

BAYELSA STATE GOVERNMENT



WATER SUPPLY AND SANITATION POLICY

Draft Version

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Executive Governor of Bayelsa State

BAYELSA
STATE GOVERNMENT



...the Glory of all Lands



Foreword by His Excellency the Honourable Henry Seriake Dickson

Executive Summary

The **Mission** of the Bayelsa State Water Policy is:

To develop and manage environmentally friendly and sustainable water systems for the populace as well as for, agriculture and fisheries, and for industries and commerce in the State.

The key **Goal** of the Bayelsa State Water Policy is:

To ensure individual, community, commercial and industrial access to water of suitable quality and appropriate quantities to meet all sustainable health, environmental, conservation, agricultural and recreational needs.

Objectives

The Objectives of the Bayelsa State Water Policy are:

- To continually reduce the incidence of water related diseases
- To continually increase the percentage of the population with access to water supply services
 - For the urban population services are to be provided by the Bayelsa State (Urban) Water Board
 - In Small Towns the services are to be provided by the local Water Consumer Associations (WCAs) supported by the new Bayelsa State Small Towns Water Supply Agency
 - In Rural areas services are to be provided by local Water and Sanitation Hygiene Committees (WASHCOMs) supported by the Bayelsa Rural Water Supply and Sanitation Agency
 - Local Government Authority Water Sanitation and Hygiene (WASH) Departments will support development of water services in their areas in cooperation with the WCAs, the WASHCOMs and the two State Agencies
- To continually improve the quality of water supply services
 - The quality of water supplied shall meet the Nigerian Drinking Water Quality Standards and shall be monitored by the service providers and by the Ministry of Health
 - Service providers shall ensure continuity of supply
 - Service providers shall ensure adequate water pressure
 - Service shall endeavour to resolve consumer complaints fully and promptly
- To continually increase the percentage of the population with access to adequate sanitation facilities
- To continually improve the standard of sanitation services

- To ensure the sustainability (environmental, technical and financial) of water supply and sanitation services and prevent the abandonment or dereliction of schemes unless replaced by something better
- To ensure that the services are provided efficiently and at least cost to the State and the population
- To ensure that water services are affordable
- To manage and safeguard the water resources of the State of Bayelsa in order to:
 - Ensure sustainability of resource use by preventing over-exploitation
 - Maximise the social and economic benefit from sustainable exploitation of our resources

Principles

In implementing the Water Policy of Bayelsa State, we will adhere to the following principles:

- Water Management
 - All citizens have the **Right to Water**
 - **Integrated Water Resource Management (IWRM)** shall be applied in order to ensure:
 - Sustainability of water resource allocation
 - Environmental protection
 - All uses respected and facilitated, with potable water prioritised
- The Governance of water shall be **fair, equitable and efficient**
 - We will separate the three key functions:
 - Service Provision
 - Policy
 - Regulation
 - We will employ the **lowest appropriate level of decision-making** and management
 - **Community involvement** shall be ensured in decision-making and management of schemes
 - **Sustainability of service provisions** shall be required of all service providers
 - **Co-operation between government bodies** will be coordinated and ensured
- The policy approach to Financial Management and Commercialisation embodies:
 - The User / **Polluter Pays Principle** shall be introduced
 - Cost recovery through tariffs shall be gradually increased over time
 - Water services shall remain **Affordable to all**:
 - Tariffs charged for water services will be regulated in order to avoid them becoming unaffordable for “the average household”
 - Pro-poor policies shall be employed to support low income groups for whom the tariffs are not affordable
 - **Government shall be the coordinator of investment** and a key contributor of capital finance
 - Contributions shall be sought from external donors in support of investment
 - Cost sharing between National, State and Local level shall be applied

- Financial Efficiency
 - Service providers shall be encouraged to improve the efficiency of service provision so as to provide “value for money” for consumers
- Private Sector Participation
 - Public Private Partnership and other forms of Private Sector Participation shall be encouraged and facilitated where such activities can assist in achieving the Goals, Objectives and Principles of this Policy.

Instruments for Achieving the Objectives

The Policy will be implemented using the full range of available instruments including:

- Institutional Reform
- Legislation, Inspection and Enforcement
- Planning, Monitoring and Reporting
- Operational and Financial Management
- Education, Information and Awareness Raising
- Promoting Appropriate Technologies

Institutional Reform

We will reform the institutions within the sector in order to increase the efficiency and effectiveness of the Ministry of Water Resources and all other water sector agencies. In so doing we will ensure:

- Clear definitions of all necessary responsibilities
- Clear separation of functions to minimise potential for conflict of interests and corruption
- Efficient design of processes and systems: results oriented
- Effective inter-institutional communication
- Co-operation between institutions through the establishment of the Water Sector Coordination Committee
- Clear, transparent and efficient procedures
- Capacity building to enhance the competence of all actors and stakeholders, including:
 - Training for service providers and supporting Agencies in:
 - Technologies for water supply and sanitation
 - Organisational and financial management of services
 - Project management
 - Information Technology tools
 - Procedures and practices for system maintenance
 - Improved Information Technology utilisation
 - Provision of required equipment to support sustainable service delivery
- The Small Town and Rural schemes are “Demand Driven” and subject to Community Management

Legislation, Inspection and Enforcement

We will develop legislation and implementation provisions to:

- Ensure a clear, comprehensive and enforceable legal framework
- Empower the institutions responsible including Communities as represented by WCAs, WASHCOMs
- Distribute responsibilities between institutions in order to prevent conflicts of interest and avoid overlaps
- Restrict the access to key water resources through a system of authorisation
- Prioritise water supply over other uses (both consumptive and non-consumptive)
- Set standards and requirements for service providers
- Establish offences, sanctions and penalties whereby the legal framework is to be enforced

Planning, Monitoring, Reporting

We will establish a system for the planning of water sector development in the State. The planning system will include provisions for monitoring and reporting and particular will entail:

- Water Sector Information management:
 - Baseline data gathering and mapping¹ to allow for effective planning and forecast of use of the water resources by all MDAs
 - Local data collection and monitoring by Local Government WASH Departments
 - River Basin District Authority
 - Regular data gathering, management and dissemination
- The development of a State Master Plan for Water Services including:
 - Inputs
 - River Basin Development Authority Plans
 - State level initiatives
 - WASH Investment Plan for all LGAs
 - Process
 - Collation – all information
 - Conflicts and synergies – efficiency
 - Prioritisation
 - Action Plan
 - Budget
 - Budget request
 - Budget approval
 - Revised plan due to financial constraints
- Monitoring and Evaluation, Resolution and Learning (MERL)
 - Monitoring implementation
 - Evaluation of results
 - Resolution of problems
 - Learning from monitoring and evaluation to improve future implementation

Operational and Financial Management

For Urban Water Services the approach to operational and financial management will entail:

¹ Mapping: <http://bayelsagis.gov.ng>

- Commercialisation of Bayelsa State Water Board as the main urban water services provider:
 - Commercial approach
 - Strong customer focus
 - Widespread metering
 - Regulated Tariffs
 - Cost Recovery for core operation and regular maintenance
- State Support for Rehabilitation and Expansion

For **Water Services in Small Towns** the approach to operational and financial management will entail:

- Water Consumer Associations
 - Established locally
 - Semi-Commercial basis
- Supported by:
 - Small Town Water Supply and Sanitation Agency
 - Local Government Authority
- Cost sharing agreements will be used to ensure financial sustainability

For **Rural Water Services** the approach to operational and financial management will entail:

- Establishment of Water Sanitation and Hygiene Committees (WASHCOMs) in villages:
 - Basic cost recovery approach – regular operational costs
 - Localised system – driven by and managed by the local Community
 - “Caretakers” appointed by the WASHOM – actual operations: focal point
- Supported by:
 - Rural Water Supply and Sanitation Agency
 - Local Government Authority

The **Key Mechanisms** that will be used to support the development of water services in the State will include:

- Government budget
 - Government shall have the primary responsibility of financing long term Water Supply and Sanitation capital projects.
 - The government shall continue to provide funds for capital expansion in urban, small towns and rural areas, and will seek and coordinate support from external donors
- Small grant facilities will be established to support Small Town and Rural communities in operation and maintenance of WSS
- The State Government shall ensure Coordination, Liaison and Co-operation, including cost sharing, in order to maximise the benefits of all investments

Education, information, awareness

As part of the Policy we will strongly promote awareness of water, sanitation and hygiene in the State, and thereby increase the efficiency with which water is used, and improve sanitation and hygiene practices. We will undertake:

- Public awareness campaigns for the conservation of water resources

- Adopt the Community-Led Total Sanitation (CLTS) approach
- Campaigns to promote improved hygiene and sanitation practices
- Utilise a variety of techniques including:
 - Participatory and social marketing
 - Child-to-child techniques
 - Demonstration projects
 - Dissemination of experiences – lessons learnt
- Education, Information and Awareness raising will be coordinated with cooperating bodies including:
 - Non-Governmental and Civil Society Organisations
 - Other MDAs: Education, Rural Infrastructure, Local Government, Environment, Women’s Affairs, Health

Promoting and Developing Appropriate Technologies

The Government recognises that a variety of technologies are needed, depending on the circumstances of the local community. The Government will support research and development of appropriate technologies and will promote their adoption including rainwater harvesting strategies, reuse and recycling of waste water, water efficiency measures, low cost techniques, and will provide guidance on the appropriate water treatment processes as needed in each location in the State.

Implementing the Policy

The policy implementation will be carried out through the formulation of local planning strategies, organizational restructuring plans and the consideration of proposals for urban, small town and rural development together with the collaboration and advice of other relevant agencies.

Short Term Activities in the next 5 years will include

- **Short Term Activity 1 – Monitoring and Evaluation**
 - The development and implementation of National monitoring and evaluation framework in the water sector.
- **Short Term Activity 2 – Water Management Strategy and Plans**
 - The development and implementation of the water sector management strategy and plans.
- **Short Term Activity 3 – Water Resources Mapping**
 - Water Resources within the State shall be mapped to allow for effective planning and forecast of use of the water resources.
- **Short Term Activity 4 – Restructuring the Bayelsa State Water Board**
 - Bayelsa State Water Board (BSWB) will be restructured.
 - The Board shall be allowed to concentrate on the urban areas.
 - The Board will be required to operate on the commercial principles of efficient and effective service, cost recovery and customer orientation.

- **Short Term Activity 5 – Establish Small Towns Agency**
 - Bayelsa State Small Towns Water Supply Agency (BSSTOWA) to be established
 - The BSSTOWA shall be set up to allow for the provision of water supply to the small towns and the participation of the stakeholders.
- **Short Term Activity 6 – Establish Independent Regulatory Commission**
 - An independent commission for the regulation of service providers to be set up to drive the improvement within the Water Sector by implementing a programme of policy, regulatory and institutional reform. This will provide protection to consumers, operators and prospective investors by putting in place an open and transparent process. In particular, the commission will be concerned with ascertaining adequacy of the standards of the water services to be provided and the monitoring of compliance. It will carry out Economic and Technical Regulation of water supply services and enforce compliance with its regulations and standards.
- **Short Term Activity 7 – Redesign Supply Network**
 - Redesign of pipe layout to allow for water to be supplied while areas undergo construction or rehabilitation. Although this is a continuous activity, this will allow for the isolation of such areas while continuing service to other areas.
 - Any disruption to the pipe network of the Water Board usually results in the closure of pumping stations leading to conflict with Construction Firms and Ministry of Works and complaints from consumers.
- **Short Term Activity 8 – Borehole Licensing**
 - Survey and licensing of boreholes for public use to be carried out. This will allow for a report on the location of the boreholes and water quality assessment
 - This will monitor borehole license compliance
 - It will also form a planning tool for revenue generation.
- **Short Term Activity 9 – Water Tariff Study**
 - Bayelsa State Water Board (BSWB) to commission a water tariff study to determine its potential consumers' "ability and willingness to pay" for its water supply service and subsequently to design an appropriate tariff targeted towards gradual reduction in subsidies over a few years. Revenue generation exercise is to commence once the Bayelsa State Water Board (BSWB) has been re-structured.
 - The water supply service delivery as currently undertaken in the State is far from being sustainable. Revenue generation from urban water supply (which shall ordinarily provide necessary funds to operate and maintain the system) is almost non-existent. Revenue has to be derived from licensed borehole operators.
- **Short Term Activity 10 – Water Sector Coordination**
 - Institutionalize the meeting of Water Sector Coordination Committee (WSCC).

- The contributions of the External Support Agencies, Oil Companies, NGOs and other stakeholders active in the sector need to be structured to work in a coordinated manner.
- **Short Term Activity 11 – Baseline Data Gathering**
 - Baseline data gathering for all LGAs to determine service delivery.
- **Short Term Activity 12 – Sector Wide Development Plan**
 - Sector wide development plan and design of water supply in all the LGAs to be carried out.
- **Short Term Activity 13 – Local Government Area Investment Planning**
 - Develop and implement WASH investment plan for all LGAs.
- **Short Term Activity 14 – Annual Work Plans**
 - Bayelsa State Ministry of Water Resources to develop annual State work plan for the water sector.

Contents

Abbreviations/Acronyms	17
1 OVERVIEW OF BAYELSA STATE	18
1.1 Geography.....	18
1.2 Location:.....	18
1.3 Climate	20
1.4 Vegetation.....	20
1.5 Drainage.....	20
1.6 Population.....	20
1.7 Economy.....	21
1.8 Ecological Problems	21
1.9 Geology	22
1.10 Water Resources.....	22
1.11 Political Structure:.....	22
2 EXISTING INSTITUTIONAL FRAMEWORK.....	23
2.1 Ministry of Water Resources (MWR):.....	23
2.2 Bayelsa State Water Board	23
2.3 Bayelsa State Rural Water Supply & Sanitation Agency (RUWASSA)	24
2.4 Local Government Areas (LGAS)	25
2.5 Communities.....	25
2.6 Line Ministries.....	25
2.6.1 Bayelsa State Ministry of Health.....	25
2.6.2 Bayelsa State Ministry of Environment.....	25
2.6.3 Bayelsa State Ministry of Agriculture and Natural Resources	25
2.7 Federal Ministries and Agencies	26
2.7.1 Federal Ministry of Water Resources (FMWR)	26
2.7.2 Niger Delta Basin Development Authority (NDBDA)	26
2.7.3 Niger Delta Development Commission (NDDC).....	26
2.7.4 Millennium Development Goal (MDG) Office.....	27
2.8 Civil Society Organizations (CSO)	28
2.9 Private Sector Participation (PSP)	28
2.10 Donor Agencies and External Funding.....	28

2.11	Other providers.....	28
3	PRESENT SITUATION IN THE WATER SECTOR	29
3.1	Access to Water Supply Services.....	29
3.2	Water Supply Coverage.....	29
3.3	Water Supply Infrastructure	29
3.4	Water Supply Donor Activities in the State	29
3.5	Private Sector Participation	29
3.6	Water Quality.....	29
3.6.1	Quality of Rain Water.....	29
3.6.2	Surface Water	30
3.6.3	Groundwater	30
3.7	Water Pricing and Tariff Collection.....	30
3.8	Cost Recovery.....	30
3.9	Regulation	30
3.10	Inadequate Funding	30
3.11	Information Management in the Sector	30
3.12	Environmental challenges.....	31
4	The Water Policy.....	32
4.1	Purpose	32
4.2	Objectives of the Policy.....	32
4.3	The Policy Vision	32
4.4	Justification for the Policy.....	33
4.5	Policy Mission Statement.....	33
4.6	Policy Goal and Objectives.....	34
4.6.1	Policy Objective 1 – Water Governance	34
4.6.2	Policy Objective 2 – Awareness Raising	34
4.6.3	Policy Objective 3 – Enhance Community Management.....	34
4.6.4	Policy Objective 4 – Enhance Agency Capacity	34
4.6.5	Policy Objective 5 – Conserving Resources.....	34
4.6.6	Policy Objective 6 – Water Quality	35
4.6.7	Policy Objective 7 – Increased Community Participation	35
4.6.8	Policy Objective 8 – Pricing Mechanisms.....	35

4.6.9	Policy Objective 9 – Protection of Water	35
4.6.10	Policy Objective 10 – Enhancing Values.....	35
4.6.11	Policy Objective 11 – Improved Rural Water Supply	36
4.6.12	Policy Objective 12 – Improved Small Town Water Supply	36
4.6.13	Policy Objective 13 – Improved Urban Water Supply.....	36
4.6.14	Policy Objective 14 – Sustainable Investment	36
4.6.15	Policy Objective 15 – Improved Service Performance	37
4.6.16	Policy Objective 16 – Improved Hygiene and Sanitation Practices.....	37
4.6.17	Policy Objective 17 – Capacity Building	37
4.6.18	Policy Objective 18 – Increasing the Capacity of Civil Society	37
4.7	Policy Targets	38
4.8	Activities to Attain Policy Goals	38
4.9	Stakeholders Relevant to Policy Implementation.....	40
5	Fundamental Principles and Key Components	41
5.1	Sanitation and Hygiene Principles	41
5.1.1	Water Supply and Sanitation in Schools and Public Places:	41
5.1.2	Health and Hygiene Promotion (key steps):	41
5.2	Water Resources Development Principles:	42
5.2.1	Urban Water Supply Principles:	44
5.2.2	Small Towns and Rural Water Supply Principles.....	45
5.3	Key Components of the Water Policy	45
5.3.1	Community Management	46
5.3.2	Operation and Maintenance.....	46
5.3.3	Application of Appropriate Technology	46
6	Policy Statements.....	48
6.1	Right to Water.....	48
6.2	Access to Water Supply.....	48
6.3	Water Rights	48
6.4	Minimum levels/standards of supply:	48
6.5	Sustainability, Pricing and Cost Recovery	48
6.6	Tariffs and Subsidies	48
6.7	Metering	49

6.8	Demand Management	49
6.9	Financing	49
6.10	Community Involvement	49
6.11	Serving the poor.....	49
6.12	Involvement of the Private Sector	49
6.13	Regulatory Framework.....	49
6.14	Autonomy of service providers.....	49
6.15	The Role of Women	50
6.16	Human Resource Development/Capacity Building.....	50
6.17	Monitoring and Evaluation	50
6.18	Data gathering and information management.....	50
6.19	Sanitation and hygiene	50
6.20	Environmental protection.....	50
7	Reformed Roles and Responsibilities of the Institutions.....	51
7.1	Ministry of Water Resources (MWR).....	51
7.2	Bayelsa State Water Board	52
7.3	Bayelsa State Small Towns Water Supply Agency	52
7.4	Rural Water Supply and Sanitation Agency	52
7.5	Local Government Water, Sanitation and Hygiene Departments	54
7.6	Communities and Small Towns.....	55
7.7	Water Consumer Associations (WCAs).....	56
7.8	Water and Sanitation Committees (WASHCOMS).....	56
7.9	The Private Sector	57
7.10	External Support Agencies	58
7.11	Civil Society Organizations	58
7.12	Bayelsa State Water Regulatory Commission.....	58
8	Water Resources Development and Management	61
8.1	Project Planning	61
8.2	Water and Environment	61
8.3	Flood Management and Drainage	61
8.4	Measures for Flood Management	62
8.5	Drainage.....	62

8.6	Resettlement and Rehabilitation	63
8.7	Industry and Thermal Power	64
8.8	Navigation	64
8.9	Water Service Charges:.....	64
8.10	Maintenance and Modernization	64
8.11	Safety of structures	64
8.12	Ground water development	64
8.13	Water Allocation Priorities.....	64
8.14	Drinking water.....	65
8.15	Irrigation.....	65
8.16	Rain water	65
8.17	Water rates	65
8.18	Water Quality.....	66
8.19	Conservation of water	66
8.20	Flood Control and Management.....	66
8.21	Land erosion by sea or river	66
8.22	Science and Technology.....	66
8.23	Research and Training.....	67
9	Action Plan	69
9.1	Overall Implementation Requirements	69
9.2	Short Term Activities.....	70
9.3	Detailed Planning of Activities	72

Abbreviations/Acronyms

Abbreviation	Meaning
CLTS	Community Led Total Sanitation
CSO	Civil Society Organization
CSS	Country Support Strategy
DFID	Department of International Development (UK.Gov. Department)
ECD	European Commission Delegation
EDF	European Development Fund
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
EU	European Union
FGN	Federal Government of Nigeria
Fig.	Figure
FMAWR	Federal Ministry of Agriculture and Water Resources
FPIU	Federal Programme Implementation Unit
GIS	Geographical Information System
GPS	Global Positioning System
HC	House Connections
IMS	Information Management System
IWRM	Integrated Water Resources Management
BARDA	Bayelsa Agriculture and Rural Development Agency
BSWB	Bayelsa State Water Board (Urban Water Supply)
LEEDS	Local Economic Empowerment and Development Strategy
LGA	Local Government Area
MDGs	Millennium Development Goals
MoU	Memorandum of Understanding
MWR	Ministry of Water Resources
M&E	Monitoring & Evaluation
MTSS	Medium Term Sector Strategies
NDHS	Nigerian Demographic and Health Survey 2008
NEEDS	National Economic Empowerment and Development Strategy
NGO	Non-Governmental Organization
NPC	National Planning Commission
O&M	Operation and Maintenance
PPP	Public Private Partnership
RBDA	River Basin Development Authority
RUWASSA	Rural Water Supply and Sanitation Agency
SEEDS	States Economic Empowerment and Development Strategy
SMWR	State Ministry of Water Resources
STOWA	Small Town Water Supply & Sanitation Agency
SWB	State Water Board (Urban Water Supply)
UfW	Unaccounted-for-Water
UNICEF	United Nations Children's Fund
VIP	Ventilated Improved Pit latrine
WASH	Water, Sanitation and Hygiene
WCA	Water Consumer Association
WHO	World Health Organization
WS&Q	Water Supply & Quality
WS&S	Water Supply & Sanitation
WSSSRP	Water Supply and Sanitation Sector Reform Programme
WTP	Water Treatment Plant

1 OVERVIEW OF BAYELSA STATE

Bayelsa is one of the six states that make up Nigeria's South-South geopolitical zone. It has interstate boundaries with Rivers State to the East, Delta State to the West. The Gulf of Guinea lies to its south. Its capital is Yenagoa.

1.1 Geography

Bayelsa has a riverine and estuarine setting. A lot of her communities are almost (and in some cases) completely surrounded by water, hence making these communities inaccessible by road. The main language spoken is Izon with different dialects such as Nembe, Epie-Atissa, Ogbia etc. Like the rest of Nigeria, English is the official language. The state was created on the 1st of October, 1996 from old Rivers State and is thus one of the newest states of the Nigerian federation. Some cities besides Yenagoa include Amassoma (the home of the Niger Delta University), Twon-Brass, Kaiama, Nembe, Odi, Ogbia town, Otuoke, Okpoama Brass, Oporoma, Otuan, Sagbama, Olugbobiri and Peremabiri. The state occupies an area of about 21 thousand square kilometres.

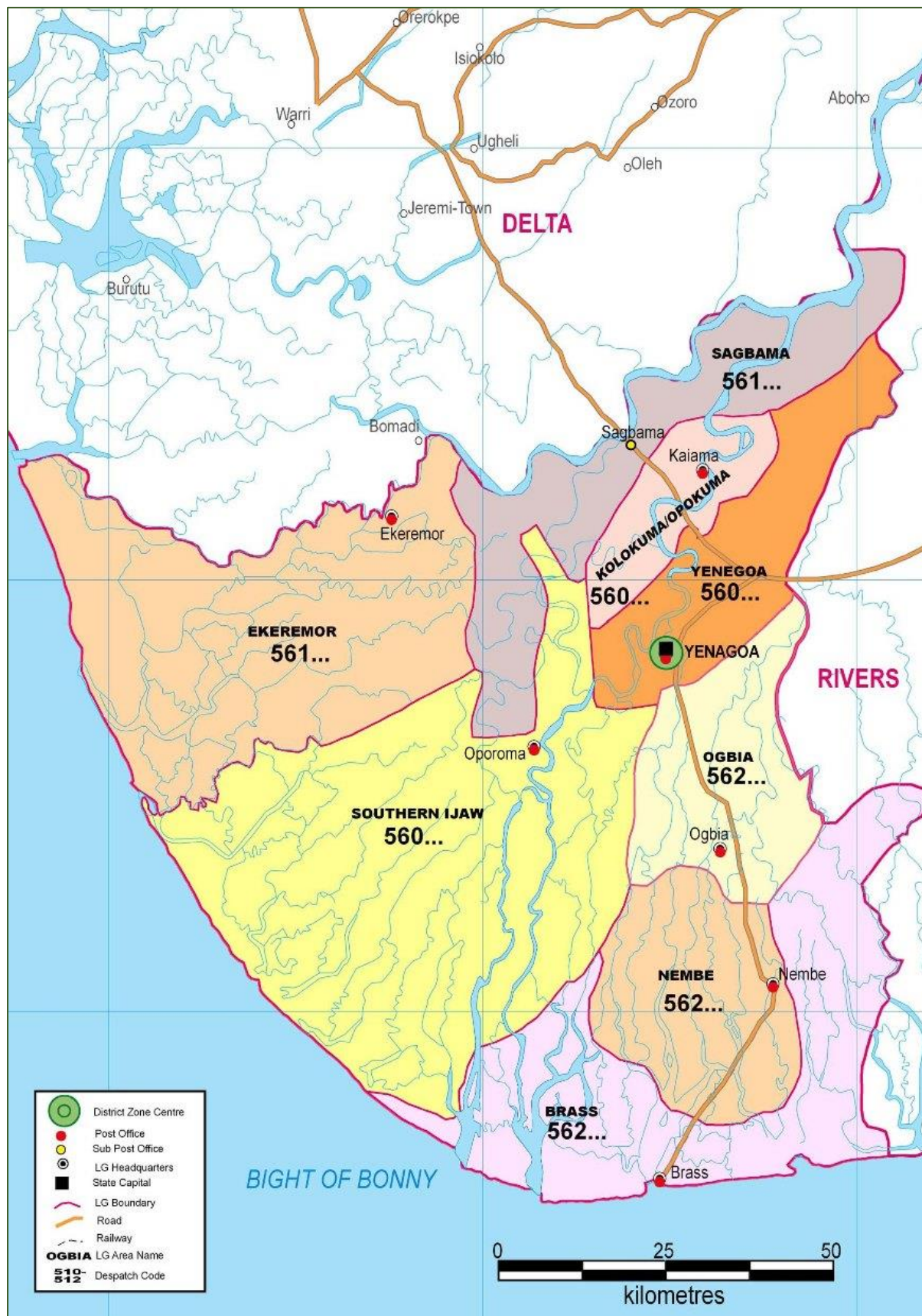
1.2 Location:

The state is geographically located within latitude 4°15' North and latitude 5°23' south. It is also within longitudes 5°22' West and 6°45' East. The state is bounded by Delta State on the West, Rivers State on the East and the Atlantic Ocean on the southern parts.

FIGURE 1 LOCATION OF BAYELSA STATE

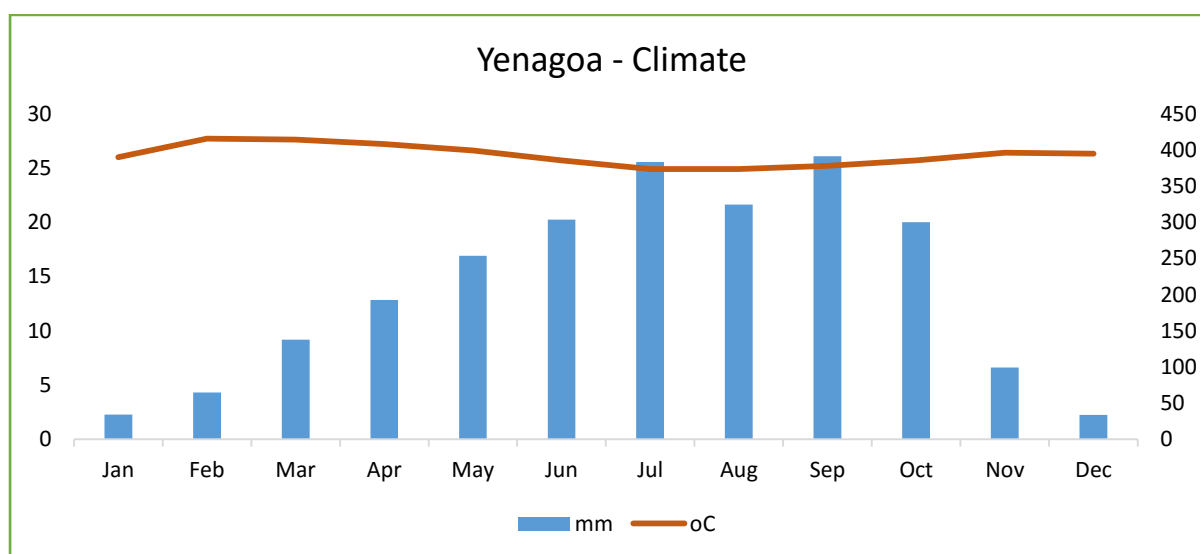


FIGURE 2 BAYELSA STATE MAP



1.3 Climate

The climate is relatively homogeneous. Rainfall in the State varies in quantity from one area to another. The State experiences equatorial type of climate in the southernmost part and tropical rain towards the northern parts. Rain occurs generally every month of the year with heavy downpour. The State experiences high rainfall but decreases from coast towards the inland. The Akassa area of the state has the highest rainfall record in Nigeria. The climate is tropical i.e. wet and the dry season. The amount of rainfall is adequate for all-year-round crop production. The mean monthly temperature is in the range of 25°C to 31°C. The mean annual temperature is uniform for the entire Bayelsa State. The hottest months are December to April. The difference between the wet season and dry season on temperatures is about 2°C at the most. Relative humidity is high in the state throughout the year and decreases slightly in the dry season.



1.4 Vegetation

Bayelsa State is composed of two ecological zones. These include: mangrove forests and freshwater swamp which constitutes the home of several threatened and even endangered plant and animal species.

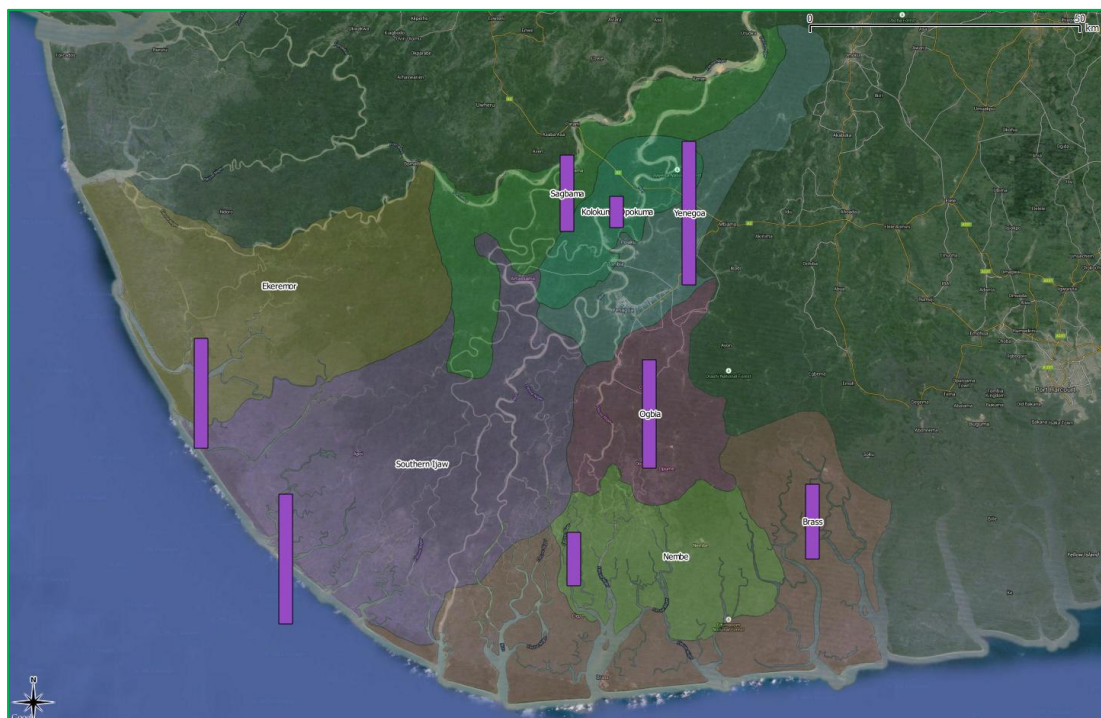
1.5 Drainage

The drainage densities of rivers within the State have a typical value of 1.5 km and sinuosity ratios are in excess of 1.9, indicating that the meandering channels are tortuous. These systems have a general downstream increase in width and velocity, especially in the freshwater zones.

1.6 Population

The State has a population of 1,704,515 (2006 census figures) with a population density of 158 people per square kilometre. It accounts for 1.2% of Nigeria's total population. Most of the population is concentrated within some towns and the State capital. This is attributable to the topography of the State which has a limited land area for agricultural practices and experiences periodic floods.

FIGURE 3 BAYELSA STATE POPULATION IN LOCAL GOVERNMENT AREAS



1.7 Economy

Bayelsa State has one of the largest crude oil and natural gas deposits in Nigeria. As a result, petroleum production is extensive in the state. However, the majority of Bayelsans live in poverty. They are mainly rural dwellers due to its peculiar terrain and lack of adequate transportation, health, education or other infrastructure as a result of decades of neglect by the central and state governments, as well as petroleum prospecting companies operating in the area. This has been a large problem in the state since its creation and successive state governments have not been able to address the issue. The State, as a result, has an almost non-existent commerce. Successive state governments have, however, embarked on various industrial projects (even venturing into the oil and gas sector), and poverty-alleviation programs to reverse this situation. The local population engages in farming, fishing on a subsistence level. The Bayelsa State government is otherwise the main employer of labour.

1.8 Ecological Problems

Bayelsa State is one of the states within the Niger Delta region of Nigeria. The region is a low-lying plain riddled with an intricate system of water channels through which the Niger finds its way into the sea. The state has very difficult terrain that constrains settlement development or expansion, accessibility to settlement sites and exploitation of natural resources.

Human activities are largely determined by natural conditions and other ecological opportunities. The difficult conditions limit the occupation of the people to fishing and farming.

The terrain of the state makes the development of land-based transportation difficult requiring the application of modern and costly technologies. Intra-state movement is mostly restricted to water transport which is equally confronted with many problems. Exploitation of forest resources is equally constrained by the terrain of the region. The major ecological problems of the state are thus flooding, coastal erosion and pollution.

1.9 Geology

Bayelsa State lies on the recent coastal plain of the eastern Niger Delta. Its surface geology consists of alluvial deposits. This includes the recent sediments transported by River Niger distributaries and other rivers. These materials deposited as regolith overburden of 30m thickness include clay, peat, silt, sand and gravel. The depositional sequence exhibits massive continental sand overlying an intercalation of sand and clay of marine origin. Sand forms the largest group of deposits types in the State, while mud constitutes all the polluted brackish waters of the riverine areas. However, peat constitutes the various vegetal and animal remains that lie in bogs and shallow pits.

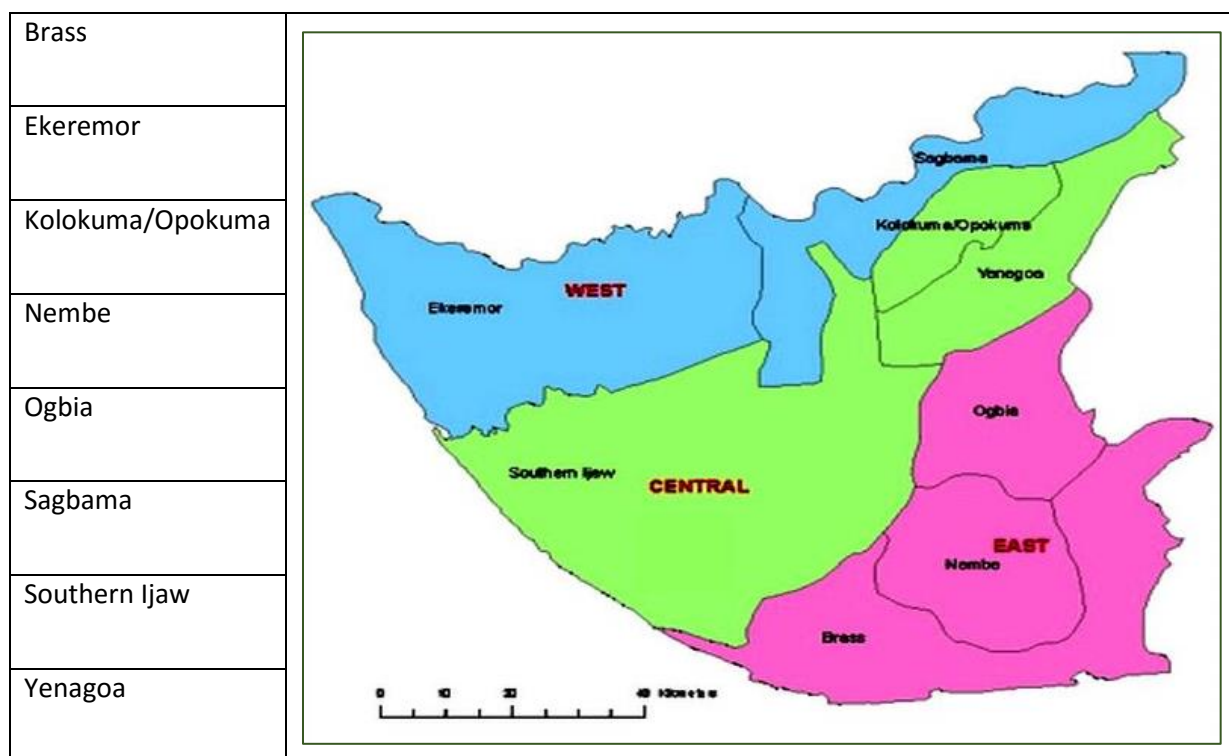
1.10 Water Resources

The State is drained by two main river systems, i.e. freshwater systems whose waters originate from river Niger and tidal systems confined largely to the lower half of the State. River bank levees are prominent and valley side slopes are very gentle and experience a great deal of erosion and accretion. All the rivers enter into the sea through wide estuaries. The land surface of Bayelsa State can be grouped into three main divisions: the freshwater, the mangrove swamps and the Coastal Sand ridges zone. This land surface is generally less than 20m above sea level and is susceptible to perennial inundation by river floods. Most water channels in the freshwater zone are bordered by natural levees. Almost all riverine LGAs are under water at one time of the year or another.

Some areas of the State are tidally flooded, while others are seasonally, thus limiting agricultural practices and nucleated/urban settlement development that could facilitate the provision of social welfare amenities by the State Government.

1.11 Political Structure:

Bayelsa is divided into eight Local Government Areas, as shown below.



2 EXISTING INSTITUTIONAL FRAMEWORK

Various Ministries and Agencies have roles and responsibilities in the Water Sector in Bayelsa State and overlaps exist in some cases. This section outlines direct or indirect responsibilities for the Water Sector activities by Government Ministries and Agencies.

2.1 Ministry of Water Resources (MWR):

The Ministry of Water Resources was created from Ministry of Public Utilities and Rural

Development in September, 2007 with responsibility over all issues relating to water resources in Bayelsa State including water resources management and development, along with the implementation of government policies in the sector.

The Mission Statement of the Ministry is:

“To develop and manage sustainable water resources in line with the Millennium Development Goals for the people, agriculture and industries in the State”.

The Ministry’s mandate includes:

- Formulating water resources policies.
- Implementing and monitoring government policies on water resources.
- Managing Water Resources Information System (WRIS) for the State including sourcing, analysing, storing and dissemination of information.
- Setting standards, regulating, supervising and controlling the use of all Water Resources.
- Overseeing parastatals and other agencies in the Water sector.
- Liaising with the Federal Ministry of Water Resources (FMWR) and other Federal Agencies in the implementation of national programmes and Federal Government support in the sector.
- Coordinating the activities of External Support Agencies, NGOs and multi-national organizations relating to Water.
- Supervising and monitoring self-help Water projects in the rural areas.
- Establishing and managing water undertakings in the State.

2.2 Bayelsa State Water Board

The Bayelsa State Water Board (BSWB) was established 27th May 1999.

The functions of the Board include:

- a) To control and manage all waterworks vested in the Water Board under its law.
- b) To establish, control, manage, extend and develop new water works as the Water Board may consider necessary for the purpose of providing wholesome potable water for the consumption of the public and for domestic, trade, commercial, industrial, scientific and other uses.

- c) To ensure that adequate wholesome water is supplied to its consumers regularly and at such charges as the Board may, from time to time determine in conjunction with the regulator
- d) To conduct or organize the conduct of research in respect of water supply, water development and matters connected therewith and submit results of such research to the Commissioner for the formulation of policy.
- e) To develop, maintain and beneficially explore water resources both natural and artificial and;
- f) To determine the rates charged in paragraph (c) of this sub-section, and any other service rendered shall be such that revenue for any year would be sufficient or as nearly as may be, to pay all working expenses, repay interest due on loans borrowed by the Water Board for any extension works.

2.3 Bayelsa State Rural Water Supply & Sanitation Agency (RUWASSA)

Bayelsa State RUWASSA started administratively in the last quarter of 2001 and since then had been benefiting sparingly from the FGN/UNICEF country programme. The State is yet to meet up with the minimal compliance criteria (MCC) for participation in and benefiting from the FGN/UNICEF country programme as stipulated in the 2004 National RWSS Strategic Framework.

Bayelsa State Rural Water Supply and Sanitation Agency (RUWASSA) is responsible for water supply and sanitation issues in the rural areas of Bayelsa State. However, the law for the establishment of RUWASSA is yet to be passed by the State House of Assembly.

RUWASSA is responsible for the provision of potable water to rural communities (defined as communities with a population less than 5000) for domestic use; mainly drinking, cooking and hygiene. This framework recommends improved potable water systems to replace traditional sources of water, such as rivers and open wells, which are often contaminated and distant from the household. Improved rural water solutions include varied technology ranging from protected wells equipped with manually operated hand pumps to more complex gravity-flow or pump-piped water systems connected to houses or public standpipes. While the most common source is a borehole equipped with motorized pumps. The specific technical solution is location dependent and will rely on a range of characteristics such as community demand, affordability and willingness to pay, community size and household density, water resources and electricity availability, and topographical issues.

Many entities are involved in providing Water and Sanitation services to rural areas in the State. However, in most cases, services have been introduced with little or no community involvement. The institutions listed below employ their own implementation strategies and involve the individual communities and Local Governments to varying degrees.

- Federal Ministry of Water Resources
- State Rural Water Supply and Sanitation Agency (RUWASSA)
- Local Government Authorities
- State Millennium Development Goals (MDG's) offices,
- Multinational companies such as Oil and Gas companies

- External Support Agencies
- The Presidency – Niger Delta Development Commission (NDDC).

2.4 Local Government Areas (LGAS)

The Local Government Authorities are responsible for the provision of potable water and sanitation to rural communities in their areas of jurisdiction.

2.5 Communities

The local communities are very important for the coordinated development and utilization of water resources throughout Bayelsa State. Many water development projects in Bayelsa State have failed due to the lack of understanding of local indigenous production systems and failure to take into account social and cultural relationships.

In recent times communities are participating in planning, financing, implementation and operation of water supply and sanitation systems. Sense of ownership and willingness of communities to share in the cost and operations and maintenance is greatly enhancing and increasing the sustainability of the system. The participation of local communities and the associated consultation process shall be the key features in water resources management. Therefore, emphasis will be given to the involvement of local people at the feasibility stage of water resources planning process.

2.6 Line Ministries

2.6.1 Bayelsa State Ministry of Health

The Nigerian Drinking Water Quality Standard was developed by a National Technical Committee and issued by Standard Organization of Nigeria in 2008. This standard requires that Water Quality Surveillance must be done by the Ministry of Health at both the Federal and State level. However, monitoring of water quality remains the responsibility of the service providers and the regulators established by the States.

2.6.2 Bayelsa State Ministry of Environment

The Bayelsa State Ministry of Environment has the responsibility for:

- Formulating policies and strategies aimed at promoting environmental hygiene and sanitation.
- Facilitating the disposal of refuse and other waste products in the Yenagoa metropolis and its environs.
- Organizing and carrying out street cleaning, providing refuse collection points and ensuring that the refuse is cleared from the collection points.
- Cleaning drains, controlling and supervision of pit latrines, sewage disposal and other conservancy methods.
- Inspecting of houses, premises, restaurants, abattoirs, shops and factories to ensure that sanitary conditions are maintained.

2.6.3 Bayelsa State Ministry of Agriculture and Natural Resources

The Ministry was established in 1996. The main functions of the Ministry include:

- Provide a social service through agricultural development to the teeming population in the state through extension services and research.
- To improve the livelihood of Bayelsa State Farmers
- To promote both natural and human resources in the state.
- To ensure the attainment of self-sufficiency in the production of basic food commodities in the state.
- To generate production of raw materials to meet the growing needs of the expanding Agroindustry.
- To ensure production and processing of Agricultural commodities for export, using improved production and processing techniques.
- To enable employment opportunities for the economy by stemming rural-urban drift through improvement in infrastructural facilities in the rural areas.

2.7 Federal Ministries and Agencies

2.7.1 Federal Ministry of Water Resources (FMWR)

The Federal Ministry of Water Resources has the responsibility of

- Policy formulation.
- Data collection.
- Monitoring and co-ordination of water resources development (of which water supply is a component).
- Undertaking water supply projects directly or through its parastatal (the Niger Delta River Basin Development Authority -NDBDA) operating in the State,
- Counterpart funds towards the successful completion of the State's external support agency (ESA) assisted water supply project.

2.7.2 Niger Delta Basin Development Authority (NDBDA)

There is currently very little collaboration between the Niger Delta Basin Development Authority and the State Ministry of Water Resources.

The Niger Delta Basin Development Authority has responsibility for:

- The development, operation and management of reservoirs in the basin.
- The supply of bulk water for water supply within its area of jurisdiction.
- Implementation of water supply projects for the Federal Ministry of Water Resources.

2.7.3 Niger Delta Development Commission (NDDC)

The Niger Delta Development Commission (NDDC) was officially inaugurated on

December 21, 2000 with a vision "to offer a lasting solution to the socio-economic difficulties of the Niger Delta Region" and a mission "to facilitate the rapid, even and sustainable development of the

Niger Delta into a region that is economically prosperous, socially stable, ecologically regenerative and politically peaceful". The NDDC Act provides for generous funding sources, including:

- Federal Government contribution, which shall be equivalent to 15% of the monthly statutory allocation due to member States of the Commission from the Federation Account.
- Oil and Gas processing companies' contribution of 3% of their total budget.
- 50% of the Ecological Fund Allocations due to the member States.
- Proceeds from NDDC Assets and miscellaneous sources, including grants-in-aid, gifts, loans and donations.
- Its work in water supply and sanitation is not well coordinated with the State government water supply programmes, projects and plans.

2.7.4 Millennium Development Goal (MDG) Office

The Bayelsa State MDG office was established along with other MDG offices in the country. MDG in Nigeria was institutionalized when the Federal Government of Nigeria struck a deal with the Paris Club in September 2005 which led to the debt forgiveness by the Club. The condition for forgiveness was that the \$1billion which was initially used to service the debt annually by Nigeria shall be channelled to the implementation of pro-poor programmes for the attainment of the Millennium Development Goals.

Federal Government designed the Conditional Grants Scheme (CGS) to provide a significant impetus in the implementation of programmes at the State and Local Government levels. Indeed, the Conditional Grants Scheme (CGS) is a mechanism to leverage funds through counterpart funding for implementation of specific projects and programmes towards achieving the Millennium Development Goals.

At the State level, the Focal Person who is an appointee of the State Governor is in charge of MDGs in the State and is the head of the Project Support Unit (PSU). The Office has the following functions.

- Serve as the Project Support Unit to the Committee and implementing MDAs.
- Coordinate the preparation of applications to access the CGS fund.
- Coordinate the implementation of CGS projects through approval, pre-implementation and implementation phases as directed by the State Implementation Committee.
- Maintain relations with relevant MDAs at the State and Federal levels that have stake in the CGS projects being implemented.
- Initiate processes for collecting and analysing locally-collected information that will support the planning and execution of CGS projects.
- Maintain relations with Local Governments MDG structures and communities to ensure sustainability of CGS projects.
- Coordinate relevant MDAs' strategic planning and implementation functions in respect of CGS.
- Co-ordinate CGS project monitoring and evaluation.

- Serve as communication lines between all three tiers of government in the implementation of CGS to Local Governments.

2.8 Civil Society Organizations (CSO)

Civil Society Organizations (CSO) are participating in a selective manner and are involved in innovative ideas, generating financial resources, introducing corporate management and improving service efficiency as well as accountability to users.

2.9 Private Sector Participation (PSP)

This sector if properly designed can work very well in leveraging the Water Sector in terms of delivering improvements and good levels of overall sector performance

2.10 Donor Agencies and External Funding

The need for external funding arises when no other approach - like payments by the beneficiaries, government contributions or public private partnerships - would be feasible. "However, it shall always be kept in mind that tapping external sources usually means financing for a limited period of time and according to the rules of an external organization. If the issue of long term financial viability has not been taken into consideration, many projects may collapse once the external finances are no longer available". Donor funds for water and sanitation projects can come from various sources. In a very schematic way, at the level of a given project, funds may come from four main sources.

- Users of the service;
- Taxpayers via the government budget;
- Private participation;
- External sources (such as international lending institutions, NGOs, INGOs, and philanthropic organizations) providing "free" money in the form of grants or subsidized loans.

2.11 Other providers

Public ownership and operation can also work reasonably well when strong incentive mechanisms are put in place. However, Lack of reliable data was one of the major difficulties encountered by most service providers.

3 PRESENT SITUATION IN THE WATER SECTOR

3.1 Access to Water Supply Services

This is seen as the closeness of an individual to a source of potable water supply. In the case of Bayelsa State, this is very low as there is absence of potable water supply facilities in majority of our communities. To compound the problem, a greater percentage of the few existing facilities are non-functional due to low funding.

3.2 Water Supply Coverage

Water supply coverage increased from 10% in 2006 to 16% in 2010. The target for 2015 was 54%. However, this cannot be realized due mainly to inadequate funding, and the uncoordinated manner the water supply services are provided by various bodies in the state.

3.3 Water Supply Infrastructure

This is another pathetic situation. So many bodies such as the state government through her agencies (Ministry of Water Resources, Water Board, RUWASSA, MDG Office, other Ministries), Federal Government through NDBDA, and NDDC, Oil Companies are involved in the provision of the water supply facilities in an uncoordinated manner, resulting to duplication of such facilities in one location. Unfortunately, again, many of the facilities ended at commissioning, and of no benefit to the communities.

3.4 Water Supply Donor Activities in the State

Donors can be described as extra governmental bodies that are either solely or in partnership with the state government involved in the provision of water supply facilities. They are UNICEP, EU, NGOs, Oil Companies, etc. Actively, only UNICEP and EU are truly seen to be in close relationship with the state government in the provision water supply facilities. There is no conscious effort made by the state authorities to bring in the other donor organizations into the desired collaboration.

3.5 Private Sector Participation

Private participation is the involvement of the organized private sector (cooperate bodies, civil society organizations, etc.), and individuals in the water supply industry in consultancy, construction, management, providers, and in any other PPP arrangement. At present, the private sector participation is very low except in the area of construction.

3.6 Water Quality

There are basically three sources of water in the state. They are (a) rain water (b) surface water, and (c) groundwater.

3.6.1 Quality of Rain Water

Due mainly to the flaring of gas at the oil flow stations, and fumes and gases from the illegal oil refineries in the Niger Delta, the acidity of the rain water is very high ie the pH is below 6.5. This

makes it not so potable enough for drinking. It requires treatment. It is also dangerous to our rain water fed agriculture.

3.6.2 Surface Water

We have fresh surface water in the northern part, while brackish to marine water in the coastal part of the state. The quality of the fresh surface water varies with the seasons. In the dry season, the sediment load is low (Turbidity is about 8 NTU in many areas). In the rainy season, the sediment load is very high (Turbidity in many areas is about 30 NTU). The number of contaminants at any point along a river is not precise. More worrisome is the ever presence of oil film, and sometimes thick flow of crude oil arising from spills on the surface water bodies. Therefore, the use of it as it is, is not recommended for drinking and some other uses. An elaborate treatment is required.

3.6.3 Groundwater

The quality of the groundwater in the northern part and the coastal areas has different characteristics. In the northern part, water from shallow boreholes may not contain iron/manganese, but is likely to have a dangerous contaminant load from biological origin. With pre-drilling geophysical investigations, one may encounter iron/manganese and other contaminants free groundwater at some locations at deeper depths.

In the coastal areas, it is a must that a thorough pre-drilling geophysical investigation shall be carried out in order to avoid encountering salt water.

3.7 Water Pricing and Tariff Collection

At present, there is neither Water Pricing nor Tariff Collection. But studies conducted showed that there was willingness to pay if introduced.

3.8 Cost Recovery

Funding for the operation and maintenance activities of Water Board are borne by the State Government for now in the absence of water pricing and tariff collection, and so cost recovery from tariff collection is zero.

3.9 Regulation

There is no regulation and defined water policy to control the activities of water supply services providers. This Water Policy being formulated is one of such measures to sanitize the sector.

3.10 Inadequate Funding

Annual budgetary provisions for the water sector had been very promising on paper, but release of funds for their implementation had always been inadequate. This does not only apply to funds for the provision of water supply infrastructure, but also for the operation and maintenance of the few existing facilities.

3.11 Information Management in the Sector

Data collection and management in the sector is poor. It is almost absent. The activities of the various providers are not coordinated. Authorities and agencies do not seem to know their roles.

The quantities and the quality of the different water resources, their suitability status for the various uses are all unknown.

3.12 Environmental challenges

Bayelsa State has the following environmental challenges.

- The state has a complex network of rivers and creeks, thereby making it almost impossible to construct regional water supply facilities, especially in the provision of reticulation for contiguous communities.
- The two types of surface water bodies (salt water in the coastal areas, and fresh water in the northern parts) have a very high sediment load, and the presence of unlimited number of different types of contaminants. The ever presence of oil film on the surface of the water bodies, and the occasional crude oil spills into them pose a challenge. Therefore, exploitation of the surface water bodies for potable water supply becomes very expensive.
- The rapid silting up of the creeks, rivers, lakes, and the weed cover are challenges to transportation and fishing. Siltation in the creeks, rivers, and lakes is a big cause of the flooding in the state.
- Though the exploitation of the groundwater with very high iron/manganese in the northern part of the state is not so expensive, it is not so in the coastal areas where there is salt water intrusion in the aquifers. Elaborate geophysical studies at any drilling site are required. Logistics for any drilling programme in the coastal areas is on the high side.
- Our agriculture is rain water fed, but the high acid content arising from the gas flaring at the flow stations, and the fumes from the illegal refineries is a challenge.

4 The Water Policy

4.1 Purpose

This Water Policy sets out the Government of Bayelsa State's vision for water resources management. It establishes the basic principles and objectives to guide future water resources development. It provides greater clarity to the sector entities and will reduce institutional fragmentation, attract external investment, support the emergence of effective government structures and support interventions in the sector generally.

4.2 Objectives of the Policy

The objectives of this policy are:

- i. To increase the level of water supply and sanitation services
- ii. To increase access to water and sanitation services
- iii. To reduce the incidence of water related diseases in order to improve the quality of life and reduce poverty especially among women and children
- iv. To provide a strategic framework based on which programmes will be designed to address the problems on a sustainable basis
- v. To ensure effective private sector and civil society participation in planning, implementation, monitoring and evaluation of water resources development, water supply and sanitation service delivery
- vi. To undertake institutional reforms within the sector, as part of the governance reform process, with a view to increasing the efficiency and effectiveness of the Ministry of Water Resources and other water sector agencies
- vii. To promote inclusive approaches which will ensure equity and gender considerations in water supply and sanitation service delivery
- viii. To improve behavioural change on sanitation and hygiene amongst the populace
- ix. To improve data generation, collection and processing
- x. To increase level of funding in water sector.
- xi. To develop all the water resources for the various uses such as agriculture, fishery, transportation

4.3 The Policy Vision

The vision of the Policy is:

Bayelsa State applies an Integrated Water Resources Management (IWRM) approach to the design of water resources development and management to provide sustainable, uninterrupted, adequate and affordable water supply to citizens who are aware of the various uses, and their sanitation and hygiene practices

4.4 Justification for the Policy

Water is an economic good but is a limited resource. The current state production levels of good quality water do not sufficiently cater for the envisaged increase in consumer demand which is expected to grow in line with the on-going increase in population of the State. At the same time, it is expected that there will be an increase in the development of commercial, recreational and industrial activities within the state.

Following the identification of critical management issues relating to the sustainable use and management of water resources in Bayelsa State, these issues are addressed in this Policy through a coordinated approach involving all stakeholders.

The critical problems addressed by this Policy are:

- Fragmented control, management and protection of water resources by various institutions
- Poor data collection required to implement an Integrated Water Resource Management approach
- Absence of water tariff and revenue collection
- Need for communication and awareness of the principle that the user or the polluter pays
- Public Health and Sanitation.
- Need for deeper Community understanding and appreciation of sustainable water management leading to greater and improved Community participation and involvement in water resource management particularly at the rural level
- Competing and conflicting demands for water resources by both consumptive and non-consumptive users
- Lack of a Regulatory Commission
- Planning for agricultural activities
- Exploration of tourism, recreation and navigation opportunities
- Lack of strong enforcement of environmental pollution and conservation regulations
- Need for comprehensive State legislation making process for cross sectorial coordination.

4.5 Policy Mission Statement

The mission of this Policy is:

To develop and manage environmentally friendly and sustainable water systems for the populace (in line with the Post 2015 Development Agenda) as well as for, agriculture and fisheries, and also for industries and commerce in the State.

4.6 Policy Goal and Objectives

The overall goal of this Policy is:

To ensure individual, community, commercial and industrial access to water of suitable quality and appropriate quantities to meet all sustainable health, environmental, conservation, agricultural and recreational needs.

This goal is to be realised by the implementation of Policy Objectives as described here

4.6.1 Policy Objective 1 – Water Governance

To improve water governance at the State, Local Government and Community levels.

- Engage the Community and all stakeholders by emphasizing demand driven bottom-up approach to water supply.
- Up to date and accurate information is the basis of developing a robust Water Policy, therefore reliable record gathering and management must be put in place to ensure availability of accurate records.

4.6.2 Policy Objective 2 – Awareness Raising

To increase awareness and understanding of water resources

- Develop strategies for implementing water resources management for all aspects of water including surface water, ground water and rainwater.

4.6.3 Policy Objective 3 – Enhance Community Management

To support, strengthen and enhance community management resulting in sustainability of water supply and sanitation facilities.

The measures of achieving this objective are:

- By protecting the right of access to basic water supply and basic sanitation.
- By progressively undertaking measures necessary to secure sufficient water supply for human health and well-being.

4.6.4 Policy Objective 4 – Enhance Agency Capacity

To enhance service reliability and technical competence of water and sanitation agencies and other service providers in the sector

The measures of achieving this objective are:

- By encouraging capacity building in the sector
- By the setting of service standards and penalties for non-compliance

4.6.5 Policy Objective 5 – Conserving Resources

To conserve water resources in partnership with all stakeholders

The measures of achieving this objective are:

- By promoting rainwater harvesting strategies
- By the advocacy of the reuse and recycling of waste water

- By public awareness campaigns for the conservation of water resources.

4.6.6 Policy Objective 6 – Water Quality

To maintain appropriate water quality

The measures of achieving this objective are:

- By ensuring that appropriate water treatment processes are utilized to meet the specific requirements of the available ground water in the different parts of the State.
- By ensuring that all treated water meet the Nigerian Standard for Drinking Water Quality (NSDWQ)
- To collaborate with the relevant agencies to monitor and minimize the acid content of the rain water

4.6.7 Policy Objective 7 – Increased Community Participation

To create greater community awareness of water resources issues and to increase community participation in water resources management.

The measures of achieving this objective are:

- Communities are to be encouraged to form Water Consumer Associations (WCAs) and Water, Sanitation and Hygiene Committees (WASHCOMs)

4.6.8 Policy Objective 8 – Pricing Mechanisms

To develop pricing mechanisms to control the allocation of water supply.

The measures of achieving this objective are:

- Community Appraisal for Social stratification
- Consumer’s prioritization
- Establishment of a Regulatory Authority

4.6.9 Policy Objective 9 – Protection of Water

To protect water resources from the adverse impacts of human activities.

The measures of achieving this objective are:

- Institutionalizing Community-Led Total Sanitation (CLTS) approach
- Agencies must put in place monitoring measures

4.6.10 Policy Objective 10 – Enhancing Values

To enhance water related environmental, recreational and cultural values.

The Measure of achieving this objective is:

- Development of tourism sites

4.6.11 Policy Objective 11 – Improved Rural Water Supply

Rural Water supply with the following characteristics

- **Service provision to communities below 5,000 people**
- **Minimum level of service being 20 litres per capita per day within 250 meters’ span**
- **Serving about 250 - 500 persons per water point.**

The Measures of achieving this objective are:

- Establishment of RUWASSA
- Establishment of WASH Departments at the LGAs

4.6.12 Policy Objective 12 – Improved Small Town Water Supply

Semi-Urban (Small Towns) Water supply with the following characteristics

- **Water supply service to settlements with population of between 5,000-20,000 with a fair measure of social infrastructure and some level of economic activity**
- **Minimum supply standard of 60 litres per capita per day with reticulation and some level of house connections.**

The measure of achieving this objective is:

- Establishment of Semi-Urban Water Supply Agency

4.6.13 Policy Objective 13 – Improved Urban Water Supply

Urban Water Supply with the following characteristics

- **Provision of 100 litres per capita consumption for urban areas with population greater than 20,000 inhabitants.**
- **Provision of full reticulation service and full consumer premises connection**
- **Achievement of full Operation and Maintenance [O and M] cost recovery in the short to medium term and capital cost recovery in the long term.**

The measure of achieving this objective is:

- Restructuring and Strengthening of Water Board

4.6.14 Policy Objective 14 – Sustainable Investment

To improve the efficiency of capital investment and ensure financial sustainability of service provision

The measure of achieving this objective is:

- To restructure and strengthen the Bayelsa State Water Board to have an effective billing system and engage in other commercial activities

4.6.15 Policy Objective 15 – Improved Service Performance

To restructure water and sanitation sector agencies and other service providers for improved performance.

The measures of achieving this objective are:

- Establishment of Water Regulatory Commission that is empowered to monitor compliance with water quality and other service standards, and impose appropriate sanctions for breach
- Establishment of Project Steering Committee
- Restructuring and strengthening of Ministry of Water Resources
- Restructuring and strengthening of Water Board
- Establishment of RUWASSA by an Act
- Establishment of Small Towns Water Supply Agency

4.6.16 Policy Objective 16 – Improved Hygiene and Sanitation Practices

To promote improved hygiene and sanitation practices

The measures of achieving this objective are:

- By developing and applying appropriate participatory and social marketing methods and techniques that will lead to a demand for household and communal sanitation facilities.
- By encouraging and working in partnership with NGOs to sensitize and empower rural Communities in the state.
- By developing and applying appropriate Community-Led Total Sanitation (CLTS) approach

4.6.17 Policy Objective 17 – Capacity Building

To increase the capacity of State, Local Government departments and sector agencies to assist communities to obtain the basic water supply and sanitation services that the communities themselves can maintain with stakeholders' support.

The measure of achieving this objective is:

- Training the management and staff of the MWR, Water Board, RUWASSA, and other agencies in water production, distribution, maintenance, commercial activities (metering consumers, computerized billing system) and general management. Support shall be sought from Federal, State and External Support/Donor Agencies.

4.6.18 Policy Objective 18 – Increasing the Capacity of Civil Society

To increase the capacity of NGOs and Civil Society Organizations to contribute to the delivery of water supply, sanitation and hygiene services.

The measure of achieving this objective is:

- To create small grant facilities for supporting communities in operation and maintenance of WSS.

4.7 Policy Targets

In line with the policy vision, goals and objectives, the following specific targets for water supply are set herein. These are:

- The initial target is to meet the State’s target of total water supply service coverage in the Capital City of Yenagoa and the Head Quarters of the eight (8) Local Government Areas of the state by the year 2018 in the short term.
- Extension of the total water supply service coverage for all the thirty-two (32) Head Quarters of the Development Authority Areas of the state by the year 2023 in the medium term.
- In the long term by the year 2033, there would be a total coverage of water supply and sanitation services for all the communities in the state.
- To streamline the activities of the various service providers in a coordinated manner.
- To develop the water resources using the principles of the National Integrated Water Resources Development initiative.

4.8 Activities to Attain Policy Goals

The Bayelsa State Water Policy will guide the preparation and review of strategic plans, flood control, any other relevant plans and regulations for the development and the management of the water sector within the State. The policy implementation will be carried out through the formulation of local planning strategies, organizational restructuring plans and the consideration of proposals for urban, small town and rural development together with the collaboration and advice of other relevant agencies.

Short Term Activities: the next 5 years:

- **Short Term Activity 1 – Monitoring and Evaluation**
 - The development and implementation of National monitoring and evaluation framework in the water sector.
- **Short Term Activity 2 – Water Management Strategy and Plans**
 - The development and implementation of the water sector management strategy and plans.
- **Short Term Activity 3 – Water Resources Mapping**
 - Water Resources within the State shall be mapped to allow for effective planning and forecast of use of the water resources.
- **Short Term Activity 4 – Restructuring the Bayelsa State Water Board**
 - Bayelsa State Water Board (BSWB) will be restructured.
 - The Board shall be allowed to concentrate on the urban areas.
 - The Board will be required to operate on the commercial principles of efficient and effective service, cost recovery and customer orientation.

- **Short Term Activity 5 – Establish Small Towns Agency**
 - Bayelsa State Small Towns Water Supply Agency (BSSTOWA) to be established
 - The BSSTOWA shall be set up to allow for the provision of water supply to the small towns and the participation of the stakeholders.
- **Short Term Activity 6 – Establish Independent Regulatory Commission**
 - An independent commission for the regulation of service providers to be set up to drive the improvement within the Water Sector by implementing a programme of policy, regulatory and institutional reform. This will provide protection to consumers, operators and prospective investors by putting in place an open and transparent process. In particular, the commission will be concerned with ascertaining adequacy of the standards of the water services to be provided and the monitoring of compliance. It will carry out Economic and Technical Regulation of water supply services and enforce compliance with its regulations and standards.
- **Short Term Activity 7 – Redesign Supply Network**
 - Redesign of pipe layout to allow for water to be supplied while areas undergo construction or rehabilitation. Although this is a continuous activity, this will allow for the isolation of such areas while continuing service to other areas.
 - Any disruption to the pipe network of the Water Board usually results in the closure of pumping stations leading to conflict with Construction Firms and Ministry of Works and complaints from consumers.
- **Short Term Activity 8 – Borehole Licensing**
 - Survey and licensing of boreholes for public use to be carried out. This will allow for a report on the location of the boreholes and water quality assessment
 - This will monitor borehole license compliance
 - It will also form a planning tool for revenue generation.
- **Short Term Activity 9 – Water Tariff Study**
 - Bayelsa State Water Board (BSWB) to commission a water tariff study to determine its potential consumers’ “ability and willingness to pay” for its water supply service and subsequently to design an appropriate tariff targeted towards gradual reduction in subsidies over a few years. Revenue generation exercise is to commence once the Bayelsa State Water Board (BSWB) has been re-structured.
 - The water supply service delivery as currently undertaken in the State is far from being sustainable. Revenue generation from urban water supply (which shall ordinarily provide necessary funds to operate and maintain the system) is almost non-existent. Revenue has to be derived from licensed borehole operators.
- **Short Term Activity 10 – Water Sector Coordination**
 - Institutionalize the meeting of Water Sector Coordination Committee (WSCC).

- The contributions of the External Support Agencies, Oil Companies, NGOs and other stakeholders active in the sector need to be structured to work in a coordinated manner.
- **Short Term Activity 11 – Baseline Data Gathering**
 - Baseline data gathering for all LGAs to determine service delivery.
- **Short Term Activity 12 – Sector Wide Development Plan**
 - Sector wide development plan and design of water supply in all the LGAs to be carried out.
- **Short Term Activity 13 – Local Government Area Investment Planning**
 - Develop and implement WASH investment plan for all LGAs.
- **Short Term Activity 14 – Annual Work Plans**
 - Bayelsa State Ministry of Water Resources to develop annual State work plan for the water sector.

4.9 Stakeholders Relevant to Policy Implementation

The following Institutions and their respective roles and responsibilities are either recognized or recommended in this policy as having significant roles to play in the promotion and maintenance of successful water resources management:

- Bayelsa State Government
- Bayelsa State Ministry of Water Resources
- Bayelsa State Ministry of Environment
- Bayelsa State Ministry of Health
- Bayelsa State Ministry of Education
- Ministry of Agriculture
- Bayelsa State Water Board
- Rural Water Supply and Sanitation Agency (RUWASSA)
- Local Governments in the State (WASH Departments)
- External Support Agencies
- Communities
- The Private Sector
- Non-Governmental Organizations
- Water Consumer Associations (WCAs)
- Water supply, Sanitation and hygiene Committees (WASH coms)
- Bayelsa State Water Regulatory Commission (New institution introduced by this Policy)
- Millennium Development Goals (MDGs)

5 Fundamental Principles and Key Components

This Chapter sets out the fundamental principles and guiding philosophies which are adopted in this Policy. The principles and philosophies are in accordance with existing Federal and State policies. The principles and the Policy Objectives are the basis from which the Policy Statements are derived.

5.1 Sanitation and Hygiene Principles

Sanitation is the first barrier to many transmitted diseases. Sanitation, wherever mentioned in this policy shall refer to water sanitation. According to National Water Sanitation Policy (2005), Water Sanitation is defined as an effective hygiene practice, handling and disposal of excreta, sewerage, and leachates in so far as it affects water sources.

The sanitation component of this policy therefore seeks to promote attitudinal change, and facilities (toilets, urinals and hand washing facilities etc.) which shall be combined together to maximize health and socio-economic benefits. Sanitation is therefore not an add-on but will be given the support required to help attain the expected benefits.

Based on the above, the focus of the State Government will be on protecting public health, creating demand for services, facilitating and enhancing partnership among the private sector, NGOs, community based organizations, local authorities, and households, and also removing obstacles in the path of achieving improved sanitation.

To this end, the Community-Led Total Sanitation (CLTS) approach shall be adopted, at all levels. This approach concentrates on empowering local people to analyse the extent and risk of pollution caused by open defecation, and to construct toilets without any external subsidies.

Sanitation programmes would be based on generating demand, with all of its implications for education and participation.

5.1.1 Water Supply and Sanitation in Schools and Public Places:

All activities relating to water supply and sanitation in schools, hospitals and other public places will be coordinated by the Ministry of Water Resources in collaboration with relevant Ministries and agencies.

5.1.2 Health and Hygiene Promotion (key steps):

The realization of the benefits of water supply and sanitation is dependent on a lasting change in hygiene behaviour. The people shall not only be made aware of the importance of better health, but also shall believe that better hygiene and sanitation are essential ingredients for improving their lives.

In this regard, emphasis will be placed on creating a linkage between water supply and sanitation provision, behavioural and disease transmission routes so that people understand and believe in hygiene concepts. The basic premise underlying this policy direction is that belief influences behavioural change.

The key steps for achieving these include:

- Promoting health awareness and understanding which, in turn, will lead to behavioural improvements.

- Providing support that will enable people to overcome constraints to change.
- Involving all members of the communities – young and old, female and male, higher and lower status – using participatory processes.
- Assessing community knowledge base; investigating their own environmental situation, visualizing a future scenario with them, analysing constraints to change, planning for change and finally implementing change.
- Work with other sector agencies such as Ministries of Education, Rural Infrastructure, Local government, Environment, Women Affairs, Health as well as NGOs and CBOs in the design and delivery of hygiene and health education services.
- Promoting the use of child to child approaches to hygiene and health education.
- Encourage the establishment of Environmental Health Clubs in schools and the communities in the state.
- Building the capacity of community institutions, particularly women groups, to lead the process of change at community level.
- Develop and implement a monitoring and evaluation system that enables communities to measure progress over time.
- Documentation of approaches used and dissemination of experiences gained, lessons learnt as part of the effort to contributing to evolving a more sustainable approach to behaviour change.

5.2 Water Resources Development Principles:

The basic aim of developing water resources is to make water in its right quality and quantity available from all sources to meet domestic, agricultural, industrial, recreational, and transportation needs, and to control excess.

Drinking water supply refers to provision of services in urban, small towns and rural communities. In this respect, adequate drinking water facilities shall be provided to the entire population both in urban, small towns and rural areas. Therefore, from any of the water resources, the State Government shall invariably include sourcing potable water, particularly wherever there are no dependable alternative sources.

With the aim at reducing poverty, access to safe water needs of human beings shall be the first charge on any available water resource, thereafter, consideration will be given to water for agriculture, industry etc.

The Principles of Water Resources Development in Bayelsa State are:

- a) Water is a social good, an economic good, as well as an environmental good; its use and management shall be integrated within social, economic, health, agricultural, educational, and environmental factors.
- b) Emphasis shall be placed on policy development and review, institutional reform, capacity building and creation of an enabling legal environment.

- c) WSS service provision, policy formulation and regulatory function are three distinct responsibilities and their separation will accelerate improvement in water supply and sanitation delivery. The Bayelsa State Government shall act as the facilitator, setting policies that create an enabling environment, ensuring coordination among stakeholders and overseeing the performance of utilities, to accomplish its social and economic development objectives. It shall deliver water and sanitation services through autonomous entities, operating along commercial practices and enjoying incentives to perform efficiently and to increase coverage.
- d) The Water Supply and Sanitation targets can only be achieved if WSS projects are managed sustainably. Water resources in Bayelsa State shall be managed at the lowest appropriate level (appropriate being a function of the specific conditions in the concerned areas and communities). This will promote consumer appreciation for the value of water and sanitation investments, and increase the sense of ownership, willingness of communities to share in the cost of operations and maintenance, thereby increasing the sustainability of the systems.
- e) The Nigerian Standard for drinking Water quality shall be the standard for monitoring and measuring water quality and the Bayelsa State Ministry of Health shall be charged with Water quality control and monitoring in the state.
- f) The creation of a Water Regulatory Commission is essential for effective water and sanitation services sector regulation
- g) All stakeholders shall be involved in the development of the Water Supply and Sanitation Sector through participatory investment by the Government agencies, Communities, External Support Agencies, NGOs and the Private sector; this necessitates the need for a cost sharing arrangement in Bayelsa State.
- h) The private sector (operators, commercial banks and consultants), communities, as well as NGOs shall play a critical role in the planning, design, financing, implementation and operation of water supply and sanitation systems. To this end, a WSS coordination meeting of key stakeholders will be institutionalized to strengthen Water and Sanitation service delivery.
- i) The private sector shall be encouraged to participate in service provision and delivery at urban, small towns and rural levels through various PSP options like management contracts, service contracts, supply contracts, while the assets of the water facilities shall remain publicly owned
- j) Government shall have the primary responsibility of financing long term WSS capital projects, while in the short term, the Urban Water Board shall be commercially oriented and granted a degree of political autonomy to be able to recover in the minimum, Operation and Maintenance cost from their revenues.
- k) Water and Sanitation management and development shall be based on participatory approach, involving users, planners and policy makers at all levels; and decisions shall be made at the lowest appropriate level.

- l) Women are important stakeholders in water resources management and as such all decisions in the state's water sector shall be taken from a gender perspective, based on gender disaggregated data.
- m) Water tariffs shall be informed and dictated by production cost, willingness to pay and affordability factors.
- n) Subsidies when considered necessary shall be designed and administered with active participation of the intended beneficiaries.
- o) WSS Urban Institutions shall adopt a policy of sustainable cost recovery, for the financing of its publicly owned water and sanitation agencies. This implies that the Water Board will aim to collect revenue sufficient to cover their recurrent costs (operating and maintenance) and they shall develop sustainable long-term cost recovery policies, anticipating all future cash flow needs. Sustainable cost recovery includes operation and maintenance cost as well as the cost of renewing existing infrastructure.
- p) Water service delivery shall be "bottom-up" and "demand-driven" as opposed to the current "top-down" and "supply driven".
- q) Other development partners and NGOs are also carrying out various projects and activities to address the critical situation in the Water Sector and there is need to harmonize these supports in a coordinated way to maximize synergies and avoid duplication of effort and wastage. The Bayelsa State Ministry of Water Resources shall be at the helm of such coordination in a structured manner.
- r) Consumers are willing to pay for water if a reliable level of service is provided, as demonstrated by the fact that many consumers currently purchase their water from private providers.
- s) In developing the water resources, adequate consideration shall also be given to their uses for transportation and fishery through silt removal and clearing of weeds.

5.2.1 Urban Water Supply Principles:

The principles adopted for urban water supply are:

- a) Water supply in urban areas is a commercial undertaking and shall be efficiently managed as a business.
- b) Water supply to the poor shall be guaranteed through carefully designed arrangements particularly in the design of tariff setting methodologies and principles as well as by subsidy policies relating to government support that are linked clearly with achievable set indicators.
- c) All urban water supply systems must work on cost recovery principles while ensuring effective, efficient, and sustainable service delivery.
- d) Autonomy of water providers shall be guaranteed.
- e) Clear Sector governance shall be established through appropriate regulatory reforms that will separate service provision, policy and regulation and encourage private investment.
- f) Commercial orientation and customer focus must be the bedrock of urban water supply and service provision must reflect this.

5.2.2 Small Towns and Rural Water Supply Principles

The principles adopted for small town water supply are:

- a) Water supply provision shall be demand driven.
- b) The community must show a desire to get involved in the management of water supply schemes, especially through their Water Consumer Associations (WCAs) and Water, Sanitation and Hygiene Committee (WASHCOMs)
- c) The provision of water supply needs to be community based, with the communities in the driving seat from the project inception up to the management of completed schemes.
- d) Communities need to be mobilized, trained and motivated to actively participate in developing their water and sanitation facilities and to eventually own the systems.
- e) Water supply infrastructure development needs to involve cost sharing arrangement between the State, the Local governments and the communities in a coordinated effective manner. The National water policy provides for the Federal Government contribution to capital Projects, this will be taken into account as appropriate.

5.3 Key Components of the Water Policy

The key components of the Water Policy are:

- The focus of this policy is to ensure increased coverage from the present level to about 100% of the population by 2025, with particular emphasis on underserved local government headquarters and unreached rural communities and institution of cost-effective measures to ensure that services are provided at affordable prices as well as increasing the efficiency of service providers in the sector.
- Design mechanisms for ensuring effective operation, maintenance and management systems for facilities and making users the pivot for ensuring the sustainability of the systems.
- Gender considerations will be given serious attention by adoption of strategies for the engagement of women, both professionally and at the community level, in sector-related activities.
- Institutionalization of cost-sharing arrangements that will ensure full participation and ownership of communities in planning, implementation and monitoring of interventions as part of the process of promoting community ownership, maintenance and management of the facilities.
- Provision of water supply and sanitation services that take into consideration, the need of the poor, through designed mechanisms that will ensure their inclusion in the decision making process, as well as having access to good quality water supply and sanitation.
- Encouragement of the private sector to participate in the development of the water resources, and provision water supply and sanitation services at all levels.

5.3.1 Community Management

Community empowerment and participation in the management of services, is critical to the sustainability of the infrastructure (physical facilities) to be provided. This will be the focus for service delivery as it promotes the concept of ownership and make communities take full responsibility for sustaining the water systems. In this vein, all programmes targeted at rural communities shall have a comprehensive training and capacity building component for community level institutions. Public institutions will facilitate and coordinate the process while Local Government personnel and NGOs/CBOs will take responsibility for enhancing the capacity of communities in the management of the facilities through a “Training the Trainers Programme”

Communities are expected to establish appropriate institutional structures that will be responsible for the day to day management of the facilities. Deliberate efforts will be made to ensure women are adequately represented in the community structures. The community structures will among others be responsible for monitoring pump use, promoting hygiene education, pump maintenance, and collection of user fees. The operational modalities shall be detailed out in the strategic framework paper.

5.3.2 Operation and Maintenance

Government shall retain the overall high-level responsibility for ensuring the proper operation and maintenance of water services.

In the case of facilities for urban and small towns, Government will achieve this through the Water Board, the State Agencies and the Water Regulatory Commission. This does not preclude the participation of the private sector.

At the rural level, communities are directly responsible for operation and maintenance of the facilities and will be assisted to design the most effective approaches for sustaining the facilities. The assistance required will be provided by a combination of private sector actors, NGOs, and the Rural Water Supply and Sanitation Agency. Local Government personnel will be actively involved with community level activities and will support the communities in operating and maintaining services.

5.3.3 Application of Appropriate Technology

Technological choice will reflect community preferences but will be geared towards giving the community the highest service level, taking into consideration the community’s ability to maintain and willingness to contribute. Technical assistance will be provided so that communities can make informed decisions about the costs, service level, operation and maintenance requirements, and the appropriate location for the facility.

Properly designed hand dug wells are the technological choice for the rural communities where the hydrogeology is suitable. For shallow and easily permeable aquifers, hand drilled boreholes may be considered. Appropriate and cost effective technologies will be used in the provision of WASH facilities. Wherever possible, consideration will also be given to installation of piped water systems where the yield is very good and can serve more than two contiguous communities or where the community is larger but does not meet the criteria of a small town.

To facilitate easy coordination and compliance, guidelines on the use of the various technologies will be developed. The guidelines will include steps to be taken such as site selection, methods of

construction, technical specifications and other elements. These guidelines will be essential in ensuring that the required service level is delivered to the people.

All water points, including properly designed hand dug wells and boreholes, shall be fitted with a hand pump that conforms to the concept of village level operation and maintenance (VLOM) and communities trained on the operation and maintenance of the pump.

6 Policy Statements

6.1 Right to Water

The Bayelsa State Government believes that access to potable and affordable water and safe sanitation is fundamental human need, therefore, a basic right.

6.2 Access to Water Supply

Every resident in Bayelsa State shall have right to access safe sanitation and at least 45 litres of potable water per day, within a distance of 150 metres. The State Government shall take steps to guarantee this right. Bayelsa State Government believes that water is a social, economic as well as an environmental good; therefore, its use and management shall be integrated within social, economic, health, agricultural, educational, and environmental factors.

6.3 Water Rights

The ownership of all water resources in the state is vested on the State Government, and its use by all service providers and consumers, shall be directed towards meeting the common goal.

6.4 Minimum levels/standards of supply:

The Nigerian Standard for drinking Water quality shall be the standard for monitoring and measuring water quality in the State.

6.5 Sustainability, Pricing and Cost Recovery

Bayelsa State Government shall support the Water Board to operate along commercial lines, adopt appropriate pricing dictated by its cost of production, and implement effective revenue generation measures to enable it operate sustainably, generating enough internal revenues to pay for all operational and maintenance costs in the short run. For rural water supply sustainability, Local Governments shall support Local Government Water, Sanitation and Hygiene Unit (WASH Departments) and rural communities to operate their water supply scheme sustainability.

The Bayelsa State Water Board shall be given the autonomy to ensure it is able to adopt a policy of sustainable cost recovery whereby it recovers revenue sufficient to cover its recurrent costs of operation and maintenance, and it shall develop sustainable long-term cost recovery policies, anticipating all future cash flow needs.

6.6 Tariffs and Subsidies

The Bayelsa State Water Board shall be dictated by its cost of production; the Board shall implement a policy of cross subsidy and also implement measures to ensure increased efficiency and reduction of internal wastes. Whilst the Bayelsa State Water Board will be encouraged to introduce appropriate pricing, Local Governments shall provide subsidies for the poor either by paying tariffs directly on behalf of identified poor and vulnerable people or purchasing water vouchers for them for the purposes of accessing water through water kiosks.

6.7 Metering

The Bayelsa State shall take steps to progressively meter all household water connections in the State. Prepaid meters would be installed on every residential buildings and Industrial consumers.

6.8 Demand Management

Bayelsa State Government will implement effective water efficiency mechanisms to ensure the equitable and sustainable supply to all users without discrimination.

6.9 Financing

Water Supply and Sanitation Sector services shall be provided to all citizens of the State in an affordable and sustainable manner through participatory investment by the three tiers of Government, the private sector and the beneficiary communities.

6.10 Community Involvement

Bayelsa State Government shall promote water supply development and management based on a participatory approach involving users, planners and policy makers at all levels, and decisions shall be made at the lowest appropriate level.

6.11 Serving the poor

The Bayelsa State Ministry of Water Resources shall ensure that all service providers conduct a water and sanitation poverty mapping to determine the locations of the poor and vulnerable people within their distribution areas and design methods of delivering water subsidies to these consumers.

Subsidized social kiosks shall be provided in low incomes areas.

6.12 Involvement of the Private Sector

The Bayelsa State Government shall encourage Private Sector Participation not only in the development of the water resources, but also in service provision and delivery at urban, small towns and rural levels through development, management, service, and supply contracts.

Bayelsa State Government shall also promote public private partnerships through training programmes with well performing urban utilities globally to share experiences and learn best partnerships

6.13 Regulatory Framework

Bayelsa State Government will separate policy and regulatory functions from service provision to encourage and regulate the sector so as to accelerate improvement in water supply and sanitation delivery. The sector's institutions to accelerate this process shall be established.

6.14 Autonomy of service providers

The Bayelsa State Government shall grant autonomy to the Water Board to enable it to operate along commercial lines with incentives to provide adequate services that respond to customer demands and expectations. Water supply and sanitation (WSS) service provision, policy formulation and regulatory functions are three distinct responsibilities and the Bayelsa State government

commits itself to removing existing overlaps towards accelerating water supply and sanitation delivery.

Provision of WSS remains the primary responsibility of the Bayelsa State Government, and towards achieving this, government shall continue to provide funds for capital expansion in urban, small towns and rural areas.

6.15 The Role of Women

Women shall not only have equal right as men in all activities but will be encouraged to take opportunity that may arise in the sector reform. Women as major stakeholders in water use shall have adequate representation in all aspects of the water sector management. At least 50% of invitees to all WASHCOMs/WCAs meetings organized by service providers shall comprise of women and the same percentage of appointive and elective WASHCOMs/WCAs positions by all service providers shall be reserved for women.

6.16 Human Resource Development/Capacity Building

Government shall invest in Human capital development to enable personnel in the WSS sector deliver services sustainably and effectively through the establishment of a Water Resources management training school.

6.17 Monitoring and Evaluation

Government shall institutionalize monitoring and evaluation of activities in the water sector to track progress of changes and to make necessary adjustments required to achieve the desired outcomes.

6.18 Data gathering and information management

Bayelsa State Government shall set up a Water Resources data bank for gathering, storing and managing information on water resources. The State would domesticate and institutionalize the National Monitoring and Evaluation framework.

6.19 Sanitation and hygiene

All public and private institutions like government offices, companies, schools, religious bodies, and business offices employing more than five people are expected to provide improved sanitation facilities within their premises. The Local Government Council shall enact by-laws to give legal backing to the activities of WASHCOMs and WCAs.

6.20 Environmental protection

Bayelsa State Government shall ensure that water sources are protected from degradation by polluting effluents from any source including industrial and agricultural developments, on-site sanitation facilities and other quarters. No Government agency or non-governmental agency, individuals and donors shall drill boreholes and/or construct waterworks in the state without prior consultations and approval of the relevant authorities in Bayelsa State.

7 Reformed Roles and Responsibilities of the Institutions

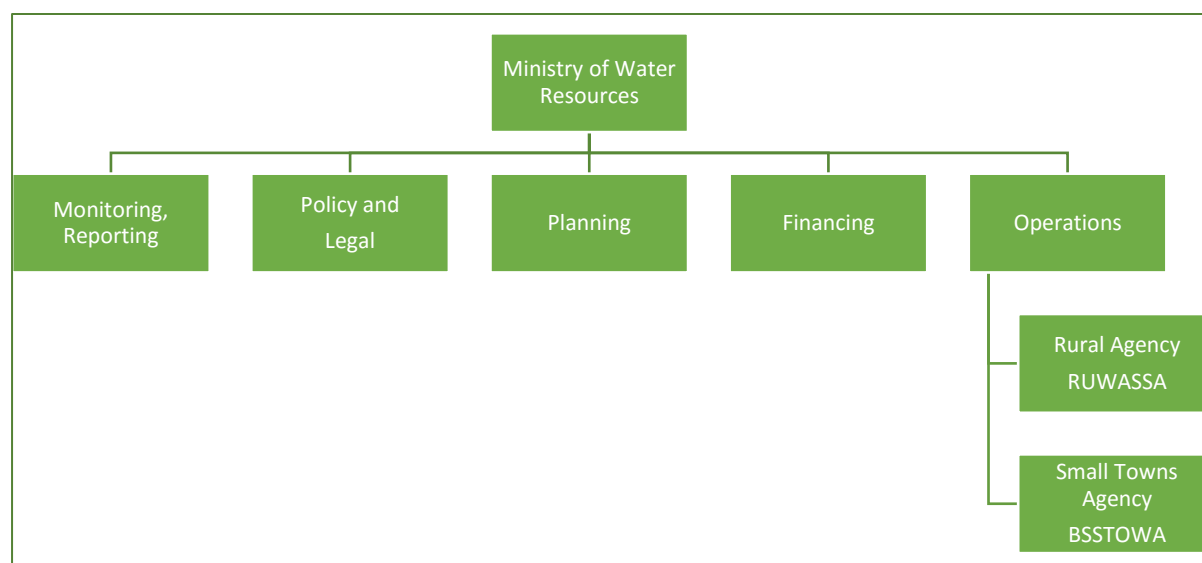
7.1 Ministry of Water Resources (MWR)

The Ministry was created alongside other Ministries within the state service structure shortly after the state was created out of the old Rivers State in 1996.

The functions of the Ministry will include:

- a) Planning & Formulation of urban and Rural Water Supply policies and programmes of the State in line with those of the Federal Government.
- b) Supervision and co-ordination of activities and performance of Bayelsa State Water Board (BSWB) and Rural Water Supply & Sanitation Agency (RUWATSSA)
- c) Mobilization and advocacy on water supply & sanitation services
- d) Creation, and supervision of the activities of the State Water Supply Data Bank
- e) Liaising with the Federal Ministry in charge of Water Resources on matters relating to water resources development in the State
- f) Inter-governmental cooperation (to liaise with other Federal Agencies in the state like Niger Delta Basin Development Authority etc.) on matters relating to water resources development, supply services, and irrigation
- g) Liaising with international organizations and agencies for assistance to the State in the area of water resources development, supply services and other infrastructures
- h) Monitoring and evaluation of the activities of private borehole operators in order to set and maintain standards
- i) Provision of water supply infrastructure
- j) Any other assignment as may be given by the State Government

FIGURE 4 OUTLINE ORGANISATIONAL STRUCTURE OF THE MINISTRY OF WATER RESOURCES



7.2 Bayelsa State Water Board

The Bayelsa State Water Board shall be responsible for the operation and maintenance of water supply facilities to the urban areas. It shall also have additional responsibility for the provision of water supply services to small towns pending the creation of Small Towns Water Supply Agency.

- a) To control and manage all water works which have been or shall be vested in it in both urban and small towns of the State for that purpose
- b) To adopt or amend master plans for the operation and maintenance of water works and supply of water in the Bayelsa State in consultation with relevant agencies
- c) To ensure regular and adequate supply services of clean and qualitative potable water to consumers
- d) To engage in the conduct of comprehensive research programmes relating to its functions that would enhance its performance
- e) To produce, provide and where necessary, market water in any other form deemed fit
- f) To maintain and operate water works and all other ancillary facility necessary for the carrying into effect the provision and supply of water
- g) To carry any water pipe through, across or under any street, road or bye-pass or any place laid out or intended as a street, road or bye-pass
- h) To establish or acquire and carry out office outlets, reservoirs and depots in the State or elsewhere for wholesale or retail distribution of water and its bye-products, amongst others
- i) To collaborate with Local Government Authorities, State and RUWASSA

7.3 Bayelsa State Small Towns Water Supply Agency

The Bayelsa State Small Towns Water Supply Agency (BSSTOWA) shall be created as soon as feasible by the Bayelsa State Government. BSSTOWA shall be vested with the responsibility for:

- a) Water supply delivery to small towns on the basis of Demand Responsive Approach and Community participation and ownership.
- b) Liaise with the Federal Government and External Support bodies for the implementation of Small Towns Water Supply and Sanitation programmes in Bayelsa State.
- c) Management of all the mini water schemes in the state.
- d) Facilitate the formation of Water Consumer Associations and coordinate their activities

7.4 Rural Water Supply and Sanitation Agency

The functions of the RUWASSA shall include facilitating capacity-building for LGAs and other actors in the RWSS sector, Regulating (including setting guidelines, standards and supporting research in technologies delivery of RWSS); and monitoring and evaluating the impact of rural WSS programmes. The Specific functions shall include:

- a) Prepare and update Bayelsa State RWSS Action and Investment Plan;
- b) Prepare annual work plan and budget;

- c) Establish memorandum of understanding with LGAs and assist them to establish WSS Department;
- d) Mobilize financing for RWSS;
- e) Execute State RWSS programme;
- f) Develop Implementation Guidelines/Standard for LGAs;
- g) Co-ordinate with other Ministries;
- h) Keep inventory of water supply and sanitation facilities in all communities and maintain a RWSS database (including water quality of wells, and all boreholes drilled in the state for that purpose)
- i) Monitor availability of water supply equipment spare parts, sanitation coverage and effectiveness of hygiene education
- j) Identify better ways of implementing programme components and feed back to State RWSS plan and training programme;
- k) Supervise/Carry out geophysical surveys for locating wells, and the design and construction of machine drilled boreholes and piped water systems in the rural communities
- l) Test water quality of new water sources and monitor quality of all other existing water sources in the rural communities
- m) Provide training and technical support to LGA RWSS staff on communication and community participation, technical and financial issues, planning and monitoring, and evaluation;
- n) Adapt/refine training materials for local use; Participate in research and /development;
- o) Train hand dug well contractors and assist LGA personnel to train mechanics and latrine artisans;
- p) Pre-qualify contractors and let out and coordinate and assist in the planning, implementation and monitoring of all National RWSS activities in the state.
- q) Control and supervise the sinking of boreholes by Individuals or corporate bodies in the rural communities under its jurisdiction, and charge appropriate fees as the Bayelsa State Water Regulatory Commission may from time to time determine.
- r) Liaise with the Federal Government Ministries and agencies in the design and implementations of programmes and projects in the area of rural water supply, environmental sanitation and maintenance and provision of rural infrastructure and any other rural development activities;
- s) Define, encourage and support any activity that will enhance rural water supply, environmental sanitation, the provision of other infrastructures and other rural development activities;
- t) Identify, involve and support local community leaders and organization in the effective mobilization of the rural population for accelerated and sustained rural development

- u) Identify and implement other rural programmes that would enhance income generating activities in the rural areas as well as help to improve the quality of life and the standard of living of the rural dwellers;
- v) Encourage the implementation of physical development plans at the community level in order to increase and improve rural productivity and rural accessibility;
- w) Supervise and monitor on a continuous basis the entire range of rural development activities carried out or supported by the agency;
- x) Commission and support studies and research projects that will facilitate the execution of the functions of the Agency.
- y) Provision of Water Supply services to rural areas in special cases and emergencies
- z) Render Technical assistance to LGAs' WASHCOMS and the private sector, for delivery of RWSS services

Other functions include:

- Support the mobilization of resources for RWSS and provision of repair and maintenance services to communities
- Support the promotion of Private sector participation in RWSS through contracting services.
- Prescribe standards and guidelines for RWSS construction and management dd. Support delivery of hygiene education and sanitation in rural areas.
- Provide back-up support and undertaking emergency works, whilst the private sector is increasingly given the opportunity to take centre stage in facilities delivery

7.5 Local Government Water, Sanitation and Hygiene Departments

At the LGA level, a Water, Sanitation and Hygiene (WASH) Departments shall be established with multi-disciplinary team of experts in community development, hygiene promotion, education, sanitation, water supply, monitoring and evaluation.

An LGA RWSS Steering Committee shall be established comprising LGA Chairman and heads of relevant departments (Primary Health Care, Education, Works and Agriculture), State RWSS personnel, LGA councillors, traditional rulers, retired public officers and women group.

The main responsibilities of the LGA and the WASH Departments include:

- a) Prepare and periodically update LGA RWSS Plan;
- b) Prepare annual work plan and budget
- c) Provide funds and execute LGA RWSS Programme
- d) Establish agreement with communities
- e) LGAs shall partner with private sector to provide public toilets in motor parks, markets and public places in urban areas.
- f) Empower communities through Mobilization and Enlightenment

- g) Assist communities to conduct needs assessment and form WASHCOMs to manage their facilities
- h) Train WASHCOM members and provide ongoing support
- i) Keep an inventory of water supply and sanitation facilities in all communities and monitor their operational status
- j) Coordinate training of private mechanics and latrine artisan
- k) Promote good hygiene and sanitation practices including Community-Led Total Sanitation (CLTS) approach
- l) Monitoring the availability of spare parts, sanitation coverage, capacity and availability of mechanics and latrine artisans, effectiveness of hygiene education and promotion and functionality and use of water and sanitation facilities
- m) Award contracts for construction of wells, rainwater harvester, water treatment systems and public latrines
- n) Establishment of database on water and sanitation facilities and their performance for mobilizing and assisting communities to establish water and sanitation committees (WASHCOMS)
- o) Choose community members with the assistance of the Water and Sanitation Committee, for training on repairs and maintenance of boreholes
- p) Each local Government shall have a dumpsite and enforce the regulation on storing, collection and transporting refuse to the dump site
- q) Each local government shall provide a serviceable refuse compactor to carry refuse generated to the dumpsites.
- r) Each Local Government shall have a public cemetery
- s) The Local Government Council shall enact bylaws to give legal backing to the activities of WASHCOMs and WCAs.
- t) Each Local Government shall have a platform (Office of the head of the Local Government Administration) for the registration (with minimal fee rate) for the registration of WASHCOMs/WCAs

7.6 Communities and Small Towns

In line with the government's desire to have communities take the lead in determining their development activities and its emphasis on building a maintenance culture to ensure that infrastructure is sustained, the main thrust of the programme strategies will be based on community management with government promoting and improving services and the private sector supplying goods and services. Each community will be supported to establish WASHCOMs/WCAs (or have its functions incorporated within an existing community development committee if preferred by the community) with adequate representation of women and youths (gender mainstreaming) and reflecting the socio-culture/religious constitution of the community.

The responsibilities of communities are:

- a) To establish Water, Sanitation and Hygiene Committees (WASHCOMs) or Water Consumers Associations (WCAs)
- b) Open a WASHCOMs or WCAs bank account and collect regular contributions towards meeting its share of the capital, operation and maintenance costs of the WSS programme
- c) Communities shall be involved in the planning, design, construction and management of water and sanitation schemes; and shall be trained to perform this role
- d) The management of water schemes in rural areas through the WASHCOMS in conjunction with Local Government and RUWASSA
- e) Each community shall embrace Community-Led Total Sanitation (CLTS)
- f) Collection of water tariffs
- g) Counterpart funding where necessary or part financing of WSS
- h) Participation in project design, implementation and management
- i) Monitoring of Water programmes and projects to ensure accountability and transparency j. Hygiene promotion
- j) Policing of water infrastructure to report leakages and protect it against vandalism
- k) Maintenance of security of urban and rural water schemes.
- l) Every household, shopping complex, market, and public places shall have toilet and refuse bins.

7.7 Water Consumer Associations (WCAs)

Water Consumers Association (WCA) is a group of individuals representing the water users in small towns (water point). They are elected by small towns (Community) to undertake activities related to the management of Water Supply Infrastructure for the mutual benefit of the small towns, operator and local authorities.

They shall be set up by Small towns to own and manage water schemes on behalf of each town.

WCAs shall be accountable to the consumers and will have status as a corporate body. Membership of WCAs shall be gender sensitive with adequate representation from youth.

WCAs will be required to obtain rights for water extraction (a license) from the Bayelsa State Water Regulatory Commission.

7.8 Water and Sanitation Committees (WASHCOMS)

WASHCOMs shall be established in the rural communities of the State to oversee the maintenance and to ensure sustainability of WSS facilities at the community level. It shall be composed of 10 members with equal representation from both genders.

Their roles and responsibilities in the community include the following:

- a) Request LGA for grant and technical assistance
- b) Plan, manage and maintain their water and sanitation facilities

- c) Improve sanitation, including construction of household and communal latrines as appropriate
- d) Monitor operation/use of facilities, revenue collection, identify constraints and modify management strategy as needed;
- e) Keep record of accounts and management decisions
- f) Ensure that the community pays counterpart contributions of construction cost in cash or in kind towards provision of water system
- g) Provide human resources to be trained
- h) Ensure proper use of their water supply and sanitation facilities and promote good hygiene and sanitation practices.

7.9 The Private Sector

Private Sector Participation in water resources development and service delivery has in the past been dominated by the public sector. The private sector is at infancy and its involvement has been limited and hence its growth is slow. Involvement of the private sector in the delivery of water services will improve efficiency and effectiveness and enhance development and sustainability of service delivery.

The private sector shall be responsible for:

- a) Financing of water infrastructure development through loans and bonds.
- b) Capital investment for the construction of water works, waste water and sanitation facilities.
- c) Conduct studies for the development of water and sanitation sector.
- d) Implementation, management and service responsibilities that may be outsourced by publicly owned water utilities through Public-Private Partnerships.
- e) Provision of alternative sources of power supply for existing water schemes.
- f) Collection of tariffs for public or private water service providers.
- g) Collection and disposal of wastes.
- h) Emergency water supplies using tankers or similar facilities.
- i) Operation and maintenance of small-scale water schemes such as boreholes at Urban, semi-urban, small towns and community levels.
- j) Financing water infrastructure and sanitation development and implementation of water and sanitation service delivery programmes in urban, small town and rural areas
- k) Execution of contracts in the sector, such as drilling of boreholes, construction of wastewater plants and water schemes.
- l) Support research and development projects.
- m) Manage sanitation centres at the small town and community levels.

7.10 External Support Agencies

External Support Agencies in the State at whatever level shall support the sector in the execution of their WSS Programme/projects in line with the Strategic Framework and support the Bayelsa State Ministry of Water Resources and the relevant Agencies to coordinate the WSS sector. Their specific roles and responsibilities will include financial and technical support in the following areas:

- a) Training of sector personnel on programme implementation
- b) Provision of logistic support such as vehicles and mobility
- c) Quality assurance of materials, equipment and programme processes
- d) Processes for local manufacture of WSS materials and equipment
- e) Establishment of computerized database for monitoring of WSS programme
- f) Advocacy and resource mobilization for programme implementation
- g) Development of hygiene and sanitation promotion materials (information, Education and Communication)
- h) Establishment of Research and Development (R&D) centres;
- i) Assist in programmes aimed at reducing all forms of water borne and water related diseases
- j) Support programme monitoring and evaluation in the sector.

7.11 Civil Society Organizations

The CSOs shall support the water supply delivery and sanitation in the following areas:

- a) Monitor the implementation of WSS programmes to ensure openness, accountability, and transparency
- b) Track WSS budgets and monitor public expenditures in the sector
- c) Support community mobilization and social marketing;
- d) Develop hygiene and sanitation promotion materials;
- e) Be involved in implementation of pilot projects;
- f) Support provision of water supply and sanitation facilities in schools;
- g) Support the training of sector personnel on programme implementation;
- h) Support the guinea worm eradication programme and all other water-borne and water related diseases.
- i) Act as social watchdogs
- j) Facilitating dialogue between users and government departments and/or the private sector
- k) CSOs shall evaluate the impact of WSS projects and programmes.

7.12 Bayelsa State Water Regulatory Commission

Water supply projects and programmes are presently implemented by many organizations and agencies with insufficient coordination. There are conflicting policies and roles which limit routine

operational decision making processes and by implication, undermine the benefits that investment would provide. A water sector coordination committee shall be set up which shall meet annually to deliberate and gather information on activities within the water sector in the State with a view to harmonization of same.

Bayelsa State Water Regulatory Commission shall be established by law as an Independent body. It shall be set up by the relevant instrument and shall operate and consider state-wide plans and undertake bi-annual monitoring and evaluation of the implementation of the state water and sanitation sector development plans. The Commission shall comprise the representatives of the following bodies:

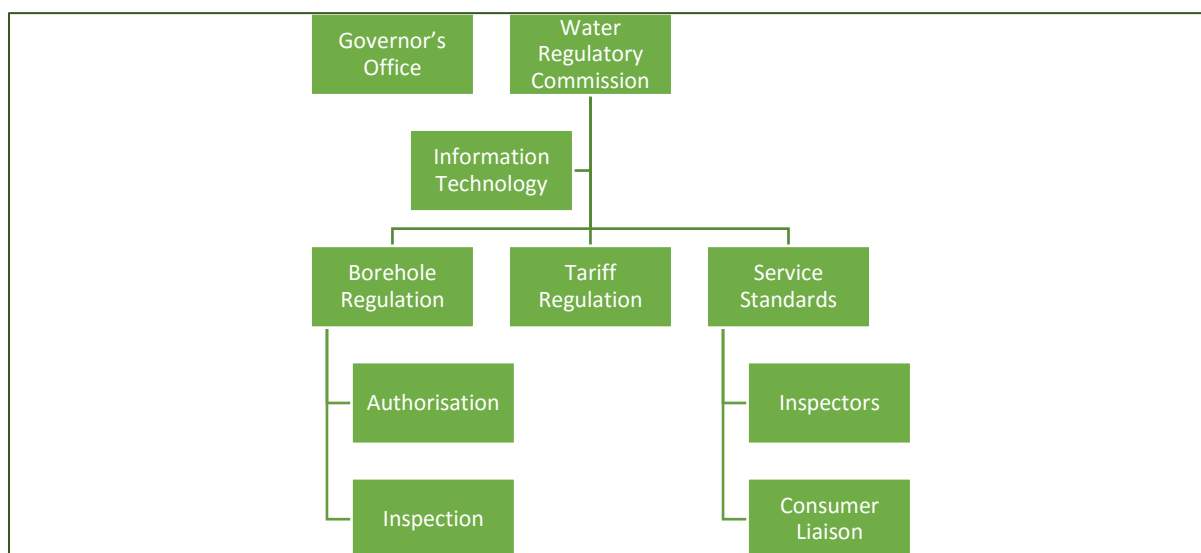
- Ministry of Water Resources - Chairperson
- Ministry of Environment.
- Ministry of Works and Infrastructure
- Ministry of Lands and Survey
- Ministry of Housing and Urban Planning
- Bayelsa State Water Board
- Ministry of Health
- Ministry of Women Affairs
- Ministry of Agriculture and Natural Resources
- Ministry of Justice
- Ministry of Finance
- Ministry of Budget and Planning
- Water Consumers Association,
- Local Governments in the State
- Non-Governmental Organizations
- External Support Agencies in the state
- Private Sector.
- Rural Water Supply and Sanitation Agency
- Niger Delta Basin Development Authority
- Niger Delta Development Commission.

The specific responsibilities shall be:

- a) Regulation of the activities of all players in the water sector
- b) Shall cover standards and norms for Consumer service, Tariff regulation and Licensing.
- c) Regulate PSP agreements- develop standard draft PSP agreement
- d) Promoting the rights of access to basic water supply and sanitation

- e) Promote State Water Laws and Policies
- f) Promotion of private sector partnerships.
- g) Ensure the preparation of and compliance with Water Services Development Plans
- h) Mediate between service providers and consumers
- i) Investigate Complaint against Service providers
- j) Receive financial and technical reports from licensed players
- k) Ensure compliance with the enabling law in the water sector
- l) Gather Data for State Information system on water services (To serve as a repository of document for investors).
- m) Act as a regulator for community-managed water supply in respect of provision of legitimacy for the WASHCOMS/WCAs, Water quality enforcement, and approval of tariffs submitted by WASHCOMS/WCAs.

FIGURE 5 WATER REGULATORY COMMISSION OUTLINE STRUCTURE



8 Water Resources Development and Management

The implementation of this water policy requires administrative, organizational, legal and project implementation actions. Besides co-operation among the various agencies and Ministries concerned, it shall be discussed widely among water sector professionals, NGOs, community organizations and all concerned officials within the government, in the next one to two years, especially with a view to finalize the action programmes.

8.1 Project Planning

The first task shall be to set up an information organization with the co-operation of all the departments who are already collecting information. This information collection, starting at the lowest level, shall be computerized and made available to the public on the Internet, with the MWR being the mother agency for this purpose. Various departments at present collect limited data at many more places but not at agreed locations, which need to be consolidated.

Water resource development projects shall as far as possible be planned and developed as multipurpose projects. Provision for drinking water shall be a primary consideration. The projects shall provide for irrigation, flood mitigation, hydro-electric power generation, navigation and recreation wherever possible.

The study of the impact of a project during construction and later on human lives, settlement, occupations, economic and other aspects shall be an essential component of project planning.

In the Planning, implementation and operation of projects, the preservation of the quality of environment and the ecological balance shall be a primary consideration. The adverse impact, if any on the environment shall be minimized and shall be off-set by adequate compensatory measures.

There shall be an integrated and multi-disciplinary approach to the planning, formulation, clearance and implementation of projects, including Catchment treatment and management, environmental and ecological aspects, the rehabilitation of effected people and command area development. Special efforts shall be made to investigate and formulate projects either in, or for the benefit of areas inhabited by tribal or other specially disadvantaged groups.

8.2 Water and Environment

Special attention has to be paid to the water from oil companies and agricultural lands, which are difficult to treat as there is no single point of pollution and as such prevention is the best answer. For these purpose bio-fertilizers, bio-pesticides and organic farming shall be encouraged, in order to reduce the use of chemicals, which could be done gradually but substantially over the next two decades. Treatment of water from industries and sewage shall be implemented within the next 10 years. All this water could also be reused and recycled for various purposes.

8.3 Flood Management and Drainage

Insurance against floods and droughts requires local action as well as national coordination. It is essential to realize that floods and their negative consequences can only be managed; they cannot be 'controlled'. The seasonal floods in most parts of the state are largely a consequence of the heavy rainfalls in the wet season and high flows from the Rivers Niger Benue systems. The flood

management policy shall recognize this fact and shall begin with the premise that people are prepared to live with the floods in ways that are least disruptive and harmful for them.

A number of systematic measures, which include the adoption of suitable policies, operational and managerial steps, disaster preparedness, flood forecasting, ecological measures and international river water sharing agreements shall be taken urgently to deal with floods in such a way that their intensity is moderated and the negative consequences on flood-prone populations are minimized. The planning for flood management shall be done in a holistic manner so that the needs during the non-flood season are also taken care of.

8.4 Measures for Flood Management

Measures for flood management that shall be implemented under this Policy include:

- i. There shall be a master plan for flood control and management for the state. An integrated Niger Delta river basin water policy for states sharing the basin shall be evolved. Such groups of states shall co-operate, make use of computerized information systems and undertake joint measures for information sharing, flood forecasting, management, and operation of reservoirs, etc.
- ii. While physical flood protection works like embankments, canalization, dredging, and dykes may be necessary in some areas, increased emphasis shall be laid on non-physical measures such as flood forecasting and warning, flood-plain zoning and flood proofing, for the minimization of losses, so as to reduce the recurring expenditure on flood relief.
- iii. Land-use regulation shall be integrated with flood plain zoning to avoid inappropriate land-use in flood-plains and other flood-prone areas and consequent higher damages and relief costs in the long run. Flood prone areas shall be demarcated at different probability levels and appropriate development measures and economic activities shall be devised for flood prone and non-flood prone areas.
- iv. Unauthorized and unabated encroachment in the flood plains, drainages and riverbeds shall be prevented.
- v. The traditional flood management systems of the area shall be revitalized, maintained and suitably upgraded. The traditional method of building houses on **stilts**, for instance, shall be revived and encouraged. Thus the government policy shall build on people's resolve to live with floods and shall aim at dealing with floods so as to minimize losses and hardship while obtaining certain benefits.
- vi. Construction of embankments shall be considered only after careful detailed studies and investigations as a part of a package. Regular and adequate maintenance of embankments shall be ensured with the involvement of people. Where embankments have been made, arrangements for adequate drainage of the area behind them shall be made through appropriately located **sluices**. Development works such as roads/railways and housing construction shall take into account natural waterways and drainages to avoid creating an afflux upstream.

8.5 Drainage

Draining out of water becomes necessary for the following purposes.

- To get rid of bad quality water from sewage and industrially used water. This can be avoided by treating the water and reusing it.
- To recover water logged land areas.

8.6 Resettlement and Rehabilitation

Although optimal management of water is best achieved through a sound micro watershed development programme, sometimes it would be necessary to construct large storages. The consequent resettlement and rehabilitation of people shall be governed by a national policy. Under this policy the project-affected persons (PAPs) shall be entitled to rehabilitation that precedes the project completion and compensation where payable shall be both for appropriation of property as well as for livelihood.

Land for land in respect of agriculturists shall be the preferred option in those regions and states where land for resettlement is or can be made available. In some cases, where allotting land for land is not possible due to small holdings throughout the command, following alternative measures shall be taken:

Annuity for a certain number of years, where the amount of annuity and the number of years for which it is to be paid may be worked out on the basis of factors like skill level, value of loss of livelihood, and number of remaining years of active working life.

A suitable job in the development project itself, where the skill and job profile match or person's skill can be upgraded by suitable training and only where the job is expected to be of a permanent nature, and is not merely created for the purpose of rehabilitation.

The compensation awarded to PAPs shall match market rates, even if this means that the cost of Resettlement and Rehabilitation (R&R) as percentage of the total project cost goes up.

The definition of PAPs shall be such as to cover all the people who are actually affected by the project.

All water and power development projects shall ensure that benefits of the project go to the local people first. For example, water supply and electric connections shall be provided on priority to all local people who are affected.

A separate R&R cell or wing shall be created within the project management structure to be staffed with social scientists (sociologists, anthropologists, economists) and extension/community workers besides engineers. This cell shall focus on bringing about attitudinal change among the project managers and government officials towards the problems of the PAPs. The central or state governments or corporations who are repeatedly involved in R&R activities shall set up a cadre of persons (from both engineering and social science backgrounds) trained in R&R activities.

The concerned government shall appoint an independent agency (outside the project implementation) to monitor the R&R activities at regular intervals for the whole duration of the development project. Representatives of local people/reputed NGOs shall be associated/co-opted as a part of this agency to inspire confidence among the affected people. They shall visit the sites/villages for redressing the grievances rather than wait for complaints.

8.7 Industry and Thermal Power

Most of the thermal power houses and industries with heavy use of water shall be located on the coast. They shall be encouraged to use sea water/desalinated water, adopt processes with minimum use of water, recycle and reuse and discharge only treated and cooled water into the sea to maintain its ecology.

8.8 Navigation

In order to save energy and reduce our dependence on petroleum products, the major portion of which is imported, navigational transport in rivers is essential. This will require that minimum flow and depth in specific reaches of the river is assured.

8.9 Water Service Charges:

Water charges need to be increased gradually to cover at least O&M expenditure of domestic water supply and subsidies shall be eliminated over a period of 10 years. Transfer of management and authority to local organizations would be necessary to achieve this objective.

8.10 Maintenance and Modernization

Structures and systems created through massive investments shall be properly maintained in good health. Appropriate annual provisions shall be made for this purpose in the budgets.

There shall be a regular monitoring of structures and systems and necessary rehabilitation and modernization programmes shall be undertaken.

8.11 Safety of structures

There shall be proper organizational arrangements at state level for ensuring the safety of storage facilities and other water-related structures. The central guidelines on the subject shall be kept under constant review and periodically updated and reformulated. There shall be a system of continuous surveillance and regular visits by experts.

8.12 Ground water development

There shall be a periodical reassessment on a scientific basis of the ground water potential, taking into consideration the quality of the water available and economic viability.

Exploitation of ground water resources shall be so regulated as not to exceed the recharging possibilities, as also to ensure social equity.

Integrated and coordinated development of surface and ground water and their conjunctive use, shall be envisaged right from the project planning stage and shall form an essential part of the project.

Over exploitation of ground water shall be avoided near the coast to prevent ingress of sea water into sweet water aquifers.

8.13 Water Allocation Priorities

In the planning and operation of systems, water allocation priorities shall be broadly as follows:

- Drinking water
- Irrigation
- Hydro-Power
- Navigation
- Fishery
- Industrial and other uses.

However, these priorities might be modified if necessary in particular regions with reference to area specific considerations.

8.14 Drinking water

Adequate drinking water facilities shall be provided to the entire population both in urban and in rural areas. Irrigation and multipurpose projects shall invariably include a drinking water component wherever there is no alternative source of drinking water. Drinking water needs of human beings and animals shall be the first charge on any available water.

8.15 Irrigation

The State Policy concerning irrigation is defined as:

- Irrigation planning either in an individual project or in a basin as a whole shall take into account the irrigation potential of land, cost-effective irrigation options possible from all available sources of water and appropriate irrigation techniques. The irrigation intensity shall be such as to extend the benefits of irrigation to as large a number of farm families as possible, keeping in view the need to maximize production.
- Water use for irrigation shall be implemented in accordance with land use policies.
- Water allocation in an irrigation system shall be done with due regard to equity and social justice. Disparities in the availability of water between head-reach and tail-end farms and between large and small farms shall be obviated by adoption of a rotational water distribution system and supply of water on a volumetric basis subject to certain ceilings.
- Concerted efforts shall be made to ensure that the irrigation potential created is fully utilized and the gap between the potential created and its utilization is removed. For this purpose, the command area development approach shall be adopted in all irrigation projects.

8.16 Rain water

The quality of the rain water shall be monitored regularly so as to be at all times suitable for our rain water fed agriculture and drinking water supply to the rural communities.

8.17 Water rates

Water rates shall be such as to convey the scarcity value or the resource to the users and to foster the motivation for economy in water-use. They shall be adequate to cover the annual maintenance and operation charges and a part of the fixed costs. Efforts shall be made to reach this ideal over a

period, while ensuring the assured and timely supplies. The water rates for surface water and ground water shall be rationalized with due regard to the interests of small and marginal farmers.

8.18 Water Quality

Both surface water and ground water shall be regularly monitored for quality. A phased programme shall be undertaken for improvements in water quality

8.19 Conservation of water

The efficiency of utilization in all the diverse uses of water shall be improved and an awareness of water as a scarce resource shall be fostered. Conservation consciousness shall be promoted through education, regulation, incentives and disincentives especially in the coastal areas of the state.

8.20 Flood Control and Management

There shall be a master plan for flood control and management for the flood prone zones. Sound monitoring and forecasting shall be promoted to reduce the intensity of floods, regulate settlements and economic activities in the flood plains so as to minimize the loss of life and property on account of floods. Physical flood protection works like embankments, dykes, canals and land reclamation shall be paid much attention. This would reduce the recurring expenditure on flood relief.

8.21 Land erosion by sea or river

The erosion of land, whether by the sea in coastal areas or by river waters inland, shall be minimized by suitable cost-effective measures. The State shall also undertake all requisite steps to ensure that indiscriminate occupation and exploitation of coastal strips are discouraged, and that the location of economic activities in such areas shall be regulated

8.22 Science and Technology

For effective and economical management of our water resources, the frontiers of knowledge need to be pushed forward in several directions by intensifying research efforts in various areas, including the following:

- Hydrometeorology
- Assessment of water resources;
- Lake hydrology;
- Ground water hydrology and recharge;
- Prevention of salinity ingress;
- Rain water harvesting;
- Evaporation and seepage losses;
- Economical designs for water resource projects;
- Crops and cropping systems;
- Sedimentation of reservoirs;

- The safety and longevity of water related structures;
- River morphology and hydraulics;
- Soil and materials research;
- Better water management practices and improvements in operational technology;
- Recycling and re-use;
- Use of sea water resources;

8.23 Research and Training

For effective and economical management of our water resources, the frontiers of knowledge need to be pushed forward in several directions by intensifying research efforts in various areas, including the following:

- Hydro-meteorology;
- Assessment of water resources;
- Groundwater hydrology and recharge;
- Water quality, recycling and reuse;
- Prevention of salinity ingress;
- Prevention of water-logging and soil salinity;
- Water harvesting in rural areas in an integral manner;
- Water harvesting and groundwater recharge in urban areas;
- Economical and easy to operate and maintain designs for water resource projects;
- Seismology and seismic design, safety and longevity of structures;
- Sedimentation of reservoirs;
- River morphology and hydraulics;
- Soils and materials research; construction material and technology (with particular reference to roller compacted concrete, fibre reinforced concrete, new methodologies in tunnelling technologies, instrumentation, advanced numerical analysis);
- Use of remote sensing techniques;
- Better water management practices and improvements in operational technologies;
- Use of sea water resources;
- Risk analysis and disaster management;
- Design of less consumptive use in domestic appliances sewage treatment on smaller scales and reuse of water after treatment;

Since the overall thrust of the Bayelsa State water policy is towards stakeholder's participation at all stages, the highest priority shall be accorded to the training of those who are to manage the water

resources at all levels. The training must sensitize all partners to the demands of stakeholder's planning approach to water resource development. Training shall also ensure the technical empowerment of all local institutions and communities who are to plan for, develop and manage water resources. These include NGOs, WCAs, and WASHCOMs etc. It shall cover training in information systems, sectorial planning, project planning and formulation, project management, operation of projects and their physical structures and systems and the management of the water distribution systems. The training shall have a strong component on attitudinal and behavioural change.

9 Action Plan

The Bayelsa State Water Policy will guide the preparation and review of strategic plans, flood control, any other relevant plans and regulations for the development and the management of the water sector within the State. The policy implementation will be carried out through the formulation of local planning strategies, organizational restructuring plans and the consideration of proposals for urban, small town and rural development together with the collaboration and advice of other relevant agencies.

9.1 Overall Implementation Requirements

The operational action plan to achieve the desired objectives requires the following actions:

- Re-assessment of water resources potential basin-wise, periodic assessment and projection of demand for water for diverse uses.
- Preparation of plans for integrated development and management of water resources by all agencies. Developing of new resources and optimal utilization of developed resources and preserving the same.
- The Water Consumer Associations/Local Bodies and Institutions at various levels are to be created for giving effect to the planning, development and management of the water resources along with a multi-sectorial, multi- disciplinary and participatory approach.
- Minimization of the adverse environmental and social impact of water resources project.
- Reduce siltation in river beds, creeks and lakes through weed control, dredging and embankment.
- Evaluate the periodic performance of the project and its overall impact during and after the construction.
- Improve drainage for enhancing agricultural productivity, human and environmental wellbeing.
- Develop navigation and inland water transport.
- Legislation for development and regulation of the exploitation of the ground water and prohibiting ground water abstraction in coastal zones after delineating such a zone for all purposes, other than drinking water.
- Make available safe drinking water to all by 2028
- Help communities revive and develop the traditional water storage technique and structures for rainwater harvesting.
- Encourage Private Sector and Civil Society Organization participation in planning, development and management of water resources projects.
- Safeguard and develop the existing water resources/bodies from pollution and over exploitation.
- Remove and prevent encroachment of such bodies.

- Optimal utilization of the flood plain zones to minimize adverse impact.
- Flood and Erosion Control Department in the relevant Ministries will prepare flood zoning map.
- Relevant Ministries, Agencies and other bodies shall always be prepared for flood impact mitigation
- Take up programmes for public awareness of the importance of conservation and optimum utilization of water. The benefits of appropriate technology shall duly be harnessed.
- Arrest land erosion along the river banks and the seacoasts.
- Flood proofing, flood forecasting and disaster management are to be taken up and updated.
- Take up maintenance, rehabilitation and modernization of the whole system of the water resources projects, as per necessity.
- Ensure safety, serviceability and improved performance of the existing infrastructure and improve efficiency of water system and its application.
- Establish, restructure and strengthen the institutions in the water sector to meet the technological requirements, participatory approaches with involvement of users' organizations.
- Provide a Management Information System (MIS) for effective monitoring and Evaluation of policy implementation.
- Water Quality Assurance Programme shall be given proper shape to avert possible outbreak of water borne diseases and others in a learner's friendly environment.
- Develop projects and programmes that will enhance Gender participation in water service delivery.

9.2 Short Term Activities

The short-term activities required for implementation of this Policy are:

- **Short Term Activity 1 – Monitoring and Evaluation**
 - The development and implementation of National monitoring and evaluation framework in the water sector. The Ministry of Water Resources will prepare on the basis of the Nationally adopted monitoring and evaluation framework, Monitoring and Evaluation Guidelines for be adopted by all stakeholders in the water sector in Bayelsa State. The Guidelines will be prepared within six months of the adoption of this Policy and shall become effective within 12 months of the adoption of this Policy. Training shall be provided in the application of the guidelines.
- **Short Term Activity 2 – Water Management Strategy and Plans**
 - The development and implementation of the water sector management strategy and plans. The main instrument will be the Sector Wide Development Plan (Activity 10 below). This Plan shall be prepared on the basis of local assessments (following the baseline data gathering in Activity 11).

- **Short Term Activity 3 – Water Resources Mapping**
 - Water Resources within the State shall be mapped to allow for effective planning and forecast of use of the water resources.
- **Short Term Activity 4 – Restructuring the Bayelsa State Water Board**
 - Bayelsa State Water Board (BSWB) will be restructured.
 - The Board shall be allowed to concentrate on the urban areas.
 - The Board will be required to operate on the commercial principles of efficient and effective service, cost recovery and customer orientation.
- **Short Term Activity 5 – Establish Small Towns Agency**
 - Bayelsa State Small Towns Water Supply Agency (BSSTOWA) to be established
 - The BSSTOWA shall be set up to allow for the provision of water supply to the small towns and the participation of the stakeholders.
- **Short Term Activity 6 – Establish Independent Regulatory Commission**
 - An independent commission for the regulation of service providers to be set up to drive the improvement within the Water Sector by implementing a programme of policy, regulatory and institutional reform. This will provide protection to consumers, operators and prospective investors by putting in place an open and transparent process. In particular, the commission will be concerned with ascertaining adequacy of the standards of the water services to be provided and the monitoring of compliance. It will carry out Economic and Technical Regulation of water supply services and enforce compliance with its regulations and standards.
- **Short Term Activity 7 – Redesign Supply Network**
 - Redesign of pipe layout to allow for water to be supplied while areas undergo construction or rehabilitation. Although this is a continuous activity, this will allow for the isolation of such areas while continuing service to other areas.
 - Any disruption to the pipe network of the Water Board usually results in the closure of pumping stations leading to conflict with Construction Firms and Ministry of Works and complaints from consumers.
- **Short Term Activity 8 – Borehole Licensing**
 - Survey and licensing of boreholes for public use to be carried out. This will allow for a report on the location of the boreholes and water quality assessment
 - This will monitor borehole license compliance
 - It will also form a planning tool for revenue generation.
- **Short Term Activity 9 – Water Tariff Study**
 - Bayelsa State Water Board (BSWB) to commission a water tariff study to determine its potential consumers' "ability and willingness to pay" for its water supply service and subsequently to design an appropriate tariff targeted towards gradual reduction

in subsidies over a few years. Revenue generation exercise is to commence once the Bayelsa State Water Board (BSWB) has been re-structured.

- The water supply service delivery as currently undertaken in the State is far from being sustainable. Revenue generation from urban water supply (which shall ordinarily provide necessary funds to operate and maintain the system) is almost non-existent. Revenue has to be derived from licensed borehole operators.
- **Short Term Activity 10 – Water Sector Coordination**
 - Institutionalize the meeting of Water Sector Coordination Committee (WSCC).
 - The contributions of the External Support Agencies, Oil Companies, NGOs and other stakeholders active in the sector need to be structured to work in a coordinated manner.
- **Short Term Activity 11 – Baseline Data Gathering**
 - Baseline data gathering for all LGAs to determine service delivery.
- **Short Term Activity 12 – Sector Wide Development Plan**
 - Sector wide development plan and design of water supply in all the LGAs to be carried out.
- **Short Term Activity 13 – Local Government Area Investment Planning**
 - Develop and implement WASH investment plan for all LGAs.
- **Short Term Activity 14 – Annual Work Plans**
 - Bayelsa State Ministry of Water Resources to develop annual State work plan for the water sector.

9.3 Detailed Planning of Activities

In order to oversee the implementation of the Policy, a Working Group will be created. The Working Group will:

- Support the implementation of the Policy
- Report to the Water Coordination Committee

The Working Group will comprise middle managers from all of the following core members:

- Ministry of Water Resources – Working Group Leader
- Ministry of Environment
- Bayelsa State Water Board
- Rural Water Supply and Sanitation Agency
- Small Towns Water Supply Agency (when formed)
- Water Regulatory Commission (when formed)

- Water Consumers Associations representative ²
- WASHCOM representative
- Local Governments Authority Representatives (WASH Departments)
- Non-Governmental Organization representative

Other organisations, such as the Ministry of Health, may also be co-opted onto the Working Group for specific issues.

The implementation activities have been scheduled as shown in the following implementation plan.

The first Gantt Chart shows the overall implementation approach, whilst the second shows detail tasks for the establishment of the two new bodies:

- The Small Towns Water Supply Agency
- The Water Regulatory Commission

² One or more WCA, WASHCOM and NGOs representatives may be invited to work on the Working Group – they should represent the views of ALL WCAs, WASHCOMs and NGOs in the State

FIGURE 6 POLICY IMPLEMENTATION PLAN

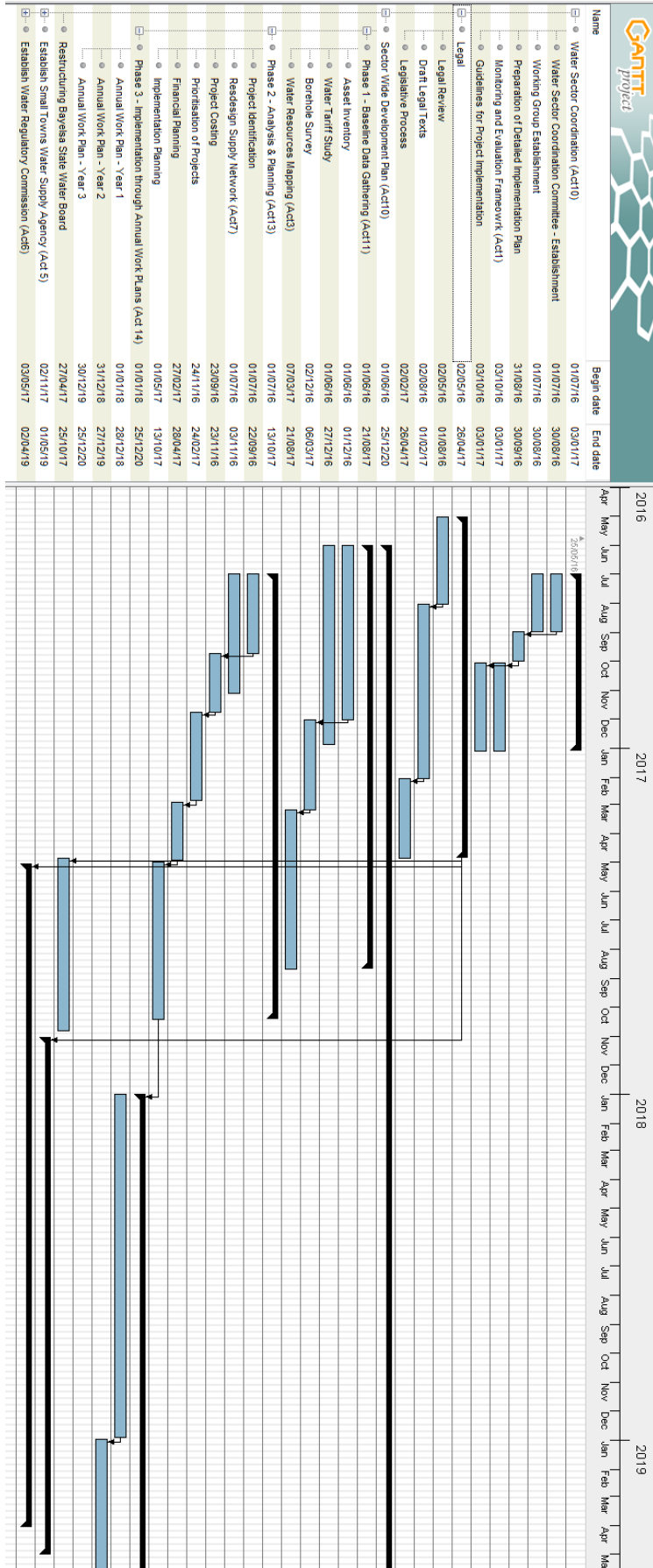


FIGURE 7 IMPLEMENTATION PLAN FOR CREATION OF NEW INSTITUTIONS

