



FEDERAL GOVERNMENT OF NIGERIA

**NIGERIA'S PATH TO SUSTAINABLE
DEVELOPMENT THROUGH
GREEN ECONOMY**

**Country Report to the
Rio+20 Summit**

June 2012

COUNTRY PROFILE

Capital: -	Abuja 9°4'N7°29'E/9.067°N 7.483°E
Official Language: -	English
Government: -	Federal Republic, Presidential Democracy
President: -	His Excellency, Dr. Goodluck Ebele Jonathan, GCFR
Vice President: -	His Excellency, Arc. Namadi Sambo, GCON
Total Land Area: -	923,768km ²
Population Estimate (2011):-	164 million
Nominal GDP:-	\$242.40 Billion (2010)
GDP Per Capita:-	\$1474.56
GDP growth rate: -	6.67%
Major Natural Resources: -	Oil and Gas, Gold, Limestone, Iron ore, Lead and Zinc, Barite and Bitumen, Gemstones etc
Major Agricultural Resources: -	Cocoa, Cassava, Coffee, Rubber, Groundnuts, Cashew, Gum-arabic, Cotton, Shea tree, Rice, Sorghum, Oil palm, Maize, Beef, Dairy, Poultry, leather, Fisheries, etc
Share of Natural Resources in real GDP: -	55%
Currency: -	Naira (₦)
Exchange Rate: -	153.90 NGN = 1 USD;
Time Zone: -	GMT+1
Major Seaports: -	Lagos, Calabar, Port Harcourt and Warri.
Major Airport:	Lagos, Abuja and Kano

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ACRONYMNS

ABS	–	Access & Benefit Sharing
ARH	–	Adolescent Reproductive Health
AUC	–	African Union Commission
BNRCC	–	Building Nigeria Response to Climate Change
BPP	-	Bureau of Public Procurement
CBN	–	Central Bank of Nigeria
CCCB	–	Climate Change Commission Bill
CCCFR	–	Centre for Climate Change and Freshwater Resources
CBHI	–	Community Based Health Insurance
CEDAW	–	Convention on Elimination of all forms of Discrimination Against Women
CHPP	–	Consumer Heat and Power Plant
CDM	–	Clean Development Mechanism
CITES	–	Convention on International Trade in Endangered Species of Wild Fauna & Flora
CBHI	–	Community Based Health Insurance
CCVI	–	Climate Change Vulnerability Index
CHPP	–	Combined Heat Power Plant
CPC	–	Consumer Protection Council
DfID	–	Department for International Development
DNA	–	Designated National Authority
DRR	–	Disaster Risk Reduction
ECN	–	Energy Commission of Nigeria
ECOWAS	–	Economic Community of West Africa States
EFCC	–	Economic & Financial Crimes Commission
EHORECON	–	Environmental Health Officers Registration Council of Nigeria
FAO	–	Food and Agriculture Organization of the United Nations
FCT	–	Federal Capital Territory
FDI	–	Foreign Direct Investment
FEC	–	Federal Executive Council
FOIB	–	Freedom of Information Bill
FMOH	–	Federal Ministry of Health
FEPA	–	Federal Environmental Protection Agency
FRIN	–	Forestry Research Institute of Nigeria
GGCA	–	Global Gender and Climate Alliance
GPA	–	Global Programme of Action
GDP	–	Gross Domestic Product
GAR	–	Gross Attendance Ratio
GGWSSI	–	Great Green wall for the Sahara and the Sahel Initiative
GEDP	-	General Entrepreneurs Development Programme
GSM	–	Global Services Mobile Telecommunications
GHG	–	Green House Gas
GEF	–	Global Environment Facility
GSSD	–	Global System for Sustainable Development
HIV/AIDS	-	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
HDI	–	Human Development Index

HVDC	–	High Voltage Direct Current
ICPC	–	Independent Corrupt Practices Commission
IUCN	–	International Union for the Conservation of Nature
ICT	–	Information and Communication Technology
IDC	–	Industrial Development Centre
ICRAF	–	International Centre for Research and Agro-forestry
IGAD	–	Inter-Governmental Authority on Drought and Development
IPP	–	Integrated Power Project
IWRM	–	Integrated Water Resources Management
JPOI	–	Johannesburg Plan of Implementation
JMP	–	Joint Monitoring Programme
LCBC	–	Lake Chad Basin Commission
LEMC	–	Local Emergency Management Committee
LGMC	–	Local Government Management Committees
LGAs	–	Local Government Areas
MEAs	–	Multilateral Environmental Agreements
MDGs	–	Millennium Development Goals
MEC	-	Mines Environmental Compliance
MMSD	-	Ministry of Mines & Steel Development
MSMEs	–	Medium Small and Micro Enterprises
MTSS	–	Medium Term Sector Strategy
NAFDAC	–	National Agency for Food and Drug Administration and Control
NBA	–	Niger Basin Authority
NASPA-CCN	–	National Adaptation Strategy & Plan of Action for Climate Change Nigeria
NAMA	-	Nationally Appropriate Mitigation Action
NDMF	–	National Disaster Management Framework
NDRP	–	National Disaster Response Plan
NHIS	–	National Health Insurance Scheme
NSCCTF	-	National Strategy for Climate Change Trust Fund
NIMET	–	Nigeria Meteorological Agency
NIRSAL	-	Nigeria Incentive-Based Risk Sharing System for Agricultural Lending
NNPC	–	Nigeria National Petroleum Corporation
NIOMR	–	Nigeria Institute for Oceanography and Marine Research
NEMA	–	National Emergency Management Agency
NEITI	–	Nigeria Extractive industries Transparency Initiative
NSHDP	–	National Strategic Health Development Plan
NBSAP	–	National Biodiversity Strategic Action Programme
NIHSA	–	Nigeria Hydrological Services Agency
NEEDS	–	National Economic Empowerment and Development Strategy
NDDC	–	Niger Delta Development Commission
NOTAP	–	National office for Technology Acquisition Programme
NBS	–	National Bureau of Statistics
NEDS	–	Nigeria Education Data Survey
NDHR	–	Niger Delta Human Resources
NTFPs	–	Non Timber Forest Products
NAPEC	–	National Poverty Eradication Council
NOSDRA	–	National Oil Spill Detection & Response Agency

NESREA	–	National Environmental Standards, Regulations & Enforcement Agency
NAPEP	–	National Poverty Eradication Programme
NHIS	–	National Health Insurance Scheme
NDMF	-	National Disaster Management Framework
NDRP	-	National Disaster Response Plan
NEP	–	National Energy Policy
NERDC	–	Nigerian Educational Research and Development Council
NCF	–	Nigerian Conservation Foundation
NCP	–	National Contingency Plan
LOP	–	One Local Government One Product
ODS	–	Ozone Depleting Substances
PAAGGW	–	Pan African Agency of the Great Green Wall
PIB	–	Petroleum Industry Bill
RED	–	Renewable Energy Division
RIDS	–	Rural Infrastructure Development Scheme
REDD	–	Reducing Emissions from Deforestation and Forest Degradation
SEEA	–	System of Environmental and Economic Accounting
SCCU	–	Special Climate Change Unit
SEEDS	–	State Economic Empowerment Development Strategy
SEMA	–	State Environmental Management Agency
SEPA	–	State Environmental Protection Authority
SGRA	–	Strategic Grain Reserve Authority
SOWESS	–	Social Welfare Services Scheme
ST&I	–	Science, Technology & Innovation
SMEDAN	–	Small and Medium Enterprises Development Agency of Nigeria
SMM	–	Sustainable Materials Maintenance
SPEC	–	State Poverty Eradication Council
SON	–	Standards Organisation of Nigeria
SPX	–	Sub-Contracting and Partnership Exchange
TACC	–	Territorial Approach to Climate change
TRATOW	–	Train To Work
UNCBD	–	United Nations Convention on Biological Diversity
UNCCD	–	United Nations Convention to Combat Desertification in those countries experiencing serious drought and/or desertification, particularly in Africa
UNCED	–	United Nations Conference on Environment & Development
UN CSD	–	United Nations Commission on Sustainable Development
UNDESA	–	United Nations Department of Economic & Social Affairs
UNDP	–	United Nations Development Programme
UNFCCC	–	United Nations Framework Convention on Climate Change
UNIDO	–	United Nations Industrial Development Organisation
UN-SPIDER	-	United Nations Platform for Space based Information for Disaster Management
UN-OCHA	–	United Nations Office for the Coordination of Humanitarian Affairs
UNICEF	–	United Nations Children Emergency Fund
UNEP	–	United Nations Environment Program
WEDP	–	Women Entrepreneurship Development Programme
WFP	–	World Food Programme

WSSD	–	World Summit on Sustainable Development
WSP	–	Water Sanitation Programme
YEDP	–	Youth Entrepreneurship Development Programme
YES	–	Youth Empowerment Scheme
YouWIN	–	Youth Enterprise With Innovation in Nigeria Programme

FOREWORD

Nigeria, as a member of the United Nations (UN), is actively involved in the processes leading to the United Nations Conference on Sustainable Development (Rio+20), the conference and other activities therein. The theme, 'Green Economy in the Context of Sustainable Development and Poverty Eradication', is timely and an impetus for the country to strengthen activities that will reverse environmental degradation and sustain the environment.

The Government recognizes the need to follow the path of sustainable development. The various policies of the Government, including the NEEDS I and II, the National Vision 20:2020, and the Transformation Agenda, were geared towards ensuring sustainable development in Nigeria. These policies are aimed at poverty eradication and wealth creation; improving the livelihood of our people; making the investment climate better for local and foreign investors; protecting our environment and conserving our natural resources; as well as ensuring the safety and security of life and property. The Government is also currently renewing efforts at achieving gender equality in line with the principle of affirmative action towards sustainable development.

This Country Report documents what we have achieved over the last 20 years in our quest for sustainable development. It highlights our policies, programmes and activities. It also presents an analysis of our development activities and challenges under the economic, social and environment pillars.

Eco-diplomacy has become an important aspect of Nigeria's foreign policy. Nigeria has been very active in various global, regional fora and initiatives. The country has provided leadership in some areas, and will continue to partner with the international community in the global efforts to promote sustainable development. We shall endeavour to meet our commitments and obligations to the environment conventions, treaties, protocols and agreements to which Nigeria is a signatory. We believe that both the North and the South can work together for the sustainable development of our common heritage – the earth.

We wish to express our appreciation to the international community for their support and collaboration with Nigeria over the years. As we deliberate and plan in Rio for 'The Future We Want', it is my firm belief that the outcome of the Rio+20 Summit will lead us to the path of sustainable development.

Dr. Goodluck Ebele Jonathan, GCFR
President and Commander-in-Chief of
The Armed Forces
Federal Republic of Nigeria

JUNE, 2012

Preface

The core mandate of the Federal Ministry of Environment is to secure a quality environment conducive for ecosystem health and integrity; promote sustainable use of natural resources; and raise awareness on the environment.

As the focal point for environment and sustainable development in Nigeria, the Federal Ministry of Environment has, over the years, been coordinating the national processes on the follow – up on the Earth Summit held in Rio de Janeiro in Brazil in 1992, including the development and implementation of the National Agenda 21 and the activities on the United Nations Commission on Sustainable Development. Furthermore, the national preparatory activities for the Rio + 20 Summit are also part of the responsibilities of the Federal Ministry of Environment.

The national preparatory processes to Rio+20 entailed extensive consultations and stakeholders' involvement and participation. The stakeholders included public and private sector organizations, the legislature, Non- governmental Organisations (NGOs), community – based organizations (CBOs), trade unions, cooperatives, business associations, professional bodies, policy advocacy groups, consumer and human right groups, women organizations, youths, faith – based organizations, academia, and research institutions.

As part of the national preparatory process to Rio+20 Summit, three national stakeholders' workshops were held for Federal Ministries, Departments and Agencies (MDAs), Academia, Non Governmental Organizations (NGOs), Community Based Organizations (CBOs), the media; private sector organizations, State Ministries and local Governments. There were also expert group meetings and special consultative meetings with the Members of the National Assembly and the Federal Executive Council. All these activities were geared to provide input into the national preparatory process and to enrich the draft country report.

This Country Report to the Rio+20 Summit – *“The Nigeria’s Path to Sustainable Development through Green Economy”* – is the outcome of those meetings and consultations and a reflection of the progress made towards sustainable development. It is also a reference material on the activities and programmes of Federal Government of Nigeria with regard to environmental protection and sustainable development over the last 10 years, since the World Summit on Sustainable Development held in Johannesburg in 2002.

It is my wish that the progress made towards achieving sustainable development in Nigeria will spur us to even greater heights as we strategize for the post Rio+20 and the implementation of the outcomes of the Summit at national, regional and global levels.

Hadiza Ibrahim Mailafia

Honourable Minister for Environment

Federal Republic of Nigeria

JUNE, 2012

ACKNOWLEDGEMENTS

We wish to acknowledge the support provided to the Federal Ministry of Environment to achieve milestones in sustainable development activities both in Nigeria and internationally. We specially thank His Excellency, Mr. President, Dr. Goodluck Ebele Jonathan, GCFR and His Excellency, the Vice President Arc. Namadi Sambo, GCON.

We also thank the Members of the National Assembly, members of the Federal Executive Council, Permanent Secretaries and the public sector. We acknowledge the fact that we have continued to register successes in our policies, plans, programmes and projects for sustainable development through their support.

We would also like to express our gratitude to the various development partners who have been assisting the Ministry through numerous programmes and projects, especially those bearing on sustainable development. Special mention must be made of the United Nations Development Programme (UNDP) which collaborated with the Government of Nigeria financially and technically in the course of the preparation for Rio+20.

The contributions constantly coming from various stakeholders towards our resolve to ensure sustainable development are highly appreciated. The role of the private sector, experts, academia, and non-governmental organizations, including women, youth and vulnerable groups in ensuring that Nigeria continues to address the issues of sustainable development is acknowledged.

Finally, we appreciate the commitment of the Rio + 20 Secretariat, Task Force, staff of the Ministry of Environment, members of the Ministerial Committee, the Ministerial Technical Working Group and the Inter-Ministerial Committee for the success of the national preparation for the Rio + 20 Summit.

Mrs. Ibukun A. Odusote
Permanent Secretary, Federal Ministry of Environment
Federal Republic of Nigeria

JUNE, 2012

EXECUTIVE SUMMARY

Introduction

Since the 1992 United Nations Conference on Environment and Development (UNCED), otherwise called the Earth Summit, in Rio de Janeiro, Brazil, there have been extensive efforts to operationalize sustainable development by governments and other stakeholders. Many reviews have been undertaken to assess progress and challenges. In 2002, ten years after Rio, the World Summit on Sustainable Development (WSSD) took place in Johannesburg, South Africa. This resulted in the Johannesburg Plan of Implementation (JPOI), which reiterated the importance of achieving internationally agreed development goals embedded in the outcomes of the major United Nations Conferences and international agreements since 1992, including those contained in the United Nations Millennium Declaration, United Nations Framework Convention on Climate Change (UNFCCC), United Nations Convention on Biological Diversity (UNCBD), United Nations Convention to Combat Desertification in those Countries Experiencing Drought and/or Desertification, particularly in Africa (UNCCD), and non-binding targets of the Forestry Principles.

Twenty years after the historic 1992 Earth Summit, the world is coming together once again in a global conference in Rio in June 2012 (Rio +20) to discuss issues around sustainable development. The global imperative of green economy and other emerging issues such as climate change and development, biodiversity, the land policy initiative, development of strategic agricultural commodity, food security – bridging the gap through mobilization of internal resources, technology transfer, organizational restructuring etc., will also be discussed.

In this report, which is a follow-up to the national report submitted to the WSSD in 2002, Nigeria takes stock of what it has achieved since WSSD and what the country is doing in its efforts to achieve national sustainable development, particularly in the face of emerging challenges such as climate change, and the greening of an economy that is currently fossil fuel-dependent. The country's progress in the implementation of Agenda 21 (the global environmental Action Plan adopted at the Earth Summit in 1992) towards the attainment of a poverty-reducing, socially-equitable and environmentally sustainable national development is elaborated, with emphasis on national activities, programmes and initiatives that have been put in place in the last 10 years (after WSSD). Major achievements, challenges and opportunities for sustainable development in a democratic developing economy are discussed.

Sustainable Development in the National Context

The economic, social and environment pillars of sustainable development have been adequately embedded in many parts of the country's 1999 Constitution. In particular, the Constitution states that the Federal Republic of Nigeria is *"a State based on the principles of democracy and social justice"*. The Constitution also promises to all Nigerian citizens' justice

encompassing the social, economic, political, equality of status opportunity and the dignity of the individual. With particular emphasis on the environmental pillar of sustainable development, Article 20 (sub-section 2), of the Constitution states that, *“the State shall protect and improve the environment and safeguard the water, air and land, forest and wild life of Nigeria”*. Key challenges of sustainable development are discussed and attempts to overcome these challenges analyzed.

Nigeria’s economic development in the last decade has witnessed some growth. Between 2002 and 2011 the economy grew at an average of 6.2 percent. Growth in the agriculture sector, the main non-oil sector of the economy, increased partly due to the agricultural policy and institutional support that government has consistently given to the sector, particularly growth enhancement support to farmers.

By 2011, the population was estimated to be 164 million. Government recognizes that poverty and unemployment remain critical challenges to its efforts to enhancing the quality of life of the people. However, the country has made progress in improving the social status of its citizenry since WSSD.

In the area of education the Gross Attendance Ratio (GAR) is 85. There are 124 universities in the country. In 2009/2010, enrolment in all universities was 605,068 made up of 375,142 male students and 229,926 females (Federal Ministry of Education, 2012). Adult literacy rate stands at 64.2 per cent.

In the health sector, the infant mortality rate has fallen from 105 in 1999 to 86 in 2008, while under-5 mortality rate fell to 157 in 2008 from 178 deaths per 1,000 births in 1999. Child mortality rate for the male child during 2003 to 2008 period is 91 compared to 93 for female. Life expectancy has improved from 45 years in 2002 to 48 years in 2010 for males, while corresponding figures for females are 46 years (2002) and 49 years (2010). The maternal mortality ratio was 840 per 100,000 live births in 2008. There has, however, been a reduction in HIV/AIDS prevalence from 4.6 per cent in 2007 to 4.1 per cent in 2010.

Nigeria ranks among the most urbanized countries in the world with a rate of 49.8 per cent in 2010. The rate is projected to increase to 56.8 percent and 63.6 percent in 2020 and 2030 respectively. This poses some challenges to the provision of basic services for all, despite government efforts, particularly in terms of safe water and sanitation. Access to safe water in the rural and as at 2011 stands at 43 % and 74 % respectively.

Nigeria's environment is currently under increasing threat from natural and human-induced disasters such as drought, floods and erosion. Population increase is exerting pressure on the environment. Rapid deforestation, resulting from unsustainable uses of forest resources for human survival (e.g. fuel wood and energy, housing etc.) is a major contributing factor to land degradation. Also, indiscriminate and inappropriate mining activities in many parts of Nigeria have left some areas of the country bare and unproductive. There is also some concern about

air and water pollution, liquid and solid wastes associated with continued urbanization and industrialization in the country.

Addressing Sustainable Development Challenges

Like any developing nation, Nigeria faces some challenges in its development stride and efforts to improve the quality of life of its citizens. The critical economic issues concern the need to foster sustainable rapid economic growth that will cater for the needs of its large population and the imperative for proper integration of its domestic economy into the world economy in the face of increasing globalization. The government also recognizes that advancing democratic governance is key to the political stability of the country. Overcoming the challenges of poverty, fighting corruption, meeting the basic needs of the people, inadequate and inefficient infrastructure and development of human resources and capital for sustainable growth and equity are critical social challenges that government is determined to address. The government also recognizes the need to maintain the sustainability of the country's environmental resources for the benefit of present and future generations.

Nigeria reckons that for it to meet its development challenges and follow the path of sustainable development, it will focus its efforts at:

- Creating consistent demand for good governance including addressing socio-economic and political marginalization that seem to fuel conflicts;
- Tackling poverty and reducing inequality through inclusive policies and people-centred development programmes, as well as addressing critical factors of poverty, underdevelopment, joblessness and lack of economic diversification;
- Promoting environmental sustainability;
- Addressing the challenge of climate change;
- Greening various sectors of its economy to capitalize on emerging opportunities to leapfrog development, and
- Promoting massive investment in people to tap unto the latest potential offered by globalization and new information technology.

To do this effectively, the government has:

- Put in place policies and programmes aimed at fulfilling its commitment towards social progress, accelerated economic growth and enhanced environmental management;
- Strengthened institutional and legal frameworks imperative for sustainable development and the National Assembly carries out oversight functions and monitors effectively and evaluates the implementation of projects captured in the budget of the MDAs.
- Embarked on a number of initiatives for financing sustainable development; and
- Supported a number of implementation imperatives and mechanisms, particularly as they relate to governance, education and awareness creation, capacity building, multi-stakeholders' participation and international and regional cooperation.

With a view to revamping the economy, the government has initiated several policies and programmes. In 2004 the First National Economic Empowerment and Development Strategy (NEEDS I) was launched. This was followed by the Second National Economic Empowerment and Development Strategy (NEEDS II, 2007-2009). The latter was replaced by the National Vision 20:2020 (NV20:2020) meant to span 2010-2020. Based on NV 20:2020 blue print, the Transformation Agenda emerged as the implementation strategic framework which is now being implemented. The key priority projects of the Transformation Agenda are derived from 20 Ministries, Department and Agencies (MDAs) and sectors where a total of 1613 projects were identified, out of which 385 are new while 1361 are ongoing.

Towards further improving on its economic performance, the government has put in place broad economic reform programmes. The government realizes the importance of privatization and the need to restructure the economy. The thrust of the reforms in all sectors is to make Nigeria's market more internationally competitive, remove controls over public sector involvement in most areas of economic activity and eliminate barriers to trade. In the financial markets, reforms sought to liberalize access to foreign capital and encourage foreign investment. Domestic capital markets are also being expanded by strengthening of institutions, including banking and financial regulatory bodies.

To translate the projects into reality, a number of policy and regulatory enablers have been put in place. These will ensure that businesses can invest and operate in a private-sector led approach without the fear of losing out on opportunities to grow because of bureaucracy, poor market access or any other impediments. The rule of law will also guarantee property rights and contract enforcement, which provide great impetus for growth of business and the contribution of businesses to economic growth. Government will simplify procedures for doing business, including:

- Reducing the length of time and cost of registering a business;
- Simplifying and harmonizing the tax systems and payment channels;
- Reducing the turnaround time and cost of obtaining building permits;
- Ensuring easy access to affordable and long-term finance; and
- Expanding IT infrastructure to facilitate easy access to internet and telecommunications services.

To improve the social status of Nigerians, social policies that are addressing existing social inequity and concerns, including economic liberalization and globalization have been pursued vigorously. Key elements of intervention in the context of implementing NV20: 2020 and The National Transformation Agenda centre on issues of governance and human capital development. Such interventions include, amongst others:

- Enhancing political, economic and corporate governance and effectiveness of institutions;

- Human capital development;
- Poverty eradication;
- Implementation of the National Strategic Health Development Plan;
- Implementation of urban policies for sustainable housing, urban renewal and good living;
- Empowerment of women, youth and other vulnerable groups;
- Implementation of the National Action Plan on Employment Creation (NAPEC) targeted at creating five million new jobs annually within the next three years;
- Accelerated rural development; and
- Implementation of the National Plan of Action on Disaster Risk Reduction.

The country, in line with global best practices, is strengthening its efforts at achieving gender equality as a fundamental step to the achievement of sustainable development. In 2006, Nigeria approved the National Gender Policy, which is guided by the global instrument on the Convention on Elimination of all forms of Discrimination Against Women (CEDAW) and its optional Protocols. National gender awareness and advocacy received added impetus with the institutionalization of gender mainstreaming in the country by the Federal Government. In a similar manner, mechanisms have been developed to assess the impact of the implementation of national policies and programmes on women, youth, children and vulnerable groups.

To promote environmental sustainability, the National Environment Policy of 1999 is a key policy document that stipulates the principles for sustainable development. Policies and programmes under broad categories of the environmental pillar are related to forestry, biodiversity, pollution control, land degradation, water management, climate change, marine and coastal environment, clean energy, and environmental crime.

Government has taken the issues of environmental pollution and degradation seriously. Various national efforts have been put in place at all levels of governance to promote environmental sustainability in the context of national sustainable development. Government has created some institutional arrangements for environmental governance. The Federal Ministry of Environment is pursuing its mandate of:

- Securing a quality environment conducive for good health and well being of fauna and flora.
- Promoting sustainable use of natural resources.
- Restoring and maintaining the ecosystem, ecological process and preserving biodiversity.
- Raising public awareness and promoting understanding of linkages of the environment.

Furthermore, specific Agencies have been created to provide more focussed attention to some specific environmental problems. They include the *National Oil Spill Detection and Response Agency* (NOSDRA) and *National Environmental Standards and Regulations Enforcement Agency* (NESREA), which were created respectively in 2006 and 2007. NOSDRA has the mandate to implement the national oil spill contingency plan. NESREA has responsibility to enforce all environmental laws, guidelines, policies, standards and regulations in Nigeria, as well as enforce compliance with the provisions of all international agreements, protocols, conventions and

treaties on the environment to which Nigeria is a signatory. From 2007 to 2012, NESREA has developed twenty four (24) Environmental Regulations which have been gazetted and are in various stages of operationalization. These Regulations have key provisions for environmental control, clean-up and remediation. Other institutions include the Forestry Research Institute of Nigeria (FRIN), National Parks and Environmental Health Officers Registration Council of Nigeria (EHORECON). FRIN is mandated to conduct research into all aspects of Forestry, Wildlife Management, Agro-forestry and Forest Products Utilization; as well as train technical and sub-technical personnel for the forestry and agro allied services in the country through its colleges.

Towards addressing climate change, Nigeria has put in place institutional structures and policies for national implementation of the UNFCCC, the Kyoto Protocol and any other instruments put in place. The government is also pursuing the implementation of environmental protection and sustainable development of the Niger Delta.

Towards the achievement of sustainable development through the tenets of green economy, government is pursuing initiatives that will enhance its global competitiveness and best practices by:

- Promoting the elimination of environmentally harmful subsidies and replacing them with market based incentives.
- Employing near market based instruments with target instructions to green key sectors.
- Enforcing its environmental rules and regulations in important sectors such as agriculture, biodiversity, forestry, water resources, fisheries and renewable energy.
- Strengthening the economic programmes by adopting the System of Environmental and Economic Accounting (SEEA) which has been prepared by the UN statistical Division. This approach will provide a free indicator of the real level and visibility of growth, income and employment.

The government reckons that moving to more sustainable development pathways requires considerable financial mobilization and commitment, not only to address new concerns and issues linked with a sustainable development agenda, but also to accelerate positive development in traditional sectors of financial allocation. Therefore, government is mobilizing financial and technical resources from within and outside the country to drive the process of sustainable development in Nigeria.

The strategic approach that is adopted to operationalize sustainable development in Nigeria centres on critical mechanisms of:

- Governance;
- Education, public awareness and capacity building;
- Stakeholders' participation;
- Information and Communication Technology (ICT)
- Environmental Monitoring and Data Management
- Science, technology and innovation
- Research for development

- Financing for sustainability; and
- International and regional cooperation

Way Forward

Overall, Nigeria will continue to pursue policies and measures to promote a more environmentally sound economy in the context of sustainable development. Such policies and measures will be based on the following key principles and approaches:

- Recognizing the economic and social values of environmental resources;
- Conserving resources and restoring damaged environments and eco-systems;
- Setting up targets and standards to control environmental degradation;
- Enabling prices to better reflect their environmental value, while ensuring access to basic goods and services;
- Improving the critical regulatory and strategic policymaking roles of the public sector to re-orient various economic and social sectors towards a sustainable development pathway;
- Enhancing the role of the private sector to take a sustainable development pathway, while at the same time being able to operate in an intensely competitive environment;
- Addressing the link between livelihoods and living conditions of rural communities and the environment. Government will ensure that the pursuit of sustainable development and green economy incorporates the right of rural communities to a clean environment that enables them to have a sound basis for their livelihoods and their living conditions in accordance with global practices.
- Addressing unsustainable consumption patterns and the link to environment, poverty and equity.
- Promoting food security, sustainable agriculture and rural livelihoods resilience to reduce national vulnerability to climate change.
- Strengthening national institutional and legal mechanisms to support policies and efforts towards sustainable development.

Conclusion

Nigeria recognizes that it faces many challenges in moving its economy to a more environmentally friendly, green and sustainable path. In this regards the country advocates that necessary conditions must be established at the global and regional levels to make it possible for developing countries to move towards a “green economy” within the framework of the Rio Principles and Agenda 21. The tenets of “green economy” in Rio + 20 should be consistent with the sustainable development concept, principles and framework with continued focus on poverty reduction, which has remained a major global development challenge.

CHAPTER 1

Background and Introduction

1.1 National Circumstances

Nigeria lies roughly between latitudes 4° and 14°North and longitudes 3° and 15°East in West Africa. It covers a land mass of approximately 923,768 km² representing about 14% of land area in West Africa. It is bordered by the elongated territory of Benin to the west, the semi-arid country of the Niger Republic to the north, the sub-equatorial Cameroun to the east and the Atlantic Ocean to the south. The country's coastline spans over 853km with the Niger Delta portion covering about 80% of the entire coastal length. A major feature of Nigeria's coastal and marine environment is the Niger Delta, which covers an area of 70,000 km², and that makes it one of the largest wetlands in the world. The mangrove forests of Nigeria rank as the largest in Africa, the third largest in the world.

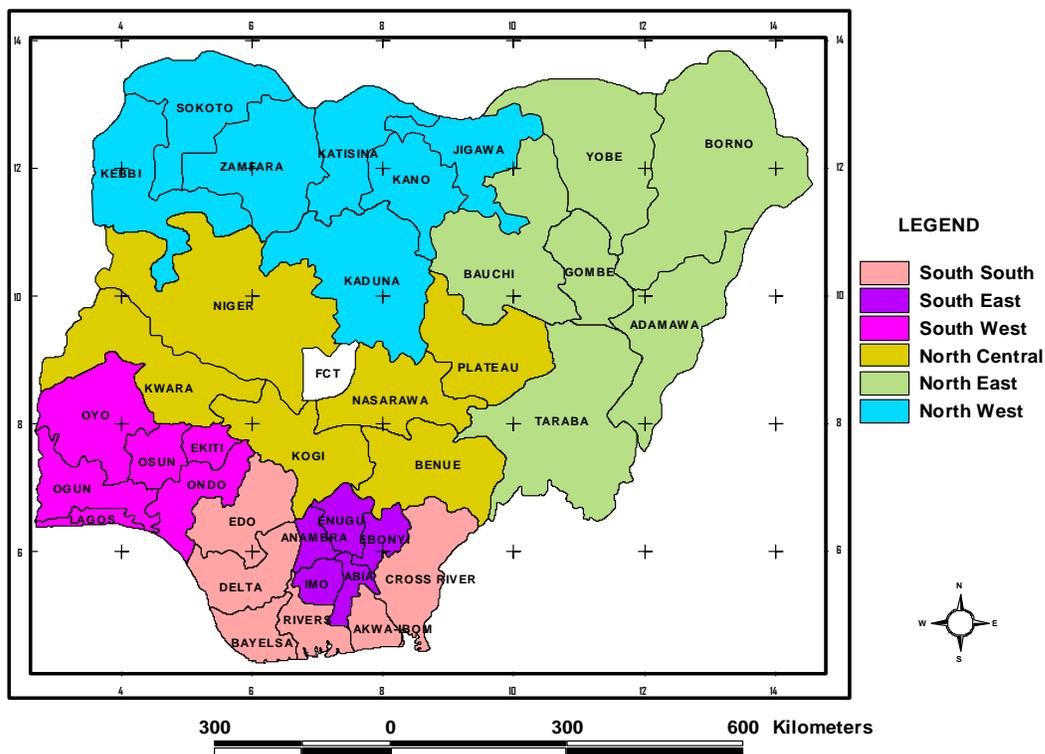


Figure 2.1: Nigeria's Geopolitical Zones

Figure 1: Nigeria's Geopolitical Zones

Nigeria is located mainly within the lowland humid tropics and is characterized by high temperatures almost throughout the year. In the far south, mean maximum temperature is 32°C, while in the north it is 41°C. The mean minimum temperature is 21°C in the south and about 13°C in the north, making the north to have a much higher annual range than the south.

The mean annual rainfall over the country varies from a high of over 3,500 mm along the coast to a low of less than 600 mm in the Sahel region in the northwest and northeast parts of the country. The annual variation of rainfall, particularly in the north, is large. This often results in climatic hazards, especially floods and droughts, which bring in their wake much suffering with devastating effects on food production and the nation's economy.

Nigeria is blessed with numerous rivers as well as coastal and inland sedimentary structures that store copious groundwater resources. According to the 2008 State of the Environment Report (Federal Ministry of Environment, 2008), the total surface water resources potential for Nigeria is estimated to be 267.3 billion cubic metres while the groundwater potential is put at 51.9 billion cubic metres, giving a total of 319.2 billion cubic metres. In addition, the number of relatively large dams completed or under construction in Nigeria is put at about 160 with a total active storage of 30.7 billion cubic metres

In ecological terms, Nigeria is a land of extremes. In the south, lush forests (mangrove forest, fresh water swamp forest and rainforest) dominate the "natural" vegetation. This gives way to Guinea savanna in the middle belt, while savanna woodland and thorny vegetation dominate the semi-arid and arid regions of the north.

Nigeria is well endowed with vast human and material resources that can guarantee sustainable economic growth and development. It has large reserves of solid minerals including bitumen, topaz, lignite, coal, tin, columbite, iron ore, gypsum, barite and talc. The proven reserves of crude petroleum are well over 37 billion barrels, while reserves of natural gas stand at over 187trillion standard cubic feet (NPC, 2009).

Nigeria's population is estimated to be 164 million in 2011, spread over an area of 923,800 square kilometers. This makes the country the most populated nation and one of the largest countries in Africa. The Nigerian population is now estimated to be growing at about 3.2 % per year. At that rate, the population is projected to double in size by 2030. The more than 250 constituent ethnic nationalities of the country, however, add a dynamic blend to the socio-political and cultural landscape of the country.

Nigeria runs a Federal system of government with a strong central government and 36 states together with a Federal Capital Territory (FCT). The States and FCT are further sub-divided into 774 Local Government Areas/Area Councils for grassroots administration. The 36 States are grouped into six geopolitical zones mainly for political purposes (Figure 1). The Constitution affirms that Nigeria is one indivisible and indissoluble sovereign state, whose constituent units are bound together by a Federal arrangement. It provides for a presidential system of government in which there is an Executive, a Legislature and a Judiciary, with each arm acting

as a check and balance on the powers of the other two arms. The legislative structure is bicameral with upper and lower chamber at federal level while state governments and local councils operate single legislative chambers. A judicial structure erected in all three tiers of government completes the operational framework for checks and balances and separation of powers in governance as enshrined in Nigeria's Constitution. The Constitution further provides for the operation of three tiers of government, at the Federal, State and Local levels (NPC 2009).

1.2 Nigeria's Constitution and Sustainable Development

The 1999 Constitution of Nigeria (as amended) reinforces the policy and legal basis of sustainable development in Nigeria. Pillars of sustainable development are embedded in many parts of the Constitution. The Federal Republic of Nigeria is "*a State based on the principles of democracy and social justice*". The Constitution promises to all Nigerian citizens' justice encompassing the social, economic, political, equality of status, opportunity and the dignity of the individual.

In Article 1 (sub-section 2), the State shall (a) harness the resources of the nation and promote national prosperity and an efficient, a dynamic and self-reliant economy; (b) control the national economy in such manner as to secure the maximum welfare, freedom and happiness of every citizen on the basis of social justice and equality of status and opportunity; (c) without prejudice to its right to operate or participate in areas of the economy, other than the major sectors of the economy, manage and operate the major sectors of the economy; and (d) without prejudice to the right of any person to participate in areas of the economy within the major sector of the economy, protect the right of every citizen to engage in any economic activities outside the major sectors of the economy. To do this effectively, the State shall direct its policy towards ensuring: (a) the promotion of a planned and balanced economic development; (b) that the material resources of the nation are harnessed and distributed as best as possible to serve the common good; (c) that the economic system is not operated in such a manner as to permit the concentration of wealth or the means of production and exchange in the hands of few individuals or of a group; and (d) that suitable and adequate shelter, suitable and adequate food, reasonable national minimum living wage, old age care and pensions, and unemployment, sick benefits and welfare of the disabled are provided for all citizens.

Article 17 (sub-section 2) in particular emphasizes a "*State social order is founded on ideals of Freedom, Equality and Justice*" in which (a) every citizen shall have equality of rights, obligations and opportunities before the law; (b) the sanctity of the human person shall be recognized and human dignity shall be maintained and enhanced; (c) governmental actions shall be humane; (d) exploitation of human or natural resources in any form whatsoever for reasons, other than the good of the community, shall be prevented; and (e) the independence, impartiality and integrity of courts of law, and easy accessibility thereto shall be secured and maintained.

With particular emphasis on the environmental pillar of sustainable development, Article 20 (sub-section 2), of the Constitution states that *“the State shall protect and improve the environment and safeguard the water, air and land, forest and wild life of Nigeria”*.

1.3 Background to Rio + 20

The Brundtland Commission Report entitled *Our Common Future* (1987), defined sustainable development as *“development, which meets the needs of the present without compromising the ability of future generations to meet their own needs”*. In response to the Brundtland Report, the UN convened a Conference on Environment and Development (UNCED) in Rio de Janeiro, Brazil in June 1992 (Earth Summit). This was a historic gathering of about 108 Heads of State and Government, and representatives of civil society organizations and the private sector. The Earth Summit put the concept of sustainable development on the national and international policy agendas and made the question of sustainable development to become the focus of deliberation, with a clear message that *“without better environmental stewardship, development will be undermined; and without accelerated development in (developing) countries, environmental policies will fail”* (Serageldin, 1994). The integration of environmental concerns into economic growth and development policies, as captured by Agenda 21 document in Rio, emerged as a priority global concern for sustainable development.

Since the 1992 Rio Summit, there have been extensive efforts to operationalize sustainable development by governments and other stakeholders. Many reviews have been undertaken to assess progress and challenges. In 2002, (ten years after Rio), the World Summit on Sustainable Development (WSSD) took place in Johannesburg, South Africa. This resulted in the Johannesburg Plan of Implementation (JPOI), which reiterated the importance of achieving internationally agreed development goals embedded in the outcomes of the major United Nations conferences and international agreements since 1992. These include those contained in the United Nations Millennium Declaration, United Nations Framework Convention on Climate Change (UNFCCC), United Nations Convention on Biological Diversity (UNCBD), and United Nations Convention to Combat Desertification in those Countries Experiencing Drought and/or Desertification, particularly in Africa (UNCCD) and non-binding targets of the Forestry Principles. The WSSD reiterated that the goals of Agenda 21 have not been fully realized and it was agreed that efforts must be redoubled to enhance the attainment of sustainable development.

Twenty years after the historic 1992 Earth Summit, the world is coming together once again in a global conference at Rio in June 2012 (Rio +20) to discuss issues around sustainable development, that is equitable as well as ecological. Greening the economy through reduced emissions of greenhouse gases (GHGs) and other pollutants and efficient use of natural resources, conservation of nature while at the same time ensuring economic growth and poverty eradication, are seen as key challenges to achieve a long term sustainable development

in the world. A major thrust of the Conference is to take stock of what had been achieved, critical challenges and what still needs to be done in the struggle for the attainment of sustainable development, particularly in the face of new challenges such as climate change. The objectives of the Conference are (i) to secure renewed political commitment for sustainable development; and (ii) to assess progress to date and the remaining gaps in the implementation of the outcomes of the major summits on sustainable development and to address new and emerging challenges.

The Conference that is expected to result in a focused political document, with significant inputs from member countries of the United Nations and the international community, has the following theme:

- a. A green economy in the context of sustainable development and poverty eradication; and
- b. The institutional framework for sustainable development.

Typical of global Conferences of this type, member nations have been urged to make inputs into its outcome through production of national reports that will address achievements and challenges of countries' efforts towards sustainable development. This report presents Nigeria's progress in the implementation of Agenda 21 towards the attainment of a poverty-reducing, socially-equitable and environmentally sustainable national development. It documents the national activities and programmes/initiatives in the country in the last 10 years after WSSD. Major achievements, challenges and opportunities for sustainable development in a democratic developing economy are elaborated.

1.4 Report Preparation and Outline

This document was prepared through a participatory approach led by a group of technical experts that was charged with the responsibility of collecting, collating and digesting available documents and opinions through consensus-building consultations at various levels and among various stakeholders, including government, private sector, civil society organizations and the academia. The initial draft that was produced by the technical committee was then subjected to consultative reviews by many stakeholders. Outputs from these consultative meetings and workshops were used to improve the content of the report. The amended report was then further subjected to the national government approval process for its adoption as *Nigeria's Path to Sustainable Development Through Green Economy*.

Chapter 1 provides the general background and introduction. Chapters 2, 3, and 4 review the state of the economic, social and environmental pillars of development in the country with emphasis on the current situation, critical issues and challenges of sustainable development. Chapter 5 outlines the development challenges. Chapters 6,7, and 8 address the development challenges in the economic, social and environment sectors. They elaborate the critical policies and programmes, institutional arrangement, finance and operational mechanisms and means that are imperative for the attainment of sustainable development in Nigeria. Chapters 9 and 10 discuss the achievement of sustainable development within the context of green economy, the country's expectations at Rio, the way forward and beyond Rio+20.

CHAPTER 2

Economic Dimension

2.1 Overview

According to the World Bank classification by region and income of 2010¹, the Nigerian economy is typical of a developing country in the lower-middle income category; this is coming after almost two decades since UNCED in Rio. The productive base of the Nigerian economy remains relatively weak, narrow and externally-oriented with primary production activities of agriculture and mining and quarrying (including crude oil and gas) accounting for about 65 percent of the real gross output and over 80 percent of government revenue (NPC, 2009).

Primary production activities account for over 90 percent of foreign exchange earnings and 75 percent of employment. In contrast, secondary activities comprising manufacturing and building and construction, which traditionally have greater potential for broadening the productive base of the economy and generating sustainable foreign exchange earnings and government revenues, account for a mere 4 percent of gross output. Services or tertiary activities which depend on wealth generated by the productive sectors for their operations comprise about 30 percent of gross output. Significantly, service activities have been expanding their influence in the economy over the last decade accounting for over 35 percent of the growth of the real gross domestic product (GDP). Between 2002 and 2011 the economy grew at an average of 6.2 percent. Figure 2 shows the growth rate of the GDP from 2006 to 2011 (CBN, 2011).

¹ WTI Country classification by Region and Income (July 2009-June 2010)http://siteresources.worldbank.org/INTRANETTRADE/resources/239054-1261083100072/Country_classification_by_Region_Income_Dec17.pdf

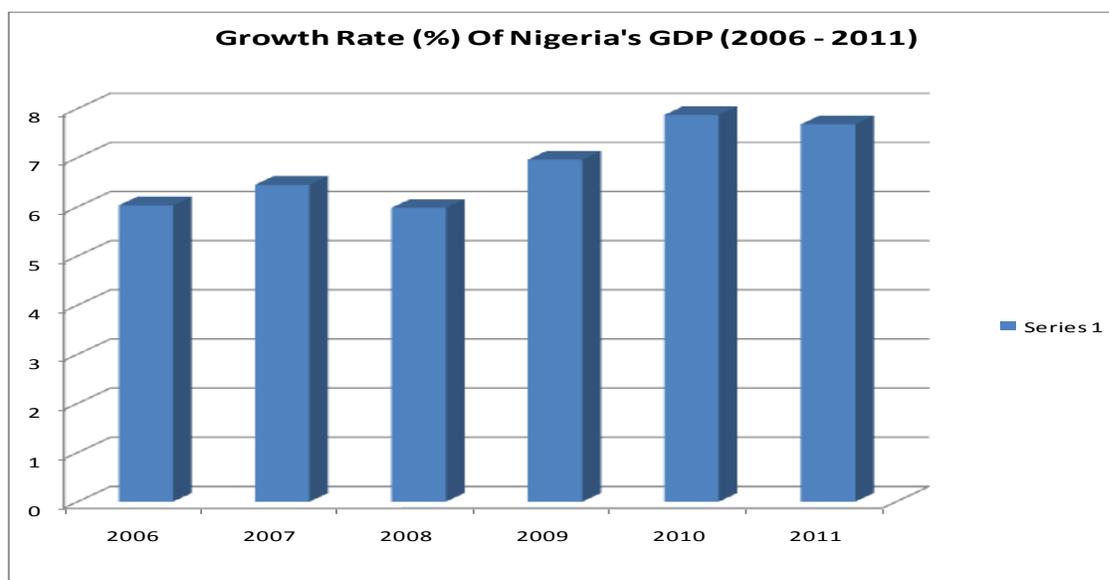


Figure 2: Growth Rate of Nigeria's GDP (%): 2006-2011

2.2 Agriculture and Food Security

Agriculture is the main non-oil sector of the economy. Crop production, fisheries and animal husbandry are the dominant activities. Agriculture is an important sector contributing 42 percent to the national GDP. It provides employment for 56 percent of the population out of which 70 percent reside in rural areas.

Nigeria's agriculture is practiced in three major types of agricultural land namely upland or rainfed (94%), lowland or swamp (8.3%) and irrigation (1.5%). It is largely rainfed and vulnerable to climate variabilities. Total area planted to various commodities is on the increase in response to growing demand for food. Similarly, national production of exportable agricultural commodities is on the increase. According to CBN Report (2010) on National Survey of Exportable Agricultural Commodities, cassava production in 2010 was 38,022,490mt, cocoa 363,510mt, cotton 531,480mt, palm oil 1,233,050mt and sorghum, 9,300,000mt. Agricultural production systems in the past are inefficient and yield relatively low. Increase in output therefore has been more in terms of planting new areas than raising productivity. International market opportunities for some exportable commodities have been low on account of the sector's inability to be competitive.

However in the past few months, the agricultural policy landscape for the country is manifestly changing following the take off of the Agricultural Transformation Agenda (ATA). The ATA is anchored upon Nigeria's Vision 20:2020, and is contributing to the goal of situating the country among the class of 20 best performing economies of the world in less than a decade.

Nigeria is already learning from successful experiences of how some countries developed their agriculture sectors, feed themselves and drive economic growth by creating jobs in the sector.

The key process of transforming Nigeria's agriculture is therefore currently being pursued through a strategic focus of driving agricultural growth and food security in a clear and measurable way, supporting public private partnership, focusing on value chains of commodities where Nigeria has comparative advantage, providing growth enhancement input/credit support to farmers, promoting and stimulating investments to drive a market-led agricultural transformation and focusing on youth and women.

2.3 Extractive Industries

The country's economic strength is largely derived from oil and gas reserves, which make up over 90 percent of foreign exchange earnings, 78 percent of Government revenues, and 38.8 percent of the Gross Domestic Product (GDP) in 2006. This was followed by Industry whose share fell from 26.1 percent in 2006 to 23.7 percent in 2007. The contribution of crude oil in the GDP in 2007 was 19.7 percent from 21.9 percent in 2006.

2.3.1 Solid Minerals

The government has made giant strides in "Promoting Sustainable development through Mineral Resources Development" by the transforming of Nigeria's solid minerals and metals sector into an irresistible destination for global capital, attracting foreign direct investment to grow the sector to optimum level.

Mining has been a major economic activity in Nigeria for over a century as many communities depend on the natural resources within their environment for their social and economic livelihood. By informal mining practices, various forms of metallic and non-metallic substances were obtained in ancient communities for the production of such items as farm tools, earthen wares, arte-facts etc .

Government's interest in the solid minerals sector has been revived because of the need to provide alternative sources of foreign exchange earnings. The government has identified solid minerals as one of the key sectors for the diversification of the economy. In order to integrate economic activity with environmental integrity, social concerns and effective governance systems the government embarked on a radical reform in the sector. The government also focuses on improvement in mining sector governance and transparency, the organization of small-scale and artisanal mining for poverty reduction, and the creation of an enabling mining environment for large scale miners which has generated remarkable interest of both International and Local investors in the minerals of Nigeria.

These world class mineral deposits occur in various parts of the Country. Presently there over 450 mineral occurrences in our country and some of these include:

- Mineral Fuel-(Coal, Lignite, Uranium, thorium etc)
- Iron and Ferrous Metals – (Iron, Manganese, Nickel, Niobium etc.)
- Non-Ferrous Metals – (Lead/Zinc, Tin titanium, tantalite etc).
- Minor Metals and related Non-metals– (Zirconium and Beryllium etc).
- Precious Metals – (Gold, Silver etc).
- Gemstones – (Emerald, Ruby, Smokey quartz and Sapphire etc.)
- Structural and Building Materials- {Limestone, Magnesite, Bitumen}

- Ceramic Materials – (Clay and Feldspars)
- Chemical Minerals – (Salt, Sulphate, Pyrites)
- Metallurgical and Refractory Material:
- (Flourspar, Cryolite, Sillimanite, Kyanite etc)
- Fertilizer Materials – (Phosphates, Gypsum Limestone)
- Industrial and Manufacturing Materials:
- (Mica, Talc, Barytes, Glass sand, Monazite etc)
- Abrasive – (Garnet, Quartz Sand, Diatomite etc)

A mineral map of Nigeria showing the occurrences of these minerals can be accessed on the Nigerian Geological Survey agency (NGSA) website www.ngsa-ng.org. Economically mining has contributed to the GDP of the country.

Other initiatives within the overall framework of Nigeria's economic diversification from oil to non-oil sector with emphasis on the development of the minerals and metals sector include:

- Enactment of Nigeria Mineral and Mining Act, 2007;
- Nigeria Extractive Industries Transparency Initiative (NEITI);
- National Minerals and Metals Policy of 2008 to enhance sustainable minerals and mining development in Nigeria;
- National Minerals and Mining Regulation, 2011.
- Institutional capacity strengthening for sustainable management of the mining industry sector including the establishment of Departments of
 - (a) Mines Environmental Compliance (MEC);
 - (b) Artisanal and Small Scale Mining;
 - (c) Mines Inspectorate in the Federal Ministry of Mines and Steel Development; and
 - (d) Mining Cadastre Office.

The Department of Mines Environmental Compliance in particular has the overall responsibility of ensuring environmental sustainability in the mines sectors with the mandate to:

- Establish environmental procedures and requirements applicable to mining operations;
- Monitor and enforce compliance by holders of mineral title with all environmental requirements and obligations as required by the law;
- Periodically audit the environmental requirements and obligations established by law, its regulations;
- Collaborate with relevant agencies of Government with respect to social and environmental issues involved in mining operations, mine closure and reclamation of land;
- Stipulate procedure for reclamation and the restoration of minesland;
- Developing realistic, transparent, and stable environmental monitoring schemes of mine sites;
- Ensure the integration of environmental concerns into mine site rehabilitation schemes;

- Ensure the adoption of environmentally sound mining technologies and practices in all phases of mining activities especially appropriate technologies to, mitigate environmental impacts, including those from small scale mining operations; and
- Monitor compliance with approved procedures for the reclamation and restoration of mined out sites and monitoring the recovery of such areas.

The department of Artisanal and Small Scale mining has achieved sustainable operations through

- The formalization of Artisanal and small scale miners through formation of Cooperatives to ensure that mining is done in a sustainable manner
- Through interaction with operators discouraged the use of harmful chemicals such as cyanide, mercury in the processing of Mineral ores. In the process the wet milling method is being introduced to reduce the effect of environmental pollution to enhance safe mining.
- Provision of mining extension service programmes for artisanal and small scale miners to educate them on safer mining and processing techniques
- Licensing and supervision of Mineral Buying Centers to reduce smuggling of minerals and also boost royalty collection that accrues to government.
- Provision of infrastructural facilities to 33 mining communities and financial support for 24 artisanal miners.
- The Mining Cadastre Office operates in a transparent and efficient way by granting mineral titles and permits. It has the responsibility of administering mining titles with integrity, in a transparent manner and on a “first come first served basis”.
- Receive and dispose of applications for the transfer, renewal, modification, relinquishment or extension of area;
- The Mines Inspectorate Department has overall responsibility of supervising the Ministry operations including detailed Exploration Evaluation, Mine development and productions;
- Supervision and enforcement of compliance by mineral title holders with all work programmes and safety regulations prescribed under the Minerals Act and any other law in force;

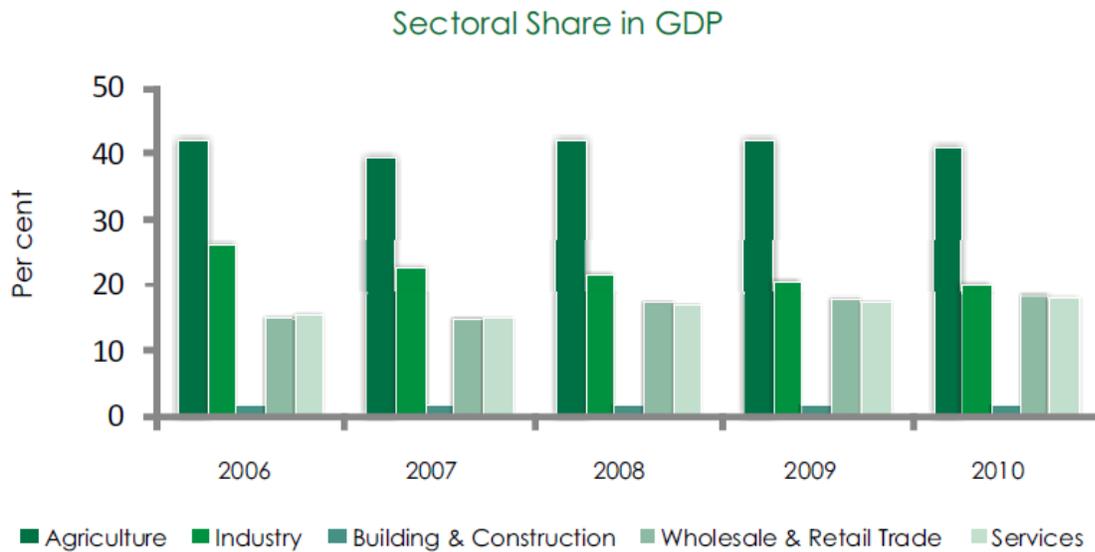


Figure 3: Contributions of different sectors of the economy to the GDP (CBN, 2010)

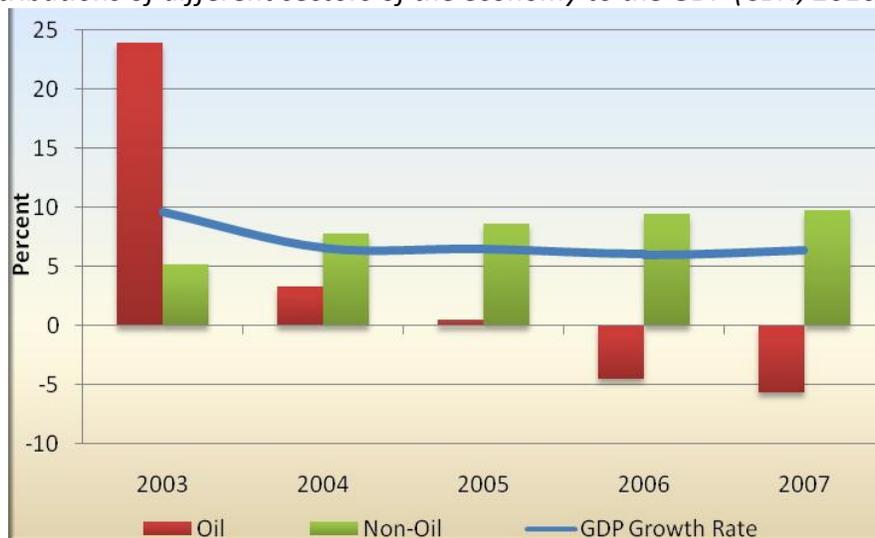


Figure 4: Oil and Non-Oil Revenue as percentage of GDP (CBN, 2008)

2.4 Foreign Direct Investment

Nigeria continues to benefit from Foreign Direct Investment (FDI). In this context, one of the principal beneficiaries of FDI is the telecommunication sector that received a cumulative investment of US\$49.65 billion between 2006 and 2009 (CBN, 2010). The trend in oil and non-oil FDI is shown in Figure 5 from 1999 to 2006. The share of non-oil FDI far outweighs FDI in oil and gas from 1999 to 2003. In 2004, the share of FDI in oil and gas sector rose sharply from 23 percent of total FDI in 2003 to 90 percent of total FDI in 2004. Investments in the oil industry are being encouraged to provide significant evidence of backward or forward linkages with local industries that could result in economic diversification and job creation. This is being addressed

with the introduction of the Petroleum Industry Bill (PIB) which is aimed at implementing major reforms that will ensure that the oil and gas sector is integrated with other productive sectors. Significant efforts are also being made to make Nigeria a very competitive nation for investment and business.

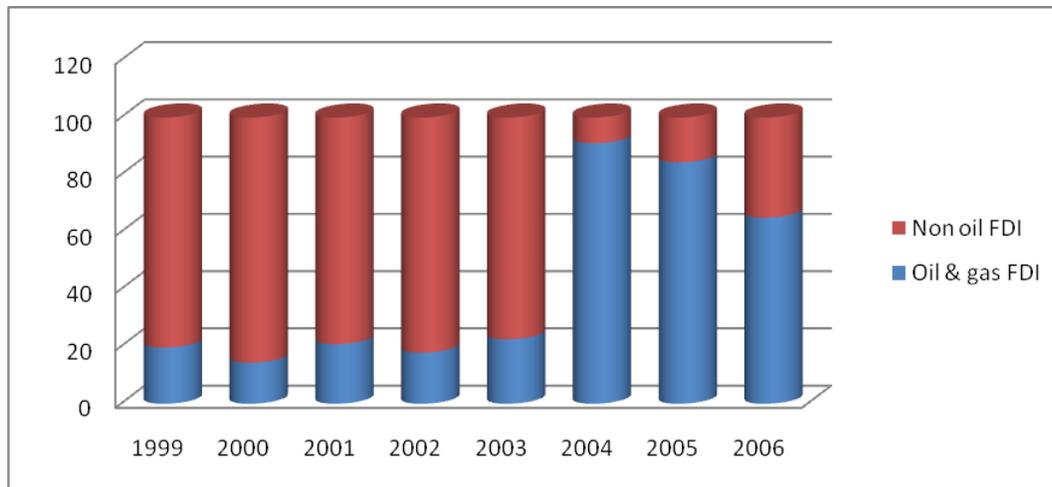


Figure 5: Share of oil and non oil FDI, 1999-2006 (Sources: WDI (2010))

2.5 Trade and Investment

In view of the critical role of trade in promoting national development, the government regards this sector as key to achieving the Transformation Agenda and NV20:2020. In recognition of this role, a new draft trade policy has been put in place to promote trade at domestic, regional and international levels. Strategy and Action plan have also been put in place to promote trade at domestic, regional and international levels.

Domestic trade in Nigeria is still largely informal and there is the need to develop domestic trade to promote intra and inter-state source. The new draft trade policy seeks to address the problems and challenges facing domestic trade and formatting the informal trade. A strategy has been developed to promote domestic trade in Nigeria.

The new draft trade policy gives priority to the development of regional trade through addressing the problems and challenges facing regional trade. The objective is to promote regional trade and integration through the movement of goods and people at regional level. Measures are also being taken along the border. The Ministry is establishing Transnational Border markets at six designated areas/borders with the pilot project at Okerete in Oyo State.

The new trade policy seeks to promote Nigeria's participation and benefits from international trade and add value to projects creating new markets for non-oil sector so as to diversify the productive base of the economy. It also aims at improving the standards of Nigeria's export projects and improving Nigeria's trade performance internationally. A strategy has been adopted to improve Nigeria's performance in international trade.

It has been widely recognized that there is a strong relationship between trade and environment. There is therefore, the need for synergy and complementarities between trade and environment policies at national and international levels to achieve developmental goals /objectives. There is the need for the two policies to be supportive of each other and that environmental policies do not constitute barrier to trade

2.6 Power

The government recognizes that adequate electricity supply is imperative to grow the economy. To meet NV20: 2020 target of 40,000MW, Nigeria requires investments in power generating capacity alone of at least US\$3.5 billion per annum for the next 10 years. Similarly, large investments will also have to be made in the other critical parts of the supply chain in the areas of fuel-to-power infrastructure, transmission and distribution networks.

In 2003, Nigeria put in place the National Energy Policy (NEP), the thrust of which is the optimal utilization of the entire nation's energy resources for sustainable development, with the private sector expected to play a pivotal role in terms of investments and management. To this end, the Electric Power Sector Reform Act (EPSRA) of 2005 introduced fundamental changes to the ownership, control and regulation of the sector in order to herald a modern, efficient, customer focused, private sector driven electricity supply industry. In August 2010, President Goodluck Jonathan also launched the Roadmap for Power Sector Reform in order to achieve adequate, reliable and affordable power supply for sustainable development.

Nigeria is endowed with numerous fuel sources for power, including hydro, natural gas, coal, wind, solar and an abundance of waste for biomass. A concerted effort is being made by the Ministry of Power to address the issue of energy mix to guarantee power sustainability for development. In the past years, Nigeria's energy mix has been basically Hydro and Gas, which in the last two years has been on the ratio of 70:30 respectively. With the Power Sector Reform and effective participation of the private sector through National Integrated Power Projects (NIPP) programme the trend will be reversed in the ratio of 15:85 for hydro and gas, when most of the NIPP Projects will be commissioned. In dealing with the issue of gas flaring, efforts are being made to exploit the asset of Natural Gas to its fullest by converting flared gas assets and harnessing non-associated gas for power application.

To diversify power generation and supply, the Ministry is also focusing attention on Renewable Energy Projects across the nation with the aim of placing 1,000MW in Renewable Energy by 2020. The scale and economic potential of renewable energy development are yet to be determined through various studies.

Due to high capital costs required to implement commercial power generation through Solar, Wind and Biomass, Nigeria's electricity generation is still predominantly through hydro and natural gas. However, where there are cost efficiencies a generation mixes of other sources of fuel-to-power is equally given consideration and attention. Solar, Wind and Biomass potential are also gradually being brought on board through pilot projects and there are currently 100MW in renewable energy projects underway.

Small and Medium Hydropower development continue to grow substantially as more dams are identified for concessioning throughout the country.

For the promotion of Energy Efficiency, a programme was initiated to disseminate energy efficient lighting to consumers so as to create public awareness of the value of reducing consumption at a time when available resources need to be used prudently and to instill good practices for the future.

With half of the population without electricity in rural areas, energy access through Distributed Generation is the preferred solution for rural and remote communities. In meeting the considerable national electricity needs, the scale of market development in the long term will consider a diverse mix of cost-efficient proven technologies and fuels to ensure security of supply. Renewable energy will play a part in extending electricity service through distributed generation to communities not connected to the national grid. These communities are entitled to reliable and steady power supply like the rest of the country, and the intermittent nature of renewable energy resources, such as solar and wind, will need to be complemented by low cost storage solutions and hybrid systems with natural gas or biodiesel as fuel sources.

The adoption of an appropriate pricing regime supports the financial viability of the Power Sector to attract investment and at the same time signals to consumers the actual cost of service at a given level of consumption. Cost-efficiency and cost-containment will also be one the major drivers in technology selection.

Electricity is an essential service in alleviating poverty, facilitating socio-economic development and in removing the disparity in the standards of living between urban and rural areas. While the initial focus will be in meeting the immediate needs of off-grid communities with renewable energy and hybrid systems, these short and medium term solutions have to consider future load growth with energy systems that can be augmented as needed, with due regard to efficiencies and demand-side management.

With the privatisation of the power sector steady and on course, the enabling environment for private sector investment is ready to attain sustainable power generation for the Sustainable Development For All.

CHAPTER 3

Social Dimension

3.1 Population

The 2006 Population and Housing Census puts Nigeria's population at 140.43 million with a national growth rate estimated at 3.2 percent per annum. The population has risen to about 167 million in 2011. With this population, Nigeria remains the most populous nation in Africa. About 50 percent of the population is female, and 50 percent is male. The sex ratio (the number of men per 100 women) is 99. The ratio in rural areas is lower than that of urban areas (97 compared with 101). The results show that the household population has a greater number of younger people than older people. Forty-five percent of the total population is under 15 years of age while 4 percent is 65 or older. The proportion of the population in each age group declines as age increases; the lowest age group (0-4) has the largest proportion of the population (17 percent), while the highest five-year age group (75-79) has the smallest proportion (less than 1 percent).

Nigeria's population is unevenly distributed across the country. Large areas in the Chad Basin, the middle Niger Valley, the grassland plains, among others, are sparsely populated. The average population density for the country in 2006 was estimated at 150 people per square kilometre. The most densely populated states are Lagos, Anambra, Imo, Abia, and Akwa Ibom. Most of the densely populated states are found in the South East geo political zone, with an average density of 442 persons per square kilometer, Kano state, is the most densely populated state in the north ((NBS, 2009, 2010). Almost 50% of the populations now live in cities compared to 35 percent in 2002.

The current population structure indicates a large base with in-built momentum for further increase as more young cohort enter into the reproductive age group. Indeed, the UNDESA (2012) has projected that by 2050 Nigeria's population could rise to 350 million making it one of the third largest populated countries in the world. This means that more demand would be made for food, water, educational and health facilities as well as other infrastructure in the very near future.

3.2 Poverty and Inequality

Whereas, the economy grew at an average of about 6.2 per cent annually between 2002 and 2011, the government is concerned about the apparent disconnect between Nigeria's economic growth and human development. Nigeria currently ranks 156 out of 187 economies (UNDP-HDR 2011). This position underscores not only the limited choices of Nigerians, but also defines the critical development challenges being faced by government. According to the 2011 National

Bureau of Statistics' (NBS) report, about 69.1 percent of the Nigerian population or approximately 100 million people are living below the poverty level ((NBS, 2011). Figure 6 shows the increasing poverty trend in the country since 1980.

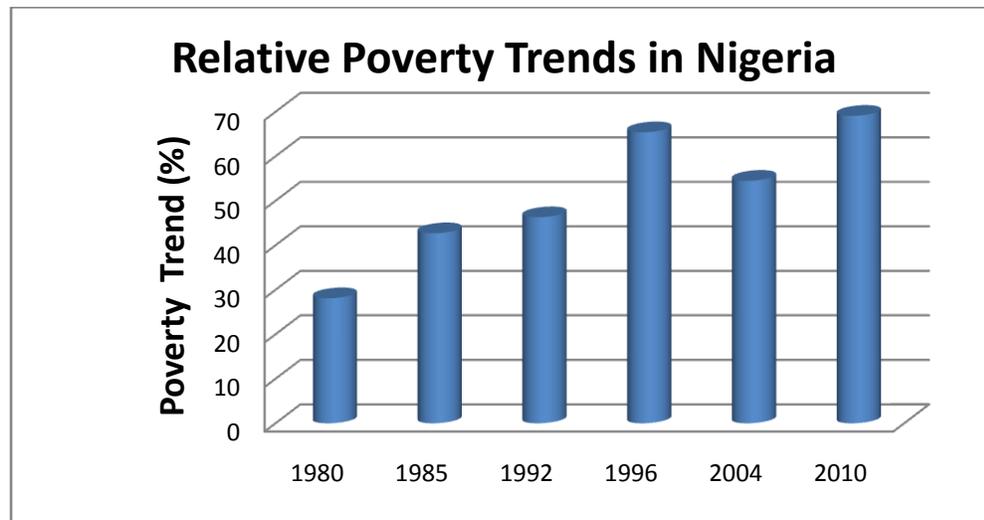


Figure 6: Relative Poverty Trends in Nigeria (Source: FOS, 1980, 1985, 1993, 1997, NBS 2004, 2011)

The country is currently struggling with high unemployment rate which surged from 3.8 percent in 2002 to about 19.7 in 2008, and now stands at 23.9 percent in 2011 (NBS, 2012). Lack of employment is one of the contributory factors to both poverty and inequality.

The poverty situation is further reinforced by the high level of inequality. The Gini Coefficient for Nigeria in 2007 was 0.48, placing the country among those with the highest inequality levels in the world. The level of inequality is highest in the North Central with Gini Coefficient of 0.49 closely followed by the South West with 0.48, North West 0.420, South South 0.41 and South east with 0.38.

There is also a very disturbing spatial divergence in the GDP per capita in the country with South-South zone having an average of US\$ 3,617.4, followed by North-West US\$1,898.9, North- Central US\$ 1,320.3, South- West US\$ 1,309.9, North -East US\$ 343.3 and South-East US\$ 297.2 (UNDP-HDR, 2009).

The rural-urban dimension of poverty (Figure 7) show that poverty remains largely a rural phenomenon in Nigeria with about 75 per cent of the poor residing in rural areas as at 2010. When extreme poverty is taken into consideration, however, about 95 per cent of them reside in rural areas. However, there is an increasing evidence of the pauperization of the urban areas, with as much as about 60 per cent of the people living in the urban areas categorized as poor in 2010. In view of the rapid rate of urbanization in Nigeria, the increasing number of the urban poor in recent

years is a worrisome indication that the urban areas of the country are not providing people the type of opportunities that they anticipate as they migrate from the rural areas.

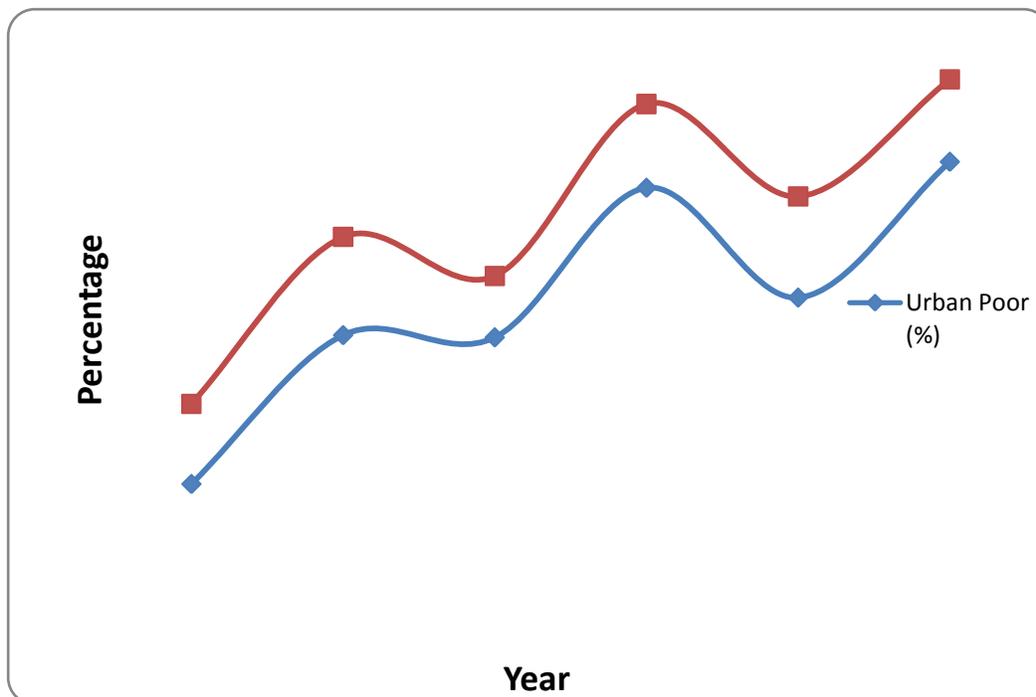


Figure 7: Spatial Pattern of Relative Poverty in Nigeria: 1980-2010 (Source: NBS, 2011)

3.3 Education

The results of the 2010 Nigeria Education Data Survey (NEDS) show that primary school attendance ratios have increased while pupil repetition and dropout rates are low. The net primary school attendance is 61 percent, although the ratio in urban areas are 74.4 percent compared to 52.2 percent in rural areas. For females, the NAR is 58.4 while for males it is 63.5 percent. The gross attendance ratio (GAR) is 85, indicating that for every 61 pupils age 6 – 11, there are 24 pupils who are either younger than age 6 or older than age 11. Again the male GAR (90) exceeds the female GAR (81), yielding a gender parity index of 0.90 implying that primary school attendance favours males (Federal Ministry of Education, 2012).

Overall, 47 percent of children age 12 – 17 attend secondary school, with no difference in gender. However, 60 percent of children in urban areas attend secondary school, compared with 36 percent of those in rural areas. In 2010, there were 4,951,450 students enrolled in JSS with males constituting 54% and females 46%. But, attendance in school is directly related to socio-economic status of households.

Overall, the 2010 National Literacy Survey (NBS, 2010) shows that about 84 percent of the population had attended one type of school; formal or non-formal. The percentage of the population ever attended schools was higher in urban (91.4 percent) than in the rural area with 80.7 percent. The survey also reveals that gender variation still existed in school attendance as females' attendance (81.2 percent) was lower than that of males' with 88.1 percent (Figure 8).

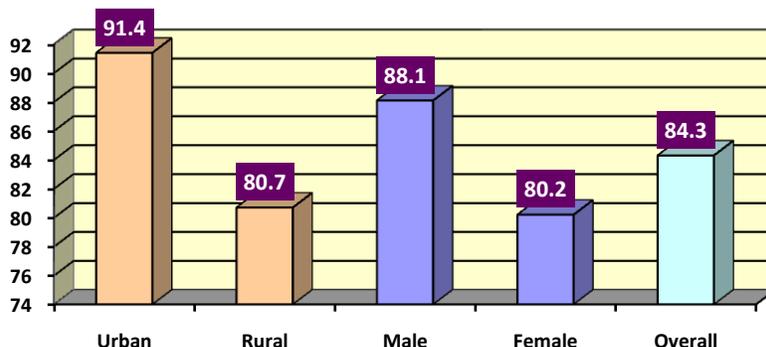


Figure 8: Percentage of persons ever attended school

According to the survey, overall adult literacy rate was 71.6 per cent. The adult literacy rates were 73.6 per cent and 49.5 per cent for urban and the rural areas respectively. The overall adult literacy rate among the males was 79.3 per cent while that of females was 63.7 per cent.

3.4 Health

Nigeria operates a pluralistic health care delivery system with the orthodox and traditional health care delivery systems operating alongside each other, albeit with hardly any collaboration. Both the private and public sectors provide orthodox health care services in the country. The public health service is organized into primary, secondary and tertiary levels. While the Constitution is silent on the roles of the different levels of government in health services provision, the National Health Policy ascribes responsibilities for primary health care to local governments, secondary care to states and tertiary care to the federal level. A number of parastatals based at the federal level for example the National Primary Health Care Development Agency (NPHCDA), are currently engaged in primary health care services development and provision; the latter is evidently part of its mandate.

The health system remains overstretched by a burgeoning population with lots of challenges in infrastructural and skill development. Though the health indices have shown mixed performance over the last two decades, they are yet to meet international standards. Inequalities in health outcomes also exist between rural and urban areas, between northern and southern regions, and across income groups.

Life expectancy in 2002 for males was 45 years compared to 46 years for females. These improved marginally to 47.2 years for men and 48.2 years for women in 2010 (NBS, 2010)². This

² National Bureau of Statistics. The State of the Nigerian Economy, 2010. NBS 2010

is below the least developed countries (LDC) average age of 53 years. The disability adjusted life expectancy at birth is 38.3years.

Infant and child mortality rates are high, though decreasing. Infant and under five mortality rates have improved from 91 and 191 in 1990 to 75 and 157 in 2008³ and 141 in 2011 (lancet Maternal series 2011) respectively. Similarly the percentage of one-year olds who are fully immunized against measles also rose from 46 in 1990 to 86⁴ in 2011.

Nigeria is still in the first stages of the epidemiological transition; communicable diseases are the major causes of mortality and morbidity in the country. In children, the major causes of mortality and morbidity are malaria, diarrhoea, acute respiratory infections (ARI), measles and other vaccine preventable diseases (VPD), and the exacerbating effect of children's malnutrition. These diseases, are however preventable and/or can be treated at small cost.

We have made progress in maternal health albeit slow towards achieving the MDG related targets. Maternal mortality ratio has improved from 704 in 1990 to 545 in 2008 (NDHS2008) and 487 per 100,000 live births in 2011 (Lancet Maternal series). The total fertility rate in Nigeria has remained at a high level over the last 17 years from 5.9 births per woman in 1991 to 5.7 births in 2008. The median age at first marriage in Nigeria among women age 25-49 is 18.3 years. On average, rural women are having two children more than urban women (6.3 and 4.7 children, respectively). The demographic dividend from this young population if well harnessed will translate to a veritable resource for national development.

There has been a reduction in HIV/AIDS prevalence from 5.8 per cent in 2001 to 4.1 per cent in 2010 (FMOH 2010 HIV/AIDS Sero prevalence survey). HIV-attributable U5MR is estimated at 5%. Unfortunately, Prevention of Maternal to Child Transmission services has not kept pace with PHC strengthening and Integrated Maternal, Neonatal and Child Health (IMNCH) expansion efforts. Nigeria has the fourth highest number of tuberculosis (TB) cases in the world, while other infectious diseases, such as meningitis, also represent a considerable health burden.

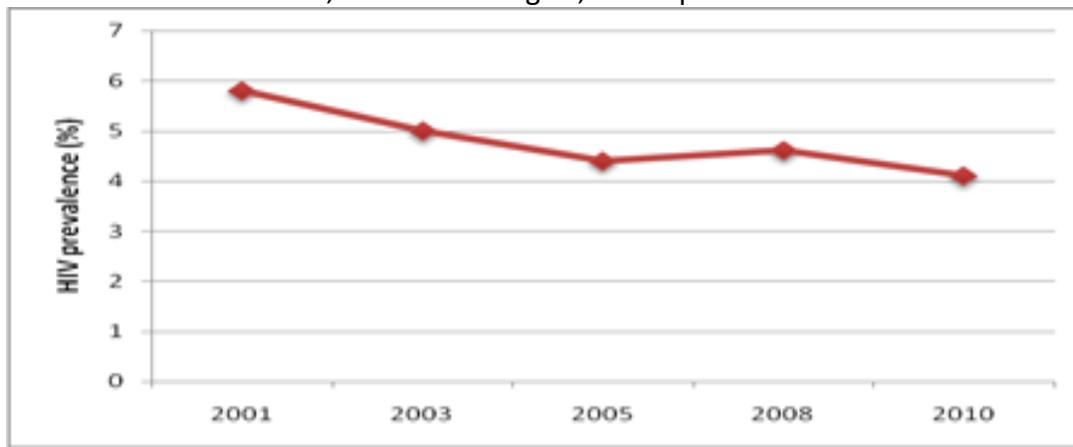


Figure 9: Trend of HIV/AIDS Prevalence among ANC attendees in Nigeria (2001-2010)

³ National Population Commission. National Demographic and Health Survey. NPopC 2008

⁴ National Primary Health Care Development Agency. National Immunization Coverage Statistics, 2011. NPHCDA, 2011

(Source: FMOH ANC Sentinel Survey Reports)

Malaria is a leading cause of death of children under five years in Nigeria. However, the country has instituted robust control measures which include integrated vector management and treatment using artemesin in combination therapy. Diarrhoea and pneumonia cause almost 400,000 child deaths annually in Nigeria. Acute diarrhoea can lead to linear growth retardation, causing more than 176,000 deaths of children under-5 in the country. Pneumonia is responsible for an estimated 200,000 deaths each year. Many of these deaths can be avoided. With the introduction of the pentavalent vaccine and the strengthening of health promotion activities, there is a remarkable reduction in the mortality and morbidity rates from these childhood diseases

In 2011, the FMOH estimated a total of 30,000 health facilities in Nigeria of which 88% are primary health care facilities, 11% secondary and 1% tertiary. 38% of these facilities are owned by the private sector which provides 60% of health care in the country⁵. The 53 federal owned tertiary facilities provide specialist services which are mostly not available at the secondary and primary level, with the teaching hospitals also providing training for health workers and research.

Government allocation to health care has been on the increase in the last decade but still remains below the Abuja Target of 15% allocation of the national budget to health. Total Health Expenditure (THE) in Nigeria has grown from N661.662 billion in 2003 to N976.69 billion in 2005 (NHA 2003; 2005⁶). While the THE has grown in absolute terms by nearly a third during this period, it has actually declined when it is considered as a share of the GDP, from 12.25% in 2003 to 8.56% in 2005. The share of government budget allocated to the health sector rose from 4.5% in 2010 to 5.4% in 2011. This is against fluctuations in from 5.6% and 5.8% in 2008 and 2009 respectively.

Improving social security in the health sector is focused on efforts to improve health services coverage through reducing both demand and supply, and the financial barriers to access. In 1999, the government established the National Health Insurance Scheme (NHIS) which is a federally funded social health insurance scheme. The scheme is designed to facilitate fair financing of health care costs through risk pooling and cost-sharing arrangements for individuals. The National Health Insurance Scheme is also currently piloting Community Based Health Insurance Scheme in 12 states of the country with similar pilots on-going in the private sector. The President flagged-off the Community-based Social Health Insurance Programme (CBSHIP) and the Voluntary Contributor Social Insurance Programme in the rural village of Isanlu in Kogi State, in the last quarter of 2011.

The number and mix of human resources for Nigeria is above regional averages in absolute terms and when considered as a proportion of the population. There are about 39,210 doctors, 124,629 nurses and 88,796 midwives registered in Nigeria. It is difficult to judge these numbers

⁵ Federal Ministry of Health (2005) *Inventory of Health Facilities in Nigeria* Abuja: Federal Ministry of Health

⁶ 2003 – 2005 NHA Estimation, Final Report, 2009

alone. The aggregated numbers hides a large variation between areas and States/Zones. The density of health workforce varies between rural and urban areas.

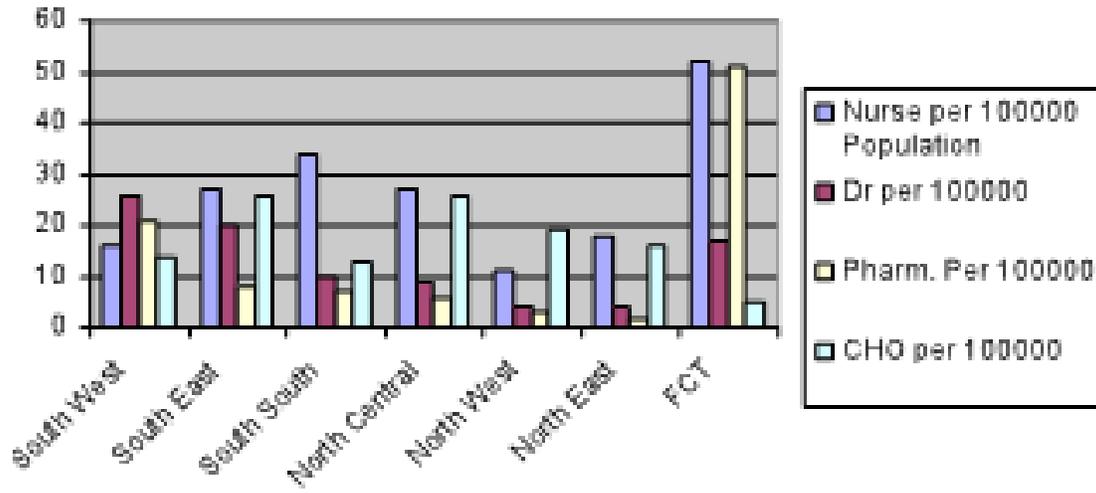
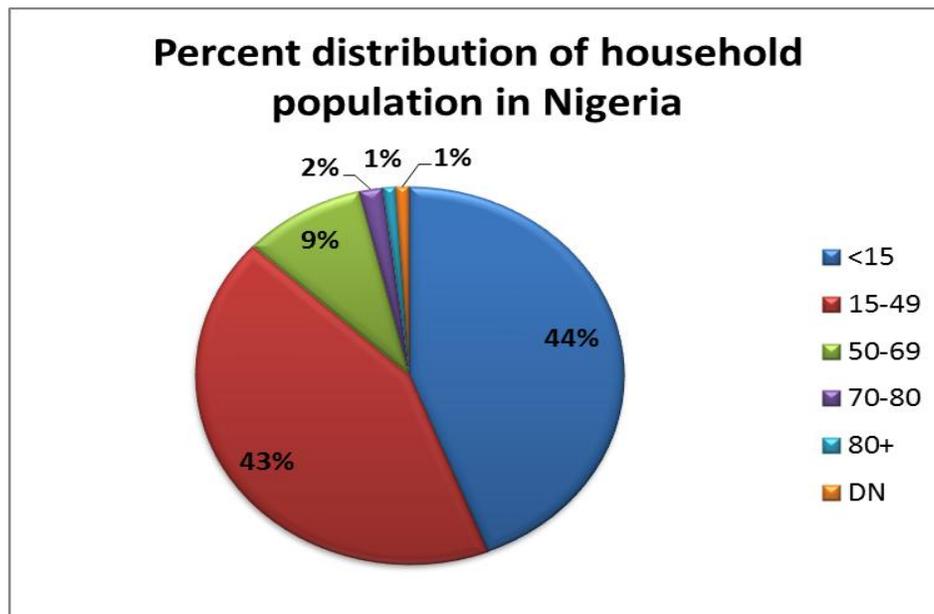


Figure 10: Health workforce per 100,000 population by Zone

Most doctors and nurses work in public secondary and tertiary health facilities, and the private sector. Only about 12% of practicing doctors work in private or public sector PHC services⁷.

Although Nigeria has a relatively high population growth rate at 3.2%, the average household size has improved from 5.0 in 2003 to 4.4 in 2008. The size is lower in urban (4.1) compared to rural (4.6) areas. This is attributable to modest improvements in contraceptive prevalence and total fertility rates witnessed in the same period. Overall, Nigeria has a young population, with 44 percent under 15 years and 43 percent between 15 and 49 years, (Figure 11).



⁷Dare et al,

Figure 11. Percent distribution of Household Population in Nigeria. Source: NDHS 2008

Recognizing that to improve the health and wellbeing of Nigerians, there was a need to scale-up, strengthen the health systems including additional financing for health, build and strengthen the Primary Health Care System in line with the principles in the Ouagadougou and Abuja declarations,⁸ the Federal Government of Nigeria, through the Federal Ministry of Health (FMOH) developed the National Strategic Health Development Plan (NSHDP). The National Strategic Health Development Plan (NSHDP) is set to encourage alignment and harmonization of existing disparate plans, as well as provide a coordination mechanism for multiple actors in the health sector that would be in alignment with the national priorities. Within the context of the Developmental Agenda of the country also, and in tandem with the guidelines of the National Planning Commission led Vision 20:2020, the NSHDP is the compass for the health sector component of the 1st National Investment Plan of the Vision 20:2020, the Transformation Agenda of Mr. President, the Medium Term Sector Strategy (MTSS) and annual operational plans and budgets.

3.5 Water and Sanitation

Access to safe water and sanitation is a major challenge in Nigeria. According to the 2008 report of the WHO/UNICEF JMP (Joint Monitoring Programme for Water Supply and Sanitation) the proportion of the population using water from improved sources was only 47% in 2006, while just about 30% used improved sanitation facilities (WSMP, 2008). According to the recent desk review by the Water and Sanitation Programme (WSP, 2012), about 70 million Nigerians use unsanitary or shared latrines and 32 million have no latrine at all and defecate in the open. The government is, however, determined to attain the MDG targets of 75% coverage for safe drinking water and 63% coverage for basic sanitation by the year 2015.

3.6 Human Settlement

Nigeria ranks among the most urbanized countries in the world. In 1980 the urbanisation rate was 28.6 percent rising to 35.3 percent in 1999 and 49.8% in 2010 with the rate projected to increase to 56.8 percent and 63.6 percent in 2020 and 2030 respectively. Figure 12 shows the trends towards high rate of urbanisation in recent years. A significant characteristic of the macro-economic context of human settlements development is urban decay which manifests as slums and squatter settlements in the country's cities and towns. The pace of urbanization increase has been such that maintenance of modest environmental standards inevitably had to lag behind.

Basic services such as piped water, electricity, roads, improved sanitation and health care are acknowledged to be still insufficient to meet the needs of these densely populated settlements.

⁸Ouagadougou Declaration on Primary Health Care And Health Systems In Africa: Achieving Better Health For Africa In The New Millennium. Available at [http://www.afro.who.int/en/divisions-a-programmes/dsd/health-policy-a-service-delivery/hps-publications/doc_details/2135-ouagadougou-declaration-on-primaire-health-care-and-health-system-in-africa-2008.html]. Accessed [03/02/2010]

Access to safe water and improved sanitation is one of the key social challenges facing the country. As a baseline survey on National Water Supply and Sanitation conducted by Nigerian government between July 2005 and July 2008 revealed that, access to safe water varied between 54 per cent and 58.9 per cent in the six geo-political zones. Expectedly, urban areas are more likely to have access to improved sources of water than those in the rural area (75 per cent compared with 45 per cent)⁹. In 2006, only 35 per cent of urban Nigeria had access to improved sanitation, less than the average for Sub-Saharan African figure of 42 per cent (World Bank, 2010).

Furthermore, these areas are in a state of urban squalor and over-crowdedness characterized by decrepit structures, poor sanitary conditions, over-crowding, and under-provision of amenities and general deterioration of the urban environment. The functionality of most urban areas is thus reduced in addition to exerting adverse impacts on households, macro-economic performance and social well-being. The government acknowledges that the current situation poses a major challenge to economic growth and sustainable development.

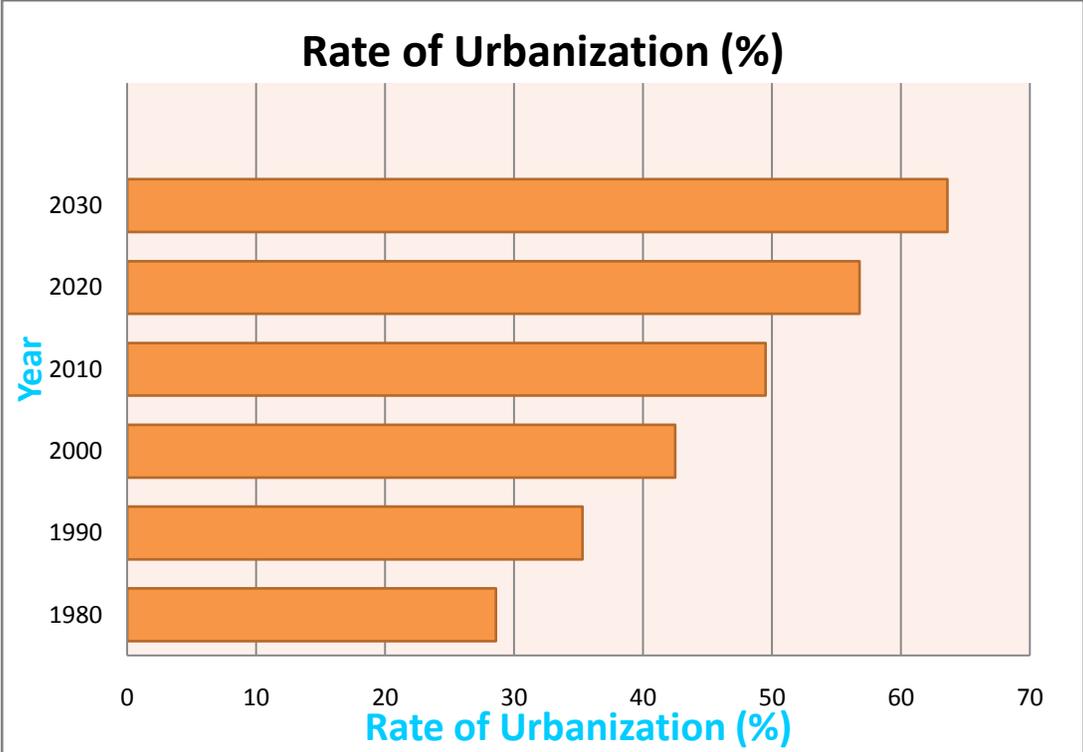


Figure 12: Trend in the Rate of Urbanization: 1980-2030 (Source: UN Habitat 2010 State of the World Cities Report: 2010/2011)

Although the government has invested or used public private partnership to invest massively in housing provisions since 2002, increasing demand for houses by the country’s large population means that a lot still needs to be done to provide shelter for all. The estimated housing deficit is

⁹NDHS, 2008

about 12-16 million units (NPC 2011). The government recognized the need to bridge the gap between need for housing and the capacity to acquire the desired housing type. Enabling policies are being put in place to making housing affordable for the majority of Nigerians.

3.7 Security

The government is concerned about the high crime rate and recent general insecurity that is affecting the social environment and quality of life of the people. Drug abuse and trafficking in drugs and human beings are growing problems that are of local and international interest.

3.8 Gender

Gender inequality still stands out as a key challenge in the country. This is in spite of a national Gender Policy. On the whole, the human development situation of the Nigerian female is worse than that of her male counterpart due to a combination of socio-cultural practices, and insufficient attention to gender issues on the part of government. While increased efforts have been witnessed on the part of the government within the last decade, it is obvious from various indices that more attention is still needed in the area of women's rights and empowerment and gender equity. The Nigerian girl currently lags behind in terms of education. The overall adult literacy rate among the males was 79.3 per cent while that of females was 63.7 per cent in 2010 (NBS, 2010).

At present, several harmful practices against women are prevalent in Nigeria. Female genital mutilation is one of the most common of these. Various widowhood rites, denial of inheritance rights and access to land and other resources, early and forceful marriage, domestic violence and harmful childbirth practices are some of the several practices infringing on the human rights of the Nigerian female. These issues are being addressed comprehensively to create opportunity for the optimal development of the Nigerian woman and enable her contribute her quota appropriately to national development.

Domestic violence occurs across all socioeconomic and cultural backgrounds. Twenty eight percent of all women reported experiencing physical violence since the age of 15, and 15 percent of women experienced physical violence in the 12 months preceding the National Demographic and Health Survey in 2008. Among women who experienced violence since age 15, a total of 45 percent reported that their current husband or partner was the perpetrator and 7 percent reported that the perpetrator was a former husband or partner. Table 1 shows some key indicators under the social pillar.

Table 1. Social Pillar: Guaranteeing the Wellbeing and Productivity of Nigerians (multiple sources, including NPC (2009))

Indicator	Year 2002	Year 2012
Total Population		172 million (Estimate at 3% percent growth rate)
Urbanisation rate (%)	48.2 (2005)	49.8 (2010)
% of population living on less than \$1/day	65.5	69.1
% of underweight children under the age of 5	29 (2000)	
% of population with sustainable access to improved water source	Urban: 72 (2002) Rural: 48 (2002)	54 (2008)
% of population with sustainable access to improved sanitation	Urban: 48 (2002) Rural: 30 (2002)	

Indicator	Year 2002	Year 2012
Life expectancy (Years)	Male: 45 Female: 46	Male: 48 Female: 49
Under – 5 mortality rate (per 1,000 live births)	201 (2003)	157 (2008)
Infant mortality rate (per 1,000 live births)	100 (2003)	75 (2008)
Maternal mortality ratio (per 100,000 live births)	800 (2000)	545 (2008)
Literacy rate (% aged 15 and above)	66.8	63
% primary school enrolment of children aged 6-11		30
Ratio of female to male enrolments in universities (%)		38:62
% of urban population living in slums		
Human Development Index	0.462 and ranked 147 out of 173 countries in the world	0.459 and ranked 156 out of 187 countries in the world (2011)
HIV/AIDS prevalence rate (% of population)	5.8 (2001)	4.1 (2010)
Knowledge of HIV/AIDS prevention (% of population)	68.7 (2007)	51.95 (2010)

3.9 Culture and Tourism

Nigeria is the most populous country in Africa with the largest concentration of black people having different cultural heritage and ethnicities. The country is an important centre for biodiversity and was identified by the UNESCO as one of the 25 Biodiversity hotspots in the world, with about one-third of Africa's mangrove forest, and half of Africa's mangrove species. Naturally, Nigeria is richly blessed with hugely Tourism Resources, varied land scape, fascinating grassland, rolling mountains, waterfalls, deep wooded valleys, beautiful beaches, parks and tourist attractions located in different parts of the country. On the account of the rich cultural heritage and tourism potentials in Nigeria, the Culture and Tourism Sector has been identified as one of the key drivers of the NV20 :2020 and the present administration's transformation agenda.

CHAPTER 4

Environment Dimension

4.1 Overview

Nigeria's environment is under increasing threat from natural disasters, such as drought, and human activities. There are already certain ominous problems with the environment and visible scars associated with the destruction of the natural resource base (land, water and air) upon which all life depend. The country's large population and its rapid growth rate are putting serious pressure on its environmental resources.

The key environmental issues facing Nigeria can be captured broadly in terms of land degradation and air and water pollution. Much of Nigeria's arable land is being sapped insidiously of its productive potential through overuse and inappropriate technologies. Rapid deforestation, resulting from unsustainable use of forest resources for human survival (e.g. fuel wood and energy, housing etc.) is a major contributing factor to land degradation. The end result of deforestation and other agricultural activities, including intensive grazing, over-plowing and over-cultivation, is severe land degradation, usually referred to as desertification, particularly in the northern part of the country.

Fossil fuel use, particularly oil and gas exploration, has aggravated the problem of ecological damage in the Niger Delta. Similarly, indiscriminate, inappropriate and illegal mining of mineral resources in many parts of Nigeria has left some areas of the country bare and unproductive.

There is also a growing concern about air and water pollution, associated with continued urbanization and industrialization in the country. Nigerians in general are increasingly being exposed to the hazards of highly polluted gaseous and dust emissions from industries and vehicles and dangerous industrial wastes that are constantly being discharged into their environment (Oladipo, 2008a, b).

The state of Nigeria's environment on sectoral basis is next discussed under the thematic issues of (i) biodiversity; (ii) coastal and marine environment; (iii) deforestation; (iv) drought and desertification; (v) floods and erosion; (vi) human settlements; (vii) land resource use; (viii) pollution; (ix) water resources; and (x) waste. This situation is being compounded by climate change.

4.2 Biodiversity

Nigeria occupies a unique geographic position in Africa and the variability in climate and geographic features endows her with one of the richest biodiversity in the continent. Its diversity of natural ecosystems includes, beginning from the north, savanna (Sahel, Sudan,

Guinea and Derived), lowland rainforest, freshwater swamp forest, mangrove forest and coastal vegetation, and along the eastern border with Cameroon, a montane forest zone.

According to the National Biodiversity Strategy and Action Plan (2006) document, Nigeria possesses more than 5,000 recorded species of plants, 22,090 species of animals, including insects and 889 species of birds, and 1,489 species of micro-organisms. It is estimated that 0.4% of the plant species are threatened and 8.5 % endangered, with 0.14 of the animals and insects threatened and 0.22% endangered. By 1992, the country study listed 135 reptile species, 109 amphibian species and 648 fish species and the forests along the south-eastern border with Cameroon area known to be a hotspot for amphibian biodiversity. Nigeria is known as a global hotspot for primate species, with a great diversity found especially in the Gulf of Guinea forests of CrossRiverState and adjacent parts of Cameroon. Some important endemic birds and mammals include three monkey species, the white-throated monkey (*Cercopithecus erythrogaster*), Sclater's guenon (*Cercopithecus sclateri*) and the Niger Delta red colobus (*Procolobus pennantii epieni*) and three birds, the Anambra waxbill (*Estrilda poplilpaia*), the Ibadan malimbe, (*Malimbus ibadanensis*) and the Jos indigo-bird (*Vidua maryae*). The most endangered gorilla subspecies on earth, the CrossRiver gorilla (*Gorilla gorilla diehli*) with an estimated population of less than 250 individuals is found only in a couple of protected areas near the Nigeria/Cameroon border.

The IUCN Red List of Threatened Species (i.e. of globally threatened species) includes 148 animals and 146 plants that are found in Nigeria. Of these, 26 animals and 18 plants are classified as endangered and another three animals and 15 plants are critically endangered worldwide.

Natural and human-made threats, socio-cultural problems as well as direct and indirect consequences of socio-economic development, particularly agriculture, have contributed to the erosion of biodiversity at all levels. Within the last 30 years, about 43 percent of the forest ecosystem has been lost through human activity. Close to 96 percent of the original 20 percent forest cover has been cleared and only 2 percent of what remains is undisturbed. This has resulted in massive loss of the very rich and diverse forest flora and fauna, including indigenous tree species. Large parts of the savanna are also being ravaged by man-induced desertification, causing ecosystem impoverishment and biodiversity loss. The protected area system in Nigeria currently covers only 5.7 percent of the land mass. The number of threatened and endangered species has also been on the increase. It is estimated that 0.4 percent of the plant species are threatened and 8.5 percent endangered, with 0.14 percent of the animals and insects threatened and 0.22 percent endangered. In addition, about 10-12 species of primates are threatened (see NV 20:2020 Environment and Sustainable Development Report, 2009)

4.3 Coastal and marine environment

The Nigerian coastal and marine environment stretches for about 853 km along the coastline and inland for a distance of about 15km in Lagos in the west to about 150km in the Niger Delta

and about 25km east of the Niger Delta. It consists of barrier bar/lagoon system, the Mahin mud coast, the Niger Delta, Strand coast and a moderately wide continental shelf.

Like many ecosystems in Nigeria, the marine and coastal area of the country is afflicted with many environmental problems that are being addressed for sustainable development. Industrialization, urban development, and oil and gas exploration and exploitation have infringed on the people and their environment, leading to the opening up of previously pristine ecosystems. This has resulted in the alteration of habitats, biodiversity loss, deforestation and pollution (UNDP, 2006). While natural hazards, such as floods, are clearly responsible for some of the environmental impacts, industrial activities have no doubt aggravated the situation. Major areas of environmental challenges include (i) pollution from oil spills, gas flaring industrial and agricultural effluents, sewage and solid wastes¹⁰; (ii) modification of ecosystem in the form of biodiversity loss, coastal erosion¹¹, flooding, deforestation, salt water intrusion and invasive/exotic species; and (iii) depletion of fisheries resources (see Awosika, 2008).

4.4 Deforestation

Forestry contributes about 3% of the GDP and accounts for a high proportion of domestic energy, food and medicinal supply of the rural population (and increasingly the urban population). Nigerian forests also play a major role in the rural economy through the Non-Timber Forest Products (NTFPs). For instance, about 150 indigenous woody plants have been identified as producing food for human and livestock consumption. A lot of other plants are being used for medicinal purposes to cure such diseases as hypertension, diabetes, sickle cell anaemia and bronchial asthma. The value of lost forest cover has been estimated at US\$750 million annually at 1989 prices.

The forest resources of Nigeria are under immense human pressure. The annual rate of deforestation of the woodlands averaged 3.5 percent, for northern Nigeria alone, the annual deforestation of woodlands runs to about 92,000 hectares, while the whole country consumes about 50 to 55 million cubic metres of woods annually. The southern rain forest, which covers only 2 per cent of the total land area in Nigeria, is being depleted at an annual rate of 3.5 per cent. *Nigeria has the highest rate of deforestation in Africa and loss of primary forest in the world.* Over 25,000 ha of the gazetted forest are being lost to de-reservation annually. A major contributory factor to massive deforestation and devegetation is the almost total dependence of over 90 per cent of rural population in Nigeria on the forest resources for livelihood and

¹⁰A recent report ((Tide online 2008) indicated that a total of 1,260 oil spill sites have taken place in the oil-producing areas of Niger Delta. Nigeria is responsible for 13% of the gas flaring going on in the world. This is equal to 23billion cm³/year of flared gas, which is sufficient to meet Nigeria's energy needs, leaving a healthy balance for export

¹¹The Victoria beach is the fastest eroding beach in Nigeria with average erosion rates of 20-30m annually. Other areas experiencing erosion include the Mahin mud coast (25 to 30m annually); Escravos (18-24m annually); Forcados (16-29m annually); Brass (16-19m annually); (Kulama 20-24m annually) and Bonny (10-14m annually) – (Awosike, 2008)

economic survival. According to Food and Agricultural Organization (FAO), the remaining forest area in Nigeria will likely disappear by 2020 if the current rate of forest depletion continues unabated (NV 20:2020 Environment and Sustainable Development Report, 2009).

4.5 Drought and desertification

Drought and desertification are twin environmental problems afflicting many parts of the northern part of Nigeria. It has been estimated that between 1976/78 and 1993/95 there was massive degradation of the environment, whereby desertification has shifted southwards from 12°30' North to 10°30' North (Hewawasam *et al*, 2003).

Desertification has become a major development and environment problem in many parts of Nigeria, particularly in the region north of latitude 10°N. It has been estimated that between 50% and 75% of Bauchi, Borno, Gombe, Adamawa, Jigawa, Kano, Katsina, Kebbi, Sokoto, Yobe, and Zamfara States in Nigeria are being affected by desertification. These states, with a population of about 35 million people account for about 35% of the country's total land area. In addition, seven adjacent states to the south are reported to have about 10% to 15% of their land areas threatened by processes of desertification. It is estimated that the country is currently losing 351,000 hectares of its landmass to desert-like conditions annually, and such conditions are estimated to be advancing southwards, in a haphazard manner, at the rate of about 0.6km per year.

Drought and desertification bring about severe disruption of the socio-economic development of the affected areas. Persistent droughts, in particular, may result in failure of crops and death of livestock, eventually bringing about famine. Drought and desertification-induced changes in population dynamics may include increased migration from rural areas into the urban centers. This leads to greater pressure on the existing urban infrastructure, and subsequent social conflicts in the affected areas (NV20:2020 Environment and Sustainable Development Report, 2009).

4.6 Flood and erosion

Flooding is a common occurrence in many parts of Nigeria. Generally, floods result mostly from heavy and high intensity rainfall, coupled with poor watershed management. Human activities such as unplanned rapid urbanization, blockage of river/drainage channels, land clearing for agricultural purposes, poor dam construction and deforestation may contribute to flooding. The most flood-prone areas in Nigeria include:

- Low-lying coastal areas of southern Nigeria where annual rainfall is quite heavy; such as Calabar, Warri, Port-Harcourt and Lagos. The adverse effects of flooding are more apparent when stormy weather coincides with high tides.
- The floodplains of the major rivers such as the Niger, Benue, Gongola, Sokoto, Hadejia, Katsina-Ala, Donga, Kaduna, Gurara, Ogun and Anambra, etc.

- The flat, low-lying areas around and to the South of Lake Chad which may be flooded during and even a few weeks after the rains.

Many urban centers including Dutse, Enugu, Ibadan, Kaduna, Kano, Lagos, Maiduguri, Onitsha, Owerri, Port Harcourt, and Sokoto have experienced flood episodes in recent times. In general, urban floods are more common in towns located on flat and low-lying terrain or where adequate provisions have not been made for surface drainages or drainages have been blocked by municipal wastes and eroded soil sediments.

Erosion of various types, including sheet, rill and gully, is affecting nearly all parts of Nigeria. Coastal erosion is becoming much intensified as a result of human activities such as damming of rivers, construction of harbour protecting structures and jetties like in the Lagos Bar beach, sand mining, dredging activities, and deforestation of coastal vegetation. Sea level rise as well as localized subsidence also exacerbates the rates of coastal erosion. More than 50 erosion sites have been identified along the 835km coastline of Nigeria, with estimated mean shoreline retreats of 2 – 30 m per year (FGN, 1997, NV20:2020 Environment and Sustainable Development Report, 2009).

Gully erosion is most visible in Anambra, Enugu and Imo. Other badly affected states include Ekiti, Gombe and Kogi. Gully menace has been identified in many parts of Nigeria – the Shemanker valley, north western part of Sokoto, the Mambilla Plateau, the Zaria area of Kaduna State as well as Auchi and Abudu Areas of Edo State. The South Eastern states of Abia, Anambra, Ebonyi, Enugu and Imo States have been ravaged by gullies of strong magnitudes. Active gullies are now common land features of Agulu, Nanka, Ekwulobia, Nnobi, Nnewi, Oraukwu, Alor (Anambra State); Item, Ohafia, Arochukwu, Isukwato, Isu Ochi (Abia State); Arondizuogu, Amucha, Ideato, Okigwe (Imo State); Enugu - Ngwo, Eke, Abor, Ekwegbe (Enugu State) and parts of Ebonyi State.

Spectacular gullies have destroyed vast areas of land in Nanka, Agulu and Oko in Anambra state, Okigwe in Imo state, and parts of Abia, Enugu, and Ebonyi. Those of Anambra state present a sad picture of the disastrous physical and socio-economic effects of gully erosion in Nigeria. By early 1970s, some of the gullies were found to be as deep as 120 m and as long as 2 km in some areas, resulting in an annual soil loss of over 13 million tones, valued at over US\$2 million (N300 million) annually. By 1997; Government had estimated that there were more than 2,000 active gully erosion sites spread across the country.

Sheet erosion occurs commonly in Nigeria although its effect is not easily perceived because of its 'deceitful' slow progress. Sheet erosion slowly removes the surface solid layers by rainfall runoff down slopes, thereby resulting in soil degradation and impoverishments, loss of farmlands, pollution and siltation of available sources of drinking water. Sheet erosion has been identified as being active in Anambra, Imo, Plateau and Sokoto States, as well as many parts of Kwara State.

Wind erosion is common in northern Nigeria where the vegetation is scarce, and causes frequent sweeping away of topsoil. Borno, Kano, Sokoto, Zamfara and Yobe States are the most vulnerable to wind erosion and its impacts in Nigeria.

In general, erosion results in the depletion of farmlands, loss of forest resources and reduction in agricultural outputs. It also results in loss of land resources for other developmental purposes, destruction of properties and social amenities, as well as loss of lives.

4.7 Land use

Land is the most important resource necessary for sustenance. Land cover is central to environmental processes through its influence on biodiversity, water, energy, trace gas emissions, carbon cycling, and a wide range of socio-economic and ecological processes that affect livelihoods (see Abbas, 2009). Nigeria has a total land area of 923, 773 square kilometers which is richly endowed with abundant and diverse renewable and non-renewable resources, but human intervention, however, has resulted in dramatic change in the land use of the country's bio-physical environment.

Land cover changes in the last 30 years indicate that disturbed forest increased by about 33%, extensive small holder rain fed agriculture by about 13% and flood plain agriculture by 123%. Forest plantation increased by 58% and rain fed arable crop plantation by 3000%. All these suggest intensification in southward movement of the grazing zone in the country. The strong increase in flood plain agriculture strongly suggested intensification of cultivation within the Fadamas when other surrounding lands are already close to the climatic limit of cultivation. A 425% increase in the extent of sand dunes/aeolian deposits and the over 50% decrease in the area of undisturbed forest is a strong evidence of land degradation.

In general, the results presented by Abbas (2009) strongly indicate loss of prime arable lands which is in turn leading to the opening up of new virgin land towards the southern part of the country. In the northern and central parts of the country, the Sudan savanna ecology is transiting to Sahel, an indication that desertification intensity is increasing. In a similar manner, the Guinea savanna in the south is giving way to Sudan savanna grassland.

4.8 Environmental Pollution

Environmental pollution in Nigeria is much greater in magnitude today than in previous decades as a result of the high rate of population growth and urbanization, modernization of agriculture, especially in the growing use of agrochemicals, the introduction of new technologies and consumer products, and, the ineffectiveness of the institutional, logistical and policy arrangements that have been put in place over the years to tackle the menace. Thus environmental degradation due to pollution must be tackled head-on if Nigeria is to achieve the vision of becoming one of the leading twenty economies in 2020, for a healthy environment is the basis of economic prosperity and sustainable development. Essentially this calls for a robust and holistic approach to pollution management in the country.

The dominant types of pollution in Nigeria are air, water, soil and noise pollution. Industries were the major sources of pollutants in Nigeria in 1980s and 1990s when well over 5,000 industrial facilities and 10,000 small scale industries were in operation on the Nigerian landscape. Constantly smoke from factory chimneys and dust are spewed into the air, untreated industrial effluent discharged directly into open drainage channels and some industries bury expired chemicals and hazardous waste in their backyards or dump them haphazardly, thereby threatening water quality in rivers and wells. The total dependence of manufacturing industries on diesel-powered electric generators is the main driving force of air pollution in major industrial centres in Nigeria. In 1998 FEPA reported that air pollution load for Lagos state industries was about 51800metric tonnes, consisting of sulphur dioxide (37.6%), nitrogen oxides (31.5%) and particulates (26.5%).

Although many of the industries have closed down, pollution has by no means abated as those functioning still rely entirely on diesel-powered generators and the country has witnessed a tremendous upsurge in the number of automobiles and commercial motorcycles on our roads and streets as well as electric generators in homes and offices. These contraptions have become the new and widespread sources of pollution in Nigeria. The major pollutants from automobiles, motorcycles and electric generators are carbon emissions into the atmosphere, expended oil and battery acid which are dumped haphazardly within and on the outskirts of towns and excessive noise from all the three. It has been estimated that about 80 million litres of used crankcase oil from mechanic workshops, industries, power stations and commercial houses are dumped directly into drains and ground surfaces in urban centres. Studies elsewhere have identified excessive exposure to noise as detrimental to the neuro-endocrine, cardiovascular, respiratory and digestive systems. In addition chronic exposure to noise has been found to cause fatigue, reduced concentration and work efficiency.

Pollution from oil exploration activities in the Niger Delta remains of concern to the government. Oil spills from leaking underground pipelines and storage tanks are a regular occurrence, rendering vast tracts of land and water bodies unproductive in the region. National Oil Spill Detection and Response Agency (NOSDRA) recorded in first half of the year 2007 a total of 424 spill incidents involving 33,799 barrels of oil. Of these spill incidents 196 were due to Equipment or operation failure, 143 were caused by cabotage while the sources of the remaining 85 were in contention. As well, pollution from gas flaring goes on daily because the flare-free deadline set by government has been postponed four times. The resultant heat stress and acid rain continue to degrade the ecosystem.

Pollution of air, water and soil in Nigeria also comes from extensive use of fertilisers on farms, dumping of expired and contraband chemicals and pesticides in the country, improper storage and handling of chemicals as well as improper disposal of hospital and municipal wastes.

An emerging and rapidly growing source of pollution is e-waste from developed countries being dumped in Nigeria. This form of waste consists of old computers and other electronic gadgets which are laced with deadly chemicals and toxins. The poor regularly sort through waste

dumps to scavenge for anything they could sell and so unwittingly expose themselves to toxic hazards and health risks.

4.9 Waste

Solid waste disposal has become one of the environmental problems that the government is concerned about. It has been estimated that by the year 2000, Lagos metropolis alone was generating about 998,081 tonnes of solid waste per year. Recent estimates (Osibanjo, 2008) indicate that the total amount of domestic waste per annum in Nigeria is about 63million tonnes (0.45kg/capital/annum). In general, the volume of solid wastes is overwhelming urban administrators' capacity to plan, evacuate and dispose wastes.

In Nigeria, waste is indiscriminately disposed without control, such that solid waste dumps dot the urban landscape. In fact only about 30 -50% of waste in Nigeria is collected (Osibanjo, 2008). Many of the urban areas in Nigeria are yet to have effective system of refuse collection. As a result, most urban households resort to open dumping of refuse, although a few engage private refuse collectors or burn or bury solid waste. The common arrangement, in the very few urban communities where a system is in place, is for waste management authorities to collect refuse from households and public containers on a regular basis.

The situation is compounded by a number of factors including: (i) indiscriminate dumping of waste (waste disposal), rather than waste management; (ii) unplanned sitting of waste dumps; (iii) preponderance of non-biodegradable materials such as plastic bags and containers in waste materials; (iv) rampant sewage leakages; and (v) increasing dumping of e-waste (outdated computers and ICT equipment) and medical waste in the country.

4.10 Climate change

Recent scenario analysis for Nigeria by the Climate Systems Analysis Group at the University of Cape Town using statistical downscaling method to extrapolate the empirical data of about 40 meteorological stations in the country (BNRCC, 2011) suggest trends towards a warmer climate in the future. Figure 13 shows a 2.0 – 2.2^oC increase from south to north for the period 2046 – 2065, with a much more rapid increase in the range of 3.5 – 4.5^oC at the end of the 21st century. Figure 14, however, shows an inverse relationship between temperature increase and rainfall increase in the country in the two periods considered. Overall, starting with no change in the extreme north-eastern part of the country, rainfall is expected to increase by a very small range of 0.2 – 0.4mm/day from the central part to the southern portion of the country by the end of this century, with some expected marked spatial variations. A recent study by DFID (2009) predicts a possible sea level rise from 1990 levels to 0.3 m by 2020 and 1m by 2050 for the country.

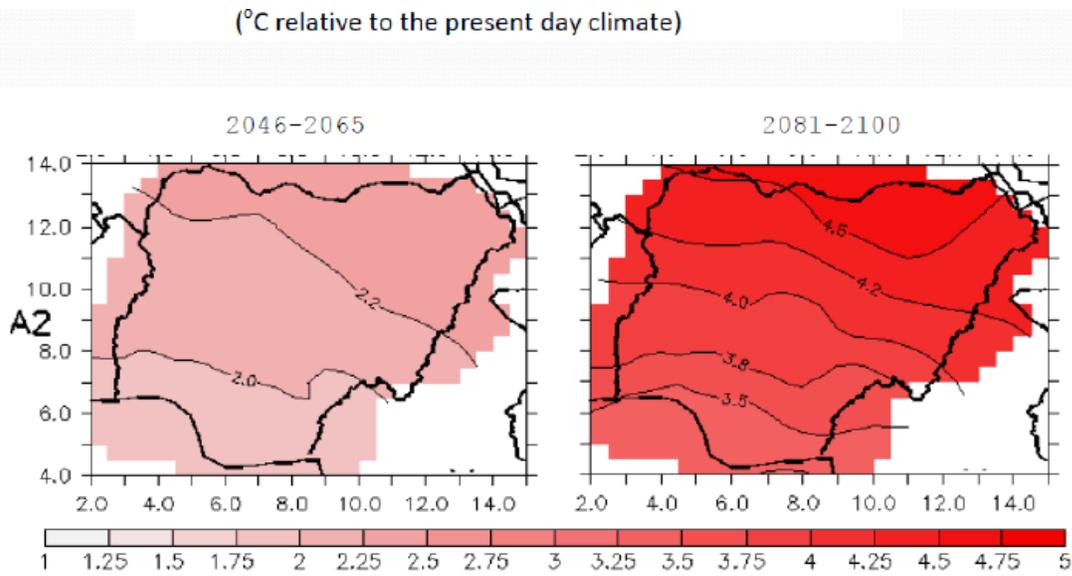


Figure 13: Projected Increases in Maximum Daily Temperature over Nigeria (Source: BNRCC, 2011)

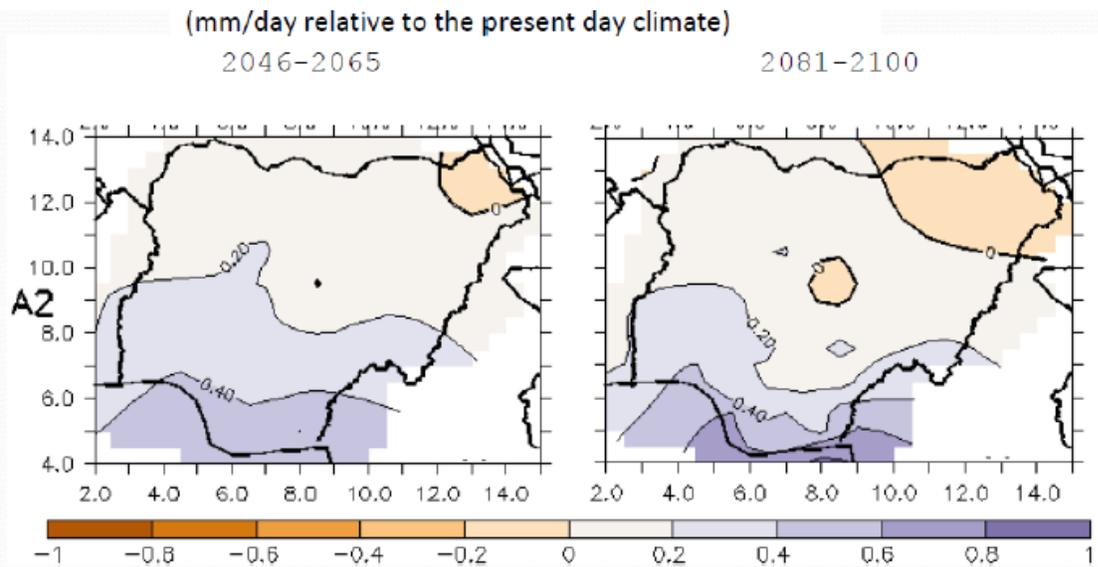


Figure 14: Projected Changes in Average Daily Rainfall over Nigeria (Source: BNRCC, 2011)

In general, Nigeria is strongly predisposed to severe negative impacts of climate change due to its fragile economy, weak resilience and low adaptive capacity. Much of the economy is dependent on climate-sensitive resources. For example, the agriculture, forestry and fishing sectors employ up to 70% of the workforce. Its fossil fuel-dependent economy will be particularly vulnerable to climate change-induced frequent and severe extreme events, such as

floods and droughts. The heavy concentration of GDP generating industry in locations that are highly vulnerable to climate change-induced sea level rise, e.g. Lagos and the Niger Delta makes the country extremely vulnerable.

The 2011 Climate Change Vulnerability Index (CCVI) published by the UK-based risk company, Maplecroft, classifies Nigeria as being of high risk. Climate change could result in a loss in GDP of between 6% and 30% by 2050, worth an estimated US\$ 100 to 460 billion dollars. According to the DFID (2009) study, if no adaptation is implemented, between 2-11% of Nigeria's GDP could potentially be lost by 2020, thereby hampering the national development goal of becoming one of the top 20 economies in the world (NPC, 2009).

Overall, Nigeria ranks low in terms of its environmental performance. The 2012 Environmental Performance Index (EPI)¹² ranked the country as 119th out of 132 countries surveyed in the world, with a score of 40.1. Although this shows some improvement over the 2008 performance in which Nigeria scored 56.2, the low EPI figure still puts Nigeria behind many other African countries. Nigeria was ranked 19th out of 21 sub-Saharan African countries scoring better than only Eritrea and South Africa. The country ranked 130th on environmental burden of disease, 26th on agriculture, and 81st on biodiversity and 41st on climate change. The government has shown serious concern about the situation of the environment in the country and, as is discussed in this report, has put in place various programmes and initiatives to mainstream environmental issues into its development policies and plans and promote environmental sustainability.

¹² The Environmental Performance Index (EPI) that has been developed by Yale University Centre for Environmental Law and Policy to assess environmental health and ecosystem vitality of. It is based on 25 well-selected performance indicators (2008 Environmental Performance Indicators, YaleUniversity). The 2012 EPI ranks 132 countries on 22 performance indicators in the following ten policy categories: (i) Environmental Burden of Disease; (ii) Water (effects on human health); (iii) Air Pollution (effects on human health); (iv) Air Pollution (ecosystem effects); (v) Water Resources (ecosystem effects); (vi) Biodiversity and Habitat; (vii) Forestry; (viii) Fisheries; (ix) Agriculture; and (x) Climate Change

CHAPTER 5

Development Challenges

5.1 Overview

With the current human development indicators that have been elaborated earlier, Nigeria, like any developing economy, is confronted with some challenges in its development stride and efforts to improve the quality of life of its citizens for sustainable development. In general terms, these can be classified into four broad categories: *economic* (the challenge of transforming the economic conditions), *political* (the challenge of strengthening and sustaining the current tenuous democracy for good governance), *human development* (the challenge of transforming social conditions of the people), and *environmental* (the challenge of protecting the resource base).

5.2 Economic challenges

The critical economic issues concern the need to foster sustainable rapid economic growth that will cater for the needs of over 140 million people and the imperative for proper integration of its domestic economy with the world economy

Nigeria's economy is still characterized by declining capacity utilization of major infrastructural facilities, large budget deficit, unacceptable level of unemployment and inflation. In addition, the economy had critical problems of dependence as well as undue reliance on a single commodity, which is oil, weak industrial base and private sector, low level of agricultural production and high debt overhang and inefficient public utilities. Moreover, the informal sector continues to play a domineering role in the national economy. The government acknowledges that it faces these challenges in its efforts to rapidly transform the economy from a developing to developed economy by 2020. In particular, the government notes that the dependence of the economy as reflected in the manner in which it has been integrated into the global political economy and the impacts of globalization, as well as the domineering role of the informal sector in the national economy, should be addressed.

In this regard, the government is emphasizing the need to get the conditions right to achieve macroeconomic stability and competitiveness for the Nigerian economy to be transformed into a dynamic and productive entity that could direct the nation in the path of sustainable human development. A major emphasis is on altering the structure of production and consumption activities so as to diversify the economic base, reduce dependence on oil and imports, to put the economy on a path of self-sustaining and non-inflationary growth. This will enlarge the country's employment base and provide hope for the large youthful population of unemployed.

5.3 Socio-Political challenges

There is the general acceptance in the country that viable and stable democracies did not evolve overnight, but matured over years through hiccups and fits and starts, and that

democracy will never thrive in a situation where it is periodically truncated or terminated on the pretext that political actors are not getting things right or performing to expectation. Thus, the government notes that the main challenge is to advance democracy in a way that is dynamic, peaceful and sustainable. This calls for democratic consolidation that will build upon the gains of democratic governance that has been in place since 1999, as well as fostering a new social compact between the state, civil society and the private sector. The emphasis of the government is to address the political challenges of:

- Breaking the alliance among what IDEA (2000) called Nigeria's anti-democratic "troika", militarism and negative communalism (ethnic militia and religious fanaticism) and petro-business.
- Delivering "democratic dividends" equitably in order to improve the quality of life of Nigerians and thus consolidate their optimism in democracy.
- Improving the degree of political equality, peace and human security, inter-group tolerance, inclusiveness and popular participation.
- Ensuring political leadership by responsive and responsible leaders.
- Eliminating corruption.

Overcoming the scourge of poverty, meeting the basic needs of the people, provision of adequate infrastructure developing human resources/capital for sustainable growth and equity are the main challenges to the advancement of the social pillar of sustainable development in the country. In addition, considering the rising population, rapid rate of urbanization and the relatively low level of water resources development which places Nigeria among the sub-Saharan African countries that lose about 5% of their GDP annually or US\$28.4 billion annually and 40 billion work hours annually; and bearing in mind that Nigeria needs about 56 billion liters of potable water supply for domestic use only as well large amount of water for industrial and agricultural use, there exist a huge funding gap towards the execution of the programs. Modern technology and capacity building to bridge the operational, maintenance and safety of dams for optimum use of water resources infrastructures requires adequate funding for sustainability. Therefore, multilateral and bilateral supports are required to fill the financial resource gap in the development of the sector.

5.4 Environmental challenges

The direct environmental hazards faced by different ecological regions of the country are many and varied. The factors of increasing environmental stress include increasing pressure on natural resources due to large population that is increasing at a high rate, unsustainable agricultural practices, the imperative of industrialization and economic growth as well as rapid urbanization due to unplanned and uncontrolled rural-urban migration. All these have combined to produce critical environmental problems and challenges which is capable of derailing the national path of sustainable human development if left unchecked. Ensuring environmental sustainability faces many challenges. One is the production of food to meet the needs of the growing population while minimizing the clearing of land for agriculture and heavy

dependence on chemical pesticides and fertilizers, particularly in the northern part of the country. Others are

- (i) the promotion of sustainable use of natural resources, including water;
- (ii) meeting the rapidly growing energy needs of present and future population mostly through environment-friendly renewable energy resources; and
- (iii) adaptation of clean development mechanism and use of energy efficiency and clean conventional technologies at affordable cost.

The government reckons that issues must be properly addressed to ensure that the resource base of the country is used sustainably for meaningful economic and social development.

5.5 Regional challenges

Overview

Regional disparities in development are not an uncommon phenomenon in countries. The issues with regional development in Nigeria include low access to infrastructure, high poverty levels, unplanned urban sprawl, intermittent religious and ethnic conflicts and environmental degradation. The disparities in regional development are due to a number of factors, which include history, culture, natural endowment and the factor of politics. These are issues that contribute to peculiar developmental problems in the different regions of the country. For example, general environmental degradation occurs in the Niger Delta due to petroleum extraction from the area, the north of Nigeria experiences desert encroachment, while some southern parts of the country are devastated with gully erosion. In addition to these are other cross-cutting issues like rural-urban drift which affect all the regions. All these constitute major challenges to sustainable development in the country.

5.5.1 The Niger Delta

Due to its peculiar history and unique physio-geographic features as well as being the region from which the oil and gas resources of the country are mined, the development of the Niger Delta has remained a major challenge for the Nigerian state.

With a total area of about 75,000 square kilometers and 185 local government areas, the Niger Delta region contains the world's third largest wetland. The Delta environment can be broken down into four main ecological zones: coastal barrier islands, mangrove swamp forests, freshwater swamps and lowland rainforests with rich biological diversity. Difficult topography encourages people to gather in small communities of the estimated 13,329 settlements in the region, 94 percent have populations of less than 5000 (Niger Delta Human Development Report, 2006 – NDHR, 2006).

Oil and gas alone from the Niger Delta have generated 40 percent of Nigeria's national GDP over recent decades. Between 2000 and 2004, oil accounted for about 79.5 percent of total government revenues and about 97 percent of foreign exchange revenues. Paradoxically, however, these vast revenues from an international industry have barely touched the Niger

Delta's pervasive local poverty. Furthermore, the discovery of oil in the region, created environmental problems mainly due to the exploration and production activities in the oil and gas sector. The Niger Delta Region has therefore become heavily polluted resulting from oil spillages, sabotage, pipeline vandalization and emission from gas flaring. Land has been heavily impacted and degraded; agriculture and fishery, the mainstay of most of the rural communities therefore declined sharply over time.

The Niger Delta crisis has been linked to agitation against such environmental degradation caused by developments in the past that had little or no consideration for environmental management. As a result of the degradation, the socio-economic lives of the people were negatively impacted. This gave rise to militancy within the region, resulting in attacks on oil facilities and drastic reduction in the daily production output from about 2 million barrels/day to less than 700 thousand barrels/day at the peak of the crisis, with attendant loss of national revenue. This has spurred formidable challenges to sustainable human development in the region, particularly as conflicts over resources tighten their often vicious grip.

Despite its contribution to the country's economic growth, the region's human development index (HDI) score was a low value of 0.564 in 2005 (NDHR, 2006). While these ratings put the Niger Delta at a slightly higher level than Nigeria's overall HDI of 0.470 at the same period (HDR, 2007&2008), the Niger Delta rated far below countries or regions with similar oil and gas resources (e.g. United Arab Emirates, Kuwait, Libya and Venezuela). Table 2 shows the Niger Delta 2005 HDI compared with other countries as at 2002.

Infrastructure and social services are generally deplorable and vastly inadequate for an estimated regional population of over 34 million people. For 85 per cent of the population, informal enterprise is the primary source of a livelihood, but these are characterized by low productivity and wages. Not surprisingly, women, who face a double marginalization due to gender are particularly active in this sector.

A majority of the people lack information and technical abilities and unemployment rates are high. The tension in the region has prompted some local people, especially youths, to prefer quick and profitable gains from conflict over longer-term and frequently unavailable investments in education and training. Available data show that limited employment correlates with the highest incidences of youth restiveness.

S/N	Country	HDI
1.	Kuwait	0.891
2.	United Arab Emirates	0.868
3.	Libya	0.818
4.	Saudi Arabia	0.812
5.	Venezuela	0.792
6.	Nigeria	0.470
7.	Niger Delta (Nigeria)	0.564

Table 2: Selected Developing Countries Ranked on the Human Development Index, 2002

One of the most serious challenges to development in the Niger Delta relates to environmental sustainability. Wide- ranging and usually destructive environmental changes have stemmed from oil and gas extraction, industrialization and urbanization. Oil spills and gas flares in particular have destroyed natural resources central to local livelihoods. The alienation of people from their land and resources has led to the inefficient use of remaining resources and poor or inequitable land-use practices (NHDR, 2006).

5.6 Science and Technology

The efficient use of scientific and technological advances is essential for economic development and social progress. One major factor militating against national development is poor scientific and technological support, and the research and development patronage.

The government acknowledges that globalization is largely driven by information and communication technology (ICT), and that knowledge has become a principal force of social transformation. Thus, knowledge-based and knowledge-led development holds the promise that many of the problems confronting humanity could be significantly alleviated if only the requisite information and expertise are systematically and equitably employed and shared (d'Orville, 2002). Nigeria therefore is determined to address the challenge of developing its ICT capacity for development.

CHAPTER 6

Addressing Development Challenges in the Economic Sector

6.1 Overview

Broad economic reform programmes are being put in place in response to the severe economic crisis, which the country faced. Government realizes the importance of privatization and the need to restructure the economy. A number of policies have been put in place to liberalize, deregulate and privatize some key sectors of the economy such as the National Electric Power Authority, telecommunication, downstream petroleum and steel sectors. These policy reforms combined with investment in human capital, physical infrastructure and good governance are essential to achieving self sustaining long term economic growth.

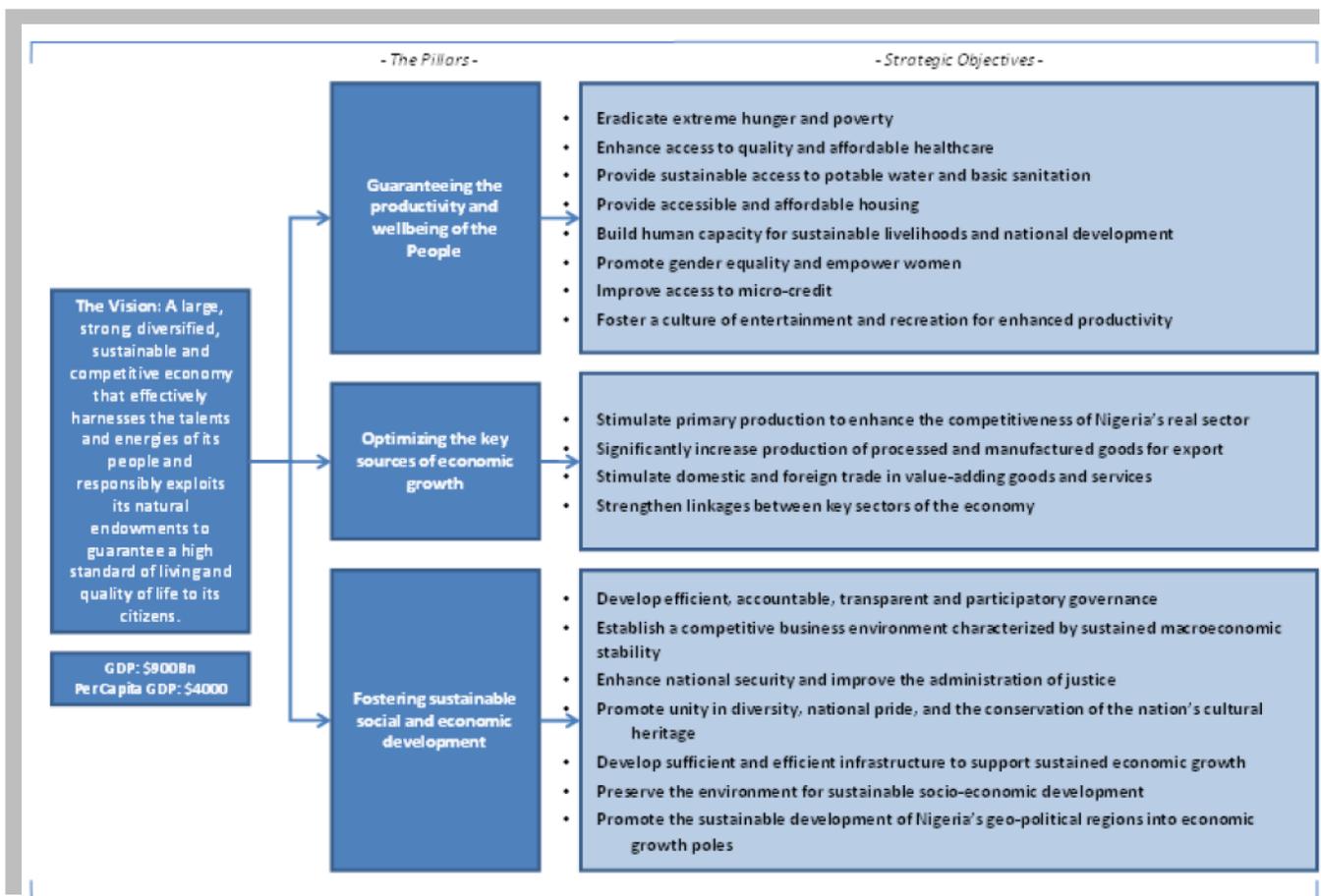


Figure 15: Nigeria Vision 20:2020

The thrust of the reforms in all sectors is to make Nigeria's market more internationally competitive, remove controls over private sector involvement in most areas of economic activity and eliminate barriers to trade. In the financial markets, reforms sought to liberalize

access to foreign capital and encourage foreign investment. Domestic capital markets are also being expanded by strengthening of institutions, including banking and financial regulatory bodies.

National policies and programmes that will advance the economic pillar of sustainable development in Nigeria are captured in the;

- (i) macroeconomic framework;
- (ii) job creation;
- (iii) public expenditure management;
- (iv) real sector development; and
- (v) Infrastructure development tenets of the Transformation Agenda.

The Government of Nigeria is projecting a baseline GDP growth rate of 11.7 per cent per annum for the period 2011-2015, as it hopes that it will translate to real and nominal GDP of about \$2.86billion (~~₦~~428.6billion) and \$488billion (~~₦~~73.2trillion) respectively at the end of the programme period. It assumes that the projected GDP growth of the period will be driven largely by the oil and gas, solid minerals, agriculture, ICT equipment and softwares, telecommunication, wholesale and retail trade, tourism and entertainment, manufacturing and building and construction sectors.

A total investment of \$271.67billion (~~₦~~ 40.75trillion) in nominal terms is also projected for the period. The public sector will account for \$163billion (~~₦~~ 24.45trillion) or 60 per cent, while the remaining \$108.67billion (~~₦~~16.30trillion) or 40 per cent is expected to be invested by the private sector. Overall, public sector investment plan is made up of \$77.27billion (~~₦~~11.59 trillion) for states and local governments respectively.

The key policies to be pursued by government during the programme period are as follows:

- i. Ensuring greater harmony between fiscal and monetary policy. In this regard, the National Economic Management Team will be strengthened to facilitate effective coordination of fiscal and monetary policies.
- ii. Pursuit of sound macroeconomic policies, including fiscal prudence supported by appropriate monetary policy to contain inflation at single digit.
- iii. The budget process shall be reviewed to provide greater clarity of roles, between the executive and legislature and to ensure that the appropriation bill is enacted into law within the first month of any year. The direction of policy shall draw inspiration from the US system and concentrate on setting allocation priorities rather than micro-budgeting or contesting figures with the executive.
- iv. The existing revenue allocation formula shall be reviewed to achieve a more balanced fiscal federalism. This is expected to pave the way for more effective implementation of programmes at the sub-national level.
- v. Institutionalising the culture of development planning at all levels of government and ensuring that, the annual capital budget allocation takes a cue from medium and long term development plans. Towards this end, government wants the National Assembly

to expedite the passage of the Planning and Project Continuity Bill in order to strengthen the Plan-Budget link and reduce the high incidence of abandoned projects.

6.2 Trade and Investment

Government is promoting inflow of Foreign Direct Investment to boost economic development in the country particularly in the areas we have comparative and competitive advantages including agriculture, solid minerals, oil and gas and petro-chemical. Some of the measures put in place by government aimed at improving the investment climate in the country include:

- Attractive and robust incentive package
- Streamline visa application process for foreign investors
- Removal of investment barriers
- Protecting intellectual rights and copyrights to encourage investors and entrepreneur to do business in Nigeria

Government regards trade as the engine of promoting economic growth and development in Nigeria. The role of trade is therefore critical in achieving the transformation agenda and Vision 20: 2020. In recognition of this critical role, a new trade policy is being put in place to create a more enabling environment to promote trade at domestic, regional and multilateral levels. A strategy and Action Plan have also being developed to enhance Nigeria's performance in trade at all levels. Government shall continue to adopt policies and measures to create a more enabling environment for trade

Government recognises the strong relationship between trade and environment. There is therefore, the need for synergy and complementarities between trade and environmental policies at national and international levels to achieve developmental goals. There is also need to ensure that environmental policies and measures do not constitute unnecessary barriers to trade. Nigeria would continue to work with international community to promote synergy between trade and environmental policies to achieve sustainable development.

6.3 Financial Services

Government recognizes that the Nigerian financial sector, beyond its traditional intermediation activity, has a social, environmental and sustainability role, and that the business activities of the sector have a direct impact on the community and environment. To this end, the banking sector has recently embarked on a sustainability journey that commenced with a roundtable meeting in September 2011 of select CEOs of Nigerian Banks and the Governor of the Central Bank of Nigeria. At the roundtable there was general consensus by key industry stakeholders on

the need to make the banking sector more sustainable and to incorporate these issues into business and lending operations. There was also broad agreement that profitable lending should take into account environmental and social concerns, as this was vital for sustainable economic development in the country. All stakeholders including the Central Bank, resolved to institutionalize sustainability as part of the Nigerian banking culture.

To drive the process of developing industry-wide standards that would help ensure the lending and banking operations of Nigerian banks, to conform to global environmental and social good practices, a Strategic Sustainability Working Group was formed with voluntary representation from six of the twenty-one banks. Subsequently, a Joint Commitment Statement signed by all stakeholders was released in October 2011, which recognizes the *“role and responsibility to deliver positive development impacts to society, whilst protecting the communities and environments in which we operate—for today’s generation, as well as for future generations”*(CBN, 2012 undated mimeo).

The commitment as agreed upon, envisaged the development of an overarching set of sustainability guidelines that are aligned with global best practice, as well as sector-specific issues commencing with three priority sectors (agriculture, oil and gas and power) that are crucial for sustainable economic development.

There is also a serious attempt for the development and implementation of innovative financing mechanisms to improve availability of funds to provide incentives as well as soft loans like the ‘GRAMEEN’ experience towards poverty eradication.

6.4 Private Sector Participation

Through appropriate mechanisms, the private sector will be supported and enabled to play a more active role in government’s drive to accelerate the rate of economic growth and development that is imperative for achieving sustainable development in the country. Some of the benefits that Nigeria wants to derive from effective partnership with private sector include:

- Available finance for clean projects
- Technical support for projects from banks and other financial institution and partners
- Clean supply chain through the firm’s product cycle
- Best practices ensured as they take the lead in sustainable development
- Adherence to regulations with little monitoring
- Healthy competition to accelerate the growth of this practice and the economy at large
- Good governance is fostered via accountability
- Increased capacity and widespread proliferation of experts in handling issues on sustainable development

6.5 Job creation

Government will pursue certain policy measures to reinvigorate various sectors of the economy and enhance their employment generating potentials, including implementing a youth employment safety net support programme that includes conditional cash transfer and vocational training; development of industrial clusters; reviewing of university curricular to align with industry job requirements and promotion of apprenticeship/work experience programmes and joint ventures; enforcement of mandatory sub-contracting and partnering with locals by foreign construction companies and implementation of mandatory skills transfer to Nigerians by foreign construction companies. In particular, the National Action Plan for Employment Creation (NAPEC), which outlines programmes and projects for employment creation in the following key sectors of the Nigerian economy (agriculture, commerce and industry, power and energy, works, housing and urban development, petroleum, gas and solid minerals, transportation, communication and information, informal economy, education, health, tourism, entertainment and sports) will be vigorously implemented within an enabling environment for employment creation. A major aspect of the Policy implementation is the establishment of Skills Acquisition Centers in different parts of the country. Between 2010 and 2011, these centres had trained 31,730 people, who were given necessary support to establish their businesses.

To enhance job creation, particularly among youths and women, government is implementing the following programmes through the Small and Medium Enterprises Development Agency (SMEDAN):

- Youth Enterprise With Innovation in Nigeria Programme (YouWiN!) in which **3,600** youths will be empowered for three years through training, provision of finance and mentoring to create jobs.
- Train to Work (TRATOW) employment programme, which is targeted at equipping young Nigerians with the skills to establish and run small businesses. It is expected to generate 1 million jobs in four years.
- One Local Government One Product (OLOP) programme that is expected to generate about **332,400** jobs in ten years.
- Sub-Contracting and Partnership Exchange (SPX) project, which is expected to generate about **750** jobs in a year.
- Women Entrepreneurship Development Programme (WEDP), which is a capacity building, counseling, mentoring, coaching and other business support services for **3,700** women in the 36 States and FCT at 100 women per State & FCT with a view to creating jobs and develop MSMEs.
- Youth Entrepreneurship Development Programme (YEDP), a capacity building, counseling, mentoring, coaching and other business support services for **4,440** youth in the 36 States and FCT at 120 youth per State & FCT with a view to create jobs and develop MSMEs.
- General Entrepreneurship Development Programme (GEDP), a capacity building, counseling, mentoring, coaching and other business support services for **4,810** members of other target groups in the 36 States and FCT at 130 persons per State & FCT with a view to create jobs and develop MSMEs.

- Revamping of the 23 Industrial Development Centres (IDCs), a programme that is expected to generate about **69,000** jobs in a year.
- Establishment of the National SMEs Credit Guarantee Scheme to facilitate easier access of SMEs to credit.

In addition, the country through its Federal Ministry of Labour and Productivity has ensured:

- ✓ New Employee's Enactment Act which gives additional social protection to all floor worker who may sustain injury at the work place,
- ✓ Introduction of new National Policy on Productivity measurement,
- ✓ Negotiating and processing of the new National Minimum Wage Act,
- ✓ Resolving of the problem of pay relativity in salaries of the Federal Civil Service, and
- ✓ Registration of 120,027 unemployed persons through the National Electronic Exchange (NELEX) out of which 80,430 persons had been employed from the Private Employment Agencies.

6.6 Public expenditure management

The Federal Government of Nigeria is concerned that the sub-optimality of its expenditure profile since 1999 has seen recurrent spending consistently crowded out capital expenditure, exacerbating the already abysmal state of infrastructure. Recurrent expenditure has fluctuated between 47.5% in 1999 to 80.29 per cent in 2003, while capital expenditure accounted for only 19.71 per cent of total government expenditure. It notes that it has since increased continually to a high of 38.37 per cent of total expenditure in 2009. It has grown much worse in 2011 with government borrowing to finance recurrent expenditures. To remedy the situation, under the transformation agenda, government will entrench a culture of accountability by beginning to sanction and prosecute officers that breach established financial management rules and regulations. The monetization policy will also be strictly enforced.

6.7 Agriculture and Food Security

The need to have sufficient and adequate food for all Nigerians is an important one. Many factors of demand and supply affect the Nigerian food situation. On the demand side, the factors we are more familiar with include the annual increase of the population and the desire of 164million Nigerians to move up the food chain and consume more grains, tubers, fruits, vegetables, livestock, etc. There is also the recent sharp increase in the global use of grain and oil palm to produce diesel/fuel for driving cars, which could soon pose a major food security challenge. On the supply side, there is limited new land to cultivate. Even when more new areas have been cleared, it is with growing environmental and climatic costs. These costs include the release of sequestered carbon, loss of plant and animal species and increase in rainfall runoff and soil erosion. There are also crop/livestock pests and disease challenges associated with

climate changes. Drought and desertification continue to pose challenges for crop and livestock production.

Effort is already being made to undertake a Country Partnership Strategy (CPS) with development partners by assessing climate risks in agriculture, and to develop specific strategies for achieving climate resilience and low carbon growth in agriculture. There is also an on-going Nigerian Erosion and Watershed Management Project (NEWMAP) with an overall objective of rehabilitating degraded lands and reducing erosion and the impact of climate variability in targeted areas.

More specifically, the new support towards addressing environmental issues on agriculture is focusing on promoting the use of climate smart agricultural technologies and practicing sustainable agricultural production and processing. These include the use of improved (drought tolerant) seed varieties, change in seeding dates, low tillage, rain water harvesting, soil conservation practices and grazing land management. Weather index crop and livestock insurance is being introduced under the Nigerian Incentive-Based Risk Sharing System for Agricultural Lending Scheme (NIRSAL). The application level is still low and requires more capacity building among service providers as well as farmers/investors and the provision of weather observatory materials for collecting reliable weather data upon which the weather index insurance depends.

6.8 Industry and Manufacturing

As part of government's drive to encourage investments and promote industrial development in Nigeria, various incentive packages in form of fiscal measures like tax deductions and allowances, necessary infrastructural facilities in remote mining sites like access roads, power supply etc., mining equipment, tools and facilities for monitoring mining activities in the minesfield. that have been designed will be implemented for the industrial sector of the economy to encourage entrepreneurship, develop indigenous technology, bring in new technology, develop the capital markets and increase competitiveness for the benefit of the citizenry, as well as industrialization of the vast areas of the country, abolition of restrictive monopoly regulation, significant opening up of activities previously reserved for the public sector; specific measures initiated in sectors, including textile, heavy industries, mineral, oil and gas, petro-chemical, pharmaceutical, electricity, small and medium enterprises, ICT, etc.

Under manufacturing, the Transformation Agenda seeks to promote private sector investments through the creation of an enabling environment, discouraging child labour, for instance in mining, that allows for substantial improvement in efficiency, productivity and profitability, significantly increase local manufacturing local content and linkages with other

sectors of the economy, ensure global competitiveness for manufactured goods, make Nigerian manufactured goods major foreign exchange earners and achieve rapid and sustained economic growth through broadening of the nation's productive base.

6.9 Oil and Gas

In oil and gas, the focus will be on the promotion of private sector investment in both the upstream and downstream activities of the oil and gas, deregulation of the industry and promotion of environmentally friendly oil and gas exploration and exploitation methods; strengthening capacity building programmes especially in core technical areas; provision of funding mechanisms for pre-bidding geosciences and surveys of deepwater offshore, gas flare-down to reduce pollution and increase supply for domestic use and power generation, and local content development.

Government has taken cognizance of the fact that the exploitation / utilization of oil and gas have attendant negative effects on the environment and is largely responsible for Nigeria's contribution to the global greenhouse gas emissions. It also has some negative socio-economic consequences in Nigeria. In line with international best business practice, the Nigerian National Petroleum Corporation (NNPC) in conjunction with its Joint Venture Partners, is engaged in several green initiatives which include the following:

- Gas to power generation;
- Expansion of LNG project for export;
- Gas to liquids initiatives;
- Increased supply to industrial markets for Feedstock and energy;
- Supply to domestic Residential/ commercial markets; and
- Introduction of CNG in the transport sector

To ensure the optimization of this asset and gas flare reduction, the Federal Government of Nigeria approved a National Gas Master Plan to chart a course for the effective discovery, development and utilization of natural gas in Nigeria. Also, Nigeria has a strategy for achieving gas flare out with the objective for achieving low carbon economy. Currently, there are about 41 gas flare reduction projects. Some of the climate change mitigation efforts are designed to earn carbon credits through the clean development mechanism (CDM). The CDM initiatives, some of which are described in Box 1, include the following:

- Gas utilization CDM projects portfolio containing 11 projects.
- One (1) project, the NNPC/Panocean, Ovade-Ogharefe Gas capture and utilization CDM Project has been registered and certified by the United Nations Framework Convention on Climate Change (UNFCCC) and has started earning carbon credits.
- Ten (10) others, mainly gas flare reduction and utilization projects, in the pipeline and at various stages of the CDM project cycle.

In the strategic approach to greening this sector, the Federal Government will, to the extent practicable, honour international environmental obligations and shall promote energy

efficiency, and a taxation policy that encourages fuel efficiency by producers and consumers. In addition, government shall introduce and enforce integrated health, safety and environmental quality management systems. The country will tap into the opportunities in the Clean Development Mechanism of the Kyoto Protocol on climate change to offset some of its emissions through renewable energy projects.

BOX 1
CDM PROJECTS IN NIGERIA

1. Recovery of Associated Gas that would otherwise be flared at Kwale Oil gas processing plant (Nigerian Agip Oil Company Ltd.)

Objective: The Project involves the capture and utilisation of the majority of associated gas previously sent to flaring at the Kwale plant (Kwale OGPP). The Kwale OGPP receives oil with associated gas from oil fields operated by Eni Nigeria Agip Oil Company (NAOC) in the Oil Mining Lease area 60 (OML60), Delta State, Nigeria.

Target: To eliminate about 15 million tonnes CO₂e in the period 2006 - 2015

2. Efficient Fuel Wood Stoves for Nigeria (Nigerian Developmental Association for Renewable Energies (DARE), the German Non-Governmental Organisation Lernen-Helfen-Leben e.V. (LHL e.V.) and the German carbon offset organisation Atmosfair gGmbH Technology)

Objective: The purpose of the project activity is the dissemination of up to 12,500 efficient fuel wood stoves (SAVE80) and heat retaining polypropylene boxes (hereafter referred to as the SAVE80 system) in different states located in the Guinea Savannah Zone of Nigeria, at subsidized prices. Users are households who previously used inefficient, traditional fireplaces. A single SAVE80 system will save 2.72 t of CO₂e per year. The whole project activity is expected to prevent the emission of 300,000 tonnes of CO₂e until 2019.

Target: To eliminate about 313 million tonnes CO₂e in the period 2009-2019.

3. Pan Ocean Gas Utilization Project

Objective: The purpose of the project is to eliminate gas flaring at the Ovade-Ogharefe oil field operated by Pan Ocean Oil Corporation (Nigeria) in a Joint Venture Partnership with Nigerian National Petroleum Corporation (NNPC). The project activity will capture and process associated natural gas that is currently and in the future would be flared. The project activity will reduce flaring by approximately 98% at the Ovade-Ogharefe field thereby contributing substantially to the reduction of GHG emissions in Nigeria and improving the local environment for the nearby community.

Target: To eliminate about 26.27 million tons CO₂ equivalents over a period of ten years.

The Petroleum Industry Bill that is about to be passed shall ensure that the management and allocation of petroleum resources and their derivatives in Nigeria is conducted strictly in accordance with the principles of good governance, transparency and sustainable development of Nigeria. The operations of relevant Institutions and the National Oil Company shall be guided by principles of the Nigerian Extractive Industries Transparency Initiative Act of 2007. In addition, the government shall honour international environmental obligations and shall promote energy efficiency, the provision of reliable energy, and a taxation policy that encourages fuel efficiency by producers and consumers. Also, the Federal Government shall introduce and enforce integrated health, safety and environmental quality management systems with specific quality, effluent and emission targets for oil and gas related pollutants, without regard for fuel type such as gas, liquid or solid, in order to ensure compliance with international standards.

6.10 Solid Minerals

Solid Minerals Challenges include but not limited to the following:

- Inadequate skilled manpower to regulate, monitor and enforce compliance to the provisions of the Minerals and Mining Act / regulations
- Lack of Mining equipment, tools and faculties for monitoring mining activities in the mines field.
- Inadequate infrastructural facilities at remote mining sites e.g access roads and power supply.
- Lack of adequate awareness on the part of operators on sustainable mining practices.
- Problem of illegal mining in some of the remote mining areas.
- Child labour issues in mining due to poverty mining communities.
- Lack of funds to remediate environmental degradation due to past mining activities.

6.11 Power

Government, envisages that the total proposed investment in the power sector during the period is about \$12.64billion (~~N~~1.896 trillion). This will cover investments in four areas of power generation, transmission, distribution and alternative energy. This expenditure aims at increasing generation and transmission capacity in order to provide adequate and sustainable power, intensifying rural electrification efforts in a more efficient manner and achieving optimal energy mix using the most appropriate technology.

The strategies to be adopted in achieving these include:

- Creating a deregulated and competitive electric power sector to attract foreign and local investment;
- Ensuring a viable commercial framework for the electric power sector including a tariff regime that promotes transparency;
- Partial risk guarantees for investments and a reasonable rate of return on investments; and
- Increasing transmission capacity and creating a fully integrated network that minimises transmission losses while strengthening grid security.

6.12 Information and Communication Technology (ICTs)

Nigeria, acknowledges the role of ICTs in accessing and sharing information providing new mechanisms for citizen participation, people empowerment and accountability. Thus it is

investing in the ICT sector. The proposed investment for the ICT sector between 2011 and 2015 is \$148 million (N22.2 billion). The agenda will focus on the development of a National Knowledge Based Economy (KBE) 10-year Strategy Plan, sustained human capacity development in ICT creation of a favourable and friendly investment and enterprise environment through transparency in tax systems, anti-trust laws, incentives and trade policies that would stimulate local and foreign investments in ICT, as well as development of infrastructure particularly global connectivity as a prerequisite to leveraging the benefits of the global economy improving domestic productivity and attracting foreign investments. Other strategies are: creation of an enabling environment through appropriate policies, legal, regulatory and institutional frameworks and enhancing Public Private Partnership (PPP) in project funding, financing and management. The government will implement the ICT policy and initiatives to provide integrated governance, reach the citizens faster and provide efficient services and citizen empowerment through access to information.

6.13 Transportation

Nigerian roads are the major means of transportation for over 90 % of inland movement of freight and passengers. The country recognises that development of roads especially during construction and maintenance brings about environmental challenges. But such challenges are assessed through EIAs at the various stages of road construction. Recently the National Council on Works in April 2012, prohibited the use of Cut-Back Bitumen in road construction in Nigeria.

The government is however determined to establish a safe, efficient and seamless transport system in line with global best practices within a policy frame work and specific initiatives towards achieving sustainable development, growth and poverty reduction. Some of the initiatives will include:

- Concession of the Nation's sea ports to improve their efficiency and effectiveness, reduce cost of services to users, encourage Foreign Direct Investment (FDI) and promote opportunities for local investors;
- Dredging of our inland waterways and the rehabilitation of existing rail network and the construction of new rail across the country to allow for seamless movement of goods and persons;
- Improving the overall connectivity of the population to local, regional, national and international markets, and opening areas with abundant reserves, increasing access to labour and physical resources thus facilitating the realization of the country's comparative advantages;
- Ensuring that the different transport modes (road, rail, maritime and air) provide opportunities for citizens to enjoy high quality of life devoid of environmental hazards caused by emission of CO₂ and decreasing any form of adverse ecological impact. Emphasis is placed on ensuring efficiency and effectiveness of the transport system for

sustainable development through improved interfacing/integration of the available modes;

- Exploiting the potentials of all available transport modes towards developing a multi-modal integrated modern transport system that will ease movement of goods and trade thus enhancing economic activity;
- Expanding available transport infrastructure including the construction and maintenance of Access/Feeder roads, to support and stimulate economic growth throughout the country, including the rural areas.
- Instituting a private-sector led transport system that is responsive to the needs of the economy through an enabling Public Private Partnership (PPP)
- Continuous review of policy, regulation and coordination in the sector to align with international best practices and conformity to existing international protocols; and
- Enhanced funding of the sector for the domestication of relevant international laws and protocols and R&D to make all modes of transportation in the country sustainable development compliant.

In summary, the government expects total investment for the transport sector during the period 2011-2015 to be approximately N4, 465 billion. The investment would cover roads, railways, inland waterways, ports and airports development. The main policy thrust during the implementation of the Transformation Agenda Plan period is to evolve a multimodal, integrated and sustainable transport system with greater emphasis on rail and inland waterways transportation. An enabling environment for Public-Private Partnership (PPP) is being created by designing new policies, legislation and institutional framework that would support the envisaged transformation of the sector.

6.14 Niger Delta Development

The government views sustainable development in the Niger Delta region as being able to deliver economic prosperity, social development and environmental protection. To this end, the Federal Government currently spends over US\$1.7 billion (N250 billion Naira) annually in the Niger Delta to ameliorate past environmental degradation and fast track development in the region.

Taking into cognisance that budgetary allocation is grossly inadequate to tackle the problems of the Niger Delta the Ministry of Niger Delta Affairs in collaboration with UNDP and other development partners has engaged consultants for the design and formulation of a comprehensive Infrastructure and Social Sector Investment Action Plan for the Niger Delta. The goal of the Action Plan is the setting up of a Multi stakeholder Niger Delta Development Trust Fund to raise and manage the much needed funds for the development of the region.

The main policy thrust is therefore to entrench peace and stability to drive sustainable socio-economic development in the area with the aim of reducing the high incidence of poverty, high rate of unemployment and current level of insecurity.

In line with the mandate to ensure the development of the Niger Delta in a sustainable manner, the Ministry of Niger Delta is implementing programmes to address the devastating effects of oil exploration and production, lack of relevant infrastructural facilities including housing, roads, water etc. This is in line with the 7-Point Agenda, Vision 20-2020 and the Transformation Agenda of the Federal Government as encapsulated in the execution of the following ongoing projects by the Ministry of Niger Delta Affairs, the NDDC and Amnesty Office in the Presidency:

- Completion of studies at 33 highly oil impacted sites with actual remedial and rehabilitation commenced at Stubbs Creek, Akwalbom State site;
- Shoreline Protection, Erosion Control and Land Reclamation projects;
- Rehabilitation and Reclamation of Degraded Ecosystem projects;
- Environmental Mapping/Data Bank/State of the Environment Report projects;
- Water ways/Canalization/Dredging projects;
- Road projects including the East-West road projects;
- Skills acquisition Centers in the 9 states of the Region;
- Electrification projects;
- Water Supply Projects;
- Provision of Housing Estates;
- Construction, Rehabilitation and Equipping of educational institutions;
- Training and placement of all ex-militants through the Amnesty Programme;
- Economic empowerment of youths through training in several fields (including marine, oil & gas and agriculture) both locally and overseas; and
- Creation of several thousands of jobs arising from the ongoing projects in the region.

It has been observed that improved security and peace in the region resulted to increased oil production level from pre-amnesty level of 700,000 bpd to the current level of 2,500,000 bpd. The Niger Delta Collaborative Development Framework (NDCDF) was established as a comprehensive programme for the social and public sector of the host communities in consonance with the Niger Delta Master Plan and Nigeria's vision 20:2020.

CHAPTER 7

Addressing Development Challenges in the Social Sector

7.1 Governance

The Transformation Agenda's policies on governance are motivated by Nigeria's inability to decisively tackle most development challenges such as poverty, unemployment, security and deplorable state of infrastructure. These include political governance, economic governance, corporate governance and effectiveness of institutions. During the life of this administration, the policies and programmes directed at addressing governance challenges, will focus on the public service, security, law and order, the legislature, anti-corruption measures and institution, the judiciary, economic coordination and support for private investment. The critical policy thrust of governance will be to maximise the benefits the citizenry derive from governance through more effective and efficient use of public resources, proper financial management and fiscal prudence. This entails adequate emphasis on the attainment of law and order, guarantee of safety of lives and property and the provision of an environment in which people find happiness and fulfilment.

7.1.1 Justice and Judiciary

The policy thrusts of the justice and judiciary sector will be achieving greater independence for the judiciary in terms of funding, improving capacity and efficiency in judicial service delivery, eliminating all forms of corruption in the administration of justice in Nigeria, enhancing the capacity of the justice ministry to superintend prosecution and improving professionalism in legal practice for better service delivery.

7.1.2 Legislature

Under the planned period, the thrust of the policy will be to facilitate the creation of a dynamic, constitutionally effective and public responsive legislature that is proactive in its legislative duties and independent but aware of its constitutional partnership with the executive and judicial arms of government. Other policy measures include; regular auditing of the activities and publication of annual reports of the national and state legislatures to promote greater transparency and accountability in the use of public funds, promote greater public interest in the scrutiny of legislative actions and inform public debate to these ends.

7.1.3 Fighting corruption

In recognition of the huge resources lost to the crimes of corruption and rent seeking, government has enacted a number of laws and established some agencies that are aimed at strengthening institutional capacity for fighting corruption. Some of the new agencies or institutional mechanisms for fighting corruption include:-

- Independent Corrupt Practices and other Related Offences Commission (ICPC);

- Economic and Financial Crimes Commission (EFCC);
- Bureau of Public Procurement (BPP) or the Due Process Office; and
- Nigerian Extractive Industries Transparency Initiative (NEITI).

Other actions aimed at strengthening institutional capacity for fighting corruption include; mandatory declaration of assets by public officials, introduction of audit alarm system in Ministries, Departments and Agencies, and more recently, the passage and signing into law of the Freedom of Information Bill (FOIB) in May 2011.

7.2 Poverty eradication

The government has for long recognized that poverty is a serious impediment to sustainable development and has made many attempts to alleviate it. Some of the early attempts include the establishment of:-

- Department of Food, Roads, and Rural Infrastructure (DFFRI) with the major aims of opening up the rural areas and to improve the conditions of the vulnerable poor;
- National Directorate of Employment (NDE) to tackle the problem of mass unemployment;
- People’s Bank of Nigeria (PBN) to cater for the credit needs of the less privileged Nigerians;
- Better Life Programme (BLP) which was gender specific and meant to improve the life of rural women. The programme was later replaced by Family Support Programme (FSP);
- National Agricultural Land Development Authority (NALDA), The Strategic Grains Reserve Authority (SGRA) and the Accelerated Crop Production (ACP) to improve the productive capacities of peasant farmers as well as improving their incomes and well-being; and
- The Nomadic and Adult Education Programmes to assist in the eradication of illiteracy.

To address some of the failed approaches of the above-mentioned institutions, government established a National Poverty Eradication Programme (NAPEP) in the year 2001. This new comprehensive scheme has been structured to integrate many sectoral schemes for an effective and practical approach to poverty reduction in Nigeria (see Box 2)

BOX 2

NATIONAL POVERTY ALLEVIATION PROGRAMME (NAPEP)

This comprehensive scheme has been structured to integrate the following four sectoral schemes:

- Youth Empowerment Schemes (YES) which is concerned with providing unemployed youth opportunities in skills acquisition, employment and wealth generation, Capacity Acquisition Programme, Mandatory Attachment Programme and Credit Delivery Programme.
- Rural Infrastructure Development Scheme (RIDS) which has the objective of ensuring that the provision and development of infrastructure needs in the areas of Rural Transport Programme, Rural Energy Programme, Rural Water Programme and the Rural Communication Programme.

- iii. Social Welfare Services Scheme (SOWESS) which aims at ensuring the provision of basic social services, including Qualitative Education Programme, Primary Health Care Programme, Farmers Empowerment Programme and Social Services Programme.
- iv. Natural Resources Development and Conservation Scheme (NRDCS). The vision of this scheme is to bring about a participatory and sustainable development of Agricultural Resources Programme, Water Resources Programme, Solid Minerals Resources Programme and Environment Protection Programme.

The target of the National Poverty Eradication Programme is to completely wipe out poverty from Nigeria by the year 2010. Three stages to the attainment of this ambitious target have been identified as:-

- The restoration of hope of poor people in Nigeria. This involves providing basic necessities to hitherto neglected people particularly in the rural areas;
- The restoration of economic independence and confidence; and
- The wealth creation.

In the process of consolidating its role as the apex body for coordination and monitoring of all poverty eradication efforts, NAPEP has put in place a formidable structure at the various levels of government.

i. *The National Poverty Eradication Council (NAPEC)* This Council constitutes the Apex Body for policy review and resource allocation for all the poverty eradication activities in the country. The Council is chaired by the President and has the following organs,

- *The National Coordination Committee (NCC)*
- *The State Poverty Eradication Councils (SPECs)*
- *The State Coordination Committees (SCC)*
- *Local Government Monitoring Committee (LGMC)*

NAPEP Interventions in Poverty Alleviation

From January 2001, NAPEP has intervened in a number of projects. So far, about 140,000 youths have been trained in more than 190 practical hand-on trades over a period of three months. Every trainee in this intervention project was paid N3, 000 (\$21) per month while N3, 500 (\$215) was paid to each of the trainer. The training programme was packaged with the understanding that beneficiaries would subsequently set up their own businesses in line with the skills they have acquired. To actualize this, 5,000 beneficiaries were resettled with assorted tailoring and fashion designing equipment.

Also under the Mandatory Attachment Programme for unemployment graduates, 40,000 Beneficiaries were attached in 2001, each of whom was paid a monthly stipend of N10, 000 (\$71).

Sources: adapted from: Elumilade, D. O., Asaolu, T. O. and Adereti, S. A. (2006), Federal Government of Nigeria (2009)

7.3 Education

Under Priority Policies for the Development of Education, the Transformation Agenda will be implemented to promote primary enrolment of all children of school age, irrespective of the income profile of the policies, engage in the provision of infrastructure such as; classrooms across all levels, so as to ease over-crowding, increase access and reduce pupil/teacher ratio and enhance the efficiency, resourcefulness and competence of teachers and other educational personnel through training, capacity building and motivation. Government will continue to promote access to higher education by approving the establishment of private universities. Education policy and initiatives to make education available to all and improve its relevance for skill building and development for national sustainable development will be

pursued. Government has already put in place a number of initiatives to enhance access to education. These include:-

- boarding Schools (102 in number) completed or nearing completion under the Almajiri Education Programme spread across all the six geo-political zones of Nigeria. This will help in mainstreaming the almajiri system with the Basic education Programme
- Construction of model girls and special programmes of campaign to enhance access girl-child education in the South Eastern part of Nigeria.
- Programmes in place for children of nomads, migrant fishermen and street children with emphasis on developing their talents so that they can be economically productive.
- Female Teachers Trainees scholarship Scheme (FTTS) targeted at female teachers from rural communities who on completion of their studies will remain back in the communities and teach in this rural schools.
- Teacher and school leadership development programme aimed at sponsored overseas training for science teachers, professional development programmes organised by National Teachers Institute, Universal basic Education Commission and Tertiary Education Trust Fund and Training for Head Teachers, principals and Vice Principals to enhance their leadership activities.

State governments are consistently accessing intervention funds for rehabilitation, development of infrastructure as well as provision of school materials. About 19,600,00 English Language, mathematics, Basic Science and Technology activity books have been provided for primaries 1, 2 and 3. Similarly, 4,944,000 library resources materials were provided for Junior Secondary Schools.

There has been a comprehensive review of school curricula at basic and post- basic levels to ensure that it is in line with national development objectives and integrate it with technical and vocational education to enhance the skills base of school products. All 51 federal and State Government polytechnics have been equipped while others are being rehabilitated. Entrepreneurship Centre has also been established in tertiary Institutions to enhance skills development and the ability of students to transmit successfully into society.

Institutional Framework is being developed to enhance the functional national systems for education in the following areas:

- Guidance and Counselling
- Quality assurance
- Teachers Development Needs Assessment/ Professional Development

- Monitoring of learning Achievement
- Education Management Information System
- School-Based Management Committees

7.4 Health

For the health sector, the underpinning policy for the inputs towards achieving the human capital development goal of the Vision 20: 2020 strategy is the National Strategic Health Development Plan (NSHDP). The NSHDP is the vehicle for actions at all levels of the health care delivery system which seeks to foster the achievement of the MDGs and other local and international targets and commitments. The NSHDP seeks to encourage alignment and harmonization of existing disparate plans, as well as to provide a coordination mechanism for multiple actors in the health sector that would be in alignment with national priorities.

The present picture of the population demographics in Nigeria underscores the need to focus on human capital development as a priority intervention for sustainable development. Heightened efforts towards improving universal coverage to MNCH interventions will seek to ensure that the 44 percent of the population of households under 15 years remain healthy well into their productive ages. HIV/AIDS, reproductive health and pregnancy related ill-health, malaria and road traffic accidents are some of the major attributable factors to sub-optimal productivity among Nigerians aged 15 to 49 years. To ensure that this group of Nigerians stays healthy so they can contribute optimally in their various fields of endeavor towards national development efforts will be intensified on promoting good health seeking behaviors, increasing access to adolescent, adult reproductive health care and services as well as access to treatment and medicines for major illnesses such as malaria among others. These interventions are gender sensitive to cater for the needs of females who constitute 50 percent of the population of households in Nigeria.

The low percentage of the population of households aged 65 years and above is an issue of concern and is a reflection of the low life expectancy of Nigerians. While it is expected that life expectancies will be significantly improved through our focus on reducing neonatal deaths, the government is also focused on improving access to health care for those over 65 years through the retiree health insurance scheme. This is however yet to be commissioned

While taking actions to make the best of the current population demographics of the country, further improvements towards sustainable development will face serious challenges if the current population growth rate as well as its related low contraceptive prevalence rates is not addressed. Towards this end, the Federal Government of Nigeria recently approved the national-wide provision of contraceptive commodities including condoms free to all Nigerians at the service delivery points. This is made possible through a memorandum of understanding signed between the Government and UNFPA with effect from April, 2012.

In line with sustainable development, the Federal Ministry of Health in collaboration with the Ministries of Environment, Water Resources, Agriculture and Education is strengthening strategies towards the prevention and control of both communicable and non communicable diseases. Furthermore, the government in collaboration with the private sector has established a factory that is now producing auto disable syringes in order to complement other efforts at improving injection safety and reducing the burden of hospital infections. The Nigeria Centre for Disease Control (NCDC) has been established to coordinate all disease control efforts in the country and to assist States and LGAs in areas of disease surveillance and response as well as conduct research and development for vaccines and biological. NCDC working with other partners has helped to contain measles, cerebro spinal meningitis and lassa fever epidemic. The introduction of the new vaccines (Human Papilloma Virus, Pentavalent and MenAfric vaccines) will also help to reduce vaccine preventable diseases in children.

In its commitment to eradicate malaria, the Ministry of Health is strengthening environmental control measures in view of its promise for sustainability. The major areas of focus in this regard are indoor residual spraying (IRS) and larviciding. In terms of IRS, about 63,088 households were sprayed in 7 World Bank funded states in 2009 with additional 4,800 households sprayed in Lagos state in 2010. Presently under this administration, we have plans to scale up IRS coverage to all States and the FCT. In this regard, all states have been sensitized on IRS implementation and capacity building has been carried out for all state vector control officers. The Principal Investigators in World Bank supported states have been trained to carry out entomological data collection. The MDGs has commenced procurement process for IRS materials. As soon as this is completed IRS implementation will commence in selected states.

In the area of larviciding, pilot studies were conducted in Rivers, Jigawa and Lagos States in 2010-2011 with gratifying success and a scale up plan has been developed. For sustainability and cost efficiency we are engaging the local manufacturers for the production of larvicides that will be used in this campaign, thereby creating jobs and contributing to economic development.

Considering the importance of Tobacco Control in reducing morbidity and mortality rates due to first/second hand smoking, the government has developed a Bill on Tobacco Control which has been passed by the National Assembly. The Federal Capital Territory is already enforcing its policy on smoking ban in public places with effect from 2010.

Social initiatives in the health sector are guided by the recognition that poverty eradication remained the daunting and foremost objective, so long as human development in terms of health is not enjoyed by the majority. Efforts are being made to strengthen the *National Health Insurance Scheme (NHIS)* to serve as a social safety net for people in Nigeria and to reduce financial barrier to accessing health care services. The Scheme has registered over 2.1 million Federal Government's employees and their families, giving a coverage of 95% of the Federal Civil Servants. In partnership with development partners, government is implementing the *NHIS-MDG/MCH Intervention Project* in many States of the Federation to ensure the protection

of vulnerable groups and promotion of access to good health care. In addition, a Community Based Health Insurance (CBHI) and a Volunteer Health Insurance Schemes have been commissioned in the last quarter of 2011 designed to target the informal sector which is largely rural/semi-urban domiciled and constitutes 70% of the Nigerian population. Characteristically, this sector is highly heterogeneous and is characterized by extreme poverty, high parity and low literacy, bearing disproportionately large burden of disease.

In a related development, the National Health Insurance Scheme (NHIS) commenced the NHIS-MDG/MCH Intervention Project, providing free services to mother and children in 12 States in 2010. The project is now supporting 1,600,000 pregnant women and children under 5 covered in 86 local Government Areas (LGAs). However a review of the project noted that the LGAs and communities covered are too few to bring about a substantial improvement in the overall health status of the beneficiary states. As such, the Federal Government has now approved N4.25 billion for phase II of this project in order to cover more LGAs and communities in these States.

The high fertility rate, low contraceptive prevalence and low life expectancy coupled with other factors in the

Results Based Health Financing, through which individuals and communities are provided with incentives to encourage take-off of health care services, is now being implemented first on a small scale basis with plans for scale up. The incentives provided serve as small holder credits that would on the long run improve the financial standing of the beneficiaries, thereby contributing to poverty alleviation. This project is new, and it is hoped that the report of its outcome will be shared with the larger stakeholder community.

Next steps:

To improve quality of health services and check medical tourism, the Federal Government has in phases modernized and equipped 14 Federal Teaching Hospitals across the country to international standard. To match skills with the equipment, the federal government will commence the hands on oversea residency training on all clinical specialties.

From lessons learnt so far in health, we have started using integrated approach in disease management instead of the verticalization of disease programmes which has led to duplication of efforts. In this regards, we are strengthening our primary health care services.

We are also looking at increasing the scope of MDG 6 beyond HIV/AIDS, Malaria and Tuberculosis to include non communicable diseases such as cancer, sickle cell disorders cardiovascular accidents and Neglected Tropical diseases. Our focus is on eradication of these tropical diseases such as Guinea Worm disease.

7.5 Population

Nigeria has expressed a profound appreciation of the inextricable linkage between population and sustainable development. It notes that the high rate of population growth (3.2%) has resulted in unprecedented urbanization that is consequently posing serious challenges of reduced employment opportunities, increased poverty, rising number of urban squatter settlements, growing insecurity as well as inadequate infrastructure. Others are rising traffic congestion, increasing pollution, lack of green spaces, inadequate water supply, sanitation and increasing vulnerability to disaster all of which are contributing to slowing down government's efforts to make appreciable progress in sustainable development.

To address the challenges, the Federal Government launched a new National Policy on Population for Sustainable Development in 2004. The overall goal of the policy is to improve the quality of life and standard of living of the people of Nigeria through the attainment of the following specific objectives:

- Achievement of sustained economic growth, poverty eradication, protection and preservation of the environment and provision of quality social services.
- Improvement in the reproductive health of all Nigerians at every stage of life cycle. Bringing about a strong and immediate response to the HIV/AIDS epidemic and other related infectious diseases, progress in achieving balanced and integrated urban and rural development.
- Achieving a balance between the rate of population growth, available resources, and the social and economic development of the country.
- Progress towards achieving a reduction in birth and death rates.

In addition, some aspects of the 2004 National Reproductive Health Policy are targeted at reducing maternal mortality and morbidity due to pregnancy and childbirth by 50% and reducing the level of unwanted pregnancies in all women of reproductive age by 50% through safe and effective family planning methods, recognizing the right of women to be informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice, as well as other methods of their choice for regulation of fertility which are not against the law.

Nigeria will continue to collaborate with development partners to develop and implement programmes and initiatives that will turn the large population into valuable resources that can propel sustainable development. Although the major challenges of data for sustainable planning for development includes the non-compliance of decision census taking in Nigeria, the inadequate coverage of registration of vital averts (births and deaths) in Nigeria to complement the census data and the huge gap on international migration statistics.

7.6 Urban housing and livelihoods

The National Housing and Urban Development Policy will be implemented to ensure sustainable housing, urban renewal and better living conditions for all Nigerians. Emphasis will be on

- (i) the concept of mass housing, social housing and low income housing;
- (ii) catalytic effect of housing on job creation;
- (iii) implementation, co-ordination, monitoring, evaluation and impact assessment; and
- (iv) use of public-private partnership (PPP) approach and diversification of the funding structure for the delivery of an average of 1million new houses every year to facilitate significant reduction in the housing deficit currently estimated at between 16 – 17 million units.

In the same vein, the focus of the National Urban Development Policy is to promote a dynamic system of urban settlements which will foster sustainable economic growth, promote urban and regional planning and development as well as ensure improved standard of living and well-being of all citizens.

In addition, government will pursue Public Private Partnership (PPP) for sustainable development of cities in Nigeria by:

- Promoting sustainable urban development.
- Providing large green area and sustainable urban development.
- Promoting liveable cities.
- Balancing strategic facilities with local economic opportunities.
- Constructing greener built environment that use water and energy efficiently.
- Protecting valuable urban ecosystems and biodiversity.
- Promoting clusters of green industries and green jobs.

7.7 Sustainable Water Resources Management

Water is central to national development because it is needed for irrigation, fisheries, hydroelectricity generation, sustainable environment, good health and sanitation. The Federal Ministry of Water Resources has carried out major reforms in the water sector, including:

- (i) expanded water supply and enhanced sanitation;
- (ii) creation of more dams and irrigation activities to increase food production and food security;
- (iii) establishment of new specialized agencies such as Nigeria Hydrological Services Agency (NIHSA) and Nigeria Integrated Water Resources Management Commission (NIWRMC) and Gurara Water Management Authority;
- (iv) Enhance rural development programmes through the River Basin Development Authorities and rural agriculture development programmes.
- (v) Strengthening of River Basin Development Authorities to carry out specialized functions in the water sector so as to ensure sustainability and efficient management of water resources.
- (vi) Rehabilitation of hand pump boreholes across the 6 geopolitical zones and FCT is ongoing.
- (vii) Rehabilitation and development of irrigation projects located across the country.

- (viii) The ministry with about 264 dams is also engaged in the construction of 28 small earth dams nationwide.
- (ix) Refocus the sector for employment generation and poverty alleviation by creating about 50,974 new jobs through irrigated agriculture.
- (x) Promotion of Public Private Partnership as a major means of intervention in the development of the water sector.
- (xi) The Ministry is also carrying out many programmes aimed at proper watershed management for improved water supply for domestic, industrial, agricultural and other uses such as:
 - (xii) Improvement of water availability at the Kainji Reservoir for hydro-power generation
 - (xiii) Resuscitation of the lake Chad through water transfer options (Preliminary studies concluded).
 - (xiv) Construction of dams in water stressed areas nationwide
 - (xv) Encouragement of formation of water user associations to minimize the effects of climate change, etc.

The Federal Government made available Special Intervention funds for immediate implementation of some projects in 2011 fiscal year as a measure to rapidly accelerate water supply coverage towards the attainment of the MDG targets. Some of these include:

Supply and installation of Special Water Treatment Plants capable of treating fresh water and brackish water targeted at communities with minimum population size of 2,000 people and maximum population size of 5,000 people. A total of ten (10) of such plants will be installed across the States of the Federation

Integrated Water Resources Management (IWRM) Strategies and Water Efficiency Plan for Nigeria have been developed in response to the WSSD declaration in Johannesburg in 2002 for member States to develop such plans by 2005. Also, Guidelines and Regulations for Water Allocation and Licensing Framework have been fully developed by 2011. Catchment Management Plans have also been developed for two major Hydrological Areas in the country for effective and efficient harnessing and sustainable management of the water resources potentials of these catchments. This programme will be extended to other Hydrological Areas by 2015. Furthermore, regular monitoring of surface and groundwater flows in all catchments (Hydrological Areas) in the country is a priority of the Ministry in order to provide adequate information for planning, design and management of our water resources infrastructures.

Nigeria continues to play vital role in promoting trans-boundary cooperation at the regional level through multilateral and bilateral Agreements such as the Niger Basin Authority, Lake Chad Basin Commission, Nigeria-Niger Joint Commission, within the region, with the view of eliminating conflicts, promoting peace through effective and efficient sustainable trans-boundary water resources management within the region. In this role, Nigeria is also championing bilateral and multilateral efforts at eliminating conflict and promotes peace and sustainable development with neighboring countries in transboundary waters through active participation and support to Niger Basin Authority (NBA) and Lake Chad Basin Commission

(LCBC) activities. In particular, Nigeria has provided a support of \$5 million dollars to the Feasibility Studies of Inter-Basin Water Transfer from Ubangui River to Lake Chad to refill the receding lake. Also, Nigeria joined the other member States of NBA to ratify the Water Charter that will serve as an instrument for equitable utilization of the natural resources of the basin.

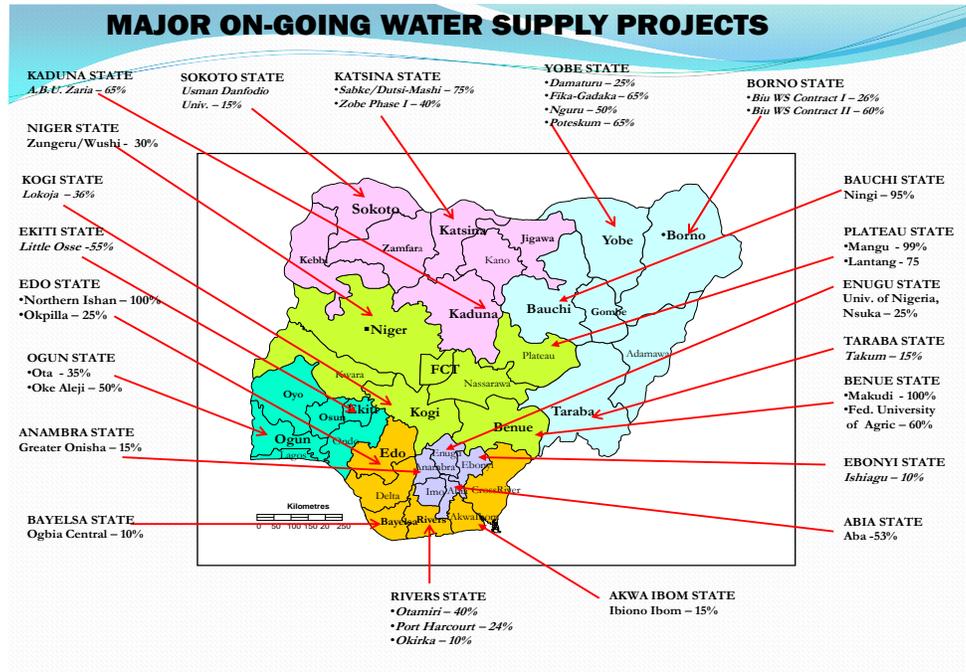


Figure 16: Major On-going Water Supply Projects in Nigeria. Source: Federal Ministry of Water Resources

Targets

The Ministry's strategy at achieving the MDG targets and promoting sector stability and creating the enabling environment for wealth creation and sustainable development by 2015 includes:

- ✓ Increase the National Water Supply Access from the existing 58% to 75%;
- ✓ Increase the National Sanitation Access from the existing 32% to 65% by establishing a special programme such as "WASH";
- ✓ Increase the available reservoir capacity from the existing 34 bm^3 to 35.5 bm^3 ;
- ✓ Increase total irrigated land from the existing 150,000 ha to 225,000 ha, an increase of about 50%;
- ✓ Provide drainage for about 10,000 to 15,000 hectares of farmland;
- ✓ Enhance rural development programs, through the River Basin Authorities rural agricultural development programs;
- ✓ Effective utilization of dams for hydro-power generation

To promote sustainability in the *water* sector Nigeria will continue to:

- Introduce policies aimed at improving water supply and efficiency;
- Provide sufficient and good quality freshwater;
- Manage ecosystems and encourage investments;
- Invest in infrastructure;
- Adopt integrated water resource management;
- Adapt appropriate rural technologies- water harvesting, dams;
- Educate and raise awareness among the populace about the imperative of sustainable water management for inter-generational needs.

7.8 Empowerment of women, youth and other vulnerable groups

The country in line with global best practices is strengthening its efforts at achieving gender equality as a fundamental step to the achievement of sustainable development. In 2006, Nigeria adopted the National Gender Policy which is guided by the global instrument on the Convention on Elimination of all forms of Discrimination Against Women (CEDAW) and its optional Protocols. National gender awareness and advocacy received added impetus with the institutionalization of gender mainstreaming in the country by the Federal Government. In a similar manner, mechanisms have been developed to assess the impact of the implementation of national policies and programmes on women, youth, children and vulnerable groups.

The government will continue to implement the National Gender Policy to bring about the advancement, development and empowerment of women. In the same vein, the implementation of the National Youth Policy will ensure the inclusion of youths in decision making for sustainable development. Also in recognition of the greatest challenges in youth development in Nigeria, the Federal Government initiated the Subsidy Re-investment and Empowerment Programme (SURE-P). This programme is aimed at aggressively pursuing jobs and wealth creation as a stimulus to economic growth of the country.

7.9 Labour and productivity

The government agenda is to focus on the implementation of the National Action Plan on Employment Creation (NAPEC) targeted at creating five million new jobs annually within the next three years, establishment of more skills acquisition centres, implementation of local content policy in all the sectors especially in the oil and gas industry in order to boost job creation in the country.

7.10 Rural development

Government is concerned that poverty in rural areas in the country is becoming more widely entrenched. To address this problem, community driven development approach has been adopted to accelerate agriculture and rural development, given that the majority of the population still lives in rural areas, and agriculture is the main source of livelihood. The

development goal of the approach is to improve the livelihoods and living conditions of rural communities, with emphasis on women and other vulnerable groups by:

- empowering poor rural women and men to critically analyse their constraints opportunities and support requirements, and to increasingly effectively manage their own development
- supporting institutionalization of the policies and processes, create awareness and develop the capacity of public and private sector service providers to become more relevant and responsive to the rural poor women and men
- Supporting balanced sustainable social, agricultural and economic development interventions for appropriate village women's and men's groups and individuals.

The government of Nigeria also recognizes that agricultural and rural developments are crucial for the structural transformation and economic development of the country, and that sustainable development should be a strategy by which communities seek economic development approaches that also benefit the local environment and quality of life. Sustainable development provides a framework under which communities can use resources efficiently, create efficient infrastructures, protect and enhance quality of life and create new businesses to strengthen their economies. Thus, Nigeria has adopted a National Policy Integrated Rural Development.

The focus of the Policy is on developing the rural areas, raising the quality of life of the rural people, alleviating rural poverty and using rural development to contribute to laying a solid foundation for national development. To achieve integrated and even development on a sustainable basis, the strategies enumerated in the Policy will empower rural dwellers through the development of productive employment, enhancing their income, ensuring protection of the environment, promoting gender responsiveness and ensuring adequate care for vulnerable groups. The Policy lays special emphasis on five areas:

- Promotion of rural productive activities
- Supportive human resources development
- Enhancement of enabling rural Infrastructure;
- Special programs for target groups
- Rural community organizations and mobilization

The Policy ensures that the private sector plays a vital role and has a good opportunity for the integration of smart, appropriate and efficient technology in propelling rural development in Nigeria.

7.11 Disaster management

Nigeria recognizes the imperative for disaster risk reduction for development to be sustainable. Thus, Government has established the National Emergency Management Agency (NEMA) at the Federal level, with complimentary State Emergency Management Agencies (SEMAs) and Local Emergency Management Committee (LEMCs) in many States and Local Government Areas respectively. The country has developed a National Disaster Response Plan (NDRP), which serves as a policy guideline for managing disasters in Nigeria. The Plan establishes a process and structure for delivery of Federal assistance in a disaster situation. It operates on the principle of

coordination and cooperation among agencies for effective disaster risk management. Complimenting NDRP is the National Disaster Management Framework (NDMF), which serves as a foundation upon which all plans, policies, programmes and procedures for disaster management can be created, developed and sustained. NDMF describes specific authorities and best practices for managing disasters and explains a paradigm shift in disaster management beyond mere response and recovery.

NEMA has also put in place a National Contingency Plan (NCP) to address the readiness of disaster management stakeholders in the country. NCP defines the modus-operandi for engaging international assistance when required. It is expected to serve as a tool for analyzing the impact of potential disaster events and ensure that adequate and appropriate arrangements are made in advance to respond in timely, effective and appropriate ways to the needs of affected population during disaster events. It is a multi-hazard contingency plan with a focus on the hazards with the highest probability of occurrence and severity such as flood, conflicts, drought and epidemics. It is a first step towards mitigating the impact of quick onset disasters when the level of forecast cannot be ascertained, ensuring that a wider range of response issues are covered.

NEMA has collaborated with the Nigerian Educational Research and Development Council (NERDC) to develop Disaster Risk Reduction (DRR) in Basic and Post Basic Education Curricula in Nigeria so as to promote the culture of building national and community resilience to disasters. The Agency is also collaborating with a number of international organizations such as the World Food Programme (WFP), the United Nations Office for the Coordination of Humanitarian Affairs (UN-OCHA) and the UN Platform for Space-Based Information for Disaster Management and Emergency Response (UN-SPIDER) Programme to enhance disaster management in Nigeria.

7.12 Sustainable Consumption and Production

The Federal Government of Nigeria established a number of public institutions that deal with matters of sustainable consumption and production and protection of citizens' right and health. They include:

- National Agency for Food and Drug Administration and Control (NAFDAC) which regulates health standards of food and drugs
- Standards Organisation of Nigeria (SON) which establishes standards for products and processes and ensuring compliance on Federal Government's policy on Standardisation, Quality Assurance and Metrology
- Consumer Protection Council (CPC) which deals with the protection of consumers' right and assist them to seek redress for injury, damage and loss suffered and seeks ways to eliminate hazardous products from the market.

The CPC specifically protects consumer rights and ensures reasonable/sustainable consumption of products, services and information tools. The Council has been functioning to amongst others, provide speedy redress to consumers' complaints through negotiations, mediation and

elimination of hazardous products, with replacement of safer and more appropriate alternatives. These are in addition to promoting sound industrial products and practices through control of advertising, eco-labeling, re-use, repair, recycle, waste reduction, extended product responsibility, removal of harmful materials, research and development.

7.13 Sustainability science

Nigeria recognizes that science and technology are critical in the service of a transition towards sustainability and in understanding the complex interactions of global processes with the ecological and social characteristics of particular places and sectors, as well as the society's capacity to guide the relevant interactions towards a more sustainable development pathway. Government will support sustainability science approach to its struggle to meet the needs of a growing population that is projected to more than double and to reach about 244 million in 2050. This will enable the country to advance its ability to analyze and predict the behaviour of the complex and multi-dimensional nature-society interactions that are expected to result from the pressures our development efforts are putting on the Earth's essential life-support system. Scientists and practitioners will be supported to work together to produce genuine and coherent problem-solving knowledge that combines scientific excellence with social relevance in the national stride towards sustainable development. Thus sustainability science will be pursued to develop scientific breakthroughs in the economic, social and environmental pillars of sustainable development for Nigeria's development.

7.14 Culture and Tourism

- Key priority projects and specific deliverables have been set as targets in the Culture and Tourism sector, such as:-
- Establishment of culture and tourism trend
- Upgrade of the Abuja Carnival to international standards
- The establishment of a National Theatre and National Gallery of International Standard.
- Achieve a 10 % annual growth rate in tourist' arrival at Nigerian Airport and land borders and
- Develop five tourism clusters for Nigeria.

Policy measures undertaken by the Culture and Tourism Ministry include:

- Review of the existing culture policy document of 1999
- production of a tourism master plan
- Production of code of ethics for tourism
- Promotion of cultural industries and festivities
- Rehabilitation of national archives/museums and value re-orientation and promotion of core national values

CHAPTER 8

Addressing Development Challenges in the Environment Sector

8.1 Environmental Governance

Government has taken the issues of environmental degradation serious, and various national efforts have been put in place at all levels of governance to promote environmental sustainability in the context of national sustainable development. Government recognizes that effective environmental governance is critical for sustainable development

The 1989 National Environmental Policy was revised in 1999. The goal of the revised Policy is to achieve sustainable development in Nigeria and, in particular to:

- Secure for all Nigerians a quality environment adequate for their health and well-being.
- Conserve and use the environment and natural resources for the benefit of present and future generations.
- Restore, maintain and enhance ecosystems and ecological processes essential for the functioning of the biosphere and for the preservation of biological diversity and to adopt the principle of optimum sustainable yield in the use of living natural resources and ecosystems.
- Raise public awareness and promote understanding of essential linkages between environment and development and to encourage individual and community participation in environmental improvement efforts.
- Co-operate in good faith with other countries, international organizations and agencies to achieve optimal use of transboundary natural resources and effective prevention or abatement of transboundary environmental pollution.

In addition, specific policies and action plans have been put in place. They include:

- National Policy on Drought and Desertification;
- Drought Preparedness Plan;
- National Policy on Erosion, Flood Control and Coastal Zone Management;
- National Environmental Sanitation Policy;
- National Environmental Sanitation Action Plan;
- National Policy Guidelines on (a) Solid Waste Management, (b) Market and Abattoir Sanitation, (c) Excreta and Sewage Management, (d) Sanitary Inspection Premises and (e) Pests and Vector Control);
- National Forest Policy;
- National Biodiversity Strategy and Action Plan;
- National Healthcare Waste Management Policy/Action Plan and Guidelines
- State of the Environment Report of 2008

8.2 Institutional Arrangement

Nigeria recognizes that sustainable development requires that national institutions work in a coordinated manner rather than in organizational isolation. It requires not only cross-sectoral, but also multi-level coordination with the active involvement of all stakeholders. Currently, the country has in place a number of institutions and mechanisms both at national and state levels, each having different roles and responsibilities. Nigeria is also working towards bringing about more coordinated and integrated policy development and stakeholder engagement in decision making and action plans for national sustainable development.

Many ministries, departments and agencies (MDAs) play a significant role in the designing of strategies and their effective implementation to achieve desired goals. There are also some specific commissions or councils or multi-sectoral authorities, and the research institutes and universities, as well as many initiatives towards promoting inclusive socio-economic growth and environmental sustainability. Key among the Ministries for the economic pillar of the country's sustainable development are those of Agriculture, Finance, Industry, Trade and Investment, while those advancing the social pillar are those of Education, Health, Women Affairs, Youth and Sports Development. Leading the overall environmental issues is the Ministry of Environment. Others in the drive towards environmental sustainability include the Ministries of Land, Housing and Urban Development, Science and Technology and Water Resources. The National Planning Commission plays a key role in planning by assessing, prioritizing and allocating resources through Mid-Term Strategies (MTSS).

The Federal Government recognizes the need for inter-ministerial and multi-level governance coordination of programmes. Inter-ministerial and expert committees have also been constituted to assist the government pertaining to issues of topical interest. National Councils in various sectors are also in place to act as apex advisory bodies. The National Council on the Environment, in particular, has been active in coordinating matters related to sustainable development to ensure that ministries and departments across the sectors work individually as well as in tandem with each other to attain socio-economic development and environmental sustainability. It will be strengthened for a more coordinated approach to sustainable development in Nigeria, and to ensure that local governments and other local institutions, as well as Civil Society Organizations are more actively involved in preparation of plans for sustainable development and their effective implementation in several aspects of governance.

8.2.1 Creation of Federal Ministry of Environment

Since 1988 when the defunct Federal Environmental Protection Agency (FEPA) was established, with the statutory responsibility for overall protection of the environment, institutional and policy framework on environment has received increasing attention from the government. Following the step of the federal government, each state has established its own State Environmental Protection Agency (SEPA). In 1999 a Federal Ministry of Environment was created, bringing together under one administrative set up, all branches, departments and units of the federal government that deal with respective aspects of the environment, including FEPA and the former environmental health unit of the Federal Ministry of Health (FMOH). The

mandate of the Federal Ministry of Environment is to

- Secure a quality environment conducive for good health and well being of fauna and flora;
- Promote sustainable use of natural resources;
- Restore and maintain the ecosystem, ecological processes; preserve biodiversity; and
- Raise public awareness; and promote understanding of linkages of the environment.

In addition, specialized Agencies have been created to address some specific environmental problems. They include the National Oil Spill Detection and Response Agency (NOSDRA), National Environmental Standards and Regulations Enforcement Agency (NESREA), Forestry Research Institute of Nigeria (FRIN), and national Park Service.

The National Oil Spill Detection and Response Agency (NOSDRA) was established by Act No. 15 of 2006 as a deliberate and articulate response by the Federal Government to the persistent environmental degradation and devastation of the coastal ecosystem especially, in the oil-producing areas of the Niger-Delta region. NOSDRA is statutorily empowered to co-ordinate oil spill management and ensure the implementation of the National Oil Spill Contingency Plan (NOSCP) for Nigeria in accordance with the International Convention on Oil Pollution Preparedness, Response and Co-Operation (OPRC) 1990, which Nigeria has ratified. The NOSCP is a blueprint for checking oil spill through, containment, recovery and remediation/restoration. It was drafted in 1981 and first reviewed in 1997, and further reviewed in 2000 and 2006. NOSDRA is essentially mandated to play the lead role in ensuring timely, effective and appropriate response to all oil spills, as well as protect threatened environment and ensure clean up of all impacted sites to the best practical extent.

The National Environmental Standards and regulations Enforcement Agency (NESREA) was established by NESREA (Establishment) Act, 2007, thus repealing the Federal Environmental Protection Agency Act Cap F 10 LFN 2004. The Act was signed into law by His Excellency, President Umaru Musa Yar'Adua, GCFR and published in the Federal Republic of Nigeria Official Gazette No. 92. Vol. 94 of 31st July, 2007. NESREA among other things is empowered to enforce all environmental laws, guidelines, policies, standards and regulations in Nigeria, as well as enforcing compliance with the provisions of all international agreements, protocols, conventions and treaties on the environment to which Nigeria is a signatory. The vision and Mission of NESREA to ensure a cleaner and healthier environment for Nigerians and to inspire personal and collective responsibility in building an environmentally conscious society for the achievement of sustainable development in Nigeria.

The Forestry Research Institute of Nigeria (FRIN) has the mandate to conduct research into all aspects of forestry, wildlife management, agro forestry and forest products utilization. Furthermore, through its colleges it has the mandate to train technical and sub-technical personnel for the forestry services and other agro allied services in the country.

The functions of the National Parks Service are to: conserve, preserve and protect the remaining indigenous Nigerian fauna and flora resource in many ecological zones as possible for

the benefit of the present and future generations; enhance the regeneration of our unique natural heritage some of which are already endangered and threatened with and threatened with extinction; stabilize the environment and forestall the disastrous effects of adverse climate changes, especially in ecologically fragile ecosystem, throughout aesthetic and tourist values of our unique natural heritage for sound economic and cultural development; and generally fulfill the terms of both international and Africa Conventions in the conservation of Natural Resources to which Nigeria is a signatory.

8.3 Legal Framework

Many laws and regulatory measures have been put in place to ensure effective environmental management in many sectors of the economy (see Boxes 3 and 4).

BOX 3
Laws put in place in Nigeria to promote environmental sustainability
<ul style="list-style-type: none"> ▪ Environmental Impact Assessment Act – retained as Cap E12 LFN 2004 (sets out the general principles, procedures and methods of Environmental Impact Assessment in various sectors). ▪ Harmful Waste Act – retained as Cap H1 LFN 2004 (prohibits the carrying, depositing and dumping of harmful waste on land and territorial water of Nigeria). ▪ National Park Service Act – retained as Cap N65 LFN 2004 (for conservation and protection of natural resources (wildlife and plants) in national parks). ▪ Endangered Species (Control of International Trade and Traffic) Act- retained as Cap E9 LFN 2004 (conservation of wild life and protection of threatened and endangered species). ▪ National Oil Spill, Detection and Response Agency (NOSDRA) Act. ▪ National Environmental Standards and Regulations Enforcement Agency (NESREA) Act. ▪ Water Resources Act – retained as Cap W2 LFN 2004; ▪ Agriculture (Control Importation) Act – retained as Cap A13 LFN 2004; ▪ Immigration Act – retained as Cap H 11 LFN 2004; ▪ Exclusive Economic Zone Act – retained as Cap E17 LFN 2004; ▪ Oil Pipeline Act - Cap 07; ▪ Oil Terminal Dues Act – Cap 08; ▪ Petroleum Act – Cap P10; ▪ Associated Gas Re-Injection Act – Cap A28

BOX 4
NATIONAL ENVIRONMENTAL REGULATIONS
<ul style="list-style-type: none"> ▪ National Environmental Protection (Effluent Limitations) Regulations S. 18 of 1991 (to ensure the installation of antipollution equipment for the detoxification of industrial effluent chemicals discharges). ▪ Environmental Guidelines and Standards for the Petroleum Industry in Nigeria 2002 - seeks control and prevention of pollution from petroleum operation. ▪ Mineral Oil Safety Regulations 1997 – to ensure that oil and gas operators provide necessary safety materials to their employees. ▪ Petroleum Drilling and Production Regulation 1969 – regulates the licensing of oil exploration, prospecting and mining. ▪ National Guidelines and Standards on Environmental Pollution in Nigeria of 1991 ▪ National Environmental (Wetlands, River Banks and LakeShores) Regulations, 2009. ▪ National Environmental (Watershed, Mountainous, Hilly and Catchments Areas) Regulations, 2009. ▪ National Environmental (Sanitation and Wastes Control) Regulations, 2009. ▪ National Environmental (Permitting and Licensing System) Regulations, 2009, ▪ National Environmental (Access to Genetic Resources and Benefit Sharing) Regulations, 2009. ▪ National Environmental (Mining and Processing of Coal, Ores and Industrial Minerals) Regulations, 2009. ▪ National Environmental (Ozone Layer Protection) Regulations, 2009. ▪ National Environmental (Food, Beverages and Tobacco Sector) Regulations, 2009. ▪ National Environmental (Textile, Wearing Apparel, Leather and Footwear Industry) Regulations, 2009. ▪ National Environmental (Noise Standards and Control) Regulations, 2009. ▪ National Environmental (Chemicals, Pharmaceuticals, Soap and Detergent Manufacturing Industries) Regulations, 2009.

- National Environmental (Base Metals, Iron and Steel Manufacturing/Recycling Industries Sector) Regulations, 2011.
- National Environmental (Coastal and Marine Area Protection) Regulations, 2011.
- National Environmental (Construction Sector) Regulations, 2011.
- National Environmental (Control of Bush, Forest Fire and open Burning) Regulations, 2011.
- National Environmental (Control of Vehicular Emissions from Petrol and Diesel Engines) Regulations, 2011.
- National Environmental (Desertification Control and Drought Mitigation) Regulations, 2011.
- National Environmental (Domestic and Industrial Plastic, Rubber and Foam Sector) Regulations, 2011.
- National Environmental (Electrical/Electronic Sector) Regulations, 2011.
- National Environmental (Non-Metallic Minerals Manufacturing Industries Sector) Regulations, 2011.
- National Environmental (Protection of Endangered Species in International Trade) Regulations, 2011.
- National Environmental (Soil Erosion and Flood Control) Regulations, 2011.
- National Environmental (Surface and Ground Water Quality Control) Regulations, 2011.
- National Environmental (Standards for Telecommunications and Broadcast Facilities) Regulations, 2011.

To put most of the national environmental challenges into their global perspectives, Nigeria is a party to a number of Multilateral Environmental Agreements (MEAs), including:

- Convention on Biological Diversity;
- Protocol on Biosafety to the Biological Diversity Convention (the *Cartagena Protocol*);
- Framework Convention on Climate Change (UNFCCC);
- Protocol to the UNFCCC (Kyoto Protocol);
- Convention to Combat Desertification;
- Convention for the Protection of the Ozone Layer (1985);
- Protocol on Substances that Deplete the Ozone Layer (1987);
- Convention on International Trade on Endangered Species (CITES);
- Ramsar Convention;
- Convention on Conservation of Migratory Species of Wild Animals;
- Rotterdam Convention; and
- Basel Convention.

8.4 Forestry and Biodiversity

Nigeria recognizes the important role of forestry in maintaining environmental sustainability and the imperative of reducing the rate of loss of biodiversity. It has developed programs which serve as pivot to its national biodiversity conservation efforts and has intensified efforts to meet its international obligations for biodiversity conservation and sustainable utilization of natural resources.

Nigeria's commitment is reflected in the adoption of the National Biodiversity Strategy and Action Plan (NBSAP). The *Action Plan* provides a framework and programme instrument for the conservation of Nigeria's biological diversity and its sustainable use by integrating biodiversity considerations into national planning, policy and decision-making processes. It provides frameworks for addressing:

- Biodiversity conservation,;
- Sustainable use of biological resources;
- Equitable sharing of benefits;

- Conservation of agro-biodiversity;
- Biosafety; and
- Biodiversity-industry interface.

The goal of NBSAP is to conserve and promote sustainable use of Nigeria's biological resources for poverty reduction and for fair and equitable benefits among the present and future generations.

Significant progress has also been made in the mainstreaming of biodiversity conservation into our national programmes through various conservation efforts in the areas of forest biodiversity, biosafety management, climate change, marine and coastal biodiversity management, compliance with impact assessment for sustainable development as it affects biodiversity conservation, combating invasive alien species, and conservation of protected areas.

Towards reducing the rate of loss of biodiversity in the country, Nigeria has:

- Adopted and participated in various national and international intervention programs such as the Presidential Afforestation Program, Invasive Weeds Eradication Program; Guinea Current Large Marine Ecosystem Management Project;
- Developed the National Access to Genetic Resources and Benefit-Sharing (ABS) Guidelines with a view to reducing bio-piracy and undue exploitation of our biodiversity in unsustainable manner;
- Participated in all international negotiations in the development of the International Regime on access to genetic resources and benefit sharing.
- Adopted and will sign the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization; and
- Signed and ratified the Cartagena Protocol on Biosafety and accepted the adoption of its supplementary Protocol (the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress).

8.5 Pollution Control

To ensure a cleaner air, the Federal Government promulgated the National Environmental Regulations 2011. The purpose of these Regulations is to control vehicular emissions; clean – up Nigerian air, and restore, preserve and improve the quality of air. It is also aimed at:

- ensuring regular emission testing and maintenance of automobiles operating the high ways;
- protecting citizens right of access to clean air; and
- improving the health of Nigerians especially in the urban areas with high incidence of air pollution due to increased number of automobiles.

Another provision of the Regulations is the ban on the importation of the highly polluting 2-Stroke Engine. This has already been translated into our national fiscal policy, with instructions to appropriate agencies of the Government, including the Nigerian Customs Service, to effect

the ban. To further operationalise the Regulations, government is putting in place a mechanism for effective implementation of the National Vehicular Emission Testing Programme.

Furthermore, Government has commissioned a Mobile Air Quality Monitoring Station in the Federal Capital Territory (FCT) as a veritable component of the Government's air quality monitoring programme. A second air quality monitoring station will soon be commissioned in Port Harcourt, Rivers State. These State-of-the art equipment are to monitor and evaluate in-situ, any environmental hot spot that requires urgent attention. The monitoring stations are being complemented with sets of mobile handheld air quality monitoring equipment for the major pollutants such O₃, NO_x, CO, Particulates, Noise, etc. The government also has in place (i) Water Quality Standards for various uses (1999) and (ii) National Guidelines and Standards on Environmental Pollution Control, 1991.

The rapid growth of air travel in Nigeria in recent years contributes to an increase in total CO₂ emission attributable to aviation which is about 3%. Nigeria has been participating in the International Civil Aviation organization (ICAO) activities on the environment which are aimed at improving the performance of worldwide fleet operations targeted at reducing global emission. Nigeria was recently admitted as the third member country from Africa into the ICAO Committee on Aviation Environmental Protection (CAEP). Under the chairmanship of Nigeria, the 37th Assembly of the International Civil Aviation Organization (ICAO) adopted the first global sectoral resolution in addressing Greenhouse Gas (GHG) emissions on International aviation. The efforts of the Nigerian Meteorological Agency (NIMET) include Maintenance of a network of synoptic, marine, agro meteorological and upper air stations, dedicated Satellite receiving ground equipment, and network of Dropper weather radar, and well trained dedicated work force.

To mitigate oil spillage, the government put up measures including: implementation of pipeline system integrity test management; real time pipeline system surveillance project aimed at detecting, locating and quantifying pipeline leaks in real time; maintenance of right of way to mitigate external influence on the pipeline; involving producing communities in pipeline surveillance activities; and implementation of amnesty programmes in Niger Delta areas.

In addition strategies have been developed to eliminate gas flaring in the short and long terms. The short term strategies are increase in gas flaring fine for every 1000 cubic feet of gas, and shut-in of wells producing high gas-oil ratio. The long term strategies include accelerated implementation of gas development programme, implementation of gas injection policy, and implementation of gas master plan which provides the required infrastructure and fiscal incentives.

8.6 Sustainable Land Management

Natural factors, such as high storm intensity, soil characteristics and climatic conditions, and the land management practices and other social factors contributed to such degradation. The government has initiated a host of measures for arresting further land degradation and for rehabilitation of degraded lands, which are implemented through different Ministries like Agriculture, Environment and Water Resources.

Some of the achievements attained in the Country to combat land degradation and desertification since signing UNCCD include:

- i. Public awareness on the threat of desertification, land degradation and deforestation has been raised by 58% through sustained Radio and TV jingles. Print media campaigns, seminars, conferences and workshops
- ii. National Action Plan to Combat Desertification has been developed and is in the process of being mainstreamed into the country's development plans and policies
- iii. About 24,000 hectare of degraded land have been rehabilitated through afforestation, oasis rehabilitation, sand dune fixation and rangeland conservation
- iv. Livelihoods of over 6 million affected people have been improved through the provision of drought amelioration infrastructure, promotion of alternative means of livelihoods and popularization of alternative sources of energy.

8.7 Integrated Management of Marine and Coastal Environment

The country is in the process of developing a national Plan of Action within the context of the Global Programme of Action (GPA) for the protection of the marine environment of the United Nations Environmental Programme (UNEP). This will provide a comprehensive and flexible framework, to preserve and protect the Nigeria's marine environment from sewage, physical alterations and destruction of habitat, nutrients, sediment mobilization, persistent organic pollutants, oils, litter, heavy metals and radioactive substances. Specific areas of intervention to address adaptation options in the country in this plan of action will include:

- Building human capacity to conduct research into land-ocean interaction that will identify the impacts of atmospheric change, variability and extremes on the Nigerian coastal socio-economic and ecological systems;
- Strengthening of national and local research communities' capacity for assessment of the impacts of atmospheric change, variability and extremes for the identification and assessment of adaptive responses;
- Strengthening national capacity by developing and implementing Integrated Coastal/Fresh Water Area Management plan;
- Developing human and infrastructural capacity for water conservation measures, planning and preparedness for droughts, salt water intrusion and severe floods; and
- Developing capacity for modeling, evaluating and designing physical structures (e.g. groin, breakwaters, dykes, and sea wall) to combat sporadic flooding and coastal erosion.

8.8 Waste Management

The government is supporting an integrated approach to the management of solid waste (Box 2). Furthermore, and in recognition of the complex nature of waste management faced by the country, Nigeria will be adopting the sustainable material management (SMM) approach in support of sustainable development. SMM is defined as *“management of the product lifecycle (extraction, production, use, and disposal) through the use of environmentally benign materials and processes which create opportunities and livelihoods while safeguarding the environment, human health and social equity”* (UNDP).

Nigeria recognizes that since SMM is a broad concept covering several different policy areas and stakeholders, it will require putting in place a wide range of governance mechanisms that can be used at the different levels of the materials life-cycle. This includes an improved policy and institutional frameworks at the national level with clear delineation of roles and responsibilities for effective use of available resources.

Nigeria will also enhance knowledge and awareness of risks associated to increasing material flows and opportunities with sustainable materials management. In addition, Nigeria recognizes that while the public sector has a key role in the formulation and implementation of governance mechanisms, such as policies and regulations, the active participation of many other actors, including the private sector, the informal sector and civil society organizations are crucial for a more sustainable management of materials. A bottom-up approach in which government is accountable to the citizens will be adopted for improved coordination at the national level. In this endeavour, Nigeria will continue to advocate for improved international governance frameworks suited for addressing environmental and social problems associated with growing materials flows.

One of the approaches for the sustainable management of Municipal Solid Wastes in Nigeria is through the establishment of Integrated Waste Management Facilities in Nigerian cities. The project was initiated by the Federal Ministry of Environment in August 2006, as an intervention project and has progressed in four major Nigerian cities. The project is based on a public-private sector partnership framework. In the arrangement, the Federal government and the private sector investor have an equity ratio of 20% and 80% funding responsibility, respectively while the State Government has the responsibility to provide land and guarantee waste collection, amongst others.

The Integrated Waste Management Facilities will comprise waste recovery facility, engineered landfill, incinerator, plastic recycling plants, composting plants as well as methane gas recovery system when fully installed and operational. Currently, all the sites have been acquired in the four cities while civil construction works have been completed and some machine components delivered and installed in some of the cities.

The project is expected to be completed within the next 5 years providing at least one thousand job opportunities and a capacity to handle an average of 2,000mt of municipal solid wastes and 60mt of hospital wastes per day.

In addition to the IWMF project, the Federal Ministry of Environment have also commissioned other Waste – to – Wealth solid wastes management initiatives namely; establishment and installation of Metal Scrap Recycling plants in 6 cities, Plastic Recycling plants in 26 cities and Briquetting Plants in 2 cities. These projects are at various stages of implementation and will become completed and fully operational within the next two years.

Box 5

ACTIVITIES OF FEDERAL MINISTRY OF ENVIRONMENT TOWARDS ACHIEVING SUSTAINABLE DEVELOPMENT

Other efforts of the Federal Ministry of Environment towards ensuring environmental protection and sustainable development include the following initiatives and actions in form of strategies, programmes, activities and interventions:

- Establishment of National Committee on Wetlands and Aquatic Resources and identification of fourteen more wetlands sites of international importance under the Wetlands Convention (RAMSAR);
- Pilot Studies on Community-based Forest Management;
- Review of the Endangered Species Legislation;
- Monitoring and evaluation of agro-forestry component of the Special programme on Food Security;
- Development of a national Biosafety Framework;
- National Biosafety Policy and Draft bill;
- Execution of relevant forestry research projects through the activities of the Forestry Research Institute of Nigeria (FRIN);
- Execution of relevant park development and management projects through the activities of the National Parks Service;
- Development and implementation of the Great Green Wall for Sahara initiative (Nigeria Programme) to green the desert (Box 5);
- Desert to Food Programme initiative;
- Integrated Ecosystem Management Project in the Transboundary Areas between Nigeria and Niger Republic
- Millennium Development Goals (MDGs) projects Rehabilitation of ten oases and provision of potable water to communities for drinking and farming.
- Land Degradation Mapping and Assessment for the prevention of erosion hazards
- Implementation of several physical erosion and flood control projects
- Intensified implementation of the National Policy on Erosion, Flood Control and Coastal Zone Management
- Launching of awareness campaign to control incidences of erosion.
- Establishment of Integrated Waste Management Facilities in many parts of the country
- Phase out of the use of CFCs in the Refrigeration and Foam Sectors (see Box 6)
- Community based waste management pilot projects in 5 Nigerian cities-private-sector driven and MDG supported
- Community based waste management pilot projects in Maiduguri and Otta-private-sector driven and MDG supported
- Establishment of a National Expert Committee on Mercury to provide guidance on appropriate strategies to address the mercury challenge.
- Implementation of the ozone-depleting substances phase-out programme for all relevant sectors in Nigeria.

Community-based Sanitation DEWAT Project to provide basic needs such as flush toilet facilities with decentralized wastewater treatment facilities to communities in the riverine areas; generate biogas from human waste for cooking and fish drying in homes. Treated wastewater to be reused for irrigation and in fishponds to enhance the socio-economic status of the beneficiary communities. To capture progress, the government, with support from development partners, has developed sustainable development indicators that will be used on regular basis for the state of the environment.

BOX 6

GREAT GREEN WALL (GGW) INITIATIVE IN THE NIGERIAN CONTEXT

President Obasanjo, in 2005 at the Sahel Saharan Summit in Ouagadougou, Burkina Faso proposed the Great Green Wall for Sahara initiative as an integrated approach to check desertification and depletion of natural resources in the dry land region. The African Union the Declaration of the Great Green Wall for Sahara Initiative by the Assembly in 2007. The Great Green Wall is Africa's resolve to combat desertification through an integrated approach that will enhance food security, ecosystem goods and services with a view to achieving development, particularly alleviating poverty.

Institutional Framework: The Summit of 11 Heads of State and Government on the Great Green Wall, held in N'djamena, Chad on 17th June 2010 signed a convention that created the Pan-African Agency of the Great Green Wall (PAGGW). The Agency is charged with:

- coordinating implementation of the Great Green Wall Programme in 11 member States namely, Mauritania, Senegal, Mali, Burkina Faso, Niger, Nigeria, Chad, Sudan, Ethiopia, Eritrea and Djibouti, on the basis of national strategy,
- mobilizing international funding, and
- Building regional capacity on best practices through knowledge, skills and technology.

The Agency is supported by three institutions, namely:

- the Conference of Heads of State and Government
- , the Council of Ministers and
- the Technical Committee of Experts.

Projects and Activities: Major development partners and institutions including GEF, World Bank, FAO and GM (UNCCD) have welcomed and applauded the Great Green Wall initiative and are presently lending their support through the following projects:

- **Support Project to the implementation of the Great Green Wall for the Sahara and Sahel Initiative (EU-FAO-AUC Project):** This project is designed to support African Union Commission in the implementation of the Great Green Wall.

The objective of this project is to enhance the capacity (both in technical and financial mobilization terms) of the AUC, the CEN-SAD Secretariat, the recently established Pan-African Agency of the Great Green Wall (PAGGW) and the eight partner countries, the sub regional and regional organizations involved including the Regional Economic Community Partners (ECOWAS, IGAD, UMA), CILSS and OSS, the Global Mechanism of the UNCCD and ICRAF to implement the GGWSSI in a coordinated and efficient way. The goal of the project is therefore to provide assistance in developing a regional strategy and national implementation plan that would lead to selection of country and cross-border projects for donor support.

To achieve the objective, the following activities are to be under taken:

- Capacities for regional harmonization strengthened and a regional strategy for effective implementation and resource mobilization for the GGWSSI developed and validated by the eight selected countries, technical and financial partners;
- Detailed implementation plans/projects portfolio prepared/validated;
- At least three cross-border projects formulated and investment plans for their implementation developed;
- A capacity development strategy and programme (at both informal levels) for the effective implementation of the GGWSSI developed and its implementation initiated, including field activities, at local/community level;
- A learning and networking platform developed and operational for enhancing knowledge sharing, technology transfer, best practices promotion across the GGWSSI countries and partners;
- Key target audiences and stakeholders are engaged in supporting the GGWSSI implementation.

The implementation of the project started in Nigeria in April 2012, and the government is providing adequate support to ensure that its objectives are realised.

GEF/WB Sahel and West Africa Programme: Twelve countries (Benin, Burkina Faso, Ethiopia, Ghana, Mali, Mauritania, Niger, Nigeria, Senegal, Sudan, Chad and Togo) were selected for the programme. The goal of the initiative is to expand sustainable land and water management (SLWM) in targeted landscapes and climate vulnerable areas in the Sahel and West Africa. The initiative is expected to lead to sustainable management of land, water and vegetation on up to 2 million hectares of croplands, rangeland and dry forest ecosystems per country, as well as to sequester 0.5 to 3.1 million tons of carbon per year. The modalities for the implementation are being worked out. The Nigeria GGW Action/investment Plan being developed will provide the Nigeria's GGW vision on which a concept note is being prepared for the programme implementation in Nigeria.

Implementation of Cross-border Project in the Trans-boundary area between Nigeria and Niger with donor support when secured in course of EU-FAO-AUC Project Implementation

Establishment of Green Wall in the 11 frontline States as indicated in the First National Implementation Plan (NIP) for 2010-2013 of Nigeria vision 20:2020. Aspect of tree planting to control desertification in the 11 frontline States for the SURE programme is expected to be accomplished.

Harmonized Strategy for GGW Implementation: The implementation of the EU-FAO-AUC Project will result in the development of a harmonized strategy that will integrate scientific, technical, social and political areas of intervention will provide a common approach for effective implementation of GGW. This will provide the guiding principle and roadmap to promote synergy and complementarity among partners for efficient and effective utilization of meagre financial and human resources in the implementation of the Great Green Wall. The

harmonized regional strategy would in addition serve as an indicative framework for the elaboration of national and regional trans-boundary plans for the implementation of GGW. The development of Nigeria Action Plan for the GGW would be guided by the harmonized regional strategy.

8.9 Managing the Climate Change Risk

The Government regards the challenge of climate change as inimical to its national sustainable development that must be squarely addressed. Thus, various national efforts have been put in place at all levels of governance to promote climate resilient environmental sustainability in the context of national development. These efforts can be captured under (i) institutional and capacity building; (ii) promoting an enabling climate change policy environment ; (iii) political and legal; (iv) participation in global initiatives; (v) partnership building for climate change; (vi) climate change financing; (vii) climate change information; (viii) other climate change related initiatives.

The Federal Ministry of Environment, which administers climate and environmental policies at the national level, created a Special Climate Change Unit (SCCU) in the Ministry in 2006 to drive the national response to climate change at the national and international levels. The Unit was upgraded to a full-fledged Department of Climate Change in December 2011. It is the country's Designated National Authority (DNA) for the Clean Development Mechanism, and works with a number of Ministries through the Inter-Ministerial Council on Climate Change. In 2009, it established a climate change desk in the Federal Ministry of Science and Technology, with a plan to expand the structure to other Ministries in the very near future. In 2010, the National Assembly passed a bill to create a national Climate Change Commission, which, once established, will likely facilitate coordination and support for the multi-level and cross-sectoral climate change responses.

In addition to the Department of Climate Change, the Energy Commission of Nigeria has been an active governmental climate actor, but principally from mitigation point of view. The Nigerian Meteorological Agency (NIMET) and the Centre for Climate Change and Freshwater Resources, Federal University of Technology, Minna¹³ are active climate change actors at the national level. NIMET is to improve the national capacity to generate observational climate data and climate monitoring systems. It has also been given the responsibility for climate research and observation. In addition, the Nigerian Institute for Oceanography and Marine Research (NIOMR) has been increasingly involved in enhancing Nigeria's adaptive capacity along the coastal and marine environment of the country. The National Emergency Management Agency (NEMA) has also shown some interest in climate change adaptation, while the focus of the Nigerian National Petroleum Corporation (NNPC) is in climate mitigation.

¹³ The Centre for Climate Change and Freshwater Resources (CCCFR) is dedicated to training and research in climate change and its impact, with emphasis on freshwater resources management in Nigeria. A major element of its mandate is to conduct basic and applied research in climate change and freshwater resources management in Nigeria, including adaptation and mitigation studies for adverse effects of agricultural and water development projects etc.

Other important potential governmental actors at the national level include the National Planning Commission (NPC), which is the primary coordinator of government programmes. In a recent meeting with the UNDP mission for the formulation of an adaptation programme for the country, NPC expressed commitment to acting on climate change and has begun to identify proactive adaptation initiatives. The NPC has also identified the need for a National Climate Change Policy and for greatly improved coordination in order to create complementarity of actions.

At the State level, at least two state governments have become active climate actors. They are Delta and Lagos States. Delta State is a member of the Territorial Approach to Climate Change (TACC), which is a partnership of five UN agencies (UNDP, UNEP, UNITAR, UN-Habitat and UNCDF) with sub-national territories and their associations¹⁴. Delta State is the first in the country to formulate a “Climate Change Policy” aimed at mitigating and adapting to climate change.

8.9.1 Promoting Climate Change Policy

To ensure a truly national response to the significant and multi-faceted impacts of climate change, Nigeria has put in place a number of policy initiatives. They include:

Vision 20:2020: The Federal Government’s current economic growth plan, *Nigeria Vision 20:2020, Economic Transformation Blueprint*, recognizes a changing climate as a threat to sustainable growth in the next decade. It sees climate change as a critical challenge globally and, in Nigeria, as a potential driver of “*damaging and irrecoverable effects on infrastructure, food production and water supplies, in addition to precipitating natural resource conflicts.*” This recognition is an important first step towards a climate change adaptation strategy and action plan.

Nigeria Climate Change Policy Response and Strategy: Nigeria recognizes the need to address climatic change in a policy responsive and strategic way. It has, therefore, put in place a *Climate Change Policy and Response Strategy* with the strategic goal of fostering low-carbon, high growth economic development path and building a climate resilient society through the attainment of the following objectives:

- Implement mitigation measures that will promote low carbon as well as sustainable and high economic growth;
- Enhance national capacity to adapt to climate change;

¹⁴TACC focuses on the level of governance covering territories below the national level (depending on the governance structure these include states, provinces, cities etc.), usually referred to as ‘regions’ or ‘local governments’.

- Raise climate change related science, technology and R&D to a new level that will enable the country to better participate in international scientific and technological cooperation on climate change;
- Significantly increase public awareness and involve private sector participation in addressing the challenges of climate change;
- Strengthen national institutions and mechanisms (policy, legislative and economic) to establish a suitable and functional framework for climate change governance.

National Adaptation Strategy and Plan of Action for Climate Change Nigeria (NASPA-CCN): Nigeria has developed an inclusive and widely supported adaptation strategy and action plan. This strategy and action plan is integrative, comprehensive in scope, and inclusive of all stakeholders. It is linked to other initiatives of the Nigerian government. In developing the NSAPA-CCN, Nigeria envisions a country in which climate change adaptation is an integrated component of sustainable development, reducing the vulnerability and enhancing the resilience and adaptive capacity of all economic sectors and of all people -- particularly women, children, and resource-poor men – to the adverse impacts of climate change, while also capturing the opportunities that arise as a result of climate change. Its goal is to take action to adapt to climate change by reducing vulnerability to climate change impacts and increasing the resilience and sustainable wellbeing of all Nigerians; and to reduce or minimize risks by improving adaptive capacity, leveraging new opportunities, and facilitating collaboration inside Nigeria and with the global community. The main objective of NASPA-CCN is to reduce the impacts of climate change through adaptation measures that can be undertaken by the Federal, State and Local governments, civil society, private sector, communities and individuals, including measures that will:

- Improve awareness and preparedness for climate change impacts;
- Mobilize communities for climate change adaptation actions through the provision of appropriate user-friendly information;
- Reduce the impacts of climate change on key sectors and vulnerable communities; and
- Integrate climate change adaptation into national, sectoral, state and local government planning and into the plans of universities, research and educational organizations, civil society organizations, the private sector and the media.

Strategic Framework for Voluntary Nationally Appropriate Mitigation Action (NAMA) in Nigeria: Towards meeting its obligations to part of the UNFCCC global agreements on climate change, Nigeria is in the process of finalizing a NAMA programme document. The overall objective is to contribute to global efforts to reduce emissions and to seek international support and funding for Nigeria to develop supported and crediting NAMAs. The NAMA strategic framework will allow Nigeria to develop strategic, long-term, participatory, transformational measures and comprehensive programmes in driving towards a low carbon climate resilient and pro-growth and gender sensitive and sustainable development path.

Other climate change-related policies: In addition to the above-mentioned key climate change related policies, Nigeria has several environmental and sectoral policies and plans where

climate change adaptation policies could apply. For example, the National Policy on Environment supports *“the prevention and management of natural disasters such as floods, drought, and desertification”*. And one of the objectives of Nigeria’s Agricultural Policy is to *“protect agricultural land resources from drought, desert encroachment, soil erosion, and floods”*. Other examples include Nigeria’s *Drought Preparedness Plan, National Policy on Erosion and Flood Control, National Water Policy, National Forest Policy, and National Health Policy*.

8.9.2 Financing Climate Change

Nigeria recognizes that ensuring sustainable financing of adaptation and to some extent mitigation measures and actions could constitute a major constraint in the country’s efforts to cope with the impact of climate change. It also notes that to respond effectively to climate change mitigation and adaptation challenges, Nigeria will require a lot of resources beyond what governments at all levels can provide. To this end, Nigeria is considering various ways of financing to address key climate change problems or challenges, as well as explore the opportunities for development. This financing is aimed at supporting climate change policies, programmes and initiatives of the Government of Nigeria. Its goal is to support the efforts of the Government of Nigeria to reduce emissions, move towards a low-carbon high growth economy and adapt to the impact of climate change. The overall objective of this financing is to attract and mobilize funding to enable Nigeria implement short to long-term climate change related actions and activities and measures that will not only increase the resilience of national development sectors to the impacts of climate change, but also enable the country to chart the course of sustainable low carbon high growth economic development. This financing could serve as a catalyst to leverage additional resources from bilateral and other multilateral sources for (a) mainstreaming of climate change issues in national, state and local development planning, (b) the implementation of mitigation and adaptation climate change initiatives and strengthening of relevant policy, operational (e.g. NIMET) and research institutions. It will develop innovative ways to link international finance sources with national investment strategies and demonstrate the possibility of managing development funds in a transparent and accountable manner for impact and sustainability.

CHAPTER 9

Achieving Sustainable Development through Green Economy

9.1 The concept of Green Economy

According to Dahlin (2010), “Green growth is the means by which the current economy can make the transition to a sustainable economy, to avoid the cost of inaction”. It involves promoting growth and development while reducing pollution and greenhouse gas emissions, minimising waste and inefficient use of natural resources, maintaining biodiversity, and strengthening energy security. It requires further *decoupling* of environmental impacts from economic growth, and greening of consumption and production patterns, while reducing poverty and improving health and job prospects. Green growth means making investment in the environment a new source of economic growth.

According to UNEP (2011), green economy is “an economy that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities.” At the operational level, the green economy is seen as one whose growth in income and employment is driven by investments that:

- Reduce carbon emissions and pollution;
- Enhance energy and resource efficiency; and
- Prevent the loss of biodiversity and ecosystem services.

It also includes investments in human and social capital, and the recognition of the central position of human well-being and social equity as core goals, which are promoted by growth in income and employment.

By definition, green economic objectives need to be aligned with the sustainable development agenda, highlighting a concern with the balance of risks and scarcities faced by peoples across the globe. Affirming sustainable development as overall or end goal, the green economy also represents an attempt to mobilize more action-oriented, mainstream and identify bottom-up pathways to sustainable development.

9.2 Issues on Green Economy

As a developing economy, Nigeria is concerned that despite its good intentions as a policy instrument for sustainable development, the “green economy” concept may be misused or taken out of context. Its promotion may give rise to unhelpful or negative developments, and these must be avoided. Some of the concerns as captured by Khor (2010)¹⁵ include:

¹⁵(Challenges of the green economy concept and policies in the context of sustainable development, poverty and equity by Martin Khor, Executive Director, South Centre From: The Transition to a Green Economy: Benefits, Challenges and Risks from a Sustainable Development Perspective Report by a Panel of Experts To Second Preparatory Committee Meeting for United Nations Conference on Sustainable Development)

- *One dimensional approach* in which the “green economy” is defined or operationalised in a one dimensional manner and promoted in a purely “environmental” manner (without considering fully the development and equity dimensions of sustainable development) and without consideration of the international dimension, especially its negative effects on developing countries. Thus, there is the concern that if the green economy concept gains prominence, while the sustainable development concept recedes, there may be a loss of the use of the holistic sustainable development approach, with imbalances between the three pillars.
- *“One size fits all” approach* in which all countries are treated in the same manner. This would lead to failures either for environment, development or both. The levels and stages of development of countries must be fully considered, and the priorities and conditions of developing countries taken into account. Nigeria continues to support the view that the principle of common but differentiated responsibility should be respected and operationalised. Thus, in considering various principles, policies and targets of green economy, adequate flexibilities and special treatment should be provided for developing countries, such as exemptions, allowance for more lenient obligations, and the provision of finance, technology and capacity building.
- *Risk of using environment for trade protection* in which the environment, and by implication the “green economy”, can be inappropriately made use of by countries for trade protectionist purposes, and that in particular developed countries may use this as a principle or concept to justify unilateral trade measures against the products of developing countries that do not have financial resources or access to low-emission technologies, and thus violate the principle of common but differentiated responsibilities.
- *Attempting to gain market access through the guise of environment* by countries to promote the access of their goods and services into markets of other countries. There is a fear that the green economy concept could be used as a front for mercantilist interests. In particular, there is the concern that some developed countries have been attempting to get developing countries to eliminate the tariffs of many of their goods that the proponents claim are “environmental goods.”
- *The treatment of subsidies* -many developing countries are concerned that some developed countries have been providing their companies with major subsidies for the research and development (R&D) of environmentally sound technologies. This puts developing countries at a disadvantage, especially since they lack the financial resources to match the developed countries' subsidies. Given this unfair imbalance in subsidies, the developing countries and their firms would be in an even worse competitive situation if they have to lower their tariffs on environmental products.

- *Environmental standards* constitutes another area of risk to green economy concept as developing countries are concerned that the adoption of environmental standards for products may mean that if they may be unable to meet the standards, they face the prospect of losing their exports. Unless developing countries are provided with resources and technology for upgrading their environmental technology and standards, they will continue to be penalised. Developing countries need to be fully involved in negotiating and setting international environmental standards and be assisted to comply with them so as to make the green economy concept acceptable.

Overall, there is a major concern that the “green economy” may be used as new conditionality on developing countries for aid, loans, and debt rescheduling or debt relief. This may pressurize affected developing countries to take on one-dimensional environmental measures rather than sustainable development policies that take economic and social development and equity goals into account.

Others believes that the “green economy” concept has the potential to drive sustainable development, but that in order for it to be meaningful and relevant to developing economies that are faced with the challenge of overcoming poverty, the concept must be guided by and enshrined with a number of principles, including, but not limited to (see e.g. Stoddart et. al., 2011):

9.3 Operationalising Green Economy

- *Equitable distribution of wealth* within nations and among nations, to reduce disparities between rich and poor, and achieve social and economic justice, within a sustainable and fair share of the world’s resources.
- *Economic equity and fairness* guided by the principle of common but differentiated responsibilities create economic partnerships that would transfer substantial financial and technological assistance to less developed countries, to help minimize the gap between the developed and developing world and support the environmental sustainability of both.
- *Intergenerational equity* in which environmental resources and ecosystems are carefully managed and safeguarded so as to enhance the value of environmental assets for future generations, thereby equitably meeting their needs and allowing them to flourish.
- *Precautionary approach* in which science is utilized to enhance social and environmental outcomes, through the identification of environmental risk and scientific uncertainty of environmental impacts is not allowed to lead to avoidance of measures to prevent environmental degradation.
- *The right to development* in which human development in harmony with the environment is fundamental to the achievement of sustainable development, so that

individuals and societies are empowered to achieve positive social and environmental outcomes.

- *International cooperation* not only to avoid unfair protectionism, but also to ensure that trade supports sustainable resource use, environmental protection and progressive labor standards, promoting a 'race to the top' rather than the bottom.
- *International liability* that acknowledges that actions within national boundaries can cause environmental impacts beyond national jurisdictions, requiring cooperation in the development of international law that allows for independent judicial remedies in such cases.
- *Information, participation and accountability* that will make all citizens have access to information concerning the environment, as well as the opportunity to participate in decision-making processes for justice and accountability.
- *Sustainable consumption and production* with sustainable and equitable resource use to reduce and eliminate unsustainable patterns of production and consumption.
- *Strategic, coordinated and integrated planning to deliver sustainable development, the green economy and poverty alleviation* in a sustainable manner that will expedite the achievement of socio-economic and environmental sustainability through strategic planning with civil society and stakeholders, including the private sector, and across all relevant government departments.
- *Just transition* that will facilitate adequate financial and technical support to developing countries to enable them transit to low carbon green economy in the context of sustainable development, particularly to enable citizens and communities have access to new "green" skills and jobs.
- *Human wellbeing* (not GDP) and quality of life, and environmental health are the guiding objectives of economic development.
- *Gender equality* and equity are prerequisites to the transition to a green economy and the achievement of sustainable development, as women have a vital role to play as agents of change for environmental management and development.
- *Safeguard biodiversity and prevent pollution of any part of the environment* as an integral part to development and human wellbeing within a system of governance that protects the resilience of ecosystems to prevent irreversible damage.

CHAPTER 10

Way Forward and Beyond Rio+20

Overall, Nigeria will continue to pursue policies and measures to ensure a more environmentally sound economy in the context of sustainable development. Such policies and measures will be based on the following key principles and approaches:

- Recognizing the economic and social values of environmental resources;
- Conserving resources and restoring damaged eco-systems;
- Improving the critical regulatory and strategic policymaking roles of the public sector to re-orient various economic and social sectors towards a sustainable development pathway;
- Enhancing the role of the private sector to take a sustainable development pathway, while at the same time being able to operate in an intensely competitive market;
- Addressing the link between livelihoods and living conditions of rural communities and the environment, and incorporating the right of rural communities to a clean environment;
- Addressing unsustainable consumption patterns and the link to environment, poverty and equity.
- Promoting food security and sustainable agriculture; and
- Strengthening national institutional and legal mechanisms to support policies and efforts toward sustainable development.

The identified challenges in the social, economic, and environmental pillars and emerging issues can only be confronted and opportunities for sustainability tapped, through well articulated and robust implementation strategies. For instance the solid Minerals sector expects to adequately implement the programs and projects in the Mining Act and the Mining Regulations, in addition to ensuring funds availability to alleviate poverty in the mining community through the provision of micro grant and social infrastructures. It is also expected that rural integrated development programme whereby mining go side by side with other skills will be provided. Human and physical capacity in the sector, skills acquisition program for the mining community, and Education, public sensitization of the mining communities on the need for harmony and cooperation with the operators on one hand and education and sensitization of operators on best global practices in mining to achieve sustainable development on the other hand. Streamlining of institutional responsibilities in the mining sector with respect to Federal, State and Local Governments and Synergy/strengthening linkages and collaboration between the Ministry of Mines and Solid Mineral Development and other relevant bodies such as NEMA, Nigeria Security and Civil Defence Corps, Police, Federal Fire Services, NGOs and CBOs, to ensure safety in the minesfield and mining communities. The strategic approach that will be

adopted to operationalize sustainable development in Nigeria will centre on critical mechanisms of

- (i) governance;
- (ii) education, public awareness and capacity building;
- (iii) stakeholders' participation;
- (iv) information and communication technology (ICT);
- (v) science, technology and innovation;
- (vi) financing for sustainability; and
- (vii) international and regional cooperation.

10.1 Eco-Governance

Improving governance and reducing vulnerability to corruption are core development challenges. Sustainable development is essentially about reducing poverty, and there is clear evidence that the poor are the most vulnerable to corruption and suffer most from the impacts of poor governance and weak performing institutions. Therefore, participation will be a major tenet of good governance in the pursuit of sustainable development. Governance shall be strengthened by a number of policies and regulations that are already in place and where necessary, new ones shall be produced. Some of the existing policies and regulations cover industrial pollution control, desertification control and drought mitigation, access to genetic resources and benefit sharing, coastal and marine area protection amongst others.

To actualise eco-governance that is very imperative for sustainable development, government will pursue the following strategies:

- Integrate environment into the development process,
- Promote active public participation in sustainable development discourse;
- Uphold the principle of the rule of law;
- Enhance human rights;
- Empower women, youth and vulnerable groups;
- Promote transparency and accountability;
- Promote the mechanisms necessary for policy-making, coordination and enforcement at all levels of governance;
- Improve implementation of Multi-lateral Environmental Agreements and Conventions for synergy;
- Reinvigorate scientific research and development;
- Adopt a multi-disciplinary approach;
- Adherence to best environmental management practices;
- Enhance the role of local government in implementing sustainable development including through continuing support for Local Agenda 21 programmes and other sub-national sustainable development strategies.

- Reinvigorate partnerships between government and non-governmental actors, organized private sector, women, youths, and civil society groups.

10.2 Education, Public Awareness and Capacity Building

Achieving sustainable development requires awareness, a change of mindset and behaviours and capacity to respond. Furthermore, human capital development is very strategic to sustainable socio-economic development. Skilled human resources would enable the optimal exploitation and utilization of other resources to engender growth and development. Government will therefore, take a holistic approach by implementing strategies to realise the following:

- Promote education of the citizenry on the issues of the linkage between development and environment to ensure positive behavioural changes;
- Build the capacity of more Nigerians especially in the area of technology so as to enhance their ability to manage environmental resources efficiently;
- Further raise public awareness using all forms of media channels;
- Reinforce and promote indigenous knowledge;
- The existing Universities Linkage Centres and Research Institutes strengthen to promote environmental education.

10.3 Stakeholders' Participation

The government of Nigeria recognizes that nation-states are not the only stakeholders that play important roles in environmental sustainability and national development issues. Action will be taken to build a broad-based coalition with several stakeholders and ensure their active participation in governance. The stakeholders will include public and private sector organizations, non-governmental organizations, trade unions, cooperatives, business associates, professional bodies, policy advocacy groups, consumer and human right groups, women associations, youth clubs, community - based organizations and coalitions, faith – based organizations, academia and research institutions.

10.4 Information and Communication Technology

The government of Nigeria is aware that the internet and other forms of information and communication technology (ICT) are critical to realization of sustainable development. This is because they provide policy makers, individuals and communities with access to information, communication and knowledge resources that can be used for understanding national development and sustainability issues. It is in this light that Nigeria launched NigCom-Sat communication satellite with a back up in 2011. This satellite has the potentials of promoting better Internet access, e-commerce, e-government, e-education, as well as data and voice

exchange. In addition, the Galaxy Backbone was deployed in 2007 as a means of providing greater access to digital data and voice.

In order to further take the advantages embedded in ICT, government will pursue the following strategies and initiatives:

- Utilization of the Global System for Sustainable Development (GSSD) which is an adaptive, interactive system for knowledge networking, knowledge management, and knowledge sharing for use in conjunction with Internet resources to among others identify policies and strategies that facilitate social and environmental sustainability, and track range of policy responses nationally and internationally;
- Development of a functional environmental information management system, which is imperative for the proper monitoring of, and reporting on, the state of the country's environment;
- Strengthening local, states, and national capacity to collect and use multi-sectoral information in decision-making processes and;
- Operationalization of the Poverty-Sustainable Development Indicators produced in the country for monitoring changes in environmental quality and poverty reduction.

10.5 International and Regional Coordination

Since 1992 when UNCED was held, the commitment of the Nigerian government to international cooperation towards environmental protection and sustainable development has increased tremendously. The country has adopted three major strategies- collaboration, partnership and networking with the international communities. Nigeria will be more proactive in strengthening its cooperation with countries in both the global North and South. Closer collaboration will be forged with multilateral organizations such as the United Nations and its specialized agencies as well as with New Partnership for African Development, ECOWAS and bilateral organizations, towards providing assistance for the implementation of eco-friendly programmes and projects.

10.6 Science, Technology and Innovation

The government is quite cognisant of the crucial role of science, technology and innovation (ST & I) in the promotion of sustainable development. It is also aware that the path toward sustainable development relies very extensively on Research and Development (R&D). In this context therefore, the following strategies will be given priority by Nigeria:

- Utilization of appropriate technology to add value to the country's commodities and other products in order to be more competitive;
- Greater attention to be paid to the application of information and communication technology in every sector of the economy; and other generic technologies such as biotechnology and nanotechnology to be harnessed to develop critical sectors such as agriculture, energy and manufacturing;

- Establishment of virile National Innovation Systems (NSIs) and charged with breakthrough in specific socio-economic priority areas such as education, health, agriculture and industry;
- Encouragement of Nigerian Science Technology and Technology (ST&I) stakeholders to participate fully in international scientific programmes dealing with global environmental challenges;
- Environmentally sound technologies that will protect the environment, and ensure greater efficiency in resource utilisation and management to be given priority attention;
- Improvement of capabilities for determining scientific research priorities at the national, regional and global levels to meet the domestic needs of sustainable development;
- Cooperation with the proposed UN System wide Technology Acquisition Advisory Networks which will include research centers, business association, financial institutions, export promotion bureau, equipment and raw materials supplies to ensure a rapid transformation of technological development in Nigeria;
- Support and promotion of access to transfer of technology.

CHAPTER 11

Conclusions

Nigeria reckons that for it to meet its development challenges and follow the path of sustainable development, it must focus its efforts at (i) creating demand for good governance including addressing socio-economic and political marginalisation that seem to fuel conflicts (ii) tackling poverty and reducing inequality through inclusive policies and people-centred development programmes, as well as addressing critical factors of poverty, underdevelopment, joblessness, and lack of economic diversification, (iii) promoting environmental sustainability; (iv) addressing the challenge of climate change, (v) greening various sectors of the economy to capitalize on emerging opportunities to leapfrog development, and (vi) massive investment in people to tap onto the latest potential offered by globalization and new information technology. To do this effectively, the government has:

- Put in place policies and programmes aimed at fulfilling its commitment towards social progress, accelerated economic growth and increased environmental conservation;
- Strengthened institutional and legal frameworks imperative for sustainable development;
- Embarked on a number of initiatives for financing sustainable development; and
- Support a number of implementation imperatives and mechanisms, particularly as they relate to governance, education and awareness creation, capacity building, multi-stakeholders' participation and international and regional cooperation.

Sustainable development has been embedded in the planning process of the country since the 1990s. The National Vision 20:2020 document and its National Implementation Plans (NPC, 2010) explicitly recognizes the synergy between environment, health and development and identified as one of its core objectives the need for ensuring environmental sustainability of the development process through social mobilization and participation of people at all levels.

The Federal Government's key priority policies, programmes and projects that will translate the Vision and the 1st National Implementation Plan into meaningful development in the country are captured in the government's Transformation Agenda for the period 2011- 2015. The Agenda is based on a set of priority policies and programmes, which when implemented will ensure continuity, consistency and commitment of national development efforts that will *transform the Nigerian Economy to meet the needs of the Nigerian people.*

To translate the projects emanating from the Transformation Agenda into reality, a number of policy and regulatory enablers have been put in place, including laws, regulations, policies, public infrastructure, public services and international trade agreements that will facilitate the activities of economic agents, making it possible for them to be competitive, function optimally and operate profitably, while ensuring sustainable development. These laws will ensure that

businesses can invest and operate in a private-sector led approach without the fear of losing out on opportunities to grow because of bureaucracy, poor market access or any other impediments. The rule of law will also guarantee property rights and contract enforcement which provide great impetus for growth of business and the contribution of businesses to economic growth.

The role of government would be mainly on creating the enabling environment aimed at facilitating sustainable development in the country. The actions will include (i) reduction in the length of time and cost of registering a business; (ii) simplification and harmonization of the tax systems and payment channels; (iii) reduction in the turnaround time and cost of obtaining building permits; (iv) ensuring easy access to affordable and long-term finance; and (v) expansion of IT infrastructure to facilitate easy access to internet and telecommunications services.

Nigeria recognizes the challenges of achieving sustainable development. The government is determined to address these challenges, and will ensure that environmental concerns are properly incorporated into its national, social and economic development efforts.

Nigeria advocates that necessary conditions must be established at the global and regional levels to make it possible for developing countries to move towards a “green economy” within the framework of the Rio Principles and Agenda 21. The tenets of “green economy” in the Rio + 20 Summit should be consistent with the sustainable development concept, principles and framework with continued focus on poverty reduction, which has remained a major global development challenge.

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