher could, therefore, be used as a platform for undertaking my own research.
THE VILLAGE WATER SUPPLY PROGRAMME - POLICY FORMULATION, IMPLEMENTATION AND OPERATION/MAINTENANCE:

This section examines the delivery system and associated institutional structure of the Village Water Supply Programme (VWSP). First, the institutional structure of the programme is described. The relative influence exerted by central government, local government and community institutions in policy formulation, implementation and operation/maintenance is evaluated. Second, explanations are provided why a top-down framework has been used at a time when the provision of rural water supplies is being promoted on the basis of community participation and self-help, by the international aid community.

The distinctive feature of the Village Water Supply Programme is that policy formulation and implementation is dominated by central government. More recently, local government has been provided the scope to influence the operation and maintenance of installed systems. By contrast, the community has remained a passive recipient playing no part in project delivery, and is not even required to pay user charges (see Fig 3). The programme is distinctly top-down. This can be contrasted to the bottom-up characteristics of the rural sanitation project.

CENTRAL GOVERNMENT INTERVENTION:

Policy Formulation:

Within the broad framework of water resource policy set out by government, guidelines for the provision of rural water supplies are prepared for the Ministry of Mineral Resources and Water Affairs (MMRWA).

At the broadest level, central government determines the capital and recurrent budget allocations that are deemed appropriate for the rural sector and determines the means by which rural supplies are to be provided. The details of this strategy are negotiated principally between the MMRWA, the MLGL and the MFDP. However, central government decision-making is influenced by two other sources. First, by the District Councils through their District Development Plans (see ch 7).
Fig 3: The VWSP – Institutions and Direction of Delivery.
Second, and more importantly, by SIDA, the major external donor which has been closely associated with the VWSP since its inception in 1972. In view of the significant capital and technical support it has provided, SIDA is in a strong position to influence broad policy making at the highest level. The role of SIDA in the VWSP merits further discussion.

The Role of SIDA:

SIDA has been actively involved in supporting the provision of domestic water supplies in developing nations since the mid-1960's. It has been primarily concerned with improving the use of water, increasing the supply of water and improving sanitation (SIDA, 1984). It has targeted its support to rural areas through assistance at both the national and regional levels. Support is based on three activities; the construction of infrastructure, the provision of training for operation and maintenance, and the encouragement of inter-sectoral cooperation. To date, Botswana is in receipt of SIDA's third largest aid programme, after Tanzania and Kenya (SIDA, 1984). Since 1972, SIDA has played an influential role in the design, implementation, and supervision of the VWSP, in both financial and manpower terms. According to Agrell et al (1984), SIDA has provided up to 72% of the total capital costs of the programme, with the remaining 18% of the investment programme being provided by government's own Domestic Development Fund. The level of this contribution, however, has varied from year to year. For the financial year 1981/82, for example, SIDA only provided 50% of the total budget, but this figure does not take account of the provision of further funds for setting up the Council Water Maintenance Units (see below).

While financial support from SIDA is provided in grant form, it is tied to the procurement of Swedish goods. Moreover, SIDA prohibits the purchase of materials from South Africa, irrespective of the economic advantages that could be gained. Support from SIDA has been directed to three areas. First, to the VWSP, coordinated through the Ministry of Mineral Resources & Water Affairs (MMRWA), second, to the support of operation, maintenance and rehabilitation activities at the district level, through the Ministry of Local Government & Lands (MLGL), and
third, and most recently, to a health education and sanitation project through the Ministry of Health (MoH) (SIDA, 1985).

Fifteen years after the inception of the VWSP, a well established planning and implementation delivery system has been created, although the design and installation capacity of the ministry could well be strengthened, according to a ministry planner. A standardised delivery system has been established. Few changes have had to be made to broad policy guidelines, although procedures are constantly reviewed by central government in association with SIDA. Negotiations for capital funds are carried out between the implementing ministry - MMRWA, the MFDP and SIDA. Capital fund allocations are calculated according to existing and forecasted implementation capacity at both the central government and local government levels. More recently, in an attempt to speed up the rate of implementation, drilling contracts have been awarded to the private sector to make up for government's limited drilling capacity. In 1985/6, for example, 34% of drilling was undertaken by private contractors (SIDA/GOB, 1985).

The allocation of resources between the nine districts is determined by the Department of Water Affairs (DWA), within the MMRWA, which is responsible for the design and installation of supply systems. Allocations are based on consultation with the MLGL, who consult the individual district water sector forecasts submitted as part of the District Development Plans by the District Councils. The DWA must also decide on how best to distribute resources between a number of activities linked to the VWSP. These include installation of new systems, rehabilitation of existing systems and the provision of emergency relief to drought-striken areas. Therefore, the department must be sensitive to the political preferences of the day.

Policy Implementation:

Policy implementation is undertaken by central government with little assistance from either local government or the recipient community. Installation is the responsibility of the DWA/MMRWA. It installs the boreholes which supply the system. A number of test drills are made in suitable locations in proximity to the village by the drilling team. Once a suitable borehole is identified, it is equipped with a pump and
pump motor. A suitable borehole must provide an adequate yield to satisfy present and projected demand, and must be potable. In this respect, water chemists from the DWA are brought on site to conduct tests on bacteriological and chemical levels. The borehole is then connected to a storage tank of standard specification. According to the size of the village, the system is reticulated to a number of standpipes. The community assists the DWA by digging the trenches which carry the pipes. Once the reticulation system has been installed and tested, it is handed over to the District Council for operation and maintenance, with the exception of the major village supplies which are operated and maintained by DWA staff.

LOCAL GOVERNMENT INTERVENTION:

Currently, local government makes no contribution to the implementation of the programme and, therefore, is not directly involved in policy formulation. However, it is likely that this state of affairs will change in the near future. Increasingly, government is concerned to improve the operation and maintenance of existing systems and has recommended that the District Councils be made responsible for this activity. As their role in this domain increases, it is probable that they will be invited to make a more substantial contribution to both policy formulation and implementation.

Policy Formulation:

The allocation of VWSP resources to individual districts is outlined in annual plans based on estimates set out in the National Development Plan. These estimates are based on forecasts provided by each district in their respective District Development Plans (DDP) (see ch 7). Forecasts are channelled through the DDP because the programme represents a nationwide sectoral investment programme, undertaken by a line ministry which receives an annual capital and recurrent fund allocation. Each District Council is, therefore, expected to prepare a plan of action for the water sector based on an evaluation of existing facilities and future water needs in the district. It must note the number and type of settlements which still require servicing, or which may be entitled to provision, in the future, under the terms of the programme. Based on this assessment, it must provide a list of villages
which it considers ought to be included in the programme under the current plan period. The criteria used by the Council to choose appropriate settlements vary according to individual districts but are bound by general guidelines provided by central government (see Fig 4).

Once the Council has prepared a list of priority villages, it is submitted to the District Development Plan and time-tabled in the Annual Plan. These plans are forwarded to the MLGL and the DWA who negotiate the final choice of 20 or so villages which will be serviced in the Annual Plan period, across the nine districts.

Local government intervention in policy formulation is limited to influencing the level of resource allocation within a given plan period. This is achieved through the district planning process. Little else can be achieved in policy formulation. Local government does not directly influence broader policy making, regarding the setting of policy objectives and the design of an implementation framework. The extent to which it can influence the resource allocation process is, however, constrained by two major factors:

- the fact that it is not responsible for policy implementation (it does not even handle the funds).

- the fact that its influence depends on government paying serious attention to the recommendations contained in the District Development Plans (see ch 7).

Operation and Maintenance:

Recently, local government has been assigned the responsibility for the operation and maintenance of installed systems, except in the major villages where the systems continue to be serviced by the DWA. A greater degree of cooperation between central and local government has, therefore, become necessary in policy formulation so as to ensure that the rate of system installation does not exceed the operation and maintenance capacity of the District Councils.
Criteria set by Government/SIDA:

- Settlement characteristics;
  population size & density, remoteness, degree of permanency (actual or anticipated).

- Existence of basic amenities;
  a village applying for a system must have an existing or planned health post and primary school.

- Service hierarchy;
  The quality of service provided is determined by settlement characteristics and its role within a settlement hierarchy and/or rural development programme (see fig 2).

- Felt Needs;
  Application for participation must originate within the community itself. There must, therefore, be evidence of a 'felt need'.

Criteria set by the District Councils:

- Councils will only consider settlements which have made a formal application through the appropriate local government channels.

- Resources may be divided between the provision of new supplies and the rehabilitation/extension of existing supplies. The choice of allocation is more relevant in the smaller districts where most of the major settlements have been supplied. This choice is influenced by the following considerations;
  - the need for emergency action to provide water to drought-stricken areas.
  - the need to consider the Council's capacity to operate and maintain existing systems, from a manpower, finance and logistics point of view. This may affect the rate of implementation.
  - the need to consider the implementation capacity of the DWA and the cost of providing the service to remote settlements.

Influence of Community Consultation:

A settlement can only be considered for inclusion in the programme if it submits an application to the Council. However, water supply is generally identified as the first priority of all communities and inclusion in the programme is sought by everyone. Consultation, therefore, serves to confirm what is already known. At the same time, the Councils are aware that water provision is a sensitive political issue which must be addressed seriously and that, therefore, there is an imperative for Councils to satisfy demand as rapidly as possible.

Fig 4: The VWSP - Resource Allocation Criteria.
In 1980, SIDA and GOB set up a programme to provide the districts with financial and manpower resources to support the establishment of water maintenance units (WMU's) (Endresen et al, 1981). These funds are provided through the MLGL, by SIDA. For the time being, the programme is coordinated by an expatriate water technician working within MLGL (SIDA/GOB, 1982). At the district level, expatriate personnel have also been employed to run the new units. At present the units face a number of technical problems which have prevented effective operation. These problems concern in particular a shortage of trained manpower and inadequate transport (GOB, 1985).

Once a water supply system has been installed by the DWA, it is handed over to the relevant District Council. It is then under statutory obligation to operate and maintain the system through the WMU's. Councils are responsible for the employment and training of pump operators, to be assigned to individual villages, the distribution of fuel for running the diesel pumps and the undertaking of routine and emergency maintenance tasks. These units are also responsible for rehabilitating existing systems and for installing private connections (SIDA/GOB, 1982).

COMMUNITY PARTICIPATION:

The outstanding feature of the VWSP is the extent to which community participation is absent from policy formulation, implementation and even operation and maintenance. This is so, even though the VWSP is a community-based service, often serving remote and scattered rural settlements. The limited part played by the community in the provision of this service can be contrasted with the central part played by the community in the sanitation project.

Policy Formulation:

Community participation in policy formulation is particularly absent. The community plays no part in policy design at all, neither in relation to decision-making within the broad framework of the programme, nor in relation to the design and implementation of field operations. It provides, for example, no input into the choice of technology that is used. Absence from participation in decision-making reflects the fact
that the community is not involved in the installation process. The role of the community in policy formulation is, therefore, restricted to two areas.

First, the community can in theory influence the process of resource allocation. In this respect, the community is responsible for lobbying its interest in taking part in the programme. This point is raised above in relation to the part played by local government in preparing a list of priority villages. The community is supposed to express its interest during the consultation stage of the district planning process (see ch 7). In drawing up its list of priority villages for the programme, the District Council is then expected to consider the applications that have made by individual communities for inclusion in the programme. Yet, submission of an application represents only one factor which can influence resource allocation.

Second, should a particular settlement be included within the programme's implementation schedule, it then has a limited opportunity to influence the design of the water supply system. A meeting is convened at the Kgolola to officially inform the headman and community, that the village has been included in the current programme. The opportunity is taken to seek the approval of all interests within the village and, in particular, of the tribal authorities. At a later stage, a further meeting is arranged to discuss the design and installation of the system. At this stage, the community may suggest where the standpipes ought to be installed. A representative from the DWA is present to discuss the preferred location of the standpipes (Coppermann, 1978). This is the only stage during which the recipient community can influence policy formulation in a tangible way. Otherwise, planning remains top-down (Coppermann, 1978).

**Policy Implementation, Operation & Maintenance:**

Community participation in policy implementation is equally restricted. Neither individual households, nor the community at large is called to make a self-help contribution, either in terms of providing direct labour, materials or providing a cash contribution. The VWSP is fully subsidised by government. Even user tariffs imposed originally on
consumers to support running costs have been abandoned. The community is, therefore, a passive but satisfied recipient which perceives the provision of water as one of several government services such as primary schools and health facilities, to which it is entitled.

Participation is restricted to the excavation of trenches for laying the water reticulation pipes. Use of village labour serves to provide cheap labour on the spot. However, strictly speaking, this does not count as community participation as the workforce is employed and paid as casual labour, even though it might be the VDC which chooses the labourers (Coppermann, 1978). This represents the full extent of participation in the implementation stage of the programme. VDCs are, however, encouraged to undertake additional work to the water supply facility such as to erect fences around standpipes and the pump house to prevent damage and fouling by livestock and children (SIDA/GOB, 1982). Such activities do call for a small self-help contribution from the community.

The community is also excluded from direct involvement in the operation and maintenance of the system. Each supply requires a trained operator to take charge of the day to day running of the system and to undertake basic preventative maintenance. This includes, maintenance of the diesel-powered pump, ordering of fuel, daily checks to standpipes and taps, and observation of the pumping timetable. The operator is, however, a local government employee who is not necessarily a resident of the village in which he works (Coppermann, 1978). Candidates for the post of pump operator are allocated to newly installed systems after receiving a short training course. Major repairs are undertaken by the Council's WMU's. The community itself is not able to carry out routine repairs and servicing. It must rely on the Council employed pump operator, or indeed the WMU, in the case of a major breakdown or if fuel supplies run out. However, many villages are located up to 200km away from the WMU along poor quality tracks.
FACTORS DETERMINING THE VWSP DELIVERY SYSTEM:

The Village Water Supply Programme has been primarily concerned to install water supply systems in as many villages as possible, as quickly as possible. By contrast, far less attention has been paid to the issues of operation and maintenance and of providing a complementary health education programme. More recently, these issues have received greater attention, as policy objectives have evolved. Yet, as a result of the emphasis given to the installation of infrastructure, the programme has become organised in a top-down fashion, dependent on capital-intensive methods and a skilled and centralised management and labour force. Little scope has been given to either local government or community participation in any stage of the programme. The characteristics of the programme may be contrasted to examples of rural water supply projects undertaken in other parts of Africa and as advocated by the Decade. It is likely, however, that in the foreseeable future, the institutional structure of the programme will change as policy objectives are revised.

In accounting for the top-down approach to delivery in this programme, features of Botswana's political economy and environment must be examined. Such contextual factors can explain why the VWSP is so very different to projects found in other parts of Africa and to the recommendations that have been proposed by the Decade. They can explain why a top-down approach has been used at a time when bottom-up approaches are being advocated. The following factors are considered to have most directly influenced the design of project delivery (see Fig 5).

1. Politico-economic factors:

- the status of water as a valuable but scarce resource in Botswana.
- The timing of the programme in relation to government's rural development strategy during the 1970s, characterised by a high level of state intervention and a bias towards social infrastructure provision.
- The centralisation of rural policy formulation and implementation away from local government and community institutions during this period.
INTERNAL FACTORS:
1. Rural Development Objectives
   - Social infrastructure bias
2. Rural Delivery System
   - Top - Down
3. Water Priority Status
   - High
4. Major Policy Obstacles
   - Geological factors
   - Available technology

EXTERNAL FACTORS:
1. Aid Assistance
   - SIDA (technical/financial)

VILLAGE WATER SUPPLY PROGRAMME

Fig 5: The VWSP - Factors Influencing the Delivery System.
- the technical and financial input that has been provided by the donor community.

2. Environmental factors:

- the geographical scarcity and geological distribution of water and the implications that this has had on the type of technology required to exploit reserves.

Politico-economic factors:

The Status of Water:

Ensuring access to water has always been a pre-occupation of the Batswana. Water is a scarce resource in a marginal environment where drought conditions are close to endemic. Access to reliable and convenient sources of water is critical for the survival of both the human and livestock populations, and for food production. This fact was recognised by the colonial administration which invested heavily in water provision as a means of supporting the development of the livestock sector (Roe, 1980). The organisation of traditional Tswana society was structured to co-exist within this harsh environment. This was, for example, reflected in patterns of settlement and in laws pertaining to the ownership and use of water. Permanent villages were located close to reliable sources of water, while livestock was grazed away in the bush and trekked between available water sources (Schapera, 1970). Often settlement at the 'lands' was restricted because of inadequate supplies of water especially during the dry season. Water sources were, therefore, cherished by their owners and jealously guarded. Access to water was a pre-condition for exploiting grazing land and so in turn of raising livestock as the basis of the subsistence economy.

At the village level, the tribal headman was responsible for managing water resources. In particular, he was responsible for the allocation of water sources between households and of settling disputes between rival claimants over a source. He, furthermore, had the esteemed responsibility for ensuring that the rains would fall during the wet
season (Schapera, 1970, 1980). For the Batswana, therefore, water was perceived to be the crucial factor to ensuring their livelihood and survival. In contemporary Botswana, the centrality of water to national development is only too apparent and has been highlighted by the persistent recurrence of drought, most recently in the 1980-85 period. It is recognised that ensuring access to water is the key to achieving development and prosperity. It may be noted that the Setswana word for rain, "Pula", has been used for the national currency, and also serves as the national slogan, to express goodwill and prosperity. Moreover, the importance of water to national survival is symbolised on the national flag and coat of arms by a horizontal blue band.

Against this background, the central state has undertaken to oversee the management and distribution of water resources in all sectors of society. This is not uncommon in either developed or developing countries where water is perceived as a natural resource which must be managed by the state as a public asset (Saunders & Warford, 1976). However, in poor drought prone nations, this perception is all the more emphasised. In this respect, the modern state has inherited the responsibility, previously held by the traditional tribal leaders, to ensure that adequate water is available for human, livestock and production purposes. However, particular emphasis has been placed on ensuring that the majority of the rural-based population has access to free and plentiful water. By contrast, urban consumers must pay a tariff while cattle owners are now responsible for providing their own supplies. It may be argued then that evidence of state intervention in the provision of water supplies confirms in the minds of the majority of people, the belief that the modern state protects their interests in a way that the tribal leaders had done previously. As such, state provision of water can be understood to have symbolic connotations. Indeed, to shirk responsibility in this domain would undoubtedly represent political suicide. Government has, therefore, had to be sensitive to the traditional status of water in Tswana society. This has been all the more important given that under colonial rule, the administration made little effort to develop water resources for human consumption in traditional settlements. Government's commitment to water provision reflects its awareness of the great importance that both the local authorities and the community place on water as the cornerstone of development. It is sensitive to opinions voiced by
politicians, local government administrators and community representatives in relation to water provision at the local government level.

Rural Development and Institution-Building:

The VWSP has been closely associated with the evolution of government's rural development strategy and institution-building programme (see ch 2 & 3). As a highly political issue, water provision has played an important role in spearheading government's rural development strategy since independence.

The VWSP, therefore, formed an integral part of the rural investment programme undertaken during the 1970's, being included within the massive physical and social infrastructure provision programme - the Accelerated Rural Development Programme. In line with government's rural development strategy (GOB, 1972), access to water was seen as a prerequisite for investment in directly productive activities in the rural sector and essential for making up for the dearth of infrastructure which had been inherited at independence. It was, moreover, politically expedient, just prior to a general election, for government to be seen to be providing tangible symbols of development to the relatively deprived rural areas paid for by the profits of the mining and livestock sectors, and by donor financial support (Colclough & McCarthy, 1980).

As a result, in line with most government supported rural infrastructure programmes at the time, the VWSP was structured in a top-down fashion with emphasis placed on rapid physical implementation over as wide an area as possible through central government institutions. From a political point of view, such a policy would further highlight government's 'caring' image. From a practical point of view, central government was concerned that local government institutions lacked the necessary implementation capacity to achieve policy objectives and could consequently compromise government's political aspirations (Chambers, 1977). Furthermore, there was a growing belief, expressed in particular by the Ministry of Finance and Development Planning, that decision-making and implementation of rural development activities ought
to be firmly re-centralised and that the fledgling District Councils, established at independence, be done away with (Picard, 1979). Clearly, the political and technical issues are inseparable, as chapter 7 discusses further.

Donor Agency Influence:

Notwithstanding government's clear commitment to providing water on a national scale, it must be recognised that this objective has been achieved only as a result of the substantial support that has been provided by SIDA. It has provided indispensable capital expenditure grants and skilled technical manpower. Without SIDA's support, or that of another donor, the programme could not have achieved the results to date, while it may have been designed to different specifications. It is unclear, therefore, the extent to which SIDA, as the principal donor involved in the sector, has influenced the form of delivery used. Indeed, SIDA has emphasised its commitment to investing exclusively in the rural sector and for concentrating on domestic rather than on production-orientated water supplies. It may be argued that resources would not have been forthcoming from SIDA if government had not shared the same objectives as the Swedes.

Environmental Factors:

The Relationship Between Technology and the Environment:

The extraction and distribution of water in Botswana's Village Water Supply Programme is highly technology dependent. This dependence can be attributed to both the objectives of the programme but also the influence exerted by environmental factors. In relation to the former, the major objective of the programme has been the rapid installation of water supply systems with little attention paid until recently on ensuring that a high standard of operation and maintenance of installed systems is achieved. While the options available to government are restricted by environmental factors, alternative technology options could be developed if the emphasis had been on reducing costs per capita and on improving the standard of operation and maintenance.
Emphasis has been placed on using a technology which is highly capital-intensive and which depends on the operation of small teams of skilled engineers, hydro-geologists and operators. Reliance on this technology option reflects distinct geographical characteristics, especially geological and climatic features of Botswana which prohibit the exploitation of water resources by alternative, cheaper and less highly technology dependent means, which could perhaps rely more heavily on community participation. This technology package has demanded an organisational framework which is centralised, specialised and well coordinated. Only central government within the public sector has this required implementation capacity. Neither the existing local government institutions, nor community level institutions are in a position to offer these capabilities. Consequently, they have been excluded from the design and implementation of the programme.

The programme depends overwhelmingly on groundwater extraction, as there is quite insufficient surface and sub-surface water available in most parts of the country. Apart from the Okovango, Chobe, Molopo and Limpopo rivers, all other rivers are ephemeral. Even such major rivers are prone to irregular flow and descend across a low gradient. These features prohibit the possibility of constructing large dam reservoirs. Moreover, reservoirs which do exist must also contend with extremely high evaporation rates. In the western part of the country, in the Kgalagadi desert, even ephemeral rivers are absent, but here, few settled communities are found. The only viable alternative source of water is the underground aquifer. However, the combination of geological features, which preclude the occurrence of large aquifers, irregular rainfall and extremely high evaporation rates caused by persistently high temperatures and often clear skies, means that aquifer reserves and their rate of recharge are uncertain (Gould, 1984). In the Kgalagadi desert, the sand is so thick that water can never percolate down to the underlying bedrock. Nevertheless, because of the general absence of adequate surface water sources, as much as 75% of the human and cattle population has become wholly or partially dependent on groundwater sources (Gould, 1984).

The Village Water Supply Programme has, therefore, come to rely predominantly on seeking supplies from deep aquifers, sometimes as much as 100m below the surface (Gould, 1984). These sources can only be
reached by means of powerful drilling rigs. These are both expensive to purchase and to maintain. Access to such machinery is beyond the means of District Councils which lack the necessary financial and manpower resources to support such equipment. Even the DWA has insufficient capacity to fulfil demands for borehole drilling and has had to resort to the private sector for assistance. New equipment is normally provided in the form of gifts from SIDA. For example, SIDA recently provided new trucks for the DWA in order to increase the implementation capacity of the department (Daily News, 1985). Reliance on this technology, therefore, restricts the capacity of both central government and also of local government to operate independently of external assistance.

There are other problems facing the use of groundwater sources. There is little accurate data available concerning the quantity and age of aquifers, and of the rates of recharge if indeed recharge is occurring at all. Furthermore, many of the boreholes sunk provide very poor yields. The siting of a borehole is something of a costly financial gamble. Often several boreholes must be sunk before a suitable source is found. On average, there is a 40% success rate and most villages require 2 boreholes (Agrell et al, 1984). Between 1981 and 1982, for example, 111 boreholes were sunk as part of the project. Of these, only 49 proved successful, while 52 were dry and 10 were too saline (SIDA/GOB, 1982). This success rate diminishes as one progresses into the Kgalagadi where often only 30% of boreholes yield potable water (SIDA/GOB, 1983). In terms of water quality, a high proportion of boreholes have excessively high levels of saline, nitrate and bacteriological content and are, therefore, unpotable. Of a sample taken of 248 boreholes in Botswana, 53% were considered to be unacceptable for human consumption according to the standards imposed by WHO (Gould, 1984).

For these reasons, this method of water extraction is particularly expensive. It has been calculated that the average cost of drilling, equipping, and reticulating a water supply system, is in the order of P130,000. This can be translated into an average cost per head of P50, or of P100 or more in remoter western areas (MLGL, 1983), where one must take into account a lower population density, a high remoteness factor and the high risk of obtaining blank or contaminated test drills. As a result, the costs incurred rise significantly in the remoter areas.
Transport overheads, moreover, absorb an increasing proportion of total costs. Therefore, there are distinct economic constraints which discourage investment in areas of scattered and remote settlement. Increasingly, government is looking for alternative technologies which may be appropriate for smaller communities and less onerous to government (GOB, 1985).

The form of technology used for pumping and distributing water also demands a level of skill and finance which a community is unable to provide. Because of the great depths at which water is abstracted, it has been argued that manually-operated pumps are not suitable and that motorised alternatives are required. As a result, the VWSP has relied on the installation of "Lister" diesel motors. While this engine has proven reliability, it depends all the same on external support for periodic maintenance and the regular delivery of fuel. The technology is still relatively sophisticated and onerous. Furthermore, the borehole itself and the mono-pump are prone to breakdowns as well as requiring periodic cleaning. All these activities require the use of specialised tools and replacement parts which are not available to the water supply users.

Against these technological and environmental constraints, it is only central government which has the capacity to orchestrate a nationwide programme of water provision on the scale required, given policy objectives. It is argued that the standardisation of equipment and the creation of a top-down implementation framework, has been essential for efficiently organising such a technology dependent programme (Agrell et al., 1984).

A further factor which has influenced government's choice of technology is the implementation capacity and assets inherited at independence. Government has continued to use this capacity, which was built up during the colonial period for livestock watering purposes, but has harnessed it for supporting its domestic programme. A situation did not arise, as has been the case in relation to the sanitation project, in which government was forced to design a programme and to set up an institutional framework to support it from scratch.
In terms of achieving the goals of the programme, as defined by the number of villages served, top-down delivery is highly effective providing a widespread and egalitarian distribution of the service (Agrell et al, 1984). Variations in the distribution of water between and within districts have been minimised. These are precisely the conditions required in order to achieve the political success that government has sought in supporting this visible infrastructure programme on a national scale.

But there have been drawbacks too, some of which have been already mentioned. In particular, there are logistical problems associated with an inadequate implementation capacity which is highly centralised. In such a sparsely settled country, with often very poor communications between settlements, provision could be more efficiently organised from the district level. However, this is unlikely in the foreseeable future given the constraints which face local government. However, as provision in smaller and remoter communities becomes prohibitively expensive, under existing circumstances, it is likely that resort may be made to alternative low technology systems. This could stimulate greater participation at the district level and at the community level too.

A Change of Priority:

In light of a critical evaluation of programme achievements to date, policy objectives have been revised. The initial emphasis placed on physical infrastructure installation has been replaced by a growing concern to achieve higher standards of operation and maintenance, and on encouraging the promotion of a complementary health education campaign.

As a result, as policy objectives have changed, so too has the programme's delivery system. Increasingly, the top-down approach, appropriate for a programme which was only concerned with installation, is recognised to be less appropriate for a programme concerned with operation, maintenance and health education. Consequently, greater opportunities for involving local government and community institutions within the framework of the programme have been provided. In future years, it is probable that the programme will come to depend
increasingly on bottom-up delivery and thus more closely resemble the features of the SHESP sanitation project.

The apparent shift in policy objectives can be explained by the following factors. First, it may be argued that the original objectives have been successfully achieved. While many smaller villages still await inclusion in the programme, in general, the VWSP has been spectacularly successful in providing safe and reliable water supplies to a large number of settlements across the country. From the point of view of distribution, the programme has achieved the goal of providing widespread access to a state service, over a relatively short period of time. In so doing, government has also achieved its primary political objective.

Having achieved the quantitative aims of the programme, attention can now focus on qualitative issues, concerning the reliability and the health benefits of supplies. The problem is that in having focussed primarily on the challenge of installation, a technology and implementation capacity has been built up which is not conducive either to encouraging improved standards of operation and maintenance, nor of health education, which to succeed, must depend on the more thorough use of local government and community institutions. However, it is apparent that government is more confident, than ten years ago, in the ability of district-level institutions to take on a greater responsibility for managing rural development programmes, as witnessed by the establishment of the WMU's.

Second, the clear shift in policy can be attributed to evidence that installed water supply systems have a poor record of operation and maintenance (SIDA, 1985), and water hygiene remains poor with contamination of water still common. These findings point to the fact that the installation of infrastructure in itself cannot lead to the sorts of improvements to community health that are desired, as has been acknowledged by government in the most recent NDP (GOB, 1985). Indeed, the problems associated with polluted water and regular breakdowns in water supply have often received widespread coverage in the national press. Constant pressure has been placed on government to alleviate these problems exacerbated by the continuing drought conditions.
Operation and maintenance and to a lesser extent health education have become political issues.

This concern has also been influenced by the emphasis placed by the Decade on the importance of linking together water supply provision and sanitation provision, through health education and community participation in the fight against environmental diseases. SIDA has, moreover, encouraged greater inter-sectoral cooperation between water and sanitation in its revised water sector support programme for Botswana (SIDA/GOB, 1985). The current concern over operation/maintenance and health education is discussed in more detail.

Improved Operation and Maintenance:

Presently a large number of installed systems breakdown, run out of fuel and are left abandoned sometimes for lengthy periods of time. As a result, consumers resort to traditional water sources which may be unprotected and distant. Appropriate action cannot be undertaken by the pump operator unless the breakdown can be easily repaired. For all major repairs and for the supply of fuel, the districts' WMUs are required but these are heavily over-burdened. This is more of a problem in the remoter villages where the standard of operation and maintenance is lower and breakdowns are more frequent. At the same time, they are far more inaccessible, neither connected by radio phone nor graded roads.

In order that the village can be self-reliant in terms of operating and maintaining the system, and to ensure that breakdowns are less frequent, it is necessary to consider alternative appropriate technology options for the pumping systems. Indeed research is being conducted on a number of solar and wind-powered pumping systems (Gould, 1984). Moreover, breakdowns could be prevented if the community was more directly involved in the design and construction of the system. Breakdowns often result through careless use by residents who perceive the system as belonging to government and, therefore, not their responsibility to look after. It is probable that more care would be taken, if the community felt that the system belonged to them, rather than to government. This will also require an increased role for the community in the operation and maintenance of systems. In turn this might call for a
reconsideration of technology options, especially as concerns appropriate pumping systems. Technology options which could be based on greater community involvement and which would be especially suitable for smaller and remoter settlements include small dams and haffirs, sand river wells and catchment tanks (Gould, 1984). Therefore, there are strong reasons from this practical perspective, for increasing community participation in both policy formulation and implementation. Efforts need to be made to evaluate how such changes could be worked into the existing programme, and to identify the problems which might arise.

Health Education:

Research has found that;

- Households measure the benefits of standpipe water in terms of improved convenience and reliability, rather than of improved health. When systems break down, households will resort to traditional sources. In a situation where a standpipe is located further away than a traditional source, use will be made of the closer source (Land & Raditloaneng, 1985a).

- Water at the standpipe which is clean becomes contaminated during the process of transportation, storage and use in the household. Furthermore, inadequate water is used for cleansing purposes by household members, in relation to personal and household hygiene (MMRWA, 1985).

These findings reflect the fact that the VWSP has not included an integral health education component to complement the infrastructure programme. It has been an engineering, rather than a health and education programme. The design of the sanitation project, by contrast, reflects awareness of the shortcomings of this approach in terms of achieving the long-term goals of the programme. Now, increasing attention is being focussed on qualitative aspects rather than on quantitative aspects of the VWSP. In 1984, a Water Hygiene Campaign, coordinated by a SIDA consultant was introduced by government. It is imperative that this campaign becomes institutionalised and replicable in the long-term, as is advocated in relation to the sanitation project. It must become part of a broader Primary Health Care programme based at
the community level. The full benefits of water and sanitation provision can only be achieved through a combined and coordinated health education campaign. This suggests that health education for water must be modelled on, if not incorporated into the existing health education programme which has been developed during the sanitation project. It is essential that the community is actively involved in the design and implementation of such a scheme and that efforts are made to coordinate intervention by all community groups; the traditional leaders, extension workers such as the FWE and the nursing staff. In so doing, it is vital that communities are aware of the link between the provision of improved water supplies, and changes in water use and hygiene. This cannot be achieved so long as it is felt that standpipe water provides nothing but a convenient service; or that it serves as a symbol of development. However, so long as the programme maintains its present top-down status, these wider goals will be difficult to achieve.

While it is recognised that the mobilisation of institutions at the community and local government levels is fraught with problems and subject to the sorts of constraints which are discussed in relation to the sanitation project, it is imperative that the effort is made increasingly to disassociate the VWSP from being viewed as a simple infrastructure provision programme.
THE SELF-HELP ENVIRONMENTAL SANITATION PROJECT: POLICY FORMULATION AND IMPLEMENTATION:

This section examines the delivery system of the SHESP project. It identifies the role of central government, local government and community institutions in policy formulation and implementation (see Fig 6). Explanations are then provided why a bottom-up delivery system has been used to support this project. The project depends on a bottom-up delivery system which relies on community participation and local government coordination in the 'hardware' and 'software' components of the project. At the same time, it depends on financial and technical support from central government and the donor community. While, therefore, the project shares common long-term objectives with the VWSP, the delivery system it uses is very different.

CENTRAL GOVERNMENT INTERVENTION:

Policy Formulation:

SHESP owes its existence to the intervention of central government. It was instrumental in promoting research into sanitation during the 1970's. During that period, attention focussed on developing appropriate low-cost sanitation systems in urban site-and-service squatter settlements, with support from the international donor community and consultants. On the basis of this experience, government made a commitment to support a pilot rural-based sanitation project in association with an external donor, as a response to evidence of an increasing incidence of sanitation-related diseases in rural areas especially in the larger villages (Kjoer-Olsen, 1980). The broad objectives of the project and the delivery system to be used were selected by government in association with the donor agency on behalf of the eventual recipient districts. External expertise has also supported government in furthering research into the technical, social and medical aspects of providing low-cost sanitation to rural communities, forming part of an international effort in this field (Basaako et al, 1983; Van Nostrand, 1983). Without the political support provided by central government for rural sanitation and its decision to invite outside expertise to provide assistance in the design and formulation of a pilot
Fig 6: The SHESP - Institutions and Direction of Delivery.
project, it is unlikely that a district-based project would have emerged. If central government has provided the political impetus, then the donor community has made a significant contribution to the design and implementation of the project, even if their recommendations have had to be modified by government.

In both the ESPP and SHESP projects, the aid agency has provided crucial financial and manpower assistance, without which the project could not have materialised. Financial support has been provided in the form of a grant by the Netherlands government through UNICEF but covers capital costs only. The funds are used to provide essential building materials, vehicles, other logistical support and technical assistance. Central government must, therefore, providing recurrent expenditure. Furthermore, project coordination has been assigned to the Senior Public Health Engineer (SPHE), an expatriate appointee funded by UNDP, in the Ministry of Local Government and Lands.

The design of the pilot project which has provided the blueprint for the current project was undertaken by the donor agency, USAID, in collaboration with the host government, represented by the SPHE. The resulting Project Paper (USAID/GOB, 1979), therefore, represents a joint proposal between government and the donor. Government, for example, insisted that the project be designed on the basis of community self-help. USAID had by contrast suggested that a project team be made fully responsible for all construction work associated with the project. Government was likewise adamant that the project be organised and financed through existing government structures rather than through purpose designed institutions. This point was reinforced when the project was extended in 1983, under the sponsorship of UNICEF.

It also recognised that it would have to coordinate the project and that this should be undertaken by the MLGL. This appointment made sense since the MLGL is responsible for supervising all District Council activities and in particular, social infrastructure provision. However, there had been suggestions that the Ministry of Health would be a more suitable coordinating ministry since health education was a key component of the project, or that even the MMRWA, which is responsible for providing rural water supplies would be suitable. However, while the project would contribute to Primary Health which is the
responsibility of the MoH, implementation would be undertaken through the District Councils. On this basis, MLGL was best suited to provide supervision.

During 1983/4, the ESPP Plan of Operations was revised with the new funding agency, UNICEF. The revised Plan was based upon an evaluation of the pilot project, after consultation with MLGL, UNICEF and the District Councils, and following interviews with the pilot project participants. Under the current project, central government has continued to coordinate and monitor the project on a national scale. It is responsible for policy concerning manpower, financial and material support to the participating districts and for preparing policy for the accompanying health education programme. In this way, central government provides the link between the districts and UNICEF.

Policy Implementation:

The role of central government in project implementation is largely supervisory. It provides a channel of communication between the individual participating districts and the donor agency while coordinating the construction and health education programmes. It provides essential materials and technical advice, but more critically, allocates and audits project funds. It takes major decisions concerning implementation timetables, funding allocations and the placing of tenders to the private sector for the provision of technical inputs, such as the compressor and latrine components. Government also coordinates health education activity by providing assistance in the design and dissemination of health education materials, in association with other ministries, especially the MoH. This component of the project, likewise, depends on cooperation at several levels, but in particular, requires a greater degree of horizontal cooperation between sectors. Again, the role of the ministry is largely supervisory. It is supposed to provide technical and administrative support for the health education programme and to establish links between relevant ministries. MLGL has established links with the Ministry of Education's Health Education Unit, which has been involved in providing multi-media education materials, with the MoE's Non-Formal Education department, which has given advice on methods of communication, and the MMRWA, which is currently undertaking a water hygiene campaign.
The government has also prepared a number of social impact studies to accompany the project through the Applied Research Unit of the MLGL.

The most important individual in the project is the SPHE. He is accountable to both the minister of local government and the donor agency. As national coordinator, he provides technical assistance whilst ensuring that correct procedures for implementation and disbursement of funds are followed. Furthermore, he coordinates project-related affairs with other ministries. He represents the project, for example, on the Inter-Ministerial Action Group for Sanitation. This group normally meets on a quarterly basis and is represented by the MLGL, MOH, MMRWA, and MOE. Under the present UNICEF-supported project, direct ministerial intervention has increased following a decision to channel funds and assistance through central and local government institutions, rather than directly to the project team in the field, as had been the case under the USAID project. Inspite of the relatively high profile of central government in a supposedly bottom-up project, the districts are sensitive as to how far central government should be permitted to interfere in what is understood to be a district-based project.

LOCAL GOVERNMENT INTERVENTION:

The major responsibility for project coordination has been delegated to the district level, albeit under the supervision of MLGL. The success of the project, therefore, depends on the capacity of the District Council to undertake this responsibility as a major decision-maker, administrator and implementor.

Policy Formulation:

While central government is responsible for policy decision-making in relation to the broad principles of the project, the individual participating districts are responsible for policy making as it affects the implementation of the project in the field. The first stage is for the Council to mobilise support for the project. Mobilisation involves the lobbying of both local politicians such as councillors, traditional leaders and the community, through existing channels of communication. These might include formal debates, district tours or consultation (see
ch 7). In this respect, decision-making must follow the procedures set out for District Development Planning. A formal request to participate in the project must, therefore, be written into the District Development Plan. If the project is not accounted for in the plan, the district is not eligible to take part as available funds only permit a limited number of districts to participate at any one time. In submitting its proposal, the district must assess the following:

- the degree to which the project is likely to be supported at the community level.

- the extent to which additional financial and manpower resources will be required to service the project. These calculations must take into account existing recurrent budget allocations to the district. While the external donor provides capital expenditure support, recurrent costs must be borne by the Council. It is their responsibility to lobby MLGL to increase recurrent budget allocations to take account of the additional funds needed to service the project. Therefore, any additional funds that might be required must be indicated in the forthcoming District Development Plan.

District planners must also pay attention to the allocation of personnel and to the mobilisation of relevant District Council departments such as Public Health, Education, and Community and Social Development to support the construction and health education programmes. Establishing an implementation capacity based on existing staff and departments is essential, as it is the Council which must coordinate the implementation of the project and ensure its continuation in the long-term. In view of the fact that the project is competing for resources with other departments within the district, as well as against other districts, achieving political support for the project at the district level is essential.

As part of the responsibility for planning the implementation of the project, the District Council chooses the villages to take part in the project. The allocation criteria used are based on guidelines provided by central government - this was all the more so for the USAID-funded pilot project - on consultation with the district communities and on the
preferences of the district planning officers. These criteria are listed in Figure 7.

Within the guidelines set down in the Plan of Operations, the District Councils are free to plan the implementation of the project as they see fit and may make alterations according to feedback from field personnel and participants, in relation to both technical and administrative issues.

Policy Implementation:

The District Council is responsible for project implementation beyond the support provided by central government and the donor agency. It coordinates the provision of latrine infrastructure and the orchestration of a health education campaign. However, the ability of local government to execute the project depends on it receiving support from both central government, above, and the recipient community, below.

The project is implemented under the direction of a project coordinator who is directly accountable to the District Council and indirectly accountable to the MLGL. In association with a project team, and staff seconded from other departments, the project coordinator mobilises the project. The coordinator is required to supervise implementation and to provide a link between the ministry, the field staff and participants. This coordinator should be assisted by a foreman responsible for planning day to day operations and for supervising the village coordinators. All these posts fall under the technical and industrial class recruitment tier and applicants are employed through the Council. It had been hoped that the project could be implemented wholly through existing local government departments without placing undue additional burden on financial and manpower facilities. However, it has been recognised that a number of key individuals need to be employed specifically for the project. It is up to individual Councils, therefore, to decide whether or not this manpower can be obtained from the existing establishment registry or whether additional manpower must be recruited.
Criteria Set by Government:

The number of districts able to take part in the project is decided by central government according to two criteria:

- the availability of donor funds and funds from the Domestic Development Fund. Over a 2-3 year project period, up to 3 districts may be included.

- the implementation capacity of central and local government suggests that no more than three districts at a time can expect to participate. This reflects in particular, serious manpower and transport constraints. Moreover, there is no guarantee that support will continue after the end of the current project period.

Criteria Set by the District Council:

A district wishing to participate must submit a project proposal within the District Development Plan. Target villages are chosen by the District Council according to the following priority criteria:

- priority to communities which have expressed an interest in participating in the project during consultation (see below).
- priority to the principal settled communities according to standard planning procedures for providing services on a hierarchical basis.
- priority to communities involved in specific rural development programmes such as CFDA & RADP. Inclusion in the project, therefore, forms part of a larger investment package.
- priority to built-up, densely populated settlements. The major concern is to allocate resources to the most needy from a public health point of view.
- priority to settlement clusters in order to maximise use of limited resources and to ensure a high rate of implementation. Major concerns are financial and logistical.

Influence of Community Consultation:

Provision at the community level is based on household participation. This is encouraged through mobilisation campaigns and publicity conducted by the project team/extension workers to obtain signed contracts and payment from participating households. Capacity to take part is determined by socio-economic status, which may discriminate against the poorest (see ch 6). Some efforts have been made to help the destitute by providing latrines free of charge.

Fig 7: The SHESP - Resource Allocation Criteria.
In relation to construction activities, major responsibilities include the provision of essential materials, labour, technical advice and logistical support and the mobilisation of community groups to participate in the project. The Council must ensure that contracts are signed and that contributions are paid by participants, and in turn, must submit proof of financial disbursements as well as receipts of contributions paid, to the MLGL. The Council provides manpower - the project coordinator, foremen, driver and assistant, village coordinators, and labourers - as well as basic materials and fuel and, more generally, access to Council facilities.

In relation to health education, major responsibilities include coordinating and mobilising activities between community health workers, the village extension team and the Council's health, non-formal education and community development departments, in the preparation of a health education campaign, to complement the latrine construction programme. These activities are supposed to be supported by experts and materials provided by the MoH's Health Education Department. The project coordinator again provides a link between local government activity, central government support and community extension workers in the field.

That the districts achieve an effective delivery system is crucial because in the long-term, support from central government will be reduced substantially. The districts will then be responsible for providing this service on a permanent basis, from their own capital and recurrent budgets. Yet, to date, no long term plans have been drawn up. In this respect, the future of the programme rests on achieving political support from central government which must weigh the merits of the project from the point of view of achieving better health, against wider economic considerations such as the scope for increasing recurrent budget allocations to the districts.

COMMUNITY PARTICIPATION;

The success of the project depends on active participation by the community in policy formulation and implementation, together with the District Council.
Policy Formulation:

Community participation in decision-making is restricted to the planning of the project in the field in association with the project team. The community has not been involved in the preparation of broad policy objectives. In this sense, the project has been imposed from above.

The community can influence field level planning in two ways. Through the district planning process, individual villages must express their interest in taking part in the project (see allocation criteria above). This exercise is supposed to involve community leaders, extension workers and councillors, as well as individual households, as part of wider district planning (see ch 7). Once a village has been selected for the project, community groups are responsible for organising the implementation of the project on behalf of the participating households. This is especially important for the health education campaign. Communities have also been requested to provide comments and suggestions on ways of improving project delivery and on improving project technology.

Policy Implementation:

Project implementation relies upon a high level of support from the recipient community. As a result, the opportunity for different community-based groups and interests to influence the project is considerable. Community participants provide labour, materials for the superstructure and a cash outlay of P30 each on an individual household basis, and more generally, provide support to community voluntary groups involved. The success of both the latrine construction programme and the health education programme depends, therefore, on achieving active cooperation from the community and of establishing good working relations between the local government project team and the community recipients. Without community cooperation, the project is unworkable.

At the village level, the project team is made up of locally recruited people who work in cooperation with existing village institutions. It has been stressed that village coordinators should be local people, either from the project village or at least from the district, in order to maximise cooperation and support with the communities involved.
Village coordinators supervise the day to day running of the project, including the supervision of labourers and the coordination of local voluntary groups and extension workers. It is expected that village voluntary groups such as the Village Development Committee (VDC) and Village Health Committee (VHC) should play an active role in mobilising, as well as implementing the project on a more informal basis, with support provided by government extension workers.

Similarly, the health education programme relies on cooperation between participants, voluntary groups and extension workers, in association with the project team. The health education programme must rely on the support of the Village Extension Team (VET) and, in particular, on the Family Welfare Educator (FWE). It is her responsibility to organise the 'software' programme in association with the local health staff, notably the nurse in charge. While they are responsible for the technical details of the campaign, other extension workers are expected to contribute to the mobilisation of the project. At the same time, they should seek grassroots support from village voluntary groups such as the VDC and its sub-committee, the VHC, as well as such groups as the Red Cross, Women's Group, 4B and church groups. In this way, it is hoped that the project will be recognised by the participants to be their own, and not a one-off project which has been imposed from above. This is considered especially important for such a culturally-sensitive project, from which the long-term benefits can only be realised if action is taken on a community-wide basis by participants who understand and, moreover, want the project.
FACTORS DETERMINING THE SHESP DELIVERY SYSTEM:

The SHESP project is a small-scale, district self-help project designed to provide physical infrastructure (VIP latrines) and to orchestrate a health education campaign. The project depends upon a high level of community participation, supported by local government and supervised by central government. In this way, it may be described as a bottom-up project, but one which has been imposed from above. Emphasis has been placed on exploiting human resources rather than relying on capital support or sophisticated technology. As such, the project more closely resembles the recommendations prescribed by the Decade and can be contrasted to the top-down approach of the VWSP. However, to date, the 'hardware' aspect of the project has received a disproportionate level of attention while the health education campaign has been allowed to lag behind.

In order to explain why a system of bottom-up delivery has been used to achieve policy objectives, features of Botswana's political economy must be examined together with a consideration of the technical arguments used to justify the benefits of bottom-up delivery in the Decade. This illustrates how such policy recommendations have been accepted but modified to suit the context of project delivery in rural Botswana. The following factors are considered to have most directly influenced project design (see Fig 8).

1. Politico-economic factors:

- The timing of the project in relation to the reform of government's rural development strategy in the late 1970's, characterised by decentralisation of decision-making and implementation responsibilities and by the reorientation of policy away from social infrastructure provision to multi-sector development projects.
- The relatively low status of sanitation as a government priority for rural and national development.

2. Technical/Practical factors:

- the use of community participation as a means of achieving behavioural changes in personal hygiene, at an individual household
Fig 8: The SHESP - Factors Influencing the Delivery System.
and community level, through latrine construction and health education.
- the use of community participation as the means to limit costs in order to reduce dependence on central government, and to achieve widespread participation.
- institution-building at the local government and community levels to create a long-term implementation capacity capable of replicating the project on a district-wide basis.

Politico-economic factors:

The context of rural development in the 1980's:

The SHESP project was introduced at a time when government was dramatically changing the emphasis of its rural development strategy, in preparation of NDP 5. The re-orientation of policy included the creation of District Development Planning as the basis for rural development policy making and the decision to emphasise the need to prepare integrated regional development plans, such as CAD to replace the traditional sectoral plans. These policy revisions were based on the experience of the limitations of top-down implementation and of social infrastructure provision during the 1970's. Thus, both the SHESP and the principles of district planning were introduced at the 1976 National District Development Conference. The implications of these changes, examined in chapter 7, were that planning would become increasingly decentralised and would be based on consultation between local government and community groups. In theory, this provided the scope for increased bottom-up planning. Furthermore, local government and community institutions would become increasingly responsible for the implementation of policy too. The new approach reflected government's new confidence in the capacity of local institutions to direct rural development. These changes, moreover, signalled the demise of the accepted top-down rural infrastructure provision approach, symbolised by the ARDP programme. Against this changing context, the rural sanitation project can be seen to have fitted in rather neatly. Indeed, project planning has been integrated into the District Development Planning process. Resource forecasts must be based upon consultation with the community, while proposals for funds must be submitted to the MLGL.
Therefore, community participation in SHESP may indirectly contribute to improving the decision-making and organisational capacity of village institutions such as the VDC, which are now involved in District Development Planning.

The project has also benefitted from lessons learnt from the experience of previous projects, designed and implemented in a top-down fashion. As discussed above, it became clear that the long-term success of the VWSP had been compromised by the emphasis that had been placed on rapid installation of water supplies without due attention to operation and maintenance. The absence of local government and community participation in the programme has been acknowledged as an oversight which has led to poor standards of operation and maintenance and to the neglect of health education.

The Status of Sanitation:

The relatively low political status that the project enjoys, as compared to the water supply programme, is a further reason why central government has been less inclined to assume a high profile in its implementation. The project cannot offer the state the same level of political capital, nor is it nearly so politically sensitive, as is the provision of water. There is, for example, no previous experience of rural sanitation to live up to, while sanitation is not perceived by the community as such a priority need. It is also true that as an on-site facility - that is to say within the household - it is not perceived as a public utility which deserves the same degree of state intervention. Furthermore, the installation of latrines cannot directly contribute to the generation of economic activity in the rural economy, as can the provision of water, and this tends to reduce the importance attached to the project. For these reasons and in light of the new decentralised approach to rural development, central government has not felt compelled to assume a high profile in the provision of this service. It may be noted that the capital allocation that has been granted to the project under NDP 6 is dwarfed by the allocation granted to the rural water supply programme. Under NDP 6, it will receive only P1.6 million compared to P33.0 million for the VWSP (GOB, 1985).
Technical/Practical Factors:

The use of bottom-up delivery has been influenced by Decade prescriptions. Community participation is used for largely pragmatic, rather than political or ideological reasons. It is considered the best means of achieving policy objectives, in the same way that a centralised and technology-dependent implementation structure was considered appropriate for achieving the objectives of the VWSP. In the sanitation project, the choice of technology has been subordinated to the adoption of a desired organisational structure, and the contrary is true of the water supply programme. This contrast reflects the fact that the major obstacle to the achievement of policy objectives in the sanitation project has been social acceptability and affordability, while in the water supply programme, the major constraint has been an environmental and technical one.

It is felt that community participation supported by government can most effectively achieve policy objectives by reducing overall costs to both recipient and government and by maximising the recipients understanding and support for the objectives of the project. These objectives include the widespread construction and use of improved pit latrines, and the development and delivery of a health education campaign linked to existing Primary Health Care activities in order to improve community health.

Community Participation in Policy Formulation and Implementation:

The precise reasons why community participation has been advocated as the basis of the project merits further discussion. This is because an anomaly in the justification given for advocating community participation can be noted. At issue is whether or not it is promoted as a means of reducing cost to government, or whether it serves to achieve the desired behavioural changes and conditions for long-term replication.

- Policy implementation -

Community participation is required to support latrine construction for three reasons:
- The provision of labour and materials by participants serves to:

  i) reduce overall costs to government and to the recipients (assuming that there is an opportunity cost).

  ii) permit the household to build what it wants at a price it can afford, with a technology which is familiar and 'appropriate' to community skill (Social acceptability and affordability)

- A cash contribution must be made by the participant because;

  i) government will not subsidise the full cost itself.

  ii) a cash contribution can be used to measure the recipient's 'felt need' and willingness to support the project (achieve behavioural change).

- Village institutions must be involved in order to;

  i) maximise coordination of the construction process between households and to mobilise participation.

  ii) promote skills in organising community development projects (institution-building).

  iii) ensure the long-term success of the project by building up a capacity to replicate the project once government support is retracted and in so doing to reduce community dependence on central government.

Community participation is required to support the health education campaign in order to ensure that an appropriate and sustainable health message can be developed. The campaign must be directed at mobilising community interest in the project and of drawing attention to the health issues in the short term, while in the long term behavioural changes in community and personal hygiene must be encouraged. This campaign must be integrated into existing Primary Health Care by working through existing institutions and personnel at the community level. The creation of a 'felt need' for the benefits of the project and the need to monitor behavioural change depends both on efforts emanating from the community and on support being provided by village health extension workers.
In relation to policy formulation, community participation is advocated for the following reasons.

1) Appropriate Technology: Hardware Design & Community Feedback:

Community participation is required to achieve the sort of behavioural adjustments to hygiene practices related to excreta disposal and water use, on a community-wide level. This can only be achieved if the objectives of the project are understood and desired by the recipient community. The project must, therefore, be socially acceptable, affordable and technically appropriate to the community. Such pre-conditions can only be met if participants are invited to take part in the design of the project and to express opinions concerning technology preferences, the most suitable village groups to work through and the content of the health education campaign. For example, in designing the latrine, consideration to existing community attitudes, practices and preferences must be made in order to ensure that the system provided will be socially acceptable and technically appropriate. Given that the recipient is responsible for building and indeed paying for the latrine, it is essential that a structure is offered which is within the building competence and financial capacity of the recipient.

To ensure that the project can be sensitive to socio-cultural parameters and flexible enough to accommodate the socio-economic circumstances of individual households, the recipient community is encouraged to be involved in all stages of the design, monitoring and evaluation of the project in such a way that feedback can reach project planners. This can be seen as a two-way process of communication. Participation at the formulation stage is, therefore, a pre-condition to achieving wide support in policy implementation.

2) The Identification and Expression of 'Felt Needs':

While the community has not contributed to the overall design of the project, it must submit a formal request in order to participate. During the preparation of the District Development Plan, a community which wishes to take part, assuming that the district is involved in the
project, must submit a formal application, indicating that they have identified sanitation as a priority need. For the household, a contract must be signed which commits them to paying P30 for project materials and support. It is argued that only those communities and households which are genuinely concerned to improve environmental health will be included. In so doing, it is hoped that by encouraging communities to express their 'felt needs', the project is more likely to succeed.

The expression of 'felt needs' is considered to represent a key aspect of the decision-making process. However, a number of other factors determine the allocation of funds for the project, so that the extent to which the community can influence resource allocation must be questioned. Moreover, it is unclear how a community can express a 'felt need' for sanitation, as compared to water supply which is critical to basic survival. So far, the experience of the project has been that communities must be mobilised and educated by the project team in order to identify sanitation as a 'felt need'. In this sense, it is a bottom-up project imposed from above.

External agents are required to mobilise community interest in the project and to create awareness of issues which may not be immediately noticeable nor tangible, or which do not appear to directly impinge on community welfare.

3) Institution-building:

A further aim of the project is to ensure that the project can be self-supporting in the long-term once central government support is retracted. The capacity for replication requires that an institutional capacity is built-up at the community and local government level which is capable of designing and implementing the project without external assistance. Government has, therefore, encouraged local government and community institutions to identify those groups which can best build up an adequate implementation capacity. It is envisaged that local government will be required to absorb the project into their existing statutory duties and will, therefore, be responsible for capital and recurrent expenditure forecasts. This objective can be understood to coincide with government's present policy to encourage greater bottom-up planning in rural development. The emphasis that has been placed on
institution-building reflects the concern being expressed at the international level towards this issue. Policy objectives often fail precisely because undue attention has been paid to building up the institutional infrastructure necessary to support the operation/maintenance and replication of projects. As a result, many systems which have been successfully installed are rapidly abandoned when they break down as a result of insufficient commitment of manpower and financial resources to service these investments.

4) Health Education:

Community involvement in project design is required all the more in the preparation of the project's health education campaign. This is because its success depends that much more on developing an appropriate programme which is acceptable to the community and can be implemented by the community. It is recognised that environmental health can only be improved on a community wide basis, over a long-term period. To achieve policy objectives through such a health education campaign, the active support of the community must be sought with the assistance of government health and welfare extension workers. The experience of Primary Health Care has indicated that the effort must come from within the community through cooperation between the extension team and voluntary groups such as the VHC, and Women's groups in order to achieve genuine behavioural change. Attitudes can be more easily changed by local health committees which are more readily trusted by the community than by external medical staff who may make only short and infrequent visits to the community and who are necessarily viewed as "outsiders" who do not understand local problems and aspirations (Perrett & Lethem, 1983; WHO, 1978).

- Meeting Policy Objectives; Community Participation as a Means to an End -

Community participation is advocated as a means of achieving several policy objectives associated with the reduction in the incidence of environmental diseases. It is used as a means of reducing the cost of the project to the state and as a means of promoting community support for the objectives of the project and to thereby achieve desired behavioural changes. In this way, it is anticipated that the project
can succeed in both quantitative terms - by reaching as many people as possible at least cost, and in qualitative terms - by ensuring that the appropriate behavioural changes in personal hygiene habits are achieved. Yet, as discussed earlier, it is not entirely certain whether or not these reasons for advocating community participation are mutually reinforcing. This point is important because policy objectives may possibly be better achieved through more comprehensive state intervention, thereby cancelling the need to rely on community participation. The precise reasons why the state has so enthusiastically supported community participation in this project must be further discussed in view of the fact that in Botswana, social service provision, including health care, has been based on direct state intervention and subsidy (see ch 2 & 3). Community participation is glaringly absent from social service provision and rural development more generally. Furthermore, the involvement of the community necessarily exposes the project to possible constraints which might compromise the achievement of policy objectives. Why then has the state chosen to base this project on community participation?

A major reason for promoting community participation is that the state can pass on part of the capital and recurrent cost of the project to the community. To do so reflects the fact that the state is not willing to subsidise the project fully as is the case with domestic water supply provision and other social services. The economic reasoning behind this decision is that the unit cost of building a latrine is too high for the government to support. At an estimated P1300 per unit, compared to no more than P100 per head to provide a village water supply system and a forecasted demand for 100,000 units, the cost is considered prohibitive. While a total cost of P1.3 million appears insignificant by project standards, government is not sufficiently convinced of the health and political benefits of the scheme as compared to, for example, the water supply programme or other projects which, at least, provide economic returns, can be self-liquidating, or provide political capital.

Yet, besides this project, private sector contractors have been charging up to P500 to build household latrines. Such a price is clearly beyond the means of the majority of the rural population. Under such circumstances, it is unlikely that the desired community-wide adoption of latrines, which is so necessary to achieving health benefits, can be
realised. Alternatively, individual cheap and ready self-help latrines have been, and continue to be built by households, but these are usually unsafe and insanitary (Land & Raditloaneng, 1985b). Furthermore, neither of these private sector options involve health education nor community mobilisation and can do little to improve community health.

A state supported self-help project provides a solution. The state is prepared to subsidise the construction of safe and sanitary latrines and to combine this with a health education campaign, assisted by the recipients who both take part in latrine construction, and in the health campaign. In this way, policy objectives can be achieved.

Yet there is some doubt as to whether community participation in policy implementation, most especially, helps to achieve policy objectives. It is possible that quicker results could be achieved if state subsidies were more comprehensive. It is indeed questionable whether or not self-help can ensure the rapid and sound construction of latrines. There is evidence to suggest that where households are forced to provide labour and materials, the latrines will remain incomplete well after the expiry of the project and may be abandoned (Land & Raditloaneng, 1985b) (see ch 6 ). Under such circumstances, health benefits cannot be realised, irrespective of any well-planned health education campaign. This situation is all the more likely to arise where project supervision and mobilisation is inadequate (this is most likely to occur once the project team has left). Similarly, if a latrine has been completed but is poorly constructed, then it is also unlikely that the long-term benefits will be achieved, as the unit falls into a state of disrepair. A poorly built latrine can serve to increase the spread of environmental diseases rather than serve to control it.

Moreover, in the long-term, total costs may actually escalate as a result of having tried to reduce costs through self-help. The benefit of cost savings in the implementation stage must be weighed up against the risk that poorly constructed units may be built, which will have to be reconditioned at a later date at further cost. At the same time, cost savings arising from self-help construction may be lost against financial penalties imposed as a result of delays in the implementation time-table, arising from a dis-jointed and un-professional construction schedule. In the long term, it may even work out cheaper for government
to subsidise the construction programme and in so doing be sure that the latrines are built properly, so that they can be used and will not need refurbishing at a later date (Mbere, 1981).

For wealthier residents, this cost-benefit analysis of the merits of self-help is less relevant. Such residents are likely to hire a contractor to build their latrine in any case, in preference to building it themselves. Where cash is available, households prefer to spend more money to ensure that the latrine is built quickly and properly. The provision of labour is only required where incomes are too low. Otherwise, it is fair to say that the decision to spend cash on building a latrine is a reasonable indicator of an individual's commitment to the project. Furthermore, project objectives are achieved more rapidly. By paying to have the latrine built professionally, one achieves the primary objective of building a viable unit, and ensuring that it is in a usable condition. The health benefits may then be achieved more rapidly assuming that the building programme has been complemented with a health education campaign.

For poorer residents, the option to pay for the latrine to be built is not available. It is certain that they cannot afford to pay the full cost themselves. Nor is government prepared to. The compromise reached is that both sides must contribute. In so doing, the household, short of cash, must provide labour and materials. However, the risk is that the latrine may never be completed, unless the government is prepared to foot the whole bill. Since it is not, it is suggested that the primary motive for encouraging self-help in latrine construction is to reduce costs to the state, rather than to engender a feeling of commitment and sense of belonging to the project. The counter-argument is that direct community involvement in policy implementation is the only means of ensuring the recipient's commitment to the goals of the project and of building up an implementation capacity to ensure that latrines will be completed. Were the state to provide the latrine free of charge, there is no guarantee that the latrine would be used (Whyte, 1984).

In relation to the health education component of the project, issues concerning the merits of community participation are more clear cut. This is because the question of cost-saving does not directly enter into the argument. In terms of achieving behavioural changes concerning
personal hygiene, there are strong reasons for advocating community-based mobilisation. It is a long-term process, which relies on persistent education and consultation to change entrenched beliefs and habits within the community.

This discussion has served to highlight the wide-ranging and often illusive reasons used to justify community participation. It also highlights the possible end results which may be achieved according to the level of support that the state is prepared to provide.

Local Government Coordination:

While the project cannot succeed without the active support of the recipient community, equally, its success depends on District Council participation. It provides the link between participants and the policy makers in central government, while also serving to execute the project in the field. There are, therefore, practical reasons for encouraging local government intervention in this project.

The District Councils are ideally located to coordinate the activities of a community project in the field. First, from an administrative point of view, the Councils can provide the appropriate institutional linkages with community groups. Second, they also have the transport and communications facilities to operate in remote areas between scattered communities. They are, therefore, in a better position than would be central government, to distribute project materials, allocate manpower and supervise activities within the project villages. Financial and time-saving gains can be made. Third, the Council administration operates at a sufficiently large scale to merit the manufacturing of materials, such as slabs and bricks, which can then be distributed to the individual project villages. Individual villages are normally too small. Fourth, the Councils are still in a position to work through the MLGL to obtain funds and technical advice from the national coordinator.

In the long-term, the building up of an implementation capacity at this level is considered essential to ensure the replicability of the project. Since it depends on community participation, coordination must be both flexible and responsive to activity in the field. This cannot
be achieved by depending on central government, either for intervening directly, or for providing financial and technical assistance when it is most needed.

The District Councils have also assumed an important role in policy formulation as far as the planning of field operations is concerned. In order to coordinate the project effectively, the Councils must be in a position to assess their financial, manpower and transport costs and to plan an appropriate implementation schedule. These activities form an intrinsic part of institution-building. It is for this reason that participation in the project depends on individual Councils assessing both the demand for the project and their own capacity to support it. The project has, therefore, been added to the Councils' existing statutory responsibilities.

In the long term, it is hoped that the project will become self-supporting, from a financial and institutional point of view. In this way, sanitation provision will become a District Council responsibility, with manpower and finance allocations being calculated as an integral part of the district capital and recurrent budget for statutory duties. The Council will then be in a position to extend the programme throughout the district. However, it is unclear whether or not, the self-help contribution will be required in the future.

SUMMARY:

An international effort has been orchestrated to encourage the provision of domestic water supplies and sanitation as an integral part of Primary Health Care to reduce the incidence of environmental disease. This effort has been directed through the United Nations' International Drinking Water Supply and Sanitation Decade. It has identified policy objectives and has provided recommendations on policy delivery. These prescriptions suggest the use of bottom-up delivery systems which rely on community participation and on the use of appropriate technology. These suggestions are based on managerial or technocratic considerations which seek to identify the best means of achieving policy objectives. A bottom-up framework is seen as best suited to ensuring the widest access to water and sanitation facilities, to the provision of a technology
which is acceptable, reliable and effective, and to the achievement of behavioural change in personal and community hygiene.

Experience in Botswana suggests that local socio-economic circumstances and political priorities may not be conducive to the adoption of such policy prescriptions. In Botswana, rural water supply and sanitation have been provided through two independent and wholly different programmes - the VWSP and SHESP. While the two programmes share a common objective of contributing to better community health, the delivery systems that are used are fundamentally different.

THE VWSP:

The programme uses a top-down and technology dependent delivery system which relies on a high level of central government intervention in policy formulation and implementation. The use of this strategy can be attributed to specific characteristics of rural development policy and to particular environmental features. While the programme has been successful in terms of achieving a high rate of implementation, there is evidence of poor operation and maintenance and a neglect of health education. As policy objectives address these issues in the future, it is likely that greater use will be made of a delivery system which relies on community participation and local government intervention.

THE SHESP:

By contrast, this project has adopted Decade prescriptions more comprehensively. It uses a bottom-up strategy based upon local government coordination and community participation, and on the development of appropriate technology accompanied by health education. The delivery system has been influenced more by managerial factors than by local political factors though these have not been wholly absent either. Because the project depends on community participation, it is suggested that the risk of problems constraining the achievement of policy objectives is heightened.
Chapter 6: POLICY IMPLEMENTATION - EVIDENCE FROM THE FIELD:

INTRODUCTION:

Chapter 6 examines the performance of institutions involved in implementing the Village Water Supply Programme and the Self-Help Environmental Sanitation Project and considers which factors have determined their effectiveness in supporting the delivery systems used. Local government and community institutions are considered in particular on the grounds that:

- SHESP uses a bottom-up delivery system which depends on local government and community participation.
- VWSP is likely to rely increasingly on a more decentralised delivery system as policy objectives are revised.
- Decade prescriptions recommend the use of bottom-up strategies.

On the basis of fieldwork, constraints on policy implementation are identified. These constraints are not unique to the two projects but are symptomatic of broader constraints facing the implementation capacity of local government and community institutions in rural development. These wider constraints are, therefore, examined in order to assess the suitability of such institutions to support delivery systems which are based on a bottom-up approach. The influence of these broader constraints on the sanitation project has resulted in a failure to mobilise community participation and in so doing to provide the conditions for project replication. Furthermore, the probable future decentralisation of the water supply programme is likely to face similar constraints if the wider framework of rural policy formulation and implementation remains unchanged. To date, the success of the water supply programme in achieving its limited objectives of rapid infrastructure provision can be attributed to the use of top-down delivery, which has not been constrained by these problems.

A Note on Data Sources:

The analysis of the VWSP programme is based upon existing evidence of local government and community participation in the programme. Evidence
of local government and community participation outside of the programme which will be of relevance when the programme is decentralised is also considered.

Research on the SHESP project was undertaken during a period of evaluation and redesign which fell between the termination of the ESPP pilot project and the start of the current SHESP project. Field evidence is, therefore, based on an evaluation of the pilot project, and a baseline study of the new project. Evidence is based on verbal and documented accounts of past events, verbal discussion about future events and verbal and documented accounts of contemporary experience.

The Self-Help Environmental Sanitation Project (SHESP):

The constraints to policy implementation that SHESP has experienced can be attributed to the low implementation capacity of the District Council and of community development institutions. Constraints facing these institutions have restricted the achievement of project objectives because the project relies heavily on their input. Projects relying on bottom-up delivery are, therefore, vulnerable to a wider range of constraints affecting different institutions than those which depend on a top-down approach. Accordingly, it was found that:

- Household participation has been limited. Mobilisation has been slow while there is also evidence of a high drop out rate.
- An increasing proportion of participants have preferred to pay more money to ensure that their latrine is built professionally, than to provide their own self-help input.
- A replicable delivery system has not been built up either at the local government or community level. Community groups and extension workers have only played a peripheral role in the project.
- Crucially, no parallel health education programme has been instituted, resulting in little awareness of health issues amongst participants.

The following analysis examines the major problem areas affecting the capacity of local government and community institutions to perform their duties in relation to the design and implementation of the project.
The Village Water Supply Programme (VWSP):

Political, financial, technological and organisational support have all helped to ensure the relative success of the VWSP from the point of view of achieving a rapid and egalitarian distribution of rural water supplies. Over a relatively short period of time, access to improved rural water supplies has improved substantially so that the majority of the rural population living in settled villages now have access to potable water.

Top-down delivery has, however, incurred long-term costs which are now being experienced. Centralised maintenance units have been unable to provide an efficient back-up service to systems which have broken down and, therefore, remain in disrepair for lengthy periods of time. Frequent breakdowns have, moreover, been experienced as a result of poor installation, user misuse, exhaustion of water supplies and the depletion of fuel supplies. There is also evidence that few of the anticipated health benefits from the use of clean water have been forthcoming. Government now recognises that in order to achieve better results in these areas, both recipients and local authority departments must be more actively involved in the design and implementation of policy. So far, government has decentralised the operation and maintenance of rural water supplies to the District Council level, without fundamentally having to change either the organisational structure or technology on which the programme is based. Yet, in order to be able to involve communities more fully in the programme, as in the case of the sanitation project, substantial changes will have to be made to both the type of technology and the delivery system that is used.

It is probable that in the future, responsibility for policy implementation and operation / maintenance will be transferred to local government and community institutions, in order to reduce dependence on central government, to improve standards of operation and of maintenance and to undertake a health education campaign. It is, therefore, appropriate to consider the factors which presently constrain decentralised policy implementation and which are likely to constrain the programme if and when operations are decentralised. Currently, the programme is characterised by the following features:
- District Council Water Maintenance Units (WMU) have a low capacity and rely on central government and expatriate support.
- Supplies which have been rapidly installed by the DWA are prone to breakdown and abandonment especially in remoter areas.
- Standpost water has been welcomed by recipients for reasons of convenience and reliability, while health benefits have been largely ignored.
- Recipients are unable to operate and maintain their village supplies and, therefore, must depend on government assistance in every eventuality.

POLICY IMPLEMENTATION: THE ROLE OF THE DISTRICT COUNCIL:

District Councils have a weak implementation capacity. This is apparent in the water and sanitation programmes but more generally in the implementation of Council's statutory duties. Weak implementation capacity can be attributed to several constraints facing the District Council. According to Reilly (1981) planning and implementation capacity are determined by the strength of the institution and of the calibre of the personnel employed. This assertion holds true in Botswana. District Councils have been constrained by inadequate financial and manpower resources, and remain dependent on central government support. It is clear that what might appear to represent only minor problem areas can in fact have serious effects on implementation capacity and can in turn affect the outcome of specific projects.

ESPP/SHESP - DISTRICT COUNCIL SUPERVISION:

The project teams responsible for coordinating SHESP have had to face a series of financial, manpower, and administrative constraints which have reduced their effectiveness in the administration and supervision of the project. Problems include, inadequate provision of qualified manpower, insufficient recurrent funds to support capital investment, and inadequate logistical support (especially transport). All these factors have reduced the team's implementation capacity.
The effect of these constraints has been compounded by the peculiar status of the project. While it purports to being decentralised, central government continues to play a major role in decision-making, while the recipient community is responsible for implementation. The project functions according to a bottom-up framework, but one which has been imposed from above. The dual status of the project has led to problems in defining lines of accountability and responsibility. This ambiguity has prevented the hoped for institutionalisation of the project within the District Council system. Evidence of the problem can be seen in the failure of Councils to provide appropriate administrative and financial support for the project. Rather than becoming integrated within the existing administrative framework, as had been planned, the project has functioned as an appendage, having to compete for resources against more established departments. The status of the project has been called into question by the fact that the project is short-term (though contracts have been extended) and financed from an external source. Nevertheless, the fact that a relatively low-budget project has faced such constraints reflects the fact that the District Council system at large suffers from under-capacity in the planning and implementation of policy. The status of the District Council as an agent of change within rural development must, therefore, be investigated. Several examples of constraints experienced in the project are examined.

**Manpower Constraints:**

Project coordination has been compromised by manpower shortages. This problem can be illustrated with examples from Southern and Kweneng district. Although Southern district took part in the the ESPP pilot project, and is presently involved in the SHESP project, it has been plagued with manpower problems. To date, project implementation has been poor, and few tangible results have been achieved. The project has stagnated due to the Council's inability to recruit a suitable project coordinator who possesses the appropriate technical and managerial credentials. A make-shift appointment was made, involving the appointment of a junior health assistant from the Public Health department, to coordinate the project over and above his existing responsibilities. This appointment proved unsatisfactory, thereby forcing MLGL to request the appointment of an overseas volunteer on
behalf of the Council. During this period, the financial and political commitments which had been made to the project were not realised.

Kweneng district only became involved in the SHESP project in 1983/4, representing the only new district to be added to the revised project. Here too, government has been obliged to employ a volunteer to act as project coordinator, as no suitable Motswana candidate could be found. Reliance on expatriate personnel is unfortunate for a project which is designed to be community-based, and there is evidence of a certain frustration felt by local government officers in relation to this fact. The particular problem confronting the project is that it commands low status amongst qualified personnel and the position of coordinator does not enjoy a high salary. At the same time, the position demands both managerial and technical skills, possessors of which are often snatched up by the higher status sectors that can offer higher salaries. Even at the more junior level of village coordinator, there have been difficulties in finding suitably qualified and motivated candidates who can supervise and mobilise the project. The majority of such candidates offer few educational qualifications and minimal work experience, while they see the job merely as offering opportunities for gaining access to other more attractive jobs.

Financial Constraints:

Part and parcel of the problems associated with manpower recruitment is the problem of financial management. A number of difficulties concerning the allocation of recurrent budget resources have arisen, which may be attributed to the peculiar status of the project. Mismanagement has occurred because of an incompatibility in accounting procedures between the District Council and the funding agency, UNICEF, and because of a misunderstanding over the respective financial responsibilities of the two sides. In particular, problems have arisen over procedures for expense accounting and capital fund disbursements. These difficulties must be taken seriously as they highlight an issue of great sensitivity to the District Councils, concerning their financial autonomy and the extent to which they are accountable to central government. Several examples of finance-related problems can be cited.
The Procedure for expense reimbursement:

The donor agency requires that capital budget expenses incurred by Councils in the implementation of the project shall be reimbursed by the donor on submission of receipts on a quarterly basis. This procedure, however, conflicts with standard procedures followed for capital expense accounting such as for statutory duties whereby funds are provided by the government or a donor in advance. This has led to lengthy delays in the submission of claims by both Kgalagadi and Kweneng District Councils and the subsequent delay in allocation of funds, thereby affecting project implementation. This procedure, moreover, constrains the Council's freedom of action in executing its duties.

Recurrent budget planning:

Project implementation has been seriously delayed by Councils which have overlooked the need to budget for recurrent expenditures in order to support the project. It has been assumed that the donor is responsible for providing both capital and recurrent financial support, when in fact this is not so. Against a background of increasingly tight recurrent budget auditing by central government, Councils are likely to give low priority to ensuring that adequate funds have been budgetted for such auxiliary and relatively short-term projects, especially when it is known that a donor is involved who may have additional funds available to cover any shortfalls. In Kweneng district, for example, no provision was made to cover the payment of wages and transport overheads and, therefore, the Council had eventually to be bailed out by central government.

Manpower Recruitment: The Project Coordinator:

The problems associated with the recruitment of the project coordinator have been compounded by difficulties concerning the calculation of a suitable salary and on deciding to which department the post should be allocated. Appropriate salary allowances cannot be budgetted into the recurrent budget estimates until the personnel department, ULGS, has formalised the new post within the local government establishment register. Yet to date, ULGS has not confirmed the post. For the time being, therefore, the coordinator has had to be registered as a health
assistant, and be paid at a significantly lower scale than the job merits. For the time being, the appointment of volunteers in two districts, paid externally by the volunteer organisations, has artificially postponed this problem for the Councils. However, as soon as local recruits are appointed, additional funds will have to be budgetted to cover the new salary.

**Project Status:**

The District Council finds itself accountable upwards to the MLGL and donor agency, and downwards to the recipient community. Each side imposes demands on the project team which are not entirely compatible. A particular problem which does not appear to have been resolved is the accountability of the project team, to either the Council secretary as chief executive officer of the Council, or the Senior Public Health Engineer (SPHE) of the MLGL. This particular problem is exacerbated by the ambiguous status of the project within the Council. It is clear that the nature of the project could merit its inclusion within any of the following departments: public health, community welfare & development, water maintenance unit, or technical. As yet, no clear guidelines have been established.

The advisory capacity of the SPHE is, moreover, ambiguous and has led to misunderstandings. On one occasion, the ministry (MLGL) overruled a Council policy decision taken by the Council health inspector concerning the choice of participating villages. This led to a serious confrontation resulting in the resignation of the health inspector. More recently, a volunteer coordinator was cautioned by his Council Secretary for approaching the SPHE for technical advice, instead of approaching the Council's own technical officer. In another district, relations between the project coordinator and the Council Secretary have been strained over this issue of accountability. In this case, the coordinator felt accountable to the ministry rather than to the Council Secretary since he was responsible for spending the funds provided by the donor through the ministry. The Council Secretary resented the apparent special status that had been accorded to the project, which had by implication removed his authority over it and over the Council officer in question. The conflict then spilled over into a disagreement.
over the rights to use Council vehicles and labourers to support the project.

A second problem can be traced to a contradiction between the operational imperatives of a centralised and bureaucratic donor, and central government administration, and the socio-economic and cultural customs which dictate the behaviour of the participating recipient rural community (discussed below). Within this contradiction stands the District Council which against a number of its own technical, administrative and political constraints, is responsible for mobilising the recipient community and for satisfying central government demands. This contradiction is linked to the next issue.

Health Education:

The failure to develop a complementary health education campaign must be attributed to central government's decision to postpone investment in this area and to concentrate on the latrine construction programme. In the current project, a health education campaign has been promoted but only after considerable delays. The low priority accorded to health education by government, inspite of policy goals which identify health education as a major objective of the project, can be explained in relation to the spurious bottom-up status of the project. There is an evident conflict between the desire to achieve short-term and long-term project objectives. Donors are under pressure to expend project funds as efficiently as possible and to ensure that tangible results accrue from this investment. Any physical installation project is bound to yield results far more quickly than a health education campaign which aims to encourage changes in culture-bound hygiene practices and beliefs. Success in this domain can only be achieved incrementally and demands a high level of human resource commitment and even then, results might be hard to measure. The demands made on the District Councils to achieve such objectives are likely to be prohibitive, requiring inter-sectoral and departmental cooperation. This may be contrasted to the more straightforward needs of a construction programme, for which the District Councils have already built up a stronger capacity based on a decade or more of rural infrastructure provision. Therefore, because of the need to achieve results quickly, government has chosen to concentrate on the construction programme. Such a decision is
symptomatic of the biased implementation capacity of the District Councils.

VWSP - THE SCOPE FOR COUNCIL OPERATION & MAINTENANCE:

With the establishment of the District Council Water Maintenance Units (WMU), the Councils have become responsible for supervising the operation and maintenance of all rural supplies except in the major villages. To date, their record of achievement has been poor reflecting several problems associated with their implementation capacity. These problems include inadequate access to skilled manpower, inadequate financial support, and a serious shortage of vehicles and vehicle repair services. Presently, the WMU's are supported by SIDA under their umbrella water sector support programme, providing the units with manpower at the most senior levels (water engineers), and financial resources to cover recurrent expenditure. Presently, 10 out of 13 units are headed by expatriate engineers (GOB, 1985). It is clear that the units are totally dependent on external sources, and could not function effectively otherwise. Government has accepted the need to recruit expatriates to ensure the immediate achievement of higher standards of operation and maintenance, so long as no locally trained manpower is available to replace expatriate expertise. One must, however, question what would happen should SIDA remove their support from the sector? Already, the units, such as in Kweneng district, are operating at full capacity yet are unable to meet the demand to attend to breakdowns or to install private connections. In order to function effectively, the units must be able to enjoy the support of central government through generous funding. Whether this occurs or not depends on government's policy towards supporting increased decentralisation to the local authority level in the future.

The constraints identified here reflect general problems facing local government and could be eased if the WMU's were better integrated into the Council planning system. Better representation on the District Development Committee (DDC) would provide the unit with the chance to lobby Council for an increased share of the recurrent budget. Presently, their budget only covers 64% of recurrent needs (SIDA/GOB, 1985). It has been suggested by a district water engineer that more extensive decentralisation of activities relating to operation and
maintenance is required through the establishment of district sub-depots, particularly in sparsely populated districts such as Kweneng and Kgalagadi districts. Currently, WMU's are located in the district capitals, but are frequently called to service supplies in remote and inaccessible villages. A shortage of staff and of vehicles means that a trip to a remote area which may take over 72 hours may paralyse the capacity of the unit to attend to other business. This problem is exacerbated by a shortage of vehicles which tend to spend most of their time being repaired following use on harsh, ungraded and sandy dirt tracks.

The pressure on Council WMU's would be greatly reduced if communities themselves could attend to breakdowns, and could supervise the operation of water supplies. Yet to do so will require that more appropriate technologies are used which do not depend on the delivery of fuel or on skilled maintenance procedures, as is presently the case. This issue will have to be faced by government as support from SIDA cannot continue indefinitely. This challenge to find more appropriate means to operate and maintain rural water supplies highlights the contradiction which currently exists of a top-down implementation capacity which can install systems relatively efficiently, yet which is quite clearly inappropriate for operating and maintaining water supplies. This contradiction has only now appeared as policy objectives have changed. Top-down delivery has also acted as a disincentive to the promotion of health education by distancing the recipients from the design and implementation of the programme and by focussing attention on installation rather than on health and education.

CONSTRAINTS TO DISTRICT COUNCIL IMPLEMENTATION IN RURAL DEVELOPMENT:

The constraints of manpower, finance and associated decision-making capacity which have limited the achievements of the VWSP and SHESP programmes are precisely the constraints which inhibit District Councils in the implementation of their statutory duties. These constraints can be considered in this broader context.
Financial Constraints:

The implementation capacity of the District Council is severely constrained by the fact that it depends almost totally on central government and donor agencies for financial assistance (Reilly, 1983). This dependence reflects two major issues. First, the fact that Councils are unable to generate adequate local revenue, due to the lack of a taxable rural economy, to finance even a small part of their activities, thereby thwarting any attempt at achieving self-reliance. Second, the fact that Council activities continue to grow in line with public sector expansion at a rate which exceeds increases in local revenue collection. The consequent state of financial dependence on external sources severely circumscribes the freedom of Councils to make decisions over the allocation of resources as regards for example manpower, transport and development policy more generally. It forces the Councils to depend on central government for the provision of deficit grants. In so doing, they must accept close monitoring and control of financial disbursements by government. According to Mawhood (1983) this funding arrangement represents the lowest level of financial autonomy. These financial constraints concern both recurrent and capital budgets. In the latter case, almost 100% of funds are obtained from central government and the donor community to cover statutory responsibilities such as schooling and health. (A later section examines the extent to which District Development Planning provides Council the opportunity to influence resource allocation, given this level of dependence.)

Dependence on financial resources from central government is illustrated by the following figures. NDP 6 (GOB, 1985) has estimated the recurrent budget requirements of the District Councils for the next plan period to 1991. For the financial year, 1985/86, expenditure was of the order of 34.7 million Pula of which only 4.7 million Pula could be raised from local revenue collection. The remainder has had to be covered by a central government deficit grant. The Plan does not anticipate the districts being able to increase local revenue collection over the plan period. Consequently, by 1991, the deficit grant will have to be even larger. Against a forecasted expenditure in 1991 of 45.6 million Pula, 41 million will be provided for by central government. Table 9
illustrates the level of dependence of Kweneng and Kgatleng districts on deficit grants.

The problem of establishing a standard procedure for the allocation, auditing and budgetting of resources becomes apparent when a substantial proportion of resources are obtained from various external sources. This has been the experience of the ESPP/SHESP project but is by no means peculiar to this project. The financial management of District Councils has been rendered particularly complex because of this external dependence, and more especially because of an apparent anomaly between procedures for dealing with capital and recurrent budgets.

Generally, aid agencies only provide funds to cover capital expenditures. These capital expenditure funds are provided through central government or directly to the District Councils according to the status of the project. As such, these funds are allocated in a top-down fashion. By contrast the allocation of funds for recurrent expenditure involves a greater degree of district-level participation, even though the overall recurrent budget is calculated by the centre. It is the responsibility of individual Council departments to lobby their own administration through the DDC to ensure that adequate recurrent funds are provided to support any capital fund allocations that they might receive. However, this activity can be poorly coordinated as in the example of SHESP. The provision of sufficient recurrent funds is not guaranteed to follow capital fund allocations. The situation can, therefore, arise whereby a project cannot be implemented because inadequate recurrent funds have been allocated to cover project costs. Unfortunately, it has often been the case that the district has assumed that the donor is responsible for providing both capital and the recurrent funds and it has, therefore, overlooked the need to budget for additional financial requirements. Moreover, government has become increasingly concerned to limit Council's recurrent expenditure bill and is, therefore, reticent to support projects which incur increased recurrent costs (GOB, 1985). This places considerable strain on Councils to distribute scarce resources between their departments. District Councils are, however, unable to influence policy since they have neither control over their recurrent nor capital budgets.
Table 9: District Council Recurrent Budget Status - 1985/86

<table>
<thead>
<tr>
<th></th>
<th>EXPENDITURE</th>
<th>INCOME</th>
<th>DEFICIT (in Pula)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K MIENG</td>
<td>4,372,611</td>
<td>763,216</td>
<td>3,609,400 (82%)</td>
</tr>
<tr>
<td>NG-TLENG</td>
<td>3,477,677</td>
<td>427,340</td>
<td>3,050,337 (82%)</td>
</tr>
<tr>
<td>ALL</td>
<td>7,842,288</td>
<td>1,190,556</td>
<td>6,651,732 (84%)</td>
</tr>
</tbody>
</table>

(Source: COS, 1985)
Manpower Constraints:

Access to manpower is in large part determined by financial considerations, since the wage bill for employees accounts for a major part of Council's recurrent budget (Reilly, 1983). Yet the Council's ability to allocate manpower is further constrained by the fact that it is not directly responsible for the employment and training of local government officers. All local government personnel are employed through the Unified Local Government Service (ULGS), a ministerial department which hires and allocates personnel within and between the District and Town Councils. In this way, individual Councils are unable to influence who they get, and to determine necessarily which departments ought to be serviced.

This condition has been made worse by the fact that central government has had the reputation of creaming off the high calibre graduates for themselves, where they often remain underemployed and where they receive inadequate in-service training, while the District Councils must make do with the second best recruited through ULGS (Noppen, 1982; Reilly, 1983). By comparison, the District Administration is resourced through central government's directorate of personnel and, therefore, has access to the better qualified. To an extent, this state of affairs reflects the fact that the country suffers from an absolute shortage of skilled manpower (Noppen, 1982; Reilly, 1983). Those who are most able can negotiate the most prestigious and lucrative jobs, and can enjoy rapid promotion to top appointments in central government and the private sector. At the same time, it is only fair to say that central government has recognised this bias and intends to overturn it by introducing a policy which offers positive discrimination in favour of local government recruitment (GOB, 1985).

In the mean time, the shortage of high calibre manpower has constrained the implementation capacity of the District Council. In the foreseeable future, however, the problem is likely to worsen irrespective of any positive discrimination, as public sector demands outpace the training and supply of suitable manpower. Government has even conceded that a policy of delocalisation may be necessary in order to sustain government's development strategy in the districts (GOB, 1985).
The problems of manpower at the District Council level are reflected in the following figures. Only 25% of middle/senior posts and 33% of junior posts are qualified according to the ULGS guidelines for recruitment (Reilly, 1983). Districts have to be content with often low quality manpower, while even at the national level, the government remains dependent on the services of expatriate personnel in technical and professional areas. NDP 6 underlines the problem of manpower scarcity at local government level (GOB, 1985). It has calculated that vacancies have reached a level of 15%, particularly in the technical and professional areas. There is, therefore, an absolute shortage of skilled manpower with administrative and technical credentials at the national level (Egner, 1980; Noppen, 1982) and this has, in particular, affected recruitment at the local government level.

All the same, it is precisely in the districts that skilled manpower is most needed (Noppen, 1982). This is all the more so in light of government's recent increased concern to address the problems of rural development. The problem of manpower is recognised by the districts and has been referred to in the most recent development plans. Kgatleng District sees this to be the greatest constraint to district development urging central government to channel available skilled manpower to local government and the private sector (KgOC, 1985).

District Councils are, therefore, not free to recruit and allocate manpower. They are constrained in this respect both by the system of recruitment which is based in central government and by absolute shortages of skilled manpower at the national level.
POLICY IMPLEMENTATION: THE ROLE OF COMMUNITY INSTITUTIONS:

THE ROLE OF COMMUNITY INSTITUTIONS IN THE SHESP PROJECT:

In examining the constraints to community participation, it is necessary to consider both the role of community development institutions and of the individual participating household in the latrine construction and health education components of the project. This section discusses the role of community institutions while the following section considers the role of the household.

The project's Plan of Operations (USAID/GOB, 1979) anticipated that the project would rely on the participation of community institutions to mobilise and coordinate household participation in latrine construction, and to orchestrate the health education campaign. The Village Development Committee (VDC), in particular and extension workers such as the FWE and ACDO, were identified as most suitable to undertake this task. It was argued that active community participation was a pre-condition for building a village-based implementation capacity which could become self-sustaining and replicable.

The experience of ESPP fell short of these expectations. Community participation through voluntary groups was negligible and could not match the support provided by the Council's project team. No implementation capacity was built up which in part explains why so many of the participants abandoned the project and the construction of their latrines as soon as the project team departed after two years (see Table 10). Moreover, no health education campaign associated with the project was implemented and no effort has been made to start one since the termination of the project. Presently, neither the VDC nor extension workers in the ESPP villages have been charged with the responsibility for promoting sanitation according to the principles of the project. Because implementation depended on an external project team, it meant that the momentum of the project died as soon as the project team departed. ESPP has become a distant memory symbolised by a scattering of half-complete and abandoned VIP latrines. The failure of the project to become self-sustaining must be attributed to the fact that insufficient effort was made to assess the feasibility of incorporating
<table>
<thead>
<tr>
<th>District</th>
<th>COMPLETE LATRINE WALLS</th>
<th>COMPLETE LATRINE ROOF</th>
<th>COMPLETE LATRINE V/PIPE</th>
<th>COMPLETE LATRINE SEAT</th>
<th>INCOMPLETE LATRINE WALLS</th>
<th>INCOMPLETE LATRINE ROOF</th>
<th>INCOMPLETE LATRINE V/PIPE</th>
<th>INCOMPLETE LATRINE SEAT</th>
<th>INCOMPLETE LATRINE only</th>
<th>FOUNDERATION V/PIPE</th>
<th>SLABS</th>
</tr>
</thead>
<tbody>
<tr>
<td>OLIFANS</td>
<td>O.H.</td>
<td>8</td>
<td>62%</td>
<td>1</td>
<td>2</td>
<td>15%</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>DEMO</td>
<td>4</td>
<td>25%</td>
<td>1</td>
<td>1</td>
<td>15%</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>ARTESIA</td>
<td>O.H.</td>
<td>1</td>
<td>13%</td>
<td>1</td>
<td>2</td>
<td>25%</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>DEMO</td>
<td>2</td>
<td>13%</td>
<td>3</td>
<td>1</td>
<td>25%</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>MADALANE</td>
<td>O.H.</td>
<td>4</td>
<td>40%</td>
<td>7</td>
<td>6</td>
<td>3%</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>DEMO</td>
<td>5</td>
<td>100%</td>
<td>7</td>
<td>7</td>
<td>3%</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>HH</td>
<td>9</td>
<td>16%</td>
<td>13</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>DEMO</td>
<td>55</td>
<td>9%</td>
<td>55</td>
<td>7%</td>
<td>2%</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 10: ESPP Latrine Inventory: State of Completion - Kgatleng District

NOTES: HH = Household ESPP Latrines
DEMO = Demonstration ESPP Latrines
c = Cement/Concrete Blocks
m = Mud Bricks
V/PIPE = Vent pipe
village institutions into the delivery system, and the pre-occupation with achieving rapid results which prompted reliance on the project team and which led to the abandonment of the health education campaign. In the end, the objective of promoting institution-building as one of the major components of the project was subordinated to the compulsion to achieve rapid results.

This experience is being repeated in the current SHESP project. The project teams have been assuming an increasingly dominant function in project implementation and have achieved rapid results in latrine construction. While this is commendable in its own right, it does little to improve the implementation capacity of community development institutions and only reinforces an attitude of dependence on external agencies. One must wonder what will happen once the current stage of the project is finished and the project teams move to new villages. Who will support the health education campaign and how will households in the future obtain access to support and advice to maintain VIP latrines and to build new ones?

At the same time, there has been recent evidence of active community participation in planning a health education campaign in the Kgatleng "river villages". Several successful health education workshops have been organised by the project teams on behalf of community groups, and have received support from relevant central government departments. At the time of writing, the main objective of these meetings has been to identify the best institutions to work through at the community level and to seek cooperation between such institutions. It remains to be seen if, in this instance, policy rhetoric can be translated into action.

As research was carried out at a time when the pilot project had been terminated and the follow on project had not yet been launched officially, a decision was taken to try to provide explanations why community participation based on the mobilisation of village institutions had failed to respond to the project and to assess the likelihood of greater success in the forthcoming project. Research aimed to ascertain the status of community participation in rural development generally. The findings from this research corroborate findings of an earlier government research programme which sought to
evaluate the role of village institutions in rural development (Brown et al, 1982). It is concluded that the constraints to community participation experienced in the sanitation project reflect broader features of community participation in Botswana, and these features must, therefore, be examined in order to explain why community participation in ESPP was not forthcoming and why, unless carefully planned, it may not materialise during the course of the current project. Difficulties in mobilising community support cannot, therefore, be attributed solely to shortcomings in the specific design and implementation of the project.

THE ROLE OF COMMUNITY INSTITUTIONS IN THE VWSP PROGRAMME:

The community is a passive recipient of a service which is installed and maintained by government personnel. It can be argued that the absence of community participation in project delivery has eliminated the risk of problems arising which could constrain the achievement of policy objectives, as the rural sanitation project has experienced. A top-down delivery system has led to rapid implementation. However, the absence of community participation has rendered the recipient totally dependent on government services for operation and maintenance which are already stretched to over-capacity. Water supplies would be better maintained and would be more reliable if the community itself was responsible for operation and maintenance as is the case in a number of other countries such as Malawi (Glennie, 1983). Water sub-committees could be established under the auspices of the Village Development Committee to operate and maintain water supplies. Under such a scheme, pump operators would be resident in the village and accountable to the community while dependence on government services would be reduced. Yet, such a proposal could only work if substantial changes were made to the type of technology that is used to supply water. The problem is that environmental conditions constrain the options for alternative technologies, as discussed in chapter 5. Furthermore, account must be taken of the potential problems that can arise in depending on community institutions such as the VDC. In this respect, it is necessary to consider just how viable it is to delegate responsibilities to village institutions which may not be able to offer the necessary skills or credentials. It is, therefore, necessary to consider the role of community institutions such as the VDC in rural development.
COMMUNITY INSTITUTIONS IN RURAL DEVELOPMENT - THE IMPLICATIONS FOR SPECIFIC PROJECTS:

The Village Development Committee (VDC):

The ESPP Plan of Operations identified the VDC as the most suitable village institution which could contribute to the mobilisation and implementation of the sanitation project. It is probable, furthermore, that in the event that the water supply programme is decentralised, the VDC will also be used to coordinate community participation. This is because the VDC is the major institution at the village level charged with the responsibility for planning and implementing village-based development projects.

While the VDC is the most widely found, and most popular modern village institution, the influence it has exerted on village development has fallen short of original expectations. The research programme commissioned by government to evaluate the role of village institutions in rural development reached similar conclusions (Brown et al, 1982). Fieldwork carried out for this thesis corroborates these findings. The role of village institutions in rural development must, therefore, be examined in order to assess their competence to support specific projects such as the VWSP and SHESP programmes.

The VDC in Rural Development:

The majority of VDC's function ineffectively and intermittently and make few tangible contributions to community development. While the VDC has in some cases mobilised support for the construction of small self-help infrastructure projects, such as the building of houses, classrooms, or public latrines, their contribution to production-related projects or to decision-making as regards the setting of development priorities has been all the more limited. Far from being a forum for discussion, decision-making and mobilisation, as suggested in chapter 3, the vast majority of VDC's are ineffective and many do not function at all. Those that do, tend to support particular interests within the community rather than those of the whole community (Noppen, 1982). The majority of households, even in small villages with less than 500 residents have little contact with it. They know little about the activities or
purposes of the VDC, nor for that matter of other modern institutions (Wynne, 1981). This lack of popular support has been acknowledged by government who admit that the majority vary from poor to almost non-existant (LGSC, 1979).

The following section examines the status of village institutions based on fieldwork conducted in Kweneng and Kgatleng districts (unless otherwise stated). Evidence is based on interviews with committee members, extension workers and village residents.

Voluntary development groups such as the VDC, PTA and 4B are generally poorly supported by the community. Membership is low and attendance of meetings is irregular. The groups, themselves, are often poorly administered and lack leadership or a sense of purpose. This is true for the VDC as much as it is for some of the smaller committees. No more than perhaps 10% or 20% of a village population attend meetings organised by such groups including the VDC. Many households are just not interested in supporting these groups, while many claimed they did not know of their existence.

In the Kgatleng district survey, the following was found. Overall, only 23% of households belong to or attend any village institution (see Table 11). Of those who do, the most popular institutions are the VDC, the PTA, and to a lesser extent the Red Cross and 4B club. However, in the villages of Artesia, and Olifants Drift, the VDC was not mentioned at all by respondents, despite the fact that they exist. In Artesia, the VDC committee is alarmed that nobody had attended their meetings this last year and that few projects are being undertaken. They complained that there is too much alcoholism in the village, and concluded that this has led to such apathy. However, an extension worker explained that the lack of community interest is due to the fact that the village is relatively new and is made up of a number of tribal sub-groups which feel little attachment to the area, or to one another. The village has in fact been built up around a railway works. This disunity has been compounded by the fact that the newly appointed headman is elderly and sick and too feeble to carry out his duties.

Of the 77% of respondents who claim not to belong to any village group, a third claimed that the reason for this was that they did not know of
### Table 11: Household Participation in Village Institutions - Kgatleng District

<table>
<thead>
<tr>
<th></th>
<th>OLIFANTS</th>
<th>ARIESIA</th>
<th>MABALANE</th>
<th>AGGREGATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES - VDC</td>
<td></td>
<td></td>
<td>10 11%</td>
<td>5%</td>
</tr>
<tr>
<td>YES - VHC</td>
<td>1</td>
<td></td>
<td>1 1%</td>
<td>1%</td>
</tr>
<tr>
<td>YES - PIA</td>
<td>1</td>
<td></td>
<td>6 6%</td>
<td>3%</td>
</tr>
<tr>
<td>YES - Combination of above</td>
<td>4 7%</td>
<td>4 6%</td>
<td></td>
<td>4%</td>
</tr>
<tr>
<td>YES - Other Groups</td>
<td>5 9%</td>
<td>13 21%</td>
<td>3 3%</td>
<td>10%</td>
</tr>
<tr>
<td>NO - Do Not Know of Am</td>
<td>27 48%</td>
<td>15 24%</td>
<td>29 31%</td>
<td>33%</td>
</tr>
<tr>
<td>NO - Not Interested</td>
<td>13 23%</td>
<td>17 27%</td>
<td>22 23%</td>
<td>25% 78%</td>
</tr>
<tr>
<td>NO - Too Old/Too Far</td>
<td>6 11%</td>
<td>13 21%</td>
<td>23 24%</td>
<td>20%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>56 100%</td>
<td>63 100%</td>
<td>94 99%</td>
<td>101%</td>
</tr>
</tbody>
</table>

### Table 12: Household Perceptions of the VDC - Kgatleng District

<table>
<thead>
<tr>
<th></th>
<th>OLIFANTS</th>
<th>ARIESIA</th>
<th>MABALANE</th>
<th>AGGREGATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't know what it does</td>
<td>12 21%</td>
<td>30 48%</td>
<td>38 42%</td>
<td>38%</td>
</tr>
<tr>
<td>Develops the Village</td>
<td>6 11%</td>
<td>7 11%</td>
<td>25 27%</td>
<td>18%</td>
</tr>
<tr>
<td>VDC Does Nothing</td>
<td>6 11%</td>
<td>12 19%</td>
<td>7 8%</td>
<td>9%</td>
</tr>
<tr>
<td>OTHER</td>
<td>2 4%</td>
<td>4 6%</td>
<td></td>
<td>6%</td>
</tr>
<tr>
<td>There is no VDC</td>
<td>6 15%</td>
<td>2 3%</td>
<td>3 3%</td>
<td>7% 29%</td>
</tr>
<tr>
<td>Don't Know</td>
<td>21 38%</td>
<td>8 13%</td>
<td>18 20%</td>
<td>22%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>56 101%</td>
<td>63 100%</td>
<td>94 100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
the existence of any of these groups. Many expressed complete
disinterest. This is discussed in more detail in relation to the VDC.

About 70% of residents are in fact aware that their village has a VDC.
22% said they did not know that there was one in existence while 7% were
convinced that there was no VDC in the village at all (see Table 12).
Of the majority who were aware of the VDC, few could make positive
comments about its activities. 47% said that they had no idea what it
was supposed to do, while others stated categorically that it does
nothing at all, except to help itself. However, in Mabalane, attitudes
towards the VDC seemed to be more positive. Again, one must recognise
that there is significant inter-village variation, and that this might
also vary from year to year, according to who is elected to the
committee.

In all three villages, it was confirmed that there is a VDC present
which is represented by an elected committee. In Olifants Drift, the
committee admitted that the meetings are poorly attended and that one
rarely found the same people attending the meetings. As a result, it
was practically impossible to mobilise any activity in the community.
Lack of support has been made worse by the recent drought. Increasing
numbers of residents have left the village to seek employment in the
urban sector, on the bordering South African farms, or on the local
drought relief projects. Committee members explained that people were
no longer prepared to provide labour without receiving payment for
community projects. The committee felt that unless it received greater
support from the District Council, it would not be able to exert a
greater influence on village development. In Mabalane, however, the
committee claimed that meetings are held on a regular basis at the
tribal Kgotla and that the meetings are well attended. However,
commitment to decisions reached is so poor that few policies are
implemented. Moreover, the VDC also feels isolated from local
government, and argues that it ought to receive greater support from
extension workers, such as the ACDO.

Findings from the Kweneng district survey are similar (see Table 13).
Only 10% of the sampled households claimed to attend or belong to
village groups. The VDC was the most popular group, followed by the Red
Cross. Most respondents felt that the activities of community groups
just did not interest them. Others insisted that such groups did not exist in their village. In Thamaga, the VDC is poorly organised and is unsure as to what it ought to be doing. There have also been difficulties in organising the election of new committee members because the current members have refused to stand down. In the other villages, the VDCs are inactive and complaints were made that they refuse to cooperate with other village groups, and extension workers, especially the health staff.

Traditional Authority as an Agent of Change:

By contrast, the Kgotla - the traditional assembly presided over by the headman - still enjoys widespread support from the community in a way that no other modern village institution, including the VDC, can. The paradox is that while the Kgotla has retained influence in a political and social capacity, it no longer holds the responsibility for influencing policy concerning village development.

The influence of the headman and the Kgotla is, therefore, considerable in an unofficial capacity, despite the fact that its legal responsibilities towards decision-making and development have been greatly reduced. Tribal authority is the only institution at the village level which can provide political legitimacy for any development activity that is undertaken in the community, or for any group working within the community. Without the approval of the Kgotla, it is difficult to obtain community support for any externally imposed or even community-based initiative. The political leverage enjoyed by the Kgotla reflects the fact that in the opinion of the majority of the rural population, it is tribal authority rather than any modern institution which reflects their interests. As a result, any private or public institution or individual which intends to undertake work in a village for whatever purpose, including fieldwork for private research, must receive official permission from the headman before proceeding with that work. While this is by no means a written regulation, it is a formality which carries considerable weight and which must be treated with respect.

There is, therefore, a substantial disparity between the de jure and de facto power of tribal authority, which the government is aware of.
### Table 13: Household Participation in Village Institutions - Kweneng District

<table>
<thead>
<tr>
<th>Village</th>
<th>Thanele</th>
<th>Moshoeshoe</th>
<th>Gabane</th>
<th>Kolepolo</th>
<th>Aggregate</th>
</tr>
</thead>
<tbody>
<tr>
<td>VLC</td>
<td>3 (3)</td>
<td>3 (7)</td>
<td>- (-)</td>
<td>6 (2)</td>
<td>(3)</td>
</tr>
<tr>
<td>RED CROSS</td>
<td>3 (3)</td>
<td>1 (2)</td>
<td>- (-)</td>
<td>4 (1)</td>
<td>(2)</td>
</tr>
<tr>
<td>OTHER</td>
<td>3 (3)</td>
<td>2 (4)</td>
<td>- (-)</td>
<td>18 (6)</td>
<td>(3)</td>
</tr>
<tr>
<td>KGC</td>
<td>79 (59)</td>
<td>35 (87)</td>
<td>35 (100)</td>
<td>277 (71)</td>
<td>(92)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>50(100)</td>
<td>45(100)</td>
<td>35(100)</td>
<td>305(100)</td>
<td>(100)</td>
</tr>
</tbody>
</table>

### Table 14: Household Attendance of Kgotla Meetings - Koatleng District

<table>
<thead>
<tr>
<th>District</th>
<th>OLIFANTS</th>
<th>ARTESIA</th>
<th>MABALANE</th>
<th>AGGREGATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES - Every Meeting when Available</td>
<td>42 78%</td>
<td>43 68%</td>
<td>70 70%</td>
<td>72%</td>
</tr>
<tr>
<td>YES - More than 1/month</td>
<td>2 4%</td>
<td>2 3%</td>
<td>13 13%</td>
<td>.8%</td>
</tr>
<tr>
<td>YES - Less than 1/month</td>
<td>5 11%</td>
<td>1 1%</td>
<td>1 1%</td>
<td>3%</td>
</tr>
<tr>
<td>NO - No Time/Too Far</td>
<td>2 4%</td>
<td>9 14%</td>
<td>5 5%</td>
<td>7%</td>
</tr>
<tr>
<td>NO - Too Old</td>
<td>4 8%</td>
<td>7 7%</td>
<td>5 5%</td>
<td>5%</td>
</tr>
<tr>
<td>NO - Not Interested</td>
<td>2 4%</td>
<td>5 8%</td>
<td>3 3%</td>
<td>5%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>55 101%</td>
<td>63 93%</td>
<td>99 99%</td>
<td>100%</td>
</tr>
</tbody>
</table>
While tribal authority has been denied access to rural policy formulation and implementation and despite government efforts to render it politically redundant, it has maintained a political relevance which means that it cannot be neglected, when examining community development. The discrepancy means that an evaluation of the role of traditional authority in community participation cannot be based on an examination of its de jure responsibilities. More importantly, one must consider the reasons why traditional authority has maintained its influence inspite of government efforts to weaken it through legislation.

The village institution research project (Brown et al, 1982) also recognised the extent to which traditional institutions remain powerful. In one major study, it was concluded that more people attend and participate in Kgotla meetings in any one day than attend and participate in more 'modern' institutions in a year (Wynne, 1981).

Government has realised that legislation in itself cannot overcome the continued level of support for tribal authority, particularly in the more remote areas where the impact of modern government has been least felt. In such areas, the Kgotla is often the only institution which is represented (Noppen, 1982). This level of representation can be contrasted to that of the VDC and other modern institutions which may only be found in larger settlements. My own fieldwork conducted in Kweneng and Kgatleng districts, reached familiar conclusions.

Respect and support for the Kgotla remains strong. Over three-quarters of household respondents in the seven survey villages claim that they attend Kgotla meetings when they are resident in their home village (see Table 14). This might, however, be quite rare, given the seasonal migration to the lands and the high rate of migration to the urban sector. However, the Kgotla, rather than more modern village institutions remains the focal point for community decision-making on development issues and on local political, social and judicial matters. As such, any project which requires community participation in order to succeed, but which by-passes the Kgotla, is unlikely to attract the support of the community.

The sanitation project which relies on modern institutions to mobilise community participation and to coordinate the health education campaign,
can only succeed if the relationship between the Kgotla and such designated modern institutions is good. In cases where there is competition for power between traditional and modern forces, including councillors, problems can arise as experienced in the village of Gabane where health extension workers and the VDC have been unable to obtain the cooperation of the headman. However, there are instances when the headman enjoys little respect and it may be the councillor who can exercise more influence. Therefore, a project imposed from outside must be especially sensitive to the specific climate of local village politics.

In one of the 'river villages' in Kgatleng district, the headman refused to call a Kgotla meeting to introduce the sanitation project to the community. Without the support of the headman, it was unlikely that the community would take an interest. Eventually, the meeting did take place but only after the project coordinator threatened to report the headman to the paramount chief of the Kgatla tribe, who had been instrumental in publicising and endorsing the project in the district in the first place. Generally, the Kgotla can provide the necessary political backing to mobilise community support. It is, therefore, essential to use the Kgotla to provide legitimacy to modern village institutions and development projects.

The Kgotla was, for example, put to good use in introducing the health education campaign to the village of Mathubudukwane. A Kgotla meeting was convened which was attended by all local dignitaries, village residents and government officers associated with the project. At this meeting, speeches were presented by the headman, by a senior government official and by the UNICEF country representative. Gifts were presented to the headman while government officials were entertained with a display of traditional dancing.

Nevertheless, the popular support enjoyed by tribal authority is by no means guaranteed. As such, the village headman must earn the support and recognition of his community. The influence of the Kgotla depends on the personality and effectiveness of the headman (Manzardo, 1982). Similarly, relations with modern government institutions are often determined by the attitude of the headman (Odell, 1985). This 'personality' factor is of particular importance because tribal
authority is upheld by custom rather than by a written constitution and is, therefore, subject to individual interpretation.

Moreover, the absolute authority and respect that the Kgotsa was once accustomed to, has been declining, as suggested in chapter 3. Authority has been lost as increasingly, the Kgotsa is unable to determine community behaviour, especially in social and economic life. Thus, while the Kgotsa remains the most powerful village institution, its absolute power has declined substantially.

The village institution research programme (Brown et al, 1982) has noted the contradictory status of tribal authority. It concluded that attendance at Kgotsa meetings is generally poorer than in the past. There has been a growing loss of respect for the institution resulting from the progressive erosion of the power base of its figure heads which today, are little more than poorly paid civil servants (Brown et al, 1982). Furthermore, respect for headmen appointed by local government tends to be lower than for those who have been appointed according to Tswana custom (Manzardo, 1982). Consequently, one can detect a:

"...contradictory situation of an apparently declining institution which continues to have considerable effect." (Fortmann, 1983: pli)

The imposition of modern community and local government institutions has artificially separated political decision-making from social and economic development concerns at the village level. Yet, so long as Batswana identify the Kgotsa and headman as their true representative, community participation will be compromised if that representation is denied access to the development process.

While researchers have concluded that community participation cannot ignore the importance of the Kgotsa in providing legitimacy to externally imposed development projects and, therefore, recommend the need to consult the Kgotsa, many are concerned that a number of social customs which are reflected in the Kgotsa, conflict with the goals of government and donor-supported community development projects. While the Kgotsa is accountable to Tswana culture, it is recognised that this culture displays distinct features of social differentiation between nobility and commoners, the old and young, and between men and women.
which some development projects seek to challenge. It has been noted by many that at Kgotla meetings priority is given to the views of the old and wealthy (Fortmann, 1983). In particular:

"The views of the young, the poor, and the inferior, not to speak of the women, count for very little." (Noppen, 1982: p133)

This can have serious consequences for the success of the sanitation project. It is widely recognised that women are responsible for household health and hygiene. Women are the 'drawers of water' (White et al, 1972), are responsible for clothes washing, cleaning, food preparation and child care. Attitudes and behaviour towards the use and protection of clean water and to safe excreta disposal concerns women more than anyone else within the household, though ultimately it concerns everybody - young and old, male and female. Ideally the project must involve the active participation of women in planning and implementing the project. Yet this objective can be constrained by the customs of the Kgotla which restrict women from participating in debate and decision-making, while giving priority to men. They are, however, likely to be less informed and less concerned about health related issues as indeed survey results suggested (Coppermann, 1978).

The Role of the Extension Worker:

Extension workers are expected to provide technical assistance to the sanitation project by mobilising household participation, and by promoting the health education campaign. In practice, the support provided by extension workers to ESPP was negligible, amounting to little more than occasional uncoordinated assistance. In some of the project villages, such as Olifants Drift, extension workers helped out in the collection of project contributions. It would appear that the FWE was provided with no guidelines nor assistance to incorporate project-related health education into her responsibilities. However, it is noted that the health education component of the project was curtailed after the first year. Furthermore, cooperation between extension workers and other village institutions was often poor so that no concerted effort could be established.
The lack of support from extension workers can in part be attributed to problems associated with the district-level coordination of project implementation. At the same time, the poor results can be attributed to broader problems facing the role of the extension cadre in supporting community development. The experience of ESPP was by no means unusual but was symptomatic of the problems facing the extension worker more generally. It is not uncommon to find that the contribution made by extension workers to village development is haphazard and un-coordinated. It is likely, therefore, that the current sanitation project and any future decentralised water supply project will confront similar constraints in trying to work through the village extension team. The surveys conducted in Kweneng and Kgatleng districts tried to establish the extent to which this might be so.

- The Role of the FWE and Community Health Education -

The FWE is expected to undertake regular house to house visits as part of her Primary Health Care duties within the village. However, only 25% of sampled households in the project villages in Kgatleng district could remember having been visited by their FWE in the last 12 months. 42% of the sample, however, knew that there was a FWE in their village while 17% did not even know that there was one at all (see Table 15). FWE's who were interviewed explained that many villagers do not recognise them as specifically FWEs. This is because residents tend not to differentiate between government workers within the community. In Artesia, people confuse the FWE with the ACDO while in Olifants Drift, villagers are not sure as to what the FWE is supposed to do. FWEs complained that they receive little support from the Council or from the Ministry of Health, and that they are forced to spend a disproportionate part of their time helping out at the clinic. This problem has been worsened by the current drought. Government relief measures include compulsory feeding to vulnerable groups at village clinics on a daily basis. The duty of preparing meals has had to fall on the FWE. For these reasons, they are unable to undertake routine tasks such as house to house visits, which is their primary responsibility.

Findings in Kweneng district are similar. There again, only about 25% of the community had been visited by their FWE (see Table 16). Similarly, excessive time has had to be spent working at the clinic.
Table 15: Household Perceptions of the FWE - Kgatleng District

<table>
<thead>
<tr>
<th></th>
<th>OLIFANIS</th>
<th>ARTESIA</th>
<th>MABALANE</th>
<th>AGGREGATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FWE in Village -</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>has not visited</td>
<td>22</td>
<td>11</td>
<td>23</td>
<td>27%</td>
</tr>
<tr>
<td>FWE in Village -</td>
<td>10</td>
<td>11</td>
<td>20</td>
<td>24%</td>
</tr>
<tr>
<td>has visited in</td>
<td>13</td>
<td>1</td>
<td>24</td>
<td>17%</td>
</tr>
<tr>
<td>last 12 months</td>
<td>12</td>
<td>6</td>
<td>18</td>
<td>17%</td>
</tr>
<tr>
<td>No FWE in Village</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don't Know</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>56</td>
<td>63</td>
<td>91</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 17: Household Perceptions of the VHC - Kgatleng District

<table>
<thead>
<tr>
<th></th>
<th>OLIFANIS</th>
<th>ARTESIA</th>
<th>MABALANE</th>
<th>AGGREGATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>VHC in Village -</td>
<td>8</td>
<td>26</td>
<td>23</td>
<td>27%</td>
</tr>
<tr>
<td>has done nothing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VHC in Village -</td>
<td>14</td>
<td>12</td>
<td>14</td>
<td>19%</td>
</tr>
<tr>
<td>have visited/</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>held meetings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No VHC in Village</td>
<td>15</td>
<td>8</td>
<td>9</td>
<td>15%</td>
</tr>
<tr>
<td>Don't Know</td>
<td>15</td>
<td>17</td>
<td>45</td>
<td>39%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>56</td>
<td>63</td>
<td>91</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 16: Households Having Received a Visit from the FWE - Kweneng District

<table>
<thead>
<tr>
<th></th>
<th>Motlame</th>
<th>Mafeteng</th>
<th>Gaborone</th>
<th>Molepolole</th>
<th>Aggregate</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAVE RECEIVED F.W.E. VISIT</td>
<td>15 (17)</td>
<td>11 (23)</td>
<td>6 (17)</td>
<td>79 (26)</td>
<td>(21)</td>
</tr>
<tr>
<td>NO VISIT</td>
<td>75 (83)</td>
<td>35 (79)</td>
<td>29 (83)</td>
<td>226 (74)</td>
<td>(79)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>90 (100)</td>
<td>45 (100)</td>
<td>35 (100)</td>
<td>305 (100)</td>
<td>(100)</td>
</tr>
</tbody>
</table>
While they might be active and useful at the clinics, they are not fulfilling their responsibility of working with and in the community. While those household members who attend clinic sessions may benefit from the presence of the FWE, those who live in remoter parts of the community and who might not be able to reach the clinic are being overlooked. A further problem is that cooperation between the FWE and other village groups is frequently poor. Often, FWEs try to work with the Kgotla, the VDC or the VHC, to encourage health and hygiene campaigns, but with apparently little success. This lack of cooperation is looked at in a little more detail.

The VHC, a sub-committee of the VDC is a voluntary group, comprised of locally elected residents responsible for identifying community health needs, promoting health-related issues and for liaising closely with the work of the FWE. As such, it serves as a further link between the community and health staff within Primary Health Care. The VHC is, however, a relatively new institution which operates in only a few villages. Over 33% of sampled residents in the Kgatleng district study do not know whether or not their village has a VHC. About 25% know that there is one but feel that it does little for them, especially in Artesia, where the proportion was 41% (see Table 17). Here, the VHC is completely inactive. No meetings have been arranged during the past year and there is a very real sense of apathy. There have been calls to have the committee re-elected especially since no actions have been planned to improve this current state of affairs. According to both the FWE and VDC, the VHC is supposed to encourage people to build latrines and provide information on water hygiene but these amongst other things has been ignored. It may be noted that the committee member that was interviewed in Artesia was drunk at 11 in the morning.

In Olifants Drift, we were told that the VHC is also inactive because eight of the ten committee members are either working in South Africa or are employed on an on-going labour-intensive road project. Such absenteeism is a characteristic problem facing village voluntary groups. In effect, such groups can only be operational during the dry season when most village inhabitants have returned from the lands. This means that for up to 6 months, these groups lie dormant. Moreover, with so few employment opportunities available in the village, the able-bodied and able-minded migrate away so that only the less able remain to run
village groups. This has been all the more so during the current drought when household members have been forced to migrate to find work, rather than stay in the village to maintain village groups on a voluntary basis.

These findings on the role of village institutions in community participation are disappointing but not unexpected. Given this background, the task of institution-building is challenging. The goal of achieving a long-term implementation capacity and an institutionalised health education programme within SHESP will be difficult to realise so long as community participation faces these constraints. It is only that it has been designed to operate through existing institutional arrangements, and with good reason too. It is possible that the experience of this project together with other community development initiatives will contribute to a strengthening of village institutions so that they can become more permanent and self-reliant units. However, the constraints identified illustrate the problems that government and the donor must face up to, in trying to implement a project from above, while relying on a high level of community support.

Yet, providing that appropriate planning has been undertaken and that suitable individuals have been appointed to key positions in the project, the community can make a positive contribution to the project. Recently, an active project team, working in association with an enthusiastic and dedicated FWE in Malolwane has organised some successful community-based health workshops which have brought together members of voluntary groups, churches and extension workers to discuss the hardware and software components of the project. The community has been active in other areas too, concerning decision making. The design of the latrine unit was amended to include a door following a full council meeting in which councillors strongly voiced their objection to the existing spiral design (Land & Raditloaneng, 1985b).

Constraints operating at the community and local government levels undermine the tight implementation timetable set by the donor agency. Results are achieved slowly and patchily. However, the donor is only committed to the project for a 2 year period, after which support might well be retracted. As a result, the major objectives of the project,
such as the construction of latrine units within the project period may not be achieved. However, in order to exhaust funds before the termination of the project, which is interpreted as a measure of project success, emphasis is placed on intensifying construction so that as many units as possible can be built. Emphasis is, therefore, directed to quantity rather than to quality, in a situation of crisis management.
POLICY IMPLEMENTATION: THE ROLE OF THE HOUSEHOLD:

The success of the sanitation project and similar bottom-up projects depend on widespread household participation. Policy objectives cannot be met if recipients are unable to participate. Such projects are, therefore, vulnerable to factors constraining household participation. By contrast, in top-down projects, policy implementation is unaffected by such issues and therefore objectives can be more easily achieved. This section illustrates the significance of constraints at the household level affecting project delivery. On the basis of the Kweneng and Kgatleng household surveys (see methodology), the capacity of households to provide self-help contributions to the sanitation project is examined.

Participation is determined by a household's capacity and willingness to take part. This study concentrates on the former issue taking as given that households wish to have a latrine provided by the project. Field data suggests that almost all households would like to have a latrine, be it for reasons of health, convenience, privacy or status (see table 18). It is, therefore, necessary to identify factors affecting the capacity to participate through the provision of cash (30 Pula), labour and building materials. Results from the field indicate that the capacity to participate is positively correlated with socio-economic status and that levels of participation vary between households, between villages, and seasonally too. Despite subsidy, a significant number of households do not have the means to provide a self-help contribution, while some households have had to drop-out because of an unanticipated shortage of resources.

The ability to provide cash and labour are primary factors determining participation while access to materials is a secondary factor contingent on the primary factors. To provide cash, a household must have access to a disposable cash income. Such access is determined primarily by the income and employment status of the household but also by a variety of mediating factors. To provide labour, a household must either have access to able-bodied household members or be able to hire labour. Circumstances vary according to the age, sex, employment and income status of households. The type of materials used is determined by both
Table 18: Reason For Wanting a Latrine - Kqatleng District

<table>
<thead>
<tr>
<th>Reason</th>
<th>GLIFANTS</th>
<th>ARTESIA</th>
<th>MABALANE</th>
<th>AGGREGATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't want latrine</td>
<td>1 3%</td>
<td>2 5%</td>
<td>21 68%</td>
<td>3%</td>
</tr>
<tr>
<td>Convenience</td>
<td>23 61%</td>
<td>24 55%</td>
<td>21 68%</td>
<td>61%</td>
</tr>
<tr>
<td>Health benefits</td>
<td>5 13%</td>
<td>13 30%</td>
<td>6 19%</td>
<td>21%</td>
</tr>
<tr>
<td>Privacy</td>
<td>2 5%</td>
<td>1 2%</td>
<td>3 10%</td>
<td>5%</td>
</tr>
<tr>
<td>Combination of above</td>
<td>5 13%</td>
<td>1 2%</td>
<td>3 10%</td>
<td>4%</td>
</tr>
<tr>
<td>Other</td>
<td>1 3%</td>
<td>2 5%</td>
<td>1 3%</td>
<td>4%</td>
</tr>
<tr>
<td>No reason</td>
<td>1 3%</td>
<td>1 2%</td>
<td>1 3%</td>
<td>2%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>38 101%</td>
<td>43 100%</td>
<td>31 100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
socio-economic and geographical factors. Income status, in particular, can influence whether purchased manufactured materials such as tin sheeting are used instead of traditional rural materials such as thatch. Geography determines access to markets and supplies retailers according to the location of settlements while the endowment of the physical environment determines the nature of locally available materials. Here, there is a seasonality dimension too. For example, during ESPP, thatch was not used owing to a shortage of grass resulting from drought while it was found that smaller and remoter villages tended to use traditional mud bricks to build the latrine superstructure because of the absence of any nearby cement brick making plant (see tables 19, 20).

ACCESS TO CASH AS A PRECONDITION TO PARTICIPATION:

The following analysis is based upon the Kgatleng ESPP evaluation survey unless otherwise indicated. Baseline data from the survey villages indicates household socio-economic characteristics consistent with wider analyses of the rural economy (see ch 3). Mean household incomes are low with a majority below the poverty datum line. While most households have at least one wage earner, employed outside of the rural sector, informal incomes and arable cultivation are required to satisfy basic needs while only a minority of households own cattle (see tables 21, 22). However, there is substantial variation in total incomes, access to wage employment and ownership of livestock on an intra- and inter-village basis, consistent with evidence of a high Gini coefficient in the rural economy at large.

Socio-economic differentiation is reflected in levels of project participation. There is a positive correlation between rising income levels and participation. Households already owning latrines are amongst the wealthiest whilst households unable to participate are amongst the poorest. ESPP participants fell between these two. This correlation was also evident on an inter-village level so that participation rates and existing latrine ownership was highest in the wealthiest of the three villages and lowest in the poorest (see tables 23-28).
Table 19: Factors Determining Type of Materials Used in Latrine Construction - Kqatleng District

<table>
<thead>
<tr>
<th></th>
<th>OLIFANTS</th>
<th>ARTESIA</th>
<th>MABALANE</th>
<th>AGGREGATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>6 86%</td>
<td>2 66%</td>
<td>5 43%</td>
<td>59%</td>
</tr>
<tr>
<td>Cost</td>
<td></td>
<td></td>
<td>4 33%</td>
<td>18%</td>
</tr>
<tr>
<td>Other</td>
<td>1 14%</td>
<td>1 33%</td>
<td>1 8%</td>
<td>15%</td>
</tr>
<tr>
<td>Don't know</td>
<td></td>
<td></td>
<td>2 17%</td>
<td>9%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>7 100%</td>
<td>3 99%</td>
<td>12 100%</td>
<td>101%</td>
</tr>
</tbody>
</table>

Table 20: Source of Building Materials Used - Kqatleng District

<table>
<thead>
<tr>
<th></th>
<th>OLIFANTS</th>
<th>ARTESIA</th>
<th>MABALANE</th>
<th>AGGREGATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locally</td>
<td>3 43%</td>
<td>1 33%</td>
<td>6 50%</td>
<td>45%</td>
</tr>
<tr>
<td>South Africa</td>
<td>3 43%</td>
<td>1 33%</td>
<td>1 8%</td>
<td>18%</td>
</tr>
<tr>
<td>Left-overs</td>
<td>1 14%</td>
<td>1 33%</td>
<td>1 8%</td>
<td>14%</td>
</tr>
<tr>
<td>Mochudi</td>
<td>1 33%</td>
<td>1 33%</td>
<td>1 8%</td>
<td>9%</td>
</tr>
<tr>
<td>Combination - Locally and South Africa</td>
<td>2 17%</td>
<td>9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Botswana</td>
<td>1 8%</td>
<td></td>
<td></td>
<td>5%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>7 100%</td>
<td>3 99%</td>
<td>12 99%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Household income was measured according to four indicators - total monthly income, total income earners, total wage earners and ownership of livestock. Capacity to provide cash and labour requires access to a disposable cash income. This condition is best satisfied in high income households. Obtaining a high income is contingent on access to wage employment and/or ownership of cattle.

Wage incomes are important because they provide the highest and most regular form of remuneration and are paid in cash. Cattle represent valuable assets which when sold can provide an immediate source of disposable cash. However, for the majority of households who do not own cattle, access to wage employment is the primary factor determining their total income. Incomes are supplemented by informal sector activities such as beer brewing and casual farm labour, by subsistence farming and by hunting and gathering. These sources of income are most important in those households with only one, or no wage earner at all.

Thus, households already with latrines were the wealthiest with a mean monthly income of 82 Pula. A higher proportion of such households had access to two or more wage incomes and owned cattle, and were consequently less dependent on informal sector activities. Such households have had sufficient income available to be able to invest in what for the majority is considered to be a non-essential luxury.

ESPP participants had a mean monthly income of 58 Pula, while non-participants had an income of 54 Pula. Both groups had fewer total income sources, access to wage employment and owned fewer cattle. By contrast, such households rely more extensively on informal sector employment. However, non-participants - the poorest on average - were most dependent on informal sector opportunities. These figures suggest two things. First, both groups are significantly less well off than those households which already have latrines. Second, ESPP has provided an opportunity for such households to invest in a latrine. However, the self-help commitment required is still significant and clearly a number of different contingent factors have prevented some households with comparable incomes from participating.

An inter-village comparison also suggests that household income status varies spatially. Consequently, participation rates are highest in the
Table 21: Livestock Ownership by Village & by Socio-Economic Group - Kgatleng District

<table>
<thead>
<tr>
<th></th>
<th>OLIFANIS</th>
<th>ARTESIA</th>
<th>MABALANE</th>
<th>ESPP</th>
<th>NON-ESPP</th>
<th>LATRINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>No livestock</td>
<td>20 35%</td>
<td>30 48%</td>
<td>15 21%</td>
<td>18 41%</td>
<td>8 15%</td>
<td>43 32%</td>
</tr>
<tr>
<td>Smallstock</td>
<td>23 40%</td>
<td>10 16%</td>
<td>20 32%</td>
<td>11 25%</td>
<td>18 34%</td>
<td>33 25%</td>
</tr>
<tr>
<td>Cattle &amp; smallstock</td>
<td>8 14%</td>
<td>17 19%</td>
<td>20 32%</td>
<td>7 15%</td>
<td>17 32%</td>
<td>25 22%</td>
</tr>
<tr>
<td>Goats only</td>
<td>4 7%</td>
<td>5 8%</td>
<td>7 8%</td>
<td>5 11%</td>
<td>6 11%</td>
<td>5 6%</td>
</tr>
<tr>
<td>Cattle only</td>
<td>2 4%</td>
<td>5 8%</td>
<td>7 8%</td>
<td>3 7%</td>
<td>4 6%</td>
<td>7 6%</td>
</tr>
<tr>
<td>Total</td>
<td>57 100%</td>
<td>67 55%</td>
<td>51 101%</td>
<td>41 100%</td>
<td>53 100%</td>
<td>113 95%</td>
</tr>
</tbody>
</table>

Table 22: Access to Draught Power by Village & by Socio-Economic Group - Kgatleng District

<table>
<thead>
<tr>
<th></th>
<th>OLIFANIS</th>
<th>ARTESIA</th>
<th>MABALANE</th>
<th>ESPP</th>
<th>NON-ESPP</th>
<th>LATRINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tractor</td>
<td>4 9%</td>
<td>15 39%</td>
<td>54 74%</td>
<td>16 50%</td>
<td>37 73%</td>
<td>25 32%</td>
</tr>
<tr>
<td>Donkey</td>
<td>35 81%</td>
<td>11 28%</td>
<td>7 10%</td>
<td>6 25%</td>
<td>6 14%</td>
<td>40 40%</td>
</tr>
<tr>
<td>Oxen</td>
<td>3 3%</td>
<td>5 23%</td>
<td>6 8%</td>
<td>3 9%</td>
<td>3 7%</td>
<td>12 15%</td>
</tr>
<tr>
<td>Don't Know</td>
<td>1 2%</td>
<td>4 15%</td>
<td>5 8%</td>
<td>3 15%</td>
<td>3 7%</td>
<td>3 4%</td>
</tr>
<tr>
<td>Total</td>
<td>43 99%</td>
<td>33 95%</td>
<td>73 100%</td>
<td>32 100%</td>
<td>44 101%</td>
<td>70 100%</td>
</tr>
</tbody>
</table>
wealthier villages. Aggregate mean monthly incomes varied between 60 Pula in Mabalane, to 45 Pula in Artesia and 43 Pula in Olifants Drift. Mean incomes in the latter two villages were, therefore, below the Poverty Datum Line. These figures reflect the fact that Mabalane residents have better access to wage employment and livestock and are less dependent on informal sector employment as compared to the other two villages. In particular, only 18% of Mabalane households do not have a wage income compared to 39% in Olifants Drift and 44% in Artesia. Mabalane is in fact the largest of the three villages situated on a major district highway running west to Mochudi - the district capital - and east to South Africa and the cluster of 'river villages'. The village offers a greater number of formal sector activities, while many of the able-bodied are employed in Gaborone, Mochudi and South Africa. Mabalane provided the largest proportion of participants and has recorded the highest completion rates (see table 10).

Secondary factors constraining a household's capacity to participate concern the disposability of household income. While higher incomes make it easier to invest in the project, for poorer households, choices must be made as to how available income is spent. Individual households face particular social and economic circumstances which determine the disposability of income and, therefore, the capacity to participate. These factors are significant given the low absolute levels of income and the range of potential financial commitments which individual households must face. The decision to participate may, therefore, be determined by the relative influence of such factors and explains variations in participation between households of similar income.

The nature and impact of such intervening factors vary, in particular, according to the stage reached in a household's life-cycle and according to season. Several examples can be cited.

Over and above the satisfaction of basic household needs, there are often obligations to spend money to pay for school fees and clothing for school children at the beginning of the academic year, for social commitments for weddings, burials and other social events, to support other family members, and invest in 'homemaking' or in acquiring basic means of production for cultivation. Evidence from other surveys suggests that new residents are unlikely to consider the construction of
Table 23: Number of Wage Income Sources by Socio-Economic Group - Kgatleng District
Table 24: Number of Total Income Sources by Socio-Economic Group - Katlehong District

- Households with no labor
- Non-ESPP households
- ESPP households
a latrine a priority until at least two rondavels, a kitchen and the compound wall of their new plot have been built (HHC, 1985). 25% of such 'new' residents explained that at the time of the ESPP project, they had had insufficient cash to invest in the project.

There are seasonal variations too, influenced by the agricultural season and the cycle of circular migration to formal sector employment in Botswana and South Africa. In the former case, household income, either in kind, or in cash reaches a seasonal low in the immediate months preceding the harvest in April, as food reserves are depleted. Income from informal activities such as beer brewing also tends to vary according to seasonal commitments, and to when migrant workers are present in the village. In the latter case, households must wait for the arrival of remittances or the return of migrant workers when their contracts expire.

The significance of this seasonal dimension cannot be underestimated as it can have a major impact on the timing and coordination of project activities, and the corresponding availability of cash and labour. Finally, participation can be influenced by unpredictable or unanticipated events. Such an example is the recent drought. Drought conditions have intensified the marginal existence of rural households and increased the value of having access to a cash income in order to subsist. Yields from subsistence agriculture have continued to fall and are inadequate to sustain basic nutritional requirements. Disposable cash must, therefore, be used to purchase food from commercial sources, over and above food entitlements that households receive under government's drought relief programme. Disposable income is used to satisfy basic subsistence requirements, and cannot be invested in comparative luxuries such as latrines. In these circumstances, available labour is used to increase household income rather than to support non-productive and relatively non-essential projects.

ACCESS TO LABOUR - A SECONDARY CONSTRAINT TO PARTICIPATION:

The capacity to provide labour for the project is a secondary influence on rates of participation. However, it is significant only for those households which are resource poor. Relatively wealthy households with
Table 25: Monthly Household Income by Socio-Economic Group - Kgatleng District
Table 26: Number of Wage Income Sources by Village - Kgalagadi District
higher disposable incomes are able to hire labour to build their latrine rather than build it themselves. This has been the case most recently in Kgatleng district where households have employed the project team. The discussion here, therefore, concentrates on those households which are unable to hire labour and must resort to the provision of household labour.

The ability to provide labour depends on whether or not a household has access to the able-bodied. This varies according to the specific socio-economic status of a particular household. Of most importance is the age and sex structure of the household and its employment characteristics. The significance of these factors varies temporally and seasonally.

Households willing to participate may be unable to provide labour because no able-bodied household members exist or because they are absent. The former circumstance is found in households belonging to the elderly and in some Female Headed households. The latter circumstance is found in households where the able-bodied are employed outside of the village in the formal sector or at the lands. In the sample villages, 16% of households which had not taken part in the project explained that they would have taken part but for the fact that they were at the lands at the time of implementation (see Table 29).

In such situations, labour might be unavailable for an extended period or only during the summer months. The availability of labour is, therefore, determined by the wider characteristics of the rural economy. In particular, the out-migration of the able-bodied is attributed to the absence of income earning opportunities and the marginalisation of arable production. However, even where labour is available in the village, it may be required for other purposes. As noted above, during the drought, such labour has been attracted to labour-intensive projects which offer payment and provide food.

Certain socio-economic groups such as Female Headed households and the elderly are more disadvantaged lacking both access to the able-bodied and to regular employment, and are thus less able to participate in the project. Yet it is often such households which are the most needy but
Table 27: Number of Total Income Sources by Village - Kgatleng District
Table 28: Monthly Household Income by Village - Kgatleng District
least able to help themselves. These conclusions are illustrated with results from the Kweneng SHESP feasibility study.

Between a third and two thirds of sampled households are able to provide both cash and labour for the project. The proportion varied between 43% in Gabane and 62% in Thamaga. By contrast, up to a quarter of households could neither provide money nor labour, while the remainder could only make a partial contribution – that is labour but no cash or vice-versa.

Of those households which are able to provide labour, over three quarters explained that they would have to obtain this labour from outside the household. Obtaining labour may involve a cash outlay or some form of reciprocal arrangement. The implication is that cash has become increasingly necessary in the rural economy in order to obtain basic goods and services, such as manpower. The importance of access to labour and cash on project participation is considered in more detail as it affects a number of socio-economic household categories.

- Households unable to contribute labour or cash; These households are poorer than the average with lower incomes and fewer assets. Compared to the average, a smaller proportion have access to wage incomes and to cattle. Only 42% have access to a wage income compared to the average of over 60% (see Table 30).

- Households able to make a full contribution; These households are wealthier than the sample average with higher cash incomes. A larger proportion have access to wage incomes and a smaller proportion are without cattle nor wage incomes as compared to the sample average. 69% of such households have access to wage incomes compared to the average 60% (see Table 31). Of particular note is the fact that twice as many households in this category have access to wage incomes and own cattle (40%), as compared to those households which cannot contribute at all.

- Households which already have latrines; These households were on average the wealthiest in the communities sampled and had had the opportunity to invest in a latrine without the need for a government subsidy (see Table 32). Indeed, it was found that
Table 29: Awareness of ESPP but Reason Given for Non-Participation – Kgatleng District

<table>
<thead>
<tr>
<th>Reason</th>
<th>OLIFANTS</th>
<th>ARTESIA</th>
<th>MABALANE</th>
<th>AGGREGATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not aware</td>
<td>16 42%</td>
<td>20 47%</td>
<td>9 28%</td>
<td>40%</td>
</tr>
<tr>
<td>Aware but no money</td>
<td>8 21%</td>
<td>9 21%</td>
<td>12 38%</td>
<td>26%</td>
</tr>
<tr>
<td>Aware but away at time</td>
<td>6 16%</td>
<td>5 12%</td>
<td>7 22%</td>
<td>16%</td>
</tr>
<tr>
<td>Aware but no reason</td>
<td>2 5%</td>
<td>2 5%</td>
<td>1 3%</td>
<td>4%</td>
</tr>
<tr>
<td>Aware but no labour</td>
<td>3 8%</td>
<td></td>
<td></td>
<td>3%</td>
</tr>
<tr>
<td>Aware but ESPP departed</td>
<td>1 3%</td>
<td>2 5%</td>
<td></td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>2 5%</td>
<td>5 12%</td>
<td>3 9%</td>
<td>9%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>38 100%</td>
<td>43 102%</td>
<td>32 100%</td>
<td>101%</td>
</tr>
</tbody>
</table>
80% of this category had access to a wage income while just 13% was found to have neither access to wage incomes nor to cattle.

- Female-headed households;
  This category of households is given special consideration as it is becoming increasingly common in the rural sector and is particularly prone to economic hardship (see ch 3). Consequently, as a disadvantaged group, it is least able to participate. It was found that as compared to the sample average, a slightly larger proportion can make no contribution at all to the project (27%), while a smaller proportion can make a full contribution (38%), (see Table 33). This reflects the fact that a smaller proportion of such households have access to wage employment while a considerably larger number have neither access to wage incomes, nor to cattle. Moreover, fewer belong to the wealthier socio-economic groups which have access to both wage incomes and own cattle – just 17% compared to an average of 31%. Of those female-headed households which could make a full contribution, less than one third said that they could rely on household labour. Such households would have to rely on cash sources in order to hire labour and, therefore, represent the wealthiest of the female-headed households.

HOUSEHOLD PROFILES:

A project participant: Mpho Matlapeng.

Mpho is a resident of Olifants Drift in Kgatleng district. She is married and shares her home with her mother, two sons, daughter and grandchild in a three rondavel compound. By the standards of the village, her household is quite wealthy. Her husband is employed clandestinely as a farm worker across the Limpopo river in South Africa, while her eldest son has a job in the Selibi-Phikwe mine. Their income is shared by the household and is supplemented by the sale of traditional beer. While they have lands, in past years they have not ploughed because of the drought. Mpho says that they earn about P60 per month and that they also have some savings invested in a few head of cattle. They decided to take part in the project because the latrine which they had built themselves earlier had collapsed and was dangerous. They were able to take part because cash could be provided from her
Table 30: Socio-Economic Status of Households which Cannot Contribute to SHESP - Kweneng District

<table>
<thead>
<tr>
<th>SOCIO-ECONOMIC STATUS</th>
<th>Total Sample</th>
<th>Total Sample</th>
<th>Total Sample</th>
<th>Total Sample</th>
<th>Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO WAGE NO CATTLE</td>
<td>6 (43)</td>
<td>2 (22)</td>
<td>13 (30)</td>
<td>12 (29)</td>
<td>(32)</td>
</tr>
<tr>
<td>NO WAGE CATTLE</td>
<td>8 (57)</td>
<td>2 (22)</td>
<td>1 (10)</td>
<td>8 (20)</td>
<td></td>
</tr>
<tr>
<td>WAGE NO CATTLE</td>
<td>(1)</td>
<td>2 (22)</td>
<td>4 (40)</td>
<td>10 (24)</td>
<td></td>
</tr>
<tr>
<td>WAGE CATTLE</td>
<td>(1)</td>
<td>9 (33)</td>
<td>2 (20)</td>
<td>11 (27)</td>
<td></td>
</tr>
<tr>
<td>TOTAL:</td>
<td>14 (100)</td>
<td>9 (39)</td>
<td>10 (100)</td>
<td>41 (100)</td>
<td></td>
</tr>
</tbody>
</table>

Table 31: Socio-Economic Status of Households which Can Contribute Fully to SHESP - Kweneng District

<table>
<thead>
<tr>
<th>SOCIO-ECONOMIC STATUS</th>
<th>Total Sample</th>
<th>Total Sample</th>
<th>Total Sample</th>
<th>Total Sample</th>
<th>Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO WAGE NO CATTLE</td>
<td>9 (17)</td>
<td>(11)</td>
<td>3 (22)</td>
<td>21 (16)</td>
<td></td>
</tr>
<tr>
<td>NO WAGE CATTLE</td>
<td>14 (26)</td>
<td>5 (19)</td>
<td>2 (15)</td>
<td>15 (11)</td>
<td></td>
</tr>
<tr>
<td>WAGE NO CATTLE</td>
<td>8 (15)</td>
<td>9 (33)</td>
<td>6 (20)</td>
<td>36 (30)</td>
<td></td>
</tr>
<tr>
<td>WAGE CATTLE</td>
<td>22 (42)</td>
<td>12 (26)</td>
<td>4 (27)</td>
<td>50 (41)</td>
<td></td>
</tr>
<tr>
<td>TOTAL:</td>
<td>55 (100)</td>
<td>26 (100)</td>
<td>15 (100)</td>
<td>120 (100)</td>
<td>(92)</td>
</tr>
</tbody>
</table>
husband's and son's wage incomes. Her other son was able to provide labour and build the latrine from materials taken from the collapsed latrine. Her husband brought roofing material from his place of work in South Africa. In this way, they were able to reduce the costs of construction to a minimum.

A non-participant: Grace Raketse.

Grace is an unmarried mother of two, who lives with her mother and children in a run down twin roomed house in Artesia. Her family is desperately poor with no steady source of income and no assets. Though she has lands, she cannot afford to hire cattle or labour to do the ploughing so the fields have been abandoned. Consequently, she survives as a recipient of drought relief food rations. Her grandmother earns a little money by brewing Khadi - a traditional alcoholic concoction - while Grace has been looking for work in Gaborone where she sometimes stays with her aunt. Under these conditions, she cannot imagine being able to take part in the project, even though she dislikes having to use the bush, and is concerned for her mother who is getting increasingly feeble and has difficulty going to the bush.

The non-project latrine owner: Isaac Mopipi.

Isaac is a wealthy and respected man who owns a bottle store and a share of the local bus company. He lives in the new part of Mabalambe in a large modern-style house which was built by a South African contractor from Zeerust. Here, he lives with his wife, who is the chairwoman of the local Botswana Council of Women, his mother, uncle, son, daughters and grandchild. His son is employed in the Broadhurst industrial estate in Gaborone, and is only home on the week-end while one of his daughters is schooling at Molefi secondary school in Mochudi. His uncle spends most of the time looking after the cattle and trekking them to the Lobatse abattoir. While Isaac did not want to disclose his income, it was clear that he was comparatively wealthy, as a self-employed local businessmen, who owned an undisclosed number of cattle and owned a Toyota Stout pickup. He had had a latrine built when the main house was constructed but employed a local contractor from Oodi who charged him
Table 32: Socio-Economic Status of Households which Already Own a Latrine - Kweneng District

<table>
<thead>
<tr>
<th>Molepolole</th>
<th>Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO WAGE NO CATTLE</td>
<td>6 (13)</td>
</tr>
<tr>
<td>NO WAGE</td>
<td>4 (9)</td>
</tr>
<tr>
<td>WAGE NO CATTLE</td>
<td>16 (35)</td>
</tr>
<tr>
<td>WAGE</td>
<td>20 (43)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>46 (100)</td>
</tr>
</tbody>
</table>

Table 33: Socio-Economic Status of Single, Divorced and Widowed FHHs Which Can Either Make a Full Contribution or No Contribution to SHESP - Kweneng District

<table>
<thead>
<tr>
<th>No Contribution</th>
<th>Total Sample</th>
<th>Full Contribution</th>
<th>Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO WAGE NO CATTLE</td>
<td>11 (48)</td>
<td>10 (52)</td>
<td>21 (100)</td>
</tr>
<tr>
<td>NO WAGE CATTLE</td>
<td>3 (13)</td>
<td>4 (13)</td>
<td>7 (36)</td>
</tr>
<tr>
<td>WAGE NO CATTLE</td>
<td>7 (30)</td>
<td>11 (49)</td>
<td>18 (88)</td>
</tr>
<tr>
<td>WAGE CATTLE</td>
<td>2 (9)</td>
<td>6 (19)</td>
<td>8 (41)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>23 (100)</td>
<td>31 (99)</td>
<td>54 (100)</td>
</tr>
</tbody>
</table>

ACCOUNTS FOR 27% OF FISH SAMPLE COMPARED TO 20% OF TOTAL SAMPLE
ACCOUNTS FOR 39% OF FISH SAMPLE COMPARED TO 53% OF TOTAL SAMPLE
over P450 to build it. He thought that the project was only supposed to help the destitute, and that other people ought to build their latrine themselves.

SUMMARY:

It is clear that while a partially subsidised project offers a service to a proportion of the community, which would be prohibitively expensive if it were unsubsidised, the requirement of a self-help contribution can discriminate against the poorest. Certain households are unable to provide either cash or labour and cannot participate irrespective of their need for the service. Furthermore, dependence on household contributions means that the project must be designed to suit local social and economic conditions. This concerns, in particular, the timing of project activities. Too many households were unable to participate because household members were seasonally unavailable and/or because household income was temporarily scarce. To achieve full participation, the project must be available for a longer period while alternative funding arrangements must be made to accommodate the poorest.

Because the project depends on individual self-help contributions, success is contingent on these broader socio-economic variables. However, the socio-economic status of rural households has been largely determined by government's rural development strategy. Policy has not been conducive to improving the socio-economic status of the rural household but has on the contrary created poverty and inequality. Under such circumstances, households have not been provided with the means to be able to make voluntary contributions to projects which in themselves provide no direct economic benefits.
THE CONSTRAINTS TO COMMUNITY PARTICIPATION:

This section seeks explanations for the poor record of community participation examined above. Discussion focusses primarily on the VDC as the principal village institution charged with mobilising and implementing community development projects. Constraints to more effective participation can be attributed to four factors:

- The struggle for power between modern state and tribal institutions.
- The use of a top-down delivery system in rural development.
- Administrative and technical constraints.
- The modest supportive role provided by the Extension Worker.

THE STRUGGLE FOR POWER BETWEEN MODERN STATE AND TRIBAL INSTITUTIONS.

An underlying power struggle between tribal authority and the modern state at the village level, is responsible for the disharmony in community participation which has led to the reported ineffectiveness of community institutions. This conflict forms part of a larger power struggle between the modern state and tribal authority which can be traced back to colonial times (see ch 2 & 3). At the root of this struggle is the state's desire to extend its influence to the rural periphery and to gain legitimacy in a rapidly changing society has emerged from a history of colonial rule and societal transformation. Leaders of the independent country, educated according to Western standards and keen to develop their country along Western lines, have sought to do away with the tribal system, perceiving it as an anachronism and obstacle to its ambition of integrating the separate tribes into a common nation-state and to develop a common nationalist sympathy.

While at the national and even at the district level, this struggle has been largely settled, with the curbing of any form of tribal influence in the decision-making arena at the community level, the strength of tribal authority has remained substantial despite efforts by the state to weaken it through legislation and the introduction of modern institutions such as the VDC, councillor and extension worker. Nevertheless, the state has been unable to sever the link between the Kgotla, as the symbol of tribal authority and the rural population. The
state has had to accept that for the time being tribal authority is the only institution which can claim to represent the legitimate interests of rural society.

Yet, while the Kgotsa has indeed maintained a high level of political influence at the village level, it has been effectively excluded from socio-economic rural development activities. It, therefore, enjoys political leverage but no economic leverage. By contrast, the VDC enjoys responsibility for managing socio-economic development affairs, receiving support from local authorities, donors and extension workers, but lacks any political legitimacy at the community level. In recognising the political authority enjoyed by tribal authority, the state has, inspite of its long-term ambitions to do away with tribal authority, accepted the need to work through it as a means of legitimising its rural policy objectives at the village level.

The state recognises that the achievement of policy objectives is contingent on community support which depends, in turn, on obtaining the support of the Kgotsa. The rural constituency continues to channel its political aspirations through the Kgotsa rather than through modern state institutions. In fact, the state, and more particularly the Botswana Democratic Party, has not created a local party-system recognising that most of rural society is still insufficiently familiar with western political culture to merit one, while remaining faithful to Tswana political culture (Vengroff, 1977). In such circumstances, it is difficult for the state to extend its legitimacy to the periphery. For most of rural society, of which a large part is semi-literate or illiterate and whose social and political life does not extend beyond the community, or the district, modern state institutions are perceived as alien to their culture.

Therefore, rural households tend to vote according to the political choice of their chief, whom they view as their legitimate leader and spokesman (Vengroff, 1977). Government has, therefore, concentrated on attracting the support of tribal leaders to their policies. On the whole, this policy has been successful, with rural areas voting uniformly for the government party, though there have been notable exceptions too (Colclough & McCarthy, 1980; Parson, 1984). By contrast,
the locally elected councillors have failed to command any meaningful support from the electorate (see below).

The Kgolga, therefore, is instrumental in providing political support to the socio-economic activities of modern institutions such as the VDC. A number of contradictions can, therefore, be identified in the relationship between the modern state and tribal authority.

Therefore, most modern institutions working at the village level such as the VDC are established as sub-committees of the Kgolga while tribal leaders are normally appointed as ex-officio members to such institutions. By linking the modern institution to the traditional, the Kgolga legitimises the activities of these less well known institutions (Fortmann, 1983). In so doing, it is anticipated that the de facto political strength of the Kgolga can be married to the de jure economic authority of the VDC. The particular way in which the Kgolga can legitimise the activities of the VDC in community participation can be attributed to several factors.

Under Tswana custom, tribal authority enjoyed a right to mobilise labour according to the system of age-regiments to support a variety of tribal activities ranging from public works, such as well sinking and bush clearance, to active engagement in battle. This represented a form of indigenous community participation. Under contemporary circumstances, community participation requires similar cooperation and this can only be achieved by involving the Kgolga. To this effect, the state has accepted that the Kgolga must be used to provide legitimacy to its own inspired self-help projects.

In reality, it has been difficult to convince the Kgolga to cooperate with modern institutions when it recognises that it no longer enjoys the right to determine policy itself. Tribal authority resents the loss of power to such institutions and the right to determine tribal affairs. By taking over the responsibility for community development, the VDC in particular, symbolises the intrusion of the modern state into tribal life. Tribal authority is all too aware that the VDC is the first village institution to have executive rights which are separate from the judicial authority of the Kgolga (Wynne, 1981).
Tribal leaders can, therefore, refuse to cooperate with this rival institution when it is felt that the VDC threatens their customary status and authority. The paradox, then, is that while the Kgotla feels threatened by modern institutions such as the VDC, it still enjoys widespread community support. Older sections of the community who retain their faith in tribal authority also tend to treat the VDC with suspicion viewing it as an alien institution which is out of tune with Tswana culture - a sentiment which can be exploited by the headman. The attitude of the old is, moreover, especially important because as senior tribesmen, their opinions carry more weight than those of younger members. Furthermore, it is precisely the old who tend to reside in the village on a permanent basis and who, therefore, determine village politics while the younger and more able-bodied, who have the potential to exert a greater influence on village development are absent.

The basis for community participation must depend on the Kgotla and the VDC accepting the need to cooperate with each other (Fortmann, 1983) as well as with extension workers and councillors. Such cooperation cannot be forthcoming so long as tribal leaders resent the economic power that the VDC enjoys. Moreover, tribal leaders are often frustrated by unfamiliar bureaucratic and technocratic procedures with which they are not familiar. This problem is all the more apparent when it is noted that the majority of tribal leaders at the village level have received only primary education, and in some cases, no formal education at all and, therefore, feel threatened by the formally educated government officers.

In its ambition to extend modern political culture to the grassroots level, the state faces two choices. It can either disband tribal authority comprehensively or it can try to coopt its support. The former choice has faced substantial resistance. The second choice may be more realistic but there are strong reservations felt as to how far cooperation should allow tribal authority to retain power.

THE MARGINAL ROLE OF COMMUNITY PARTICIPATION IN RURAL DEVELOPMENT.

The characteristics of government's rural development strategy (see ch 2 & 3) have rendered community participation moribund. Self-help village
development has become increasingly uncommon in contemporary Botswana, representing the exception rather than the rule. Consequently, institutions responsible for community participation have fallen into disuse, or are characterised by apathy and unpopularity. Rural residents are increasingly unfamiliar with the ethos of self-help and no longer accept the responsibility for contributing to their own development. The underlying cause of this trend has been government's strategy of direct intervention in social infrastructure provision within the rural sector. The emphasis on top-down decision-making and implementation and the bias toward social service provision has affected the status of community participation in several ways.

First, it has called into question the whole raison-d'être for community participation. The VDC was created to promote rural development through community self-help at a time when the government was unwilling or felt unable to fully support a subsidised rural investment programme. Communities were encouraged to provide much needed social infrastructure such as schools and health facilities until such time as government could intervene directly. Once government did assume responsibility for social infrastructure provision, as a consequence of the economic boom following the discovery of diamonds, the role of the VDC was compromised as the activities for which it had been responsible were taken over by the state (Fortmann, 1983). Increasingly, rural development came to be equated with state-provided social infrastructure and, consequently, rural residents no longer felt the need to provide contributions themselves. As a result, the VDC has suffered an identity crisis with nobody clearly knowing what it is supposed to be doing. A number of authors have been emphatic in attributing the failure of community participation to this bias towards state social service provision (Brown et al, 1982).

Second, the emphasis placed on social infrastructure provision has done little to develop the economic base of the rural sector, in the communal areas. While the rural village has become well endowed with social infrastructure, it can provide few formal employment opportunities while the subsistence agricultural sector has been marginalised. These trends have had two major effects on community participation. The subsequent out-migration of the able-bodied and able-minded to the urban sector has meant that only the less able are left in the village to support
community institutions. They, however, lack the necessary resources and skills to ensure effective community participation. In particular, rural households are unwilling to provide free labour and to make financial contributions when they can barely scratch an existence. They correctly point out that as the poor, they are least able to help themselves.

Third, a related point is that self-help has become increasingly unpopular as a result of the on-going drought. It has become all the more necessary for available labour and assets to be used to safeguard subsistence. Any available labour is used to participate in drought relief projects (Noppen, 1982). Under these schemes, small-scale infrastructure projects, such as dam building or drift fence erection, have been undertaken through the employment of village residents, in return for a basic wage with which to purchase essential foodstuffs. However, it is precisely these sorts of projects which had been the mainstay of the VDCs. Committee members explained that as a result, residents are no longer prepared to provide self-help contributions for such projects when they know that under the drought relief schemes, they would be paid for doing the same work.

Community participation will remain redundant unless institutions such as the VDC are provided with more clearly defined responsibilities within rural development and unless they are provided with necessary manpower and financial support (Fortmann, 1983). The VDC could be more effective if it were able to mobilise production orientated projects rather than only social infrastructure ones (Brown et al., 1982; Iskasen, 1980; Vengroff, 1977; Wynne, 1981). This is because such projects would provide both immediate economic returns to participants, thereby justifying the provision of self-help contributions and also, longer term economic spin-offs, by generating economic activity which could help stem the tide of out-migration and the state of rural stagnation. As a consequence, the able-bodied might remain in the rural sector and in turn be able to provide better support to community institutions while even the less well-off might accept the value of contributing to projects which produce economic results. Under these circumstances, community participation would become relevant to community needs, as the example of the drought relief programme has demonstrated.
However, it is unlikely that this approach will be adopted as the VDC is not supposed to engage in any directly profit-making ventures. The LGI7 Village Development Programme which provides financial and technical support to self-help projects only reconfirms the bias towards social infrastructure provision. Projects supported by these funds must not be money-making nor commercial (RECC, 1980). As such, the programme only serves to complement government's wider social infrastructure provision and to reconfirm the attitude that rural development only represents the provision of social infrastructure.

In this respect, what may be termed a 'social service' rationale has developed in the minds of both planners and rural households and this has served to inhibit the promotion of alternative development strategies. In this sense, the concept of rural development has come to be equated with the provision of social infrastructure, based on experience to date. Against this background, it is difficult to change attitudes to what development ought to be. Residents have come to accept that the state satisfies their "basic needs" by providing tangible symbols of development free of charge and free of contribution. It is for this reason that both rural households and VDC committee members have expressed uncertainty as to what exactly community participation is supposed to achieve and are sometimes unenthusiastic about contributing to self-help projects such as SHESP.

ADMINISTRATIVE AND TECHNICAL CONSTRAINTS.

A third constraint concerns the capacity of village institutions to implement policy. Practical constraints have limited the potential impact of village institutions on rural development (Fortmann, 1983). In particular, such institutions have lacked experience and adequate training and have received little extension support (Manzardo, 1982).

During survey work, VDC committee members frequently expressed their frustration towards administrative and technical procedures imposed by government with which they are not familiar. While the LGI7 programme was set up to facilitate project implementation for the VDC by providing financial assistance and by simplifying administrative procedures, evidence suggests that bureaucracy continues to frustrate the VDC in
project implementation (Isaksen, 1980). Moreover, results from fieldwork suggest that many village institutions are not even aware of the assistance that LG17 is supposed to provide. Committees consider themselves ill-equipped to manage development projects without the assistance of government workers. This sense of inadequacy, expressed by VDC committee members in Olifants Drift and Mabalane has become more apparent as government has improved its own standards of workmanship and organisation, as a result of its top-down rural development strategy. It is not uncommon for VDC's to feel that there is little point to build a school classroom, when if they were to wait a little longer, government may build one of a much higher standard. Increasingly, residents have come to expect higher standards and not to settle for second best.

The constraint on the VDC to execute village projects can be attributed to several factors concerning access to appropriate manpower. A major problem is that membership to the VDC committee is often based on community status rather than on merit. Often the committee is composed of the old who have high traditional status but who are poorly educated. Furthermore, the old and wealthy who might be elected to the committee do not always represent the interests of the whole community (Fortmann, 1983). This situation has been exacerbated by broader socio-economic factors which are linked to rural development. Lack of attention to employment creation has resulted in out-migration by the able-bodied and the able-minded - precisely those sections of society which could make a valuable contribution to the running of the VDC through the provision of ideas and skills. The responsibility, therefore, falls on those sections of the community who are least familiar with necessary administrative and accounting skills, and who have had least exposure to modern state institutions with which they increasingly must work. These include the elderly, the very young and women. Moreover, as suggested in chapter 3, often the residents who stay in the village have least access to labour and cash and, therefore, are least able to provide contributions to self-help projects.

Furthermore, the activity of the VDC is effectively suspended for six months of the year, during the wet season, when a large proportion of the village population is absent, working at the lands. Against this background, the positive contribution that the VDC could be making to
village development is severely compromised. The fact that for a large part of the year, the community as such does not exist, cannot be overlooked:

Given the marginal status of the VDC in rural development, it is not surprising to find that support for the VDC is lacking and that committee members are at best reluctant volunteers, who lack basic necessary skills and who lack the incentives to fulfil job requirements (Brown et al, 1982; Isaksen, 1980). This problem has not been helped by the attitude of extension workers as elaborated below. Institutions such as the VDC can only be effective if they are equipped with the means and political support to promote, organise and implement projects which are genuinely sought by the community.

THE LIMITS OF SUPPORT FROM THE EXTENSION WORKER.

The technical and administrative constraints facing village institutions is recognised by government. Extension services have been established precisely for this reason to support village based development (Isaksen, 1980). The role of the extension worker has, however, proved disappointing in practice. As a result, a critical input to the achievement of community participation has been lost. The limits to extension support can be attributed to four factors. These are not unique to the extension worker, but reflect the major constraints which characterise the implementation capacity of the District Council.

The first constraint is an administrative one which concerns the issue of accountability. Because of the recruitment system, extension workers are accountable not to the communities on whose behalf they work, but to their employer, the government. Recruited, trained and paid by ULGS, extension workers are concerned to satisfy demands imposed from above rather than those imposed by the community they serve (Noppen, 1982). Their own priority is to guarantee upward career mobility by satisfying their employer. As with district-based personnel (with the exception of the FWE), they can anticipate regular transfers to other communities or districts after a two or three year period (Isaksen, 1980). There is little compulsion to feel accountable to the community since to do so could not influence their career prospects (Brown et al, 1982; Noppen,
Moreover, the community has no formal communication link to the district to complain about unsatisfactory extension workers.

The second constraint concerns socio-cultural values and perceptions. Even though extension workers have been trained specifically to work with and for the rural community, they are socially, if not culturally isolated from the community. At the village level, they represent the elite class—they have been trained and educated in the city, are provided with government housing and receive a government salary. Moreover, they share more closely the values and aspirations of the elite and, therefore, treat the rural resident with contempt. This lack of cooperation and understanding can in part be attributed to the type of training that the extension worker receives (Brown et al., 1982). As a result, their working relationship with the community is often poor even with such groups as the VDC (DET/KgDC, 1982). They are perceived as outsiders by the indigenous community and are often resented by the headman and village elders who see them as young educated upstarts.

A third constraint which follows on concerns conditions of employment and the nature of their training. Working conditions are unsatisfactory. Ministerial support is lacking, accommodation is often inadequate while transport is sometimes unavailable for lengthy periods of time (Brown et al., 1982). Moreover, extension workers must service several villages which may be spatially remote, and which may not be able to provide adequate office or administration facilities. It is also felt that pay is insufficient.

Furthermore, it has been suggested that the training which extension workers receive is inappropriate in that it develops the wrong skills (Noppen, 1982). Rather than producing personnel who are keen to explore development initiatives, by thinking in a creative manner, and who are prepared to make personal contributions which exceed normal expectations, low grade bureaucrats have been moulded to fit into a static administrative framework (Noppen, 1982). This has done little to encourage community participation on the basis of decision-making, problem-solving and self-reliance (Manzardo, 1982). This is compounded by the fact that the issue of what exactly community participation should involve is not clear and, likewise, there is uncertainty as to the means of developing it.
SUMMARY:

Evidence from the field has identified a number of factors which have constrained the implementation capacity of the District Council and community institutions in project delivery. These constraints are summarised.

THE DISTRICT COUNCIL.

With respect to the VWSP programme, the Council's Water Maintenance Units have experienced under-capacity in the operation and maintenance of village water supply systems. A shortage of manpower, funds and equipment has meant that the units are unable to meet demand for repair work and the delivery of fuel. Under these circumstances, water supplies are abandoned and traditional sources are resorted to. With respect to the SHESP project, the Council's project team has been disorganised and has provided poor coordination in the latrine construction programme and the organisation of health education. These problems can be attributed to a shortage of appropriate manpower and inadequate funding. The low implementation capacity experienced in both programmes is symptomatic of the wider constraints which the District Councils face. This, in particular, concerns manpower and finance.

COMMUNITY PARTICIPATION.

To date, the community has not participated in the water supply programme. Evidence from the sanitation project and of the wider activities of community institutions in policy implementation suggest that community participation makes only a small and ineffective contribution to rural development. With respect to the sanitation project, community institutions have played a secondary role in project delivery relying rather on the activities of the project team. There have, however, been exceptions too. Participation at the household level has been determined primarily by the capacity to provide cash and labour. Evidence suggests that the ability to participate is determined by the socio-economic characteristics of the individual household.

The poor record of participation by community institutions in the project are symptomatic of the constraints which face community
participation more generally and, which it is contended, will affect the water supply programme should it be decentralised. The constraints noted can be attributed to three major contributory factors. First, the lack of harmony within the community, based on a power struggle between tribal and modern state institutions. Second, the marginal relevance of community participation to government's rural development strategy. Third, a shortage of appropriate skills, experiences and resources within the community.
Chapter 7: DISTRICT DEVELOPMENT PLANNING: THE CONTEXT OF RURAL POLICY FORMULATION.

INTRODUCTION:
This chapter examines the role of local government and community institutions in rural policy formulation. It investigates the system of District Development Planning recently introduced as the forum for rural policy making. The analysis is divided into two parts. First, the District Development Planning system is described according to the mechanisms set up by government and to its pronouncements on the purpose and objectives of the planning system. Second, an attempt is made to identify how far the planning system provides local government and community institutions with the scope to influence policy formulation. The objective is to assess how far District Development Planning has created the conditions for devolved decision-making and the bottom-up delivery of development projects. The implications for implementation capacity are then examined.

The constraints faced by institutions in policy implementation can be related to the access these same institutions have to decision-making and to the control of resources. A major factor determining the implementation capacity of an institution is its access to the decision-making process. This has been stressed in relation to community participation in community water supply and sanitation (Bourne, 1984) and in relation to building up the capacity of local government institutions more generally (Conyers, 1982; Reilly, 1981).

It is suggested that the planning framework established at the sub-national level, has served to deconcentrate rather than decentralise rural policy formulation and implementation (Mawhood, 1983; Reilly, 1983). It has only provided limited scope for devolved decision-making. This means that rural development has remained top-down even though the planning framework is supposed to incorporate bottom-up planning. As a result, the role of local government and the community has been restricted to supporting the implementation of policy. The absence of decentralised decision-making is a major factor which has constrained the implementation capacity of local government and community institutions.
DISTRICT DEVELOPMENT PLANNING:

INTRODUCTION:

The first substantial measure to decentralise decision-making in rural development policy was taken in 1977 when government introduced the system of District Development Planning, based upon the preparation of 5 year plans to coincide with the preparation of NDP 5 (Noppen, 1982). The proposal to introduce district planning to the policy agenda was made at the National District Development Conference in 1976, in a speech presented by the late president, Seretse Khama. It received unanimous support from delegates. These plans would be designed to include the aspirations of the rural community for their own development and would provide an important input to the preparation of the National Development Plan.

The plans would be based on decision-making by local authority departments, after consultation with village institutions. For this reason, the slogan; "Planning with the People" was chosen to herald the introduction of this new planning initiative. Emphasis was placed on the idea that planning should not rest with the district technocrat, but should be a political process in which the aspirations of the people would be heard and translated into policy. The introduction of this new planning system must be seen to represent a significant change in government policy towards local authorities and community institutions in rural development. For the first time, an explicit proposal had been made which accepted that sub-national institutions ought to be involved in policy formulation as well as in policy implementation.

What was the thinking that lay behind this move after ten years of centralised decision-making? Why was it that government was now interested in promoting 'bottom-up' planning? According to government publications, District Development Planning was introduced as a means of improving and widening its rural development strategy. In particular, it was felt that greater consultation with recipients would help to:

- obtain feedback from the community on the planning process.
- educate and inform the community on the activities of government.
- encourage a degree of bottom-up planning from the community.
evaluate or monitor current government activities in the districts (Wheeler, 1979).

Development planning would be delegated to local authorities who would be encouraged to prepare plans on a cross-sectoral or regional basis and to link social infrastructure provision to production activities (GOB, 1980). The new planning framework reflected broader changes in government's national and rural development strategy. As such, the system of rural policy delivery had been restructured to accommodate revised policy objectives. Thus, during most of the period since independence when rural development concentrated on social infrastructure provision, there was little incentive to decentralise decision-making and implementation. Furthermore, central government benefitted from being seen to be actively involved in policy implementation for political reasons, while it was also clear that local government capacity was at the time low. However, when government revised its rural development strategy for NDP 5 and began to place more emphasis on rural production and employment creation, as a major element of national development, in the face of changing political and economic circumstances, greater decentralisation was justified in order to create a stronger planning and implementation capacity to administer this strategy. Furthermore, government had come to recognise that the through the creation of the DDC, the implementation capacity of local government had improved significantly.

At a more general level, government recognised that national development objectives would be more popular if those objectives were seen to be based on common participation. As such, the national development plan would symbolise the satisfaction of both central government and rural community aspirations. In theory, the acceptance of the need for 'bottom-up' planning represented a significant political step towards achieving a considerable level of decentralisation. For the first time, the District Council would be able to influence resource allocation at the national level as well as determine development priorities in the district, while community members would be invited to express their opinions and aspirations, as the basis for planning.
THE PLAN.

District planning is based upon the preparation of a District Development Plan (DDP). The Plan provides details of all existing and planned development activities for the district over a three year period. The content of the Plan document is comprehensive. It is sub-divided into sections which examine activities by sector: production, employment, social welfare and services, and by institution: central and local government, community institutions, and the private sector (Wheeler, 1979). The Plan, therefore, takes account of the majority of activities which lie beyond the scope of the District Council. This is because the Plan is designed to provide an integrated review and forecast of all district development activities.

The Plan is, therefore, designed to encourage regional or spatial, rather than sectoral planning (Noppen, 1982). Emphasis has been directed to the preparation of an integrated planning framework which considers the cross-sectoral needs of the whole district. The Plan represents a shift away from the previous approach according to which central government prepared a planning agenda for each line ministry, responsible for a discrete sector. Through a regional approach, it is hoped that greater coordination can be achieved and that a better understanding may ensue as regards the needs of individual regions (Wheeler, 1979). To this end, it has been recognised that vital information can be obtained by encouraging greater district participation through technocrats and rural residents themselves.

It is suggested that regional-based planning makes more sense to the recipient community which is supposed to contribute to the decision-making process through consultation (Noppen, 1982). Rural households can more easily identify with a tangible concept such as the physical area in which they live and work, rather than with abstract concepts such as the agriculture, health or education sectors (Noppen, 1982).

The Plan is designed to fit into the planning agenda of central government departments which prepare the National Development Plan. The District Development Plan fulfils two functions. First, Phase 1 of the
plan sets out an implementation agenda based upon resources which have already been allocated to each district according to the existing National Development Plan. Second, Phase 2 represents an indicative plan which sets out a district's preferred development strategy for the next NDP period. To this end, the Plan outlines priority areas and the resources that will be needed to fulfil these objectives (Reilly, 1981; Wheeler, 1979). It is this second phase of the Plan which is supposed to be based on consultation with the rural community. The DDP, therefore, represents an integral part of the NDP, reflecting on the one hand guidelines set by central government and on the other hand, priorities set by the District Council on behalf of the rural constituency.

The completed Plan must be ratified by the Council before it is submitted to government. Once ratified, the DDP becomes a political document which reflects the preferred development strategy of a particular district (Noppen, 1982). The government is by law prohibited from amending the document once it has received Council approval. At the same time, government is under no obligation to commit itself to the demands of each Plan. As such, it is not a formally approved policy document but serves as an indicative plan. However, the Plans are discussed within government circles in the preparation of the NDP, and are further discussed at the annual Districts' Development Conference and then with each respective district (Noppen, 1982; Wheeler, 1979). Approved expenditures outlined in phase 1 are then translated into working annual plans detailing manpower and financial allocations and an implementation schedule (Noppen, 1982).

THE CONSULTATION PROCESS.

Emphasis has been placed on the fact that the DDP must reflect the aspirations and expectations of rural residents. Consultation has been encouraged between the local authority officer and the rural resident. In this way, the Plan should be prepared through a 'bottom-up' framework. The basis of consultation has been spelt out clearly in a government publication produced in 1979, which serves as a reference manual for District Council officers (Wheeler, 1979). The participating local government and community institutions are briefly reviewed.
Local Government;

The DDP is co-written by the Council Planning Officer (CPO) and the District Officer (Development) (DO(D)), on behalf of the District Council and the District Administration. The preparation of the Plan involves consultation with heads of individual departments who meet together through the forum of the District Development Committee (DDC) or the District Extension Team (DET).

Community;

Consultation between the Council and the community is channeled through a number of institutions. At the formal level, the community is represented by the councillor. With regard to specific development issues, the Village Development Committee, assisted by the Village Extension Team is approached. More often than not, meetings are held at the Kgotla after an introduction has been made to the local headman.

To date, experience of consultation in the preparation of the DDP is limited. So far only two plans have been prepared, and in all fairness, the first Plan must be judged as something of a pilot project. The whole idea of consultation was new so that few participants from either side knew what to expect, nor knew what was really expected of them (Noppen, 1982). Moreover, none of the participants were really equipped to make a coherent contribution to the planning exercise, since the experience until then had been that government was wholly responsible for managing rural development affairs.

While central government provides guidelines for undertaking consultation under the new scheme, each district is encouraged to choose the means by which it wishes to conduct this exercise. The first round of consultation represented an exercise in trial and error, but feedback from this exercise has prompted both central government and local authorities to reconsider how best to organise consultation. An outline of the consultation process can be sketched here, based on experience to date and on guidelines provided by government (see Fig 9).

The DDP is drafted by the CPO and DO(D). The draft document should reflect the outcome of consultation and negotiation at all institutional
Fig 9: District Development Planning - The Consultation Process.
levels. Central government provides broad guidelines and expenditure ceilings, especially for Phase 1, while it provides technical support on planning matters. Proposals are discussed between Council departments and other interested parties in the DDC. These discussions should only follow after consultation with the community. The proposals that are discussed should be based on the priorities and problems identified by the community.

It is recognised by all involved, that the consultation exercise represents the most challenging stage of the planning process. Experience to date has been disappointing. Consultation serves two objectives. First, it is used to inform communities of guidelines and policies prepared under Phase 1 of the Plan. Second, it is used to elicit the views of the community towards rural development and the sort of policies that it would like to see introduced in their communities.

This information is gathered by several means, of which a few are outlined. Different methods have been employed according to socio-economic and environmental features of the different districts. What might be feasible in one district may be quite inappropriate in another. Some districts have depended on a centralised approach whereby rural delegates are invited to attend an annual district development conference, as in Kgatleng district, where matters can be discussed with local authority officers. Others, such as Central and Kgalagadi districts, have favoured more decentralised approaches based on conducting a tour through each village and discussing development matters at fora usually held at the Kgotla. In some cases, the opinions of the residents have been tape-recorded for future reference. In others, more emphasis has been placed on educating participants on the meaning of development, so that consultation has represented more of a learning process (Hoppen; 1982). Yet in most cases, it is usual that at some stage, an annual district development conference is held. At this conference, proposals based upon the conclusions of consultation tours are discussed in greater depth amongst representatives from all levels.

It may, however, be questioned to what extent the planning technocrat at either the district or central government level, is influenced by the opinions expressed by the rural community. There is clear scepticism over the consultation process and some outright resentment on the part
of some officers who feel that it serves only to frustrate the planning process. These attitudes have been reflected, for example, in only a token commitment to consultation in preparing DDP 2 in Kweneng district.

First, a preliminary meeting was organised by the Communal Area Development coordinators within the district to brief the district VDC's, on the impending planning exercise. It is admitted, however, that only some of the eleven coordinators managed to organise the meeting. Second, the District Development Committee Conference was held in Molepolole. During this conference attended by both district and village personnel, such as the VDC, FWE, ACDO, councillor and headman, a questionnaire, written in Setswana, was circulated concerning the development priorities of the VDC's from different CADs. Again, it was noted that attendance was poor. Third, on completion of these questionnaires, the extension workers responsible for the different CADs added their comments and recommendations to the proposals. Yet again, only some extension workers bothered to do this. Finally, the proposals made were supplemented with comments from the various district departments which would be responsible for implementing the approved projects (KDC, 1984). At this stage, a list of priorities would be established before a final Plan proposal would be submitted to a full Council meeting for ratification (KDC, 1982).

Once the draft has been prepared by the CPO and DO(D), it is submitted to the District Plans Committee in MLGL. The draft Plan is then returned to the DDC for further comment and alterations, in light of recommendations made by the District Plans Committee. At this stage, the draft is intended to be presented to the communities once more, in order that they might see how their own demands and priorities have been received by central government. The community is able to make further comments which might be included in the preparation of the final draft. The Plan is then re-submitted to the DDC in its final form and is then presented to a full Council meeting for ratification (Noppen, 1982; Reilly, 1981).
THE LIMITS TO BOTTOM-UP PLANNING:

This section examines how far the system of District Development Planning has decentralised decision-making to the local government and community levels and, therefore, considers the extent to which it constitutes the basis for effective bottom-up planning. Two questions are addressed:

- Who are the decision-makers in District Development Planning and whose interests do they represent?
- To what extent does the planning system influence the allocation and distribution of resources in the rural sector?

CONSULTATION AND REPRESENTATION: WHO ARE THE DECISION-MAKERS?

The District Development Plan is actually determined by central and local government technocrats, and not by representatives of the rural community. The apparent objective of "Planning with the People" has not been used to incorporate the interests of the rural community in the planning process. This situation has arisen primarily because government technocrats at the local government level have deliberately excluded community representatives from decision-making while failing to represent those community interests themselves. This policy has been made possible by two factors. First, the absence of political consensus at the community level over who should represent community interests. Second, the shortage of appropriate skills and expertise at the community level to articulate community interests effectively at the local government level. These latter points are discussed first.

Community Representation:

Rural opinion can potentially be expressed through a number of village-based institutions which can function as representatives in the planning process. The most important of these are the Kgotla, the VDC, the councillor and the extension worker (Wheeler, 1979), all of which have been discussed in the context of policy implementation. According to the district planning procedure, consultation with local representatives forms the basis of decision-making, and must be
considered seriously by the local government officer. The District
Council should serve as a platform for the representation of community
rather than government interests and it should be accountable to those
interests. It is, therefore, necessary to consider which institutions
do articulate community opinion in this process. It has been argued
that genuine decentralised decision-making can only exist when decisions
are taken by locally elected and accountable representatives (Mawhood,
1983).

Using Mawhood's criteria of legitimate representation, the locally
elected councillor would represent a legitimate decision-maker in the
context of Botswana, since he is the formally elected local
representative. The councillor is responsible for lobbying community
interests in local government, and for providing a formal channel of
communication between the District Council administration and grassroots
institutions. He is elected by the rural constituent though nominated
by the central party and has been provided with the responsibility for
determining Council policy, including the ratification or rejection of
the District Development Plan. The basis of his judgement should be
determined on how proposed policy affects his constituency. The
councillor is after all accountable to his electorate, rather than to
the local government administration. The councillor, therefore, has
inherited the responsibility to ensure the welfare of the rural village
community which had been traditionally upheld by the chief. In reducing
the authority of the Kgotla, the state has appointed the councillor as
the surrogate decision-maker thereby usurping the role of the tribal
leader.

The councillor must, therefore, face two challenges in order to be an
effective decision-maker. First, he must be acceptable to his
constituency and more especially to the Kgotla. Second, he must be
respected by the government technocrat. In reality, the councillor has
been unable to meet either challenge. He is the least respected and
least effective representative involved in District Development Planning
having neither influence within the village constituency where he enjoys
little respect nor within the District Council and wider local
government departments where he is unable to influence the technocrat in
the formulation of policy, notwithstanding the right he enjoys to ratify
the plan.
The other institution which has been provided special responsibilities for articulating community interests is the VDC. The previous section illustrated how consultation can make use of the VDC, supported by extension workers, to discuss rural policy in discussions, meetings and workshops. This is considered appropriate in view of the fact that the VDC is responsible for the implementation of village development projects (Noppen, 1982). However, the VDC is not any better equipped than the councillor to defend community interests. While a mechanism has in principle been created to encourage communication, the VDC must face similar constraints to the councillor, as the discussion of the constraints to implementation has demonstrated.

The Issue of Political Consensus at the Community Level:

Neither the councillor nor the VDC is able to provide acceptable political representation of community opinion. The inability to do so is linked to the power struggle between tribal authority and the modern state. The key issue in this struggle is the deliberate exclusion of the Kgotla from the decision-making process and the appointment of modern institutions to fulfil this responsibility. Yet so long as the Kgotla remains the accepted representative of community opinion, as evidence strongly suggests, it will not be possible to obtain consensus as to which alternative institution can articulate community interests. While the VDC and councillor have been vested with the legal authority to determine socio-economic policy within the community, this has proved ineffective against the de facto power base of the Kgotla. This contradiction typifies the anomaly between traditional and modern institutions at the community level. While the Kgotla has been used as a forum for decision-making at this level, it has not been vested with executive or judicial powers within the planning system. As such, its participation is only symbolic.

Yet, the councillor has not succeeded in replacing the Kgotla as a decision-maker and community representative. As a symbol of the modern state, the councillor represents an alien political institution which is incompatible with Tswana socio-political culture. So long as the Kgotla is able to exercise influence at the village level, the status of the councillor will remain subordinate. This is because the Kgotla remains the primary forum for village-based decision-making. While tribal
authority has the customary right to address the Kgotla, the councillor must remain an invited and, therefore, outside speaker. The rural household, therefore, views the appointment of the councillor as their representative with suspicion. This suspicion is heightened because the central party is responsible for nominating councillor candidates. Grassroots representation is, therefore, imposed from above even if the nominee is eventually elected by the community. The failure of the councillor to provide a link between the community and local government has, therefore, severed access to the decision-making process.

The VDC, likewise, is unable to substitute itself for the Kgotla. Previous discussion has illustrated how the VDC does not necessarily enjoy the support of the Kgotla and is not accepted as an official representative for the community. So long as external modern institutions are imposed, the Kgotla remains defiant as the genuine and legitimate defender of community opinion. Therefore, the VDC is unable to mobilise community support so long as the Kgotla boycotts it.

Community participation will continue to be constrained so long as the struggle between tribal authority and the modern state remains unresolved. Implementation capacity depends on cooperation between village institutions and this requires that the struggle is reconciled. It also is contingent on the community being able to take part in decision-making. It is, therefore, essential that an institution which is acceptable to both government and community is found.

The Issue of Technical Capacity:

In the analysis of implementation capacity, it was argued that a major constraint to more effective community participation was a lack of suitably qualified committee members and of households with the means to provide self-help contributions. Furthermore, support from extension workers has been inadequate while the government has been accused of complicating administrative procedures such as in the LG 17 Village Development Programme (Isaksen, 1980). Given this background, the constraints to participation in planning are that much greater. Participation in planning and the ability to negotiate on the terms of the professional technocrat demands familiarity with modern government
and certain literate and technical skills. However, these pre-conditions are not easily found amongst village institution committee members, or amongst councillors. Consequently, there are clear limits as to how far the community can influence the planning process and it would, therefore, be unrealistic to expect village institutions to provide a significant contribution to decision-making beyond the expression of simple 'felt needs' (Conyers, 1982; Jeffers, 1982).

Councillors are unable to influence the technocrat in policy formulation because they lack the necessary educational background and technical skills and are unfamiliar with the technical formalities of planning. As politicians, they can lobby opinions and suggest policies but cannot easily influence how policy is prepared. The councillor is, therefore, squeezed out of the consultation process and is only called in to ratify pre-determined policies. Unable to make an impression on decision-making, the councillor is apt to accept the decisions that are taken by the technocrat (Noppen, 1982). The result is that decision-making becomes the responsibility of the technocrat.

It is also unrealistic to expect the VDC to shoulder the responsibility for negotiating rural policy on the same terms as the government planner, beyond the identification of immediate community needs. The constraints which face the VDC are not surprising given that their primary responsibility is to coordinate small-scale village projects. Committee members elected from within the community rarely have the experience or technical capacity to articulate, negotiate and present coherent policies within the consultation agenda. This problem of unfamiliarity and of inadequate skills has not been helped by extension workers who rarely provide the level of support to such institutions as had been anticipated. Consequently, institutions such as the VDC, can at best contribute to the consultation exercise by presenting a list of projects which their community would like to have. More often than not, all villages submit similar "shopping lists" and focus almost exclusively on social infrastructure projects (Nøppen, 1982). Under such circumstances, consultation counts for very little, and indeed planners argue that consultation does no more than confirm what they already know.
In conclusion, the poor reputation of the councillor and the VDC within the community can be explained in terms of the struggle for power being waged between tribal authority and the modern state. The ineffectiveness of these institutions within local government can be attributed to the relatively junior educational and skill status of the councillor and VDC as compared to the local government technocrat. They, therefore, display neither political nor technical credibility and consequently fail to make a major impact on the decision-making process.

The Role of the Technocrat in Blocking Community Participation:

While, in principle, the local government technocrat is employed to serve rural interests and to be responsive to community opinion, in reality, the technocrat takes decisions as the basis for policy which are informed by their own priorities rather than those of the community. This practice can be attributed to two factors.

First, the technocrat overlooks community opinion because he feels that he is the rightful and qualified person to make decisions (Noppen, 1982). By contrast, village representatives are viewed as unqualified and, therefore, as a hindrance to an activity which should be left to professionals. This belief in the superiority of the professional has had the effect of blocking community access to the decision-making arena.

Councillors, for example, are often elderly and have not received the level of formal education which the younger technocrats have enjoyed (Noppen, 1982). The technocrat is, therefore, inclined to dismiss the councillor as an uneducated rural politician who ought to stay out of decision-making and who is perceived as a low status and subordinate government officer.

These comparatively highly trained government technocrats, therefore, dismiss their rural village counterparts as 'illiterates' who can only frustrate the planning process. While the technocrat may claim to consider the priorities which have been expressed by the VDC, the culture of professionalism (De Kadt, 1983; Segall, 1983) ensures that technocrats base policy upon decisions reached by themselves without the
benefit of community opinion. "Planning with the People" is, therefore, accepted by the planner as a political gesture to participatory planning but recognise that in actual fact the contribution made by the community to policy formulation is negligible.

Second, the technocrat blocks community participation in decision-making when it threatens the vested interests shared by modern state elites (Noppen, 1982). They might, therefore, deliberately block attempts to address sensitive issues which concern income, employment and production should they be raised at the community level (Picard & Morgan, 1985). While there has been evidence of a conflict of interest between technocrats within local government and between itself and central government on occasions (Picard, 1979c), there is a strong case to suggest that these technocrats share common attitudes, aspirations, and interests, and, therefore, seek to present policies which are compatible with their shared self-interest (Reilly, 1981). This conclusion is based on the argument that policy formulation is determined by a broad socio-political and economic alliance between public sector bureaucrats, government politicians and also the small elite of industrialists and businessmen, and the rural cattle-owning elite (Parson, 1977). Under these circumstances, decisions taken by the local government technocrat in preparation of the DDP are influenced by policy objectives presented by this alliance of interest rather than by community representatives. Consequently, the Plan which is eventually produced does no more than reconfirm elite policy objectives. As such, planning is undertaken from the top down and not from the bottom up.

This alliance determines the policy formulation agenda at the national and district level, facing little challenge from alternative lobby groups. The strength of this alliance, founded upon a comprehensive control of financial resources, skilled manpower and information, and the subsequent extent to which it determines policy formulation can be contrasted to the weak lobbying power vested in the majority of the rural population who precisely lack finance, manpower and information and who have not been provided with a platform which unites their community interests.

The ability of the government technocrat to determine policy without the inconvenience of opposition from alternative interests can be attributed
to the fact that the public sector dominates formal sector employment and economic activity. In particular, it monopolises employment opportunities in Botswana's formal sector, and thereby the recruitment of educated and skilled manpower. By comparison, the private sector is inconsequential in terms of size and status (GOB, 1985). As a result, the public sector has become a forum for an educated and wealthy elite, which is unchallenged by any other powerful interest group. There are simply no other powerful lobby groups in the country at the national level. While the mass of the rural population does constitute an interest group, it is highly fragmented and has neither the political nor economic power to lobby government, nor the organisation to articulate common grievances, as discussed above. Consequently, the public sector elite is in a position to dictate policy according to its own interests without fear of challenge. Within this alliance, the local government officer shares common interests with the civil servants in central government. This situation helps to explain the bias in national policy towards capital-intensive urban development, to investment in the livestock sector, and into providing high civil service salaries (Holm, 1985). It is also a reflection of the near absolute power that the Botswana Democratic Party has enjoyed since independence.

The system of manpower recruitment used in the public sector also reinforces the alliance between local and central government civil servants and serves to weaken local government accountability to the rural community. The creation of the Unified Local Government Service (ULGS) in 1973 served to transfer responsibility for manpower away from local government to central government (Reilly, 1983). Under this system, local government officers are recruited by a central organisation and allocated to local authorities for a specified period of time. While they are paid by the District Council and are accountable to the Council Secretary during their term of office, their employer is central government. This has reduced accountability to the local community in two important respects. First, Council officers sense accountability to the ministry which has recruited them, rather than to the district which they serve. This is because their future employment is determined by satisfying central government interests rather than community aspirations. It is ULGS rather than the District Councils which is responsible for promoting officers. They, therefore,
look upwards to central government rather than downwards to the community. Second, under the ULGS system, it is normal practice for a local government officer to be transferred from one district to another every two or three years (Reilly, 1983). In this way, the officer is not able to build up a strong link with the district community which he is supposed to be representing. While it could be argued that this should not be considered a significant problem since the district officer is a civil servant responsible for implementing decisions taken by politicians, such as the elected councillors, on behalf of the community, in reality, it is the technocrat who is the decision-maker.

On the basis of these factors, community participation in policy formulation is of only marginal influence and, therefore, major policy decisions continue to be taken by the government technocrat. Community institutions supposedly involved in the consultation process are constrained from determining policy objectives. The conditions necessary for articulating community opinion do not exist. It is argued, therefore, that no effective lobby power exists outside of government (Holm, 1985). Planners are accountable only to themselves within government, but not to any interest outside of government. They, therefore, enjoy the position of being free to determine policy according to the objectives that they set for themselves. These are based on government objectives rather than on opinions expressed by the rural community.
HOW FAR DOES THE PLAN PROVIDE SCOPE FOR DETERMINING RURAL RESOURCE ALLOCATION?

It is argued here that the District Development Plan (DDP) provides limited scope for determining how resources are allocated and distributed within the rural development budget. The major part of the Plan covers sectors of the economy which continue to be administered from the centre and which are based on central government policy objectives. Therefore, the creation of the system of participatory planning has done little to change a system of top-down planning. It has only served to devolve a number of administrative responsibilities of marginal political significance from central government to local government.

The contention is based on two arguments. First, that at the local government level, the autonomous District Council is only able to influence the preparation of a small part of the total rural budget. Second, that the DDP has only been able to exert a minimal influence on policy formulation at the central government level. These arguments are examined in more detail.

While local government technocrats are responsible for the formulation of rural policy and share common political objectives with their central government counterparts, closer examination of the planning process suggests that decision-making is shared between potentially competing institutions within the government system. It is, therefore, necessary to consider the respective role of each government institution involved in planning in order to identify the extent to which the District Council is able to determine policy.

In creating the system of District Development Planning the District Development Committee (DDC) was given responsibility for coordinating the preparation of the Plan at the local government level. This committee comprises representatives of the District Administration which is accountable to central government and the District Council, which is supposedly accountable to the rural constituent. Within this framework, the District Officer (Development) (DO(D)) and the Council Planning Officer (CPO) have been appointed to draft the plan document. This division of labour between the two institutions is important because
according to a White Paper presented in 1972, after the creation of the DDC, government argued that:

"...councils should maintain a position as a decision-making body independent of central government..." while, "...the DDC and District Administration...would have the responsibility for the coordination of rural development and the preparation of rural development plans."

(Picard, 1979:p291)

Of most significance is the fact that the DO(D) is responsible for planning all central government activities within the district while the CPO only determines resource allocation for the major Council statutory duties. The former activities, moreover, account for over 80% of the rural budget and concern all major production-orientated investment programmes. By contrast, the 20% of the budget which the CPO determines concerns primarily social infrastructure programmes. Yet, the DO(D), as the senior planner, is employed by the District Administration and is, therefore, accountable to central government who provide major policy proposals and not to the rural constituent, as is theoretically the CPO. "Planning with the People" is consequently restricted to the 20% of the budget which the Council can influence (Reilly, 1981). Those activities which are still centralised cannot be determined by the Council since they are not charged with their implementation. At best they are able to provide suggestions but does this amount to participatory planning? Furthermore, a high proportion of rural investment funds are provided by international aid organisations and are normally channelled through central government ministries rather than directly to the local government level.

In relation to the second argument, there is evidence to suggest that irrespective of who influences the preparation of the Plan document, the ratified Plan makes very little difference to rural resource allocation and that in, effect, central government continues to determine rural policy. The reasons for this are two-fold. First, the DDP is not taken seriously by the central government planner (Reilly, 1981). This attitude is symptomatic of a deeper prejudice towards the local government officer especially those in the District Council, and to a general denigration of the importance of rural affairs. This attitude can be compared to that of the local government officer towards the
rural representative, as discussed above. So while there is evidence of an alliance of interest between all public sector technocrats, it is at the same time apparent that the DDP is treated with a certain derision at the central government level, especially outside of the Ministry of Local Government and Lands (Reilly, 1981). This attitude must be partially responsible for the reluctance on the part of central government to provide the District Councils with adequate resources to support a more comprehensive implementation and decision-making capacity and of the important role that is still attached to the District Administration. Yet this attitude towards local government is likely to be perpetuated so long as the Councils are denied the responsibility to extend their influence over key productive sectors.

It has, in fact, been reported that difficulties have been experienced in trying to establish a closer working relationship between the centre and the districts (Reilly, 1981). The district depends on the centre taking the plan seriously as a major policy document. In practice, this is not the case. The central planner is preoccupied by more immediate ministerial imperatives, which might more directly affect his own career and, therefore, tends to underrate the relevance and importance of the districts. Furthermore, central government personnel feel no particular attachment to the districts. This is most evident in relation to the macro-economic planners in the MFDP, who are the principal policy writers (Reilly, 1981). As a result, consultation at this level is characterised as top-down. Directives are presented by the central planners, and little attention is paid to the proposals contained in the draft DDP plans, or to the related negotiations.

Second, what is probably the most astonishing fact is that the most recent DDPs have not been produced! The Plan documents did not proceed beyond the draft stage. Therefore, the supposed key document which symbolises government's commitment to bottom-up planning has not materialised. NDP 6, presented in 1985 was, therefore, prepared without reference to district aspirations. According to a planner working for MLGL, budget allocations for individual districts and sectors were calculated according to broad forecasts based on past trends, and national development priorities. Resource distribution was based upon technocratic considerations such as population size, a remoteness factor, and the implementation capacity of individual districts. The
question to ask is whether or not the submission of a plan would have made any tangible difference to these allocations?

THE IMPLICATIONS FOR DISTRICT COUNCIL AND COMMUNITY DECISION-MAKING:

The establishment of District Developing Planning represented an apparent policy shift towards greater decentralised decision-making in rural affairs. Government rhetoric and the mechanics of the planning framework, indeed, suggest that local government and the community had been provided with the means and political support to influence the formulation of rural policy. The basis for planning from the bottom-up appeared to have been created.

Yet a more rigorous examination of the planning system suggests quite clearly that the emphasis placed on bottom-up planning is only symbolic and that rural policy formulation has remained centralised.

The District Council:

The DDP has not provided the District Council with the means to determine rural policy. In practice, it is only able to influence a small part of the total rural budget, amounting to no more than 20% of total investments, which concern almost exclusively Councils' statutory duties (Noppen, 1982). Within this sector, decision-making is largely restricted to recurrent expenditure forecasting as a large proportion of capital funds are provided by donor agencies. Planning amounts to little more than providing a list of priority investments and budgetary forecasts within pre-determined sectors.

Under these circumstances, the scope for determining resource allocation and distribution is highly restricted. Councils can only provide inputs for those social services such as health and education which they administer, but are unable to influence the major productive investment programmes which concern agriculture, commerce, secondary education, rural employment creation and housing (Reilly, 1981). These have remained the responsibility of line ministries who are represented by the District Administration at the local government level. They,
therefore, remain centralised even though they can have the most far-reaching effects on the status of the rural economy. Consequently, Councils are unable to determine the key issues which concern the rural sector.

The restrictions placed on Council autonomy reflect a conscious government decision to ensure that policies which could challenge sensitive economic vested interests, remain centralised. The government is nervous about empowering local government officers and politicians with the means to influence such policies. Central government has only permitted devolved decision-making over those sectors which least affect political and economic power relations. This is why, for example, Councils have not been able to impose a cattle tax as a means of increasing local revenue (Hudson, 1981). All major production related programmes such as the Tribal Grazing Lands Programme and Arable Lands Development Programme are implemented by central government, with the exception of the Communal Area Development programme (CAD), though it is too early to say what impact this is likely to make. An alternative explanation is offered by the government, and cannot be wholly dismissed, in view of recent policies such as CAD. It argues that until recently, the District Councils lacked the implementation capacity to administer complex production-related programmes. It has only been by strengthening the Councils that it has become possible to devolve such programmes more recently, as in the case of CAD. Yet this programme, too, may only amount to rhetoric and unfulfilled pronouncements.

It is suggested, on the contrary, that the implementation capacity of the Council has remained weak precisely because of the secondary role it has been ascribed in rural development. By comparison, the District Administration has fared well receiving, in particular, more highly qualified manpower. Graduates have, for example, been appointed to the posts of District Officer, while counterparts in the Councils may only have secondary school qualifications. This begs the question why the Councils have not been treated by the same standards and why the District Administration continues to exist at all? It is because government is un-willing to strengthen a local government institution which is not accountable to the centre. Therefore, it has only provided it with a restricted implementation capacity. While the means are
provided to service statutory duties, there is no scope for the Council to become more autonomous.

The Community:

The community does not really participate in District Development Planning. Contrary to the rhetoric which stresses the centrality of consultation to the decision-making process, in reality, it is of marginal importance. A number of factors have blocked the channels of communication in the planning process, while the Plan itself provides only limited opportunity to influence resource allocation. Lack of political consensus and a shortage of appropriate skills at the community level have constrained the effectiveness of participation, while local government technocrats ignore opinions which are expressed. Consultation with community groups is seen as a hinderance to the achievement of elite aspirations even if it does provide a useful gesture to the ideal of "Planning with the People". Public employees will try to obstruct the course of the consultation process should it try to question aspects of national policy which defend vested interests (Noppen, 1982). Furthermore, the importance attached to participation seems unfounded when it is recognised that decision making is restricted to sectors which only concern social-infrastructure provision and not production, and when it is realised how un'influential the Plan is on overall rural policy formulation. At best, community participation represents an opportunity to provide a list of priority 'felt needs' (Noppen, 1982).

The notion of a "social service" rationale based on the historical experience of government's rural development strategy is relevant to this discussion. Consultation that does take place between the district planner and the rural community is influenced by this heritage and, moreover, serves to reinforce this bias (Noppen, 1982). It may be noted that special programmes such as CAD and the Remote Area Dwellers Programme have all been successful in relation to social service provision, but are far less successful in relation to production activities (Egner, 1981).

Rural residents are, moreover, apt to accept this situation given their limited knowledge and understanding of the planning system. It is of
little surprise, therefore, to find that the priorities expressed in the Plans for rural development tend to coincide with those expressed by central government (Noppen, 1982) since they rarely question the sensitive issues of access to the means of production, which is manifested, for example, in the skewed ownership of cattle.

The District Development Plan is, therefore, prepared by the government technocrat who is only accountable to central government and not to the rural constituent. Finally, there is evidence to suggest that the Plan is in any case of only marginal importance to rural policy formulation since decisions continue to be based on criteria and priorities set by central government.

SUMMARY:

The constraints on implementation capacity can in part be attributed to an absence of decision-making responsibility. Institutions which are prescribed implementation duties but which are not responsible for the formulation of policy relating to these duties are likely to confront constraints which will limit their effectiveness. It is suggested that this holds true in Botswana and is a major explanatory factor for the constraints which have been experienced in the implementation of the rural water supply and sanitation programmes.

The delivery systems used in the implementation of VWSP and SHESP have been constrained by problems facing local government and community institutions. The problems can be attributed to a planning system which does not provide scope for determining rural policy. This is significant given that the delivery systems of each programme include a decision-making component.

The system of District Development Planning in Botswana has not been designed to empower those institutions, currently responsible for policy implementation, to influence policy formulation. The planning system remains centralised while the District Council and community development institutions are only used as an input for supporting policy implementation. Therefore, according to the definitions of decentralisation presented in chapter 1, the system of rural policy formulation and implementation fits into the category of
deconcentration, while community participation is used as a means of achieving an end, but not as an end in itself (Oakley & Marsden, 1984). The supposedly autonomous wing of local government, the District Council, has held on to legal autonomy but in all other respects is dependent on central government and District Administration support. Consequently, these Councils serve as mere symbols of political pluralism but are deprived of funds to be able to influence and implement policy effectively (Picard, 1985; Reilly, 1983).

This deconcentrated system has had serious effects on the implementation capacity of the District Council and the community, which have been manifested in the implementation of VWSP and SHESP. The system of policy formulation and implementation which characterises rural development in Botswana, generally, cannot accommodate bottom-up delivery systems as prescribed by the Decade. Consequently, policy implementation based on the participation of sub-national institutions is likely to face constraints associated with the weak implementation capacity of these institutions.

IMPLICATIONS FOR POLICY IMPLEMENTATION:

Local government intervention: The Role of the District Council.

The comparatively low implementation capacity of the District Council as compared to the District Administration and central government, results from its subordinate position as a decision-maker. This is most apparent in relation to manpower and financial resources. The ability to execute policy is determined by the ability to determine resource allocation. However, the planning system has only reinforced Council's dependence on central government support. The has had the following results:

- Manpower and financial allocations are centrally controlled. The Council can only forecast resource requirements but cannot determine how central government will distribute resources between sectors and between districts.
The Plan can only be used to influence policy towards social infrastructure projects. Because these are not of primary national concern and more especially are non-productive, the Council is unable to command the quality of manpower and level of financing that is required. The District Administration, for example, is better endowed with manpower resources.

It is suggested that if Councils were able to engage in production orientated projects, they would be able to contribute to the economic generation of the rural sector which in turn could provide revenue, more skilled manpower and better incentives to the Councils. They would then be in a position to reduce their dependence on central government.

In the meantime, District Council officers recognise the limitations to their legal autonomy and ability to influence policy, created by their continued dependence on central government for the determination of resource allocation (KDC, 1979). Districts have pointed out that the lack of access to finance means that much of the planning exercise is mere rhetoric (KDC, 1984). Fiscal limitations mean that objectives are rarely attained and this, in particular, is resented by the rural community, who feel that the consultation process makes promises which are never kept.

Community Participation: The Role of Community Institutions.

The lack of harmony and the apathy which characterises community participation can be attributed to the fact that community institutions are barred from influencing the formulation of policy. Community participation has been restricted to supporting the implementation of rural policies which have been planned by government authorities. The scope has not been created to allow community institutions, themselves, to determine the sorts of investments which ought to be made or on deciding how they should be made. Community participation, therefore, functions within a top-down decision-making framework. Some implications include:
- Socio-political disharmony. A pre-condition to achieving a better implementation capacity is to achieve cooperation between village institutions. This is not feasible so long as the political struggle based upon the role of the Kgotla in decision-making is not resolved. An acceptable political representative of community interests is required. The existing planning system has excluded the Kgotla while alternative institutions have proved themselves so far to be unacceptable substitutes.

- Participatory planning is restricted to the determination of social infrastructure projects. Consequently:

a) this takes away the raison-d'être for community participation since social services are implemented from above by government, while it reconfirms a belief that rural development can only mean social infrastructure provision.

b) there are no opportunities for production-related projects which could provide higher incomes and create skills which could benefit the rural economy while providing the resources for implementing self-help projects more effectively. Participation would also be more popular if it was felt that economic benefits could be enjoyed.

c) extension workers are provided with few opportunities to mobilise community interest in participation so long as the government is responsible for implementation. The extension worker could be more effective if production-related projects could be encouraged and if consultation was taken more seriously.
Chapter 8: CONCLUSION:

At the start of the 1980s, the United Nations began a campaign to encourage member countries in the developing world to provide domestic water supplies and sanitation as a way of improving community health. Policy prescriptions recommended were based upon the use of community participation and decentralised coordination, upon the development of appropriate technologies and upon the promotion of health education. However, at its mid-point, the United Nations' International Drinking Water Supply and Sanitation Decade has recorded only modest results. This poor record of achievement has been attributed to a variety of constraints in the various countries hosting water supply and sanitation projects.

Botswana's Village Water Supply Programme and Self-Help Environmental Sanitation Project have been studied in order to determine why the Decade has not succeeded in meeting policy objectives. The study has compared the methods prescribed by the Decade and methods used by a particular country to achieve policy objectives. Research was based upon participant-observation and action research in the field, supported by an investigation of theoretical literature on the role of the state in development in post-colonial societies. This approach was required in order to observe how the policy recommendations of the Decade were being translated into action in the specific context of rural Botswana. It included an investigation of the two projects in two different districts and at the central government, local government and community levels. The evidence obtained through this type of fieldwork could not readily have been obtained by alternative means.

The research has indicated that rural development in Botswana relies heavily on central government for the design and implementation of policy. By contrast, sub-national institutions play only a peripheral role and, therefore, have been unable to build up a strong institutional capacity. With respect to the water supply and sanitation programmes, comparable findings have been reached. The Village Water Supply Programme has relied on central government intervention with support from a donor agency, but little participation by either local government or community institutions. This top-down approach has achieved rapid installation of infrastructure but has overlooked the need to establish
an effective system of operation and maintenance while health education has been ignored. The Self-Help Environmental Sanitation Project has, by contrast, relied on institutional support at the local government and community levels in order to support a latrine construction programme and a health education campaign. This bottom-up approach has, however, recorded modest results, characterised by a low overall level of participation, poor community mobilisation and little health education. In seeking explanations for these findings, fieldwork has identified the low implementation capacity of sub-national institutions as a major factor for the lack of success experienced in bottom-up delivery.

District Council capacity is constrained primarily by a shortage of skilled manpower and inadequate finance. Access to manpower is restricted by an absolute shortage nationally and a centralised system of recruitment which restricts the Council's ability to determine manpower needs. Access to adequate finance is constrained by the poor resource base of the districts which have become unproductive and serve primarily as sources of labour for the urban sector. Councils must, therefore, depend on central government for deficit grants. These constraints have limited the ability of the Councils to provide adequate support to the sanitation project or to the Water Maintenance Units associated with the water supply programme.

Community participation provides only limited and peripheral support to rural development. With village development institutions, the lack of activity and support for rural development can be attributed to political factors concerning the relationship between modern state and tribal institutions which has led to an absence of political consensus, to the nature of rural development which has been highly centralised and to a shortage of skills and resources which can be attributed to the nature of the rural economy, which has encouraged the able-bodied to migrate away, and to an unprofessional and under-resourced extension service. In the case of household self-help contributions, self-help depends on both the willingness and capacity of a household to provide contributions. Willingness to contribute is a function of the benefits which the project is perceived to provide and often depends on wider community mobilisation from above. Capacity to contribute depends on the socio-economic status of the household. This status is determined by the opportunities provided by the rural economy, which in turn have
been determined by state policy and to the specific choices that have been made by the individual household. Participation in the sanitation project has been compromised by the low socio-economic status of the household and the perception of the project as a social service which ought to be provided by the state. In these circumstances, short-term participation has been modest while the long-term objectives of institution-building at the village level and of designing a replicable health education campaign have been unfulfilled.

The study sought to provide more rigorous explanations for these poor levels of institutional capacity. Existing explanations have tended to be restricted to a consideration of the practical constraints identified in the field and findings have been interpreted within a non-theoretical framework. As such, the conclusions reached are incomplete. It has been demonstrated here why it is necessary to investigate beyond the immediate issues and to examine the wider context of rural development within which the particular projects take place in order to identify underlying factors which account for the observed field evidence. An examination of the role of the state in determining rural policy as it concerns objectives set and the means used to achieve those objectives in post-colonial society is required. Particular attention has focussed on the issue of the devolution of decision-making authority in rural development. The continued centralisation of decision-making, despite a limited attempt to introduce a system of decentralised planning, has restricted the institutional capacity of local government and the community. While decision-making remains centralised, Decade objectives which rely on decentralised decision-making cannot be achieved. In Botswana, rural development operates within a deconcentrated system of formulation and implementation.

An Explanation for Deconcentration: The Role of the Post-Colonial State in Nation-Building:

The apparent tendency towards the centralisation of decision-making and implementation can be explained by considering the primary challenge which faces the post-colonial state in the task of nation-building. The state is better equipped to achieve a level of political authority and short term stability than to achieve economic strength and long term
prosperity (Sandbrook, 1982). It is, therefore, inclined to promote policies which guarantee the short-term control of power by the governing interest, even when this might necessitate the use of force, than to promote longer-term developmental objectives which might compromise short-term political interests. In much of the developing world, such political expediency tends to prevail over economic rationality (Cohen et al, 1986; Sandbrook, 1986). This approach is reflected in the distribution of decision-making power between the central state and other interests within society.

Political stability can, therefore, be best guarded through the centralisation of power over decision-making. By contrast, decentralisation is politically undesirable even if from a managerial point of view it is highly desirable (Cohen et al, 1986). The option to centralise is especially attractive to the state during the process of nation-building when it is imperative to extend its influence over peripheral rural areas which might express allegiance to opposition interests. In Africa, rural areas have often been the breeding ground for tribal opposition while in Botswana, the rural sector has remained the stronghold of tribal authority over that of the modern state. Under such circumstances, political decentralisation carries risks when it can be exploited by such political opponents against the interests of the state (Alldred, 1976). It is for this reason that former British colonies in Africa have experienced a progressive if not erratic trend towards the recentralisation of power since the setting up of local government systems prior to independence (Kasfir, 1983; Mawhood, 1983). This has been most noticeable in those nations which have faced tribal and ethnic conflict, and which also have lacked the financial and manpower resources to support local government systems (Kasfir, 1983).

In Botswana, the degree of recentralisation has been less complete with evidence of a political commitment by the state to decentralisation. This is reflected in the fact that the District Councils were never disbanded, tribal authority still exists while, more recently, the system of District Development Planning was created. A form of decentralised decision-making has, therefore, survived albeit in a weakened capacity because the conditions experienced in other parts of Africa which have prompted more extensive centralisation have been less apparent (Picard, 1979b, 1979c; Reilly, 1981). In particular, Botswana
has not experienced tribal conflict nor financial constraints on the same scale while a bold effort has been made to defend one of the few remaining democracies in Africa (Picard, 1979). At the same time, the state has faced resistance by tribal authority in the districts and this has prevented it from extending the influence of the modern state to the grassroots level in a comprehensive manner. It is, therefore, suggested that the state perceives tribal authority as a greater threat to its political security than it perceives the urban based modern opposition parties (Picard & Morgan, 1985).

The case of Botswana illustrates the primacy of internal political factors in determining the political economy of rural development and this in turn has affected the way in which particular projects have been organised. The state will only decentralise power when it becomes politically expedient, and not when recommendations based on managerial criteria are presented from outside. The immediate implications for sub-national institutions is that their implementation capacity will remain compromised so long as the political conviction to support and empower them does not exist. The effect of political considerations, therefore, filters through to the field level where they are expressed as practical constraints on institutional capacity.

Implications for the Decade:

The limits to external intervention, be it by the Decade in relation to specific projects, or more generally by the international donor community in relation to more comprehensive sectoral support programmes, can be recognised. The "Conditions-Precedent" approach, based on the linking of financial assistance to prescriptions for economic and administrative reform, which have been influenced by a managerial rationale, must recognise the primacy of these internal considerations (Cohen et al, 1986). It is a major factor for explaining why recommendations are deliberately ignored or why projects sometimes fail, or do not manage to reach their intended beneficiaries (Tendler, 1982). While there is an apparent consensus over the desired objectives of the Decade at the international level, it is possible to detect variations in the real motives of governments in supporting the Decade and that often political rather than health objectives are sought (Cairncross,
1986). Under such circumstances, the rationale for supporting bottom-up delivery may not exist.

The policy prescriptions of the Decade cannot be faulted. Bottom-up delivery is the best means of ensuring that long term objectives are met. Yet by definition, this approach is likely to disturb state interests in perhaps trying to empower institutions which reflect opposing local interests, while it is also likely to have to contend with existing institutions and mechanisms which are unsuitable for supporting bottom-up delivery (Ayres, 1983). It is likely that prescriptions will, therefore, become modified either by the state or even by external agents seeking to introduce an acceptable project to the country. It has not been uncommon for external agencies to try to by-pass internal institutions and to deal directly with the recipient to maximise efficiency (Cairncross, 1986).

In order to achieve policy objectives, the Decade must ensure that policy prescriptions can be modified to suit local circumstances. It is evident that universally applicable prescriptions do not work. This justifies the need to undertake feasibility and evaluation studies as the basis for policy design. Yet, while these are in fact undertaken, inadequate attention has focussed on examining the political, social and cultural factors at both the national and sub-national levels which can influence policy recommendations for institution-building. In this respect, the major challenge for the Decade is to encourage member countries to make a genuine commitment to decentralised decision-making. This is a major challenge for both donor and recipient and, therefore, it becomes all the more important to plan for contingencies and to plan for the medium and long-term. Institutional reform is impractical and undesirable when it must be undertaken within, perhaps, a two year time span.

Implications for Botswana:

The SHESP project is organised according to the principles of bottom-up delivery and, therefore, can potentially meet policy objectives. However, it is constrained because rural development in Botswana is not geared to supporting bottom-up delivery. As a result, there has been a tendency to seek short-term results based on the rapid installation of
infrastructure in a top-down manner and to abandon the institution-building and health education components which demand a longer term commitment to bottom-up delivery on the basis of decentralised decision-making. The long-term success of the project depends both on it receiving a long-term commitment from the government to provide technical and financial support and on a commitment by government to genuine decentralisation so that the institutions involved in bottom-up delivery can contribute effectively.

By contrast, the VWSP depends on top-down delivery in line with rural development policy more generally. The context of rural development has, therefore, been suitable to ensuring that the limited objectives set have been met. Yet, the limits of this approach have become apparent with the experience of poor operation and maintenance and neglected health education. This evidence reinforces the justification for the use of bottom-up delivery as prescribed by the Decade. The programme is, therefore, likely to be decentralised in the future, but in order to succeed, must also depend on reform to the system of rural policy formulation and implementation. More detailed recommendations on how the programmes must evolve in the future could be usefully the basis for further research:

The onus is, therefore, on the Botswana government to spell out clearly how far it is prepared to extend decision-making authority to sub-national institutions as the basis of improving implementation capacity in rural development. The District Councils must, in particular, be strengthened while community institutions must be more fully involved in decision-making. Government policy, in this respect, is likely to be influenced by wider considerations of national political and economic importance. There is already evidence that the government has embarked on a cautious programme of decentralisation. It remains to be seen how far this will effectively transfer decision-making away from central government. There is also evidence that rural policy has shifted towards promoting production-related development. This is also a pre-requisite for ensuring that the community has both the willingness and capacity to contribute to its own development. As the rural sector becomes more critical to the health of the national economy, it is questionable how far the state will be ready to relinquish authority over decision-making.


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THE KWENENG DISTRICT HOUSEHOLD SURVEY.

**SAP-HELP SANITATION BASELINE SURVEY**

1. Name of respondent ___________________________ a) Sex: M/F
   b) Age ________

2. Are you the head of the household? Yes/No
   a) (If No) who is the head ______________________
   b) What is your relationship to the head ________
   c) (If yes) that is your marital status _________

(For Questions 3-9, place the answers in the table below)

3. What are the names of all the members of this household?

4. What is the approximate age of each person?

5. What is the relationship of each person to the household head?

6. What level of education has each person achieved?

7. What is the occupation of each person - where do they work?

8. How many of these contribute to the income of the household?

9. How much time does each person spend living at this residence?

<table>
<thead>
<tr>
<th>NAME</th>
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<tbody>
<tr>
<td>AGE</td>
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<td>RELATIONSHIP</td>
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<td>OCCUPATION</td>
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<tr>
<td>LOCATION</td>
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<tr>
<td>PERIOD AT HOME</td>
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</tbody>
</table>
NOTES:

USE THESE CODES FOR Q3 - 9:

Q3) C-5, C-14, C-23, C-32, D-34, 55-70, 79.

Q5) Spouse, Son/child, Brother/sister, Parent, Grandchild, Other relative.

Q6) Std. 1 - 7, I, Cartridge (Specify)

Q7) Formal, Informal, Self-Employed, Other Wage.

Q8) Indicate with a 'C', contributor to household income.

Q9) (If the HEAD HEAD IS AWAY) Who is responsible for the household.

1) Does this household own this livestock Yes/No

2) Do you have land Yes/No

(a) (If Yes) who ploughs the land

H/old members
relative/friend
hired labour

(b) (If No) Is any members of the H/old work on the land belonging to other households

3) Do you run or share a cattle post Yes, Share, Neither.

4) What sorts of livestock do you own (Specify)

5) WATER SUPPLY

1) Where does this household get its water from during

(a) wet season

(b) dry season
2) What are the reasons for using each of the sources mentioned?
   (a) ______________________________________
   (b) ______________________________________

3) How far do you have to walk to the closest/furthest sources?
   closest ___________________ furthest ______________

4) How much water do you normally collect each day?
   (number of containers _________________________)

5) Who normally collects the water? Mother, Children, Other?

6) (IF STANDPIPE ARE MOST COMMONLY USED)
   What do you think are the advantages of using standpipes
   compared to traditional sources?
   ____________________________________________

7) (IF STANDPIPE ARE NOT COMMONLY USED)
   Why don't you prefer to use public standpipes?
   ____________________________________________

8) (IF THE HOUSEHOLD HAS LIVESTOCK)
   Where do you water your livestock? ______________

9) Do you wash the following at home or at the water sources
   Clothes ___________________ Dishes ______________

10) Do you think that the water you use is clean and healthy
    ___________________________________________

11) Where do you store your water? __________________
(C) **SANITATION:**

1) Does this household have a latrine? Yes/No
   
   (IF 'YES')
   
   (IF 'NO' go to Q.12)

2) How long ago was it built ____________________________
   
   (a) Who built it? _______________________ E/hold, contractor etc.
   
   (b) How much did it cost you to build? _______________________
   
   (c) Is the latrine LINKED/UNLINKED?

3) Does the vent pipe have a fly screen? Yes/No
   
   (a) Why did you build a latrine? ____________________________

4) Do all members of the household use the latrine?
   
   (a) (IF NO) Who, and why not ____________________________
   
   (b) Where do they defecate if they don't use the latrine?
   
   ______________

5) Who cleans the latrine? ______________ How often? __________

6) What do you think are the main advantages of using a latrine
   
   ______________

7) What have been the main problems with the latrine? safety, comfort, access, odours, insects, other ______________

8) Has anybody from the council spoken to you about using latrines? Yes/No
   
   (a) (IF YES) What have you been told about the importance of sanitation and hygiene, to improve health?
   
   ______________
9) (a) Do you wash your hands after going to the toilet? YES/NO
     (b) Do you ensure that the children wash their hands?

10) Do you think that improved sanitation is important

11) Are you interested in building a new pit latrine Yes/No
     (IF YES, go to Q. 23 below)
     CONTINUE HERE FOR THOSE WHO ANSWERED 'NO' to Q.1 ABOVE!

12) Where do members of this household defecate?
     (a) Why have these sites been chosen
         Privacy, Convenience Other
     (b) Do all members of the household use the same site Yes/No

13) Do your children use latrine at school Yes/No

14) Have you, or other adult members ever used this latrine Yes/No
     (a) (IF YES) What did you like/dislike about them?
         Like ____________________________
         Dislike ____________________________

15) Has anybody from the council spoken to you about using latrine?
     (a) (IF YES) What have you been told about the importance of sanitation and hygiene, to improved health
         ____________________________

16) Do you wash your hands after defecating
     (b) Do you ensure that the children wash their hands

18) Do you think that improved sanitation is important YES/NO.
19) Would you like to have a latrine? Yes/No
   (a) (IF NO) why not? ____________________________
   (b) (IF YES) why would you like to have one? Health, Status, privacy, convenience.

20) If you had a latrine, would all members of the household be allowed to use it? Yes/No Comments ____________________________

21) If you had a latrine, would you stop using traditional places for defecation? Yes/No Comments ____________________________

22) If you had a latrine, who would be responsible for cleaning it? ____________________________

23) Would your household be able to contribute P50 to the construction of the latrine? Yes/No
   (a) (IF NO) How much could you afford? ____________________________
   (b) (IF NO) would you be able to borrow money? Yes/No

24) Would your household be able to contribute unpaid labour for the construction of the latrine? Yes/No
   (a) (IF YES) which household members would be available and when? WHO __________________ WHEN __________________
   (b) (IF NO) would you be able to hire labour or get somebody to help? Yes/No

25) (FOR HOUSEHOLDS WHERE THE HEAD IS ABSENT FOR LONG PERIODS)

   Would you have to consult the household head before deciding to build a latrine? Yes/No

(9) HEALTH: (PLACE ANSWERS IN THE TABLE BELOW)

1) Which members of this household have been ill in the last 6 months?

2) What was the nature of the illness in each case?

3) Do you know what the cause of the illness was in each case?

4) Was the illness cured? Yes/No
   (a) (IF YES) where was the illness treated in each case?
   (b) (IF NO) have any of these cases resulted in death?
NAME

ILLNESS

CAUSE

WHERE TREATED

NEIGH

(2) VILLAGE LEVEL ORGANISATIONS:

1) Do you belong to any village organisation/committee? Yes/No
   (a) (IF YES) which ones?
   when did you last attend a meeting?
   (b) (IF NO) why not?

2) Do any members of the household attend kgotla meetings? Yes/No
   (a) (IF YES) who regularly?
   (b) (IF NO) why not?

3) Is there a women's group in the village? Yes/No
   (a) (IF YES) do you belong to it? YES/NO
   (b) Are health issues discussed at their meetings? Yes/No

4) Do you receive visits from the Family Welfare Educator?
   (IF YES) what do they talk to you about

5) Have you taken part in a self-help project before? Yes/No
   Describe
1) How does this household dispose of its rubbish?__________

2) Do you think your village is clean/tidy?__________

Enumerators Inspection:
- Suitable place for building latrine __________
- Presence or absence of litter in the compound __________

Space for Additional Comments:
1. Do you have a latrine?
   YES  NO (Proceed to section 48)

2. Was your latrine built as part of the ESPP/Council project between 1981/2?
   YES  NO (Proceed to question 13)

3. How did you become involved in the project?

4. When did you START building the latrine?
   When did you FINISH building the latrine?
   (If the latrine is incomplete, explain why)

5. Who built the superstructure?
   SELF  FRIENDS/RELATIVES  CONTRACTOR  ESPP LABOURERS
   (a) If not SELF, explain why:

6. What were the reasons for choosing this design of latrine?

7. What were the reasons for choosing to use these building materials?
   AVAILABILITY  COST  FAMILIARITY  APPEARANCE  OTHER
   (a) From where did you obtain these materials?

8. Did you need to use a compressor/jackhammer to dig the pit?
   YES  NO

9. How much money did you pay the Council for the latrine?
   NOTHING  P1-5  P6-10  P11-15  P16-20  P21-25  P26
   (a) Did you pay in instalments?
   YES  NO
3. What is the average monthly income of this household?

<table>
<thead>
<tr>
<th>Income Range</th>
<th>Pula</th>
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<tbody>
<tr>
<td>Less than 100</td>
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<tr>
<td>101 - 200</td>
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<tr>
<td>201 - 300</td>
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<td>801 - 900</td>
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<td>901 - 1000</td>
<td></td>
</tr>
<tr>
<td>Over 1000</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

4. Do you receive drought relief?

- Yes
- No
- Other

5. What sort of livestock do you own?

- Cattle
- Goats
- Sheep
- Donkeys
- Poultry

6. Do you own or share a cattle post?

- Own
- Share
- Neither

7. Do you own land?

- Yes
  b) What draft power do you use? Tractor OXEN DONKEYS OTHER
  c) Is this draft power: YOUR OWN HIRED BORROWED MATEST
  d) What labour do you use? HOUSEHOLD HIRED BORROWED
  e) Which of these do you own? PLOW CULTIVATOR PLANTER
10. In return for this payment, what materials did the Council provide you with?

VENTPIPE  SEAT  SLABS  DOOR  OTHER

11. How much did it cost you to build the superstructure in terms of:

MATERIALS  LABOUR

12. Have you made any alterations or repairs to the latrine since it was built?

YES (Specify)  NO

If answer was 'NO' to question 2, continue here.

13. How long ago did you build your latrine?


14. (If it was built between 1981-83) why didn't you take part in ESPP?

15. Who built the latrine?

SELF  CONTRACTOR  OTHER

16. How much did it cost you to build it in terms of:

MATERIALS  LABOUR

17. What was the reason for using these building materials?

AVAILABILITY  COST  FAMILIARITY  CONTRACTOR CHOICE  OTHER
[3] RESPONDENT EVALUATION OF LATRINE

1. What was the reason for you building a latrine, why did you want one? 
.................................................................

2. What do you consider to have been the major benefits of the latrine to your family? (List in order of importance)

   1. ..............................................
   2. ..............................................
   3. ..............................................

3. What problems have you had with the latrine? (List in order of severity)

   1. ..............................................
   2. ..............................................
   3. ..............................................
   4. ..............................................

4. Are you satisfied with the design of the latrine?

   YES ..............................................
   NO ..............................................
   (a) How do you think it could be improved?

.................................................................
.................................................................

5. Once the pit has filled up, what are you going to do?

   BUILD A NEW ONE   EMPTY OLD PIT   OTHER ..............................................

[4] HOUSEHOLD HYGIENE-RELATED PRACTICES

A. HOUSEHOLD WITH LATRINE.

1. Do all members of this household use the latrine?

   YES ..............................................
   NO ..............................................
   (a) List WHO does not, WHERE they go, WHY they don't use the latrine:

   WHO ..............................................
   WHERE ..............................................
   WHY ..............................................

.................................................................
.................................................................
2. How often is the latrine cleaned?

........................................................................................................

3. Who normally cleans the latrine?

........................................................................................................

4. What cleaning agents are used for cleaning the latrine?

........................................................................................................

5. Do you wash your hands after using the latrine?

YES NO

6. Do you make sure that your children wash their hands after using the latrine?

YES NO

(Check if soap and water is available near the latrine: YES NO)

7. Do you allow other people, such as neighbours, to use the latrine?

........................................................................................................

8. (Where applicable) Do you always keep the latrine door closed?

YES NO

9. (Where applicable) Can the latrine be locked?

YES NO

(a) Do you always lock it after use? YES NO

10. Do you do any of the following in the latrine?

WASH BODY THROW AWAY DIRTY WATER DISPOSE OF BOTTLES/RUBBISH

........................................................................................................

B. HOUSEHOLDS WITHOUT LATRINE.

1. Why don't you have a latrine?

........................................................................................................

2. Did you know about/hear about the ESPP project?

YES NO

(a) Why didn't you take part?
3. Would you like to have a latrine?
   YES   NO
   (a) For what reason? ..............................................
   (b) When do you plan to build it? .................................
   (c) How much could you afford to pay? ...........................

4. Where do members of your household normally defecate?
   ADULTS: ...................  CHILDREN: .....................

5. Do you wash your hands after defecation?
   YES   NO

6. Do you make sure that your children wash their hands after defecation?
   YES   NO

[5] HEALTH EDUCATION AND EXTENSION

1. Does your village have a Family Welfare Educator?
   YES   NO   DON'T KNOW
   (a) Have they visited you?   YES   NO
       (a) What did they tell you?
       .................................................................
       (b) How long ago did they visit you?
       .................................................................

2. Does your village have a Village Health Committee?
   YES   NO   DON'T KNOW
   (a) Have they visited you/organised meetings?  YES   NO
       (a) What did they tell you?
       .................................................................

3. Has anybody from your village or from the Council told you to build a latrine?
   .................................................................
4. Have you been given any information, such as leaflets, or attended any talks, concerned with health, sanitation and hygiene?

YES

NO

(a) Describe: .................................................................

5. (FOR ESPP LATTINE OWNERS ONLY) When you built the latrine, were you given any advice or information on sanitation hygiene, and looking after the latrine?

YES

NO

(a) Describe: .................................................................

[6] COMMUNITY PARTICIPATION

1. Do you attend Kpotla meetings?

YES

NO  Why not? ......................

(a) How often: .................

2. Do you attend village group/voluntary group meetings?

YES

NO  Why not? ......................

(a) Which ones? ............................

(b) Are you a member of any of these (indicate)? ............................

3. Is there a village development committee (VDC) in your village?

YES

NO  DON'T KNOW

(a) What do you think is the purpose of this committee?

4. Have you ever taken part in a village Self-Help project?

YES

NO

(a) Which ones? ............................
B. SUBSTRUCTURE.

1. Cover Slabs:
   (a) How Many: 1 2 3 NA
   (b) Condition: GOOD CHIPPED CRACKED MISSING
   (c) Fitting: TIGHT LOOSE UNALIGNED
   (d) Subsidence: YES NO

2. Fill:
   (a) Depth (ask if necessary): .................... m
   (b) Is it lined: YES NO
      (i) What with: BRICKS WIRE MESH OTHER..............
   (c) How full is it: 0-25% 25-50% 50-75% 75-100%
   (d) Has it been emptied? YES NO
      (a) When? ....................
      (b) By Whom? ....................

C. VENTPIPE.

3. Ventpipe:
   (a) Is there a ventpipe? YES NO
      Why not? ............
      (i) Material: PVC MESSIAN PITCH FIBRE OTHER..............
      (ii) Height: .................... m
      (iii) Fly Screen: YES NO
      (iv) Condition: GOOD ACCEPTABLE BAD VERY BAD
      (v) Side Installed: NORTH SOUTH EAST WEST
[1] INSPECTION OF LATRINE

1. Type of latrine: OFFSET NON-OFFSET OTHER

A. SUPERSTRUCTURE

1. Exterior Walls: (a) Design: CIRCULAR SQUARE OTHER

(b) Material: CONCRETE MUD OTHER

(c) Condition: GOOD ACCEPTABLE BAD VERY BAD

(d) Approx. Height at lowest point: ______________m

(e) Evidence of Subsidence: ______________

2. Roof: (a) Material: TIN THATCH OTHER

(b) Condition: GOOD ACCEPTABLE BAD VERY BAD

3. Interior: (a) Is there a seat?: YES NO

(i) Material: WOOD PLASTIC FIBREGLASS OTHER

(ii) Toppered Shoot: YES NO

(iii) Seat Cover: YES NO

(iv) Condition: GOOD ACCEPTABLE BAD VERY BAD

(b) General Condition:

(i) Odours: GOOD ACCEPTABLE BAD VERY BAD

(ii) Insects: GOOD ACCEPTABLE BAD VERY BAD

(iii) Cleanliness: GOOD ACCEPTABLE BAD VERY BAD

4. Entrance: (a) Type: DOOR SCREENED ENTRANCE OTHER

(i) Does it close properly?: YES NO

(b) Does it have a lock?: YES NO
THE SURVEY VILLAGES:

KWENENG DISTRICT.

- Molepolole -

Population - 20 565

Location and Settlement -
District capital located 50km from Gaborone along a tarred road. The village is very large, characterised by dense settlement towards the centre and dispersed settlement to the periphery. Housing comprises a mix of traditional rondavels and modern cement and iron roofed housing.

Social Services -
Secondary school, primary schools, hospital, clinics and health posts, reticulated water supplies, churches, post office, police, Local authority headquarters.

Formal Sector Activities -
Industrial estate, construction companies, banks, wholesalers, hotel, bottle stores and bars.

- Thamaga -

Population - 6 520

Location and Settlement -
Situated along a graded dirt road between Molepolole and Moshupa in Southern district. The village is spread out between rocky outcrops and a sandy plateau. Rondavels of mud and thatch prevail. Housing is very dispersed towards the periphery.

Social Services -
Primary schools, clinic, reticulated water supplies.

Formal Sector Activities -
General stores, bottle stores, butchery, brick-making plants.

- Mankgodi -

Population - 2 693
Primary school, health post & maternity ward, reticulated water supply.

Formal sector activities -
General store sub-depot, bottle store.

- Artesia -
Population - 566

Location & Settlement -
Situated along the main Gaborone - Francistown road and railway line, approximately 60 km from Mochudi. Settlement is concentrated. Houses are typically made of mud bricks with thatch or grass roofs. Rondavels are most common.

Social Services -
Primary school, clinic & maternity ward, reticulated water supply.

Formal Sector Activity -
General store, bottle store, bus service.

- Mabalane -
Population - 681

Location and Settlement -
Situated next to Sikwane close to the South African border, approximately 40km from Mochudi along a graded dirt road. Settlement is dispersed over hilly and rocky terrain. Houses are typically built with cement walls and corrugated iron roofs. There are few 'traditional' rondavels.

Social Services -
Primary school, health post, reticulated water supply, church.

Formal Sector Activities -
General store, bottle store, butchery, bus service.
Location and Settlement -
Situated along an graded dirt track in a sandy valley between Thamaga and Gabane close to the border with Southern district. The village is very scattered especially on the eastern side. Almost all housing is traditional in style with few cement brick square houses.

Social Services -
Primary school, clinic with maternity ward, reticulated water supplies.

Formal Sector Activities -
General store, bottle store, petrol station.

- Gabane -
Population - 2,688.

Location and Settlement -
Situated between Mankgodi and Mogoditsane along a poorly graded dirt track. The village is built on very sandy soil below a range of cliffs. Housing is scattered along the length of the cliffs and comprises a mix of modern and traditional styles.

Social Services -
Primary school, clinic, reticulated water supplies.

Formal Sector Activities -
General stores, bottle store, rural crafts centre.

KGATLENG DISTRICT.

- Olifants Drift -
Population - 323

Location & Settlement -
Situated on the Limpopo river approximately 100 km from Mochudi along an un-graded dirt road. Settlement in the village is dispersed. Houses are typically made of mud bricks with corrugated iron roofs, to a square design, but there are traditional rondavels too.

Social Services -
Table A1: Number of Buckets of Water Collected by Households Per Day - Kweneng District

<table>
<thead>
<tr>
<th>Buckets</th>
<th>Tseane</th>
<th>Mankgosi</th>
<th>Gaborone</th>
<th>Moropane</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>8 (1)</td>
<td>5 (7)</td>
<td>5 (9)</td>
<td>36 (12)</td>
</tr>
<tr>
<td>3-5</td>
<td>47 (13)</td>
<td>25 (53)</td>
<td>13 (29)</td>
<td>17 (56)</td>
</tr>
<tr>
<td>6-8</td>
<td>25 (13)</td>
<td>9 (17)</td>
<td>18 (32)</td>
<td>43 (37)</td>
</tr>
<tr>
<td>9+</td>
<td>7 (13)</td>
<td>6 (11)</td>
<td>3 (17)</td>
<td>15 (5)</td>
</tr>
<tr>
<td>No Answer</td>
<td>2 (9)</td>
<td>3 (17)</td>
<td>0 (9)</td>
<td>- (-)</td>
</tr>
<tr>
<td>Totals</td>
<td>68 (100)</td>
<td>47 (100)</td>
<td>35 (100)</td>
<td>528 (100)</td>
</tr>
</tbody>
</table>

Notes: 1. An average zinc bucket contain 20 liters of water.

Table A2: Type of Container Used to Store Water - Kweneng District

<table>
<thead>
<tr>
<th>Type of Container</th>
<th>Tseane</th>
<th>Mankgosi</th>
<th>Gaborone</th>
<th>Moropane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plastic Container</td>
<td>57 (23)</td>
<td>26 (22)</td>
<td>14 (29)</td>
<td>125 (29)</td>
</tr>
<tr>
<td>Bucket</td>
<td>26 (77)</td>
<td>9 (21)</td>
<td>6 (17)</td>
<td>114 (37)</td>
</tr>
<tr>
<td>Traditional Clay Pot</td>
<td>9 (17)</td>
<td>11 (22)</td>
<td>7 (20)</td>
<td>31 (10)</td>
</tr>
<tr>
<td>Tin Drum</td>
<td>2 (5)</td>
<td>4 (5)</td>
<td>1 (2)</td>
<td>6 (2)</td>
</tr>
<tr>
<td>No Answer</td>
<td>2 (1)</td>
<td>1 (5)</td>
<td>- (-)</td>
<td>6 (2)</td>
</tr>
<tr>
<td>Totals</td>
<td>69 (100)</td>
<td>45 (100)</td>
<td>35 (100)</td>
<td>525 (100)</td>
</tr>
</tbody>
</table>
Table A3: Cost of ESPP Superstructure: Completed Latrines Only - Kgatleng District

<table>
<thead>
<tr>
<th>MATERIALS</th>
<th>OLIFANIS</th>
<th>ARTESIA</th>
<th>MABALANE</th>
<th>AGGREGATE</th>
<th>OLIFANIS</th>
<th>ARTESIA</th>
<th>MABALANE</th>
<th>AGGREGATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nothing</td>
<td>2 50%</td>
<td>6 50%</td>
<td>3 33%</td>
<td>3 33%</td>
<td>6 50%</td>
<td>50%</td>
<td>4 33%</td>
<td>3 33%</td>
</tr>
<tr>
<td>P1-P2O</td>
<td>2 25%</td>
<td>3 25%</td>
<td>3 25%</td>
<td>2 25%</td>
<td>3 25%</td>
<td>5%</td>
<td>2 17%</td>
<td>3 25%</td>
</tr>
<tr>
<td>P21-P50</td>
<td>2 25%</td>
<td>3 25%</td>
<td>3 25%</td>
<td>2 25%</td>
<td>3 33%</td>
<td>3 33%</td>
<td>2 17%</td>
<td>9%</td>
</tr>
<tr>
<td>P51-P100</td>
<td>2 25%</td>
<td>3 25%</td>
<td>3 25%</td>
<td>2 25%</td>
<td>3 25%</td>
<td>5%</td>
<td>2 17%</td>
<td>9%</td>
</tr>
<tr>
<td>P100-P200</td>
<td>2 25%</td>
<td>3 25%</td>
<td>3 25%</td>
<td>2 25%</td>
<td>3 33%</td>
<td>3 33%</td>
<td>2 17%</td>
<td>9%</td>
</tr>
<tr>
<td>Don't Know</td>
<td>3 33%</td>
<td>7 50%</td>
<td>1 17%</td>
<td>5 43%</td>
<td>2 25%</td>
<td>3 33%</td>
<td>1 8%</td>
<td>23%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>7 10%</td>
<td>8 10%</td>
<td>11 15%</td>
<td>6 10%</td>
<td>7 10%</td>
<td>100%</td>
<td>6 10%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table A4: Cost of Non-ESPP Latrine Superstructure - Kgatleng District

<table>
<thead>
<tr>
<th>MATERIALS</th>
<th>OLIFANIS</th>
<th>ARTESIA</th>
<th>MABALANE</th>
<th>AGGREGATE</th>
<th>OLIFANIS</th>
<th>ARTESIA</th>
<th>MABALANE</th>
<th>AGGREGATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nothing</td>
<td>1 13%</td>
<td>5 25%</td>
<td>15%</td>
<td>4 50%</td>
<td>6 88%</td>
<td>11 30%</td>
<td>43%</td>
<td></td>
</tr>
<tr>
<td>P1-P2O</td>
<td>2 25%</td>
<td>2 5%</td>
<td>7%</td>
<td>2 25%</td>
<td>4 11%</td>
<td>11%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P21-P50</td>
<td>2 25%</td>
<td>2 22%</td>
<td>11%</td>
<td>1 11%</td>
<td>7 19%</td>
<td>15%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P51-P100</td>
<td>1 13%</td>
<td>3 33%</td>
<td>7 24%</td>
<td>2 33%</td>
<td>11 27%</td>
<td>19%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P100-P200</td>
<td>1 11%</td>
<td>3 22%</td>
<td>7%</td>
<td>1 11%</td>
<td>7%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don't Know</td>
<td>2 25%</td>
<td>1 11%</td>
<td>15%</td>
<td>33%</td>
<td>1 11%</td>
<td>5 14%</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>8 101%</td>
<td>9 99%</td>
<td>27 95%</td>
<td>100%</td>
<td>8 101%</td>
<td>9 99%</td>
<td>37 101%</td>
<td>101%</td>
</tr>
</tbody>
</table>
### Table A5: De Facto Population by Type of Settlement 1971 & 1981
(Source: GOB, 1985)

<table>
<thead>
<tr>
<th>Type and size of settlements</th>
<th>1971 Census</th>
<th>1981 Census</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of settlements</td>
<td>No. of persons</td>
</tr>
<tr>
<td>Urban:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-mining towns</td>
<td>3</td>
<td>48,267</td>
</tr>
<tr>
<td>Mining towns</td>
<td>2</td>
<td>6,149</td>
</tr>
<tr>
<td>Sub-Total</td>
<td>5</td>
<td>54,416</td>
</tr>
<tr>
<td>Rural:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20,000+</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10,000-19,999</td>
<td>3</td>
<td>38,443</td>
</tr>
<tr>
<td>5,000-9,999</td>
<td>5</td>
<td>59,215</td>
</tr>
<tr>
<td>1,000-4,999</td>
<td>50</td>
<td>85,494</td>
</tr>
<tr>
<td>500-999</td>
<td>120</td>
<td>88,709</td>
</tr>
<tr>
<td>Under 500</td>
<td>45</td>
<td>14,641</td>
</tr>
<tr>
<td>Sub-Total</td>
<td>223</td>
<td>266,502</td>
</tr>
<tr>
<td>Other Settlements (Lands, cattleposts)</td>
<td>255,176</td>
<td>44.1</td>
</tr>
<tr>
<td>Total Country</td>
<td>574,094</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Figure A1: GDP by Industrial Origin 1966 & 1983
(Source: GOB, 1985)

Figure A2: Composition of Real Output 1977/78 & 1982/83
(Source: GOB, 1985)
Figure A3: Exports & Imports (Pula millions)
(Source: GOB, 1985)
Figure A4: Value of Main Exports 1978–1983 (Units of Account millions)
(Source: GOB, 1985)
Figure A5: Government Revenue & Expenditure 1966/67 & 1982/83
(Source: GOB, 1985)
Figure A6: Formal Sector Employment 1971-83
(Source: GOB, 1985)