

MAJOR ENVIRONMENTAL ISSUES AND THE NEED FOR ENVIRONMENTAL STATISTICS AND INDICATORS IN NIGERIA*

By

*Philip O. Bankole, Assistant Director (Statistics & Information Management),
Federal Ministry of Environment, Housing & Urban Development, Abuja;*

And

*Mr. Abayomi Surajudeen, Chief Statistician (Environment Statistics Unit),
National Bureau of Statistics, Abuja*

Introduction:

The term “*Environment*” refers to the physical surroundings of man, of which he is part, and on which he depends for his activities, like physiological functioning, production, and consumption. His physical environment stretches from air, water and land to natural resources like metals, energy carriers, soil, and plants, animals and ecosystems. For urbanized man, a large part of his environment is man-made. But even then, the artificial environments (buildings, roads) and implements (clothes, automobiles) are the result of an input of both labour and natural resources.

The environment thus provides the life support system for human existence and survival by supplying his needs for air, water, food, place of abode, raw materials, sink for the wastes he generates and indeed, his basic requirements for civilization and technological development. The interplay of human activities and natural phenomena constantly lead to changes in environmental constituents and capabilities.

Environment statistics are statistics that describe the state and trends of the environment, covering the media of the natural environment (air/climate, water, and land/soil), the biota within the media, and human settlements. Environment Statistics are integrative in nature, measuring human activities and natural events that affect the environment, the impacts of these activities and events, social responses to environmental impacts, and the quality and availability of natural assets.

Environment statistics are multi-disciplinary, their sources are dispersed, and a variety of methods are applied in their compilation. Environment statistics generally provide a synthesis of data from various subject areas and sources to assist in the formulation and evaluation of integrative socio-economic and environmental policies. For these reasons, the collation of environment statistics is not a one-man job. It requires the establishment of a network of people who have the technical-know-how in all aspects of environmental concerns.

THE NIGERIAN SITUATION

NIGERIA GEOPOLITICAL

- **Official name:** Federal Republic of Nigeria.
- **Official language:** English.
- **Capital City:** Abuja.
- **Type of Government:** Civilian Administration

**Being paper presented on behalf of the Nigerian Delegation at the ECOWAS Workshop on Environment Statistics held in Abuja from 19th – 23rd May 2008*

- **Location:** West African Sub-Region; bordering the North Atlantic Ocean, between Benin Republic, and Cameroon.
- **Border countries:** Republic of Benin (773 Km); Cameroon 1,690 (Km); Chad (87 Km); and Niger (1,497 Km).
- **Climate:** Varies - equatorial in south, tropical in centre, arid in north. Rainfall: 500 - 1800mm Temperature: Minimum Temperature - 200C - 250C. Maximum Temperature - 280C -320C.
- **Terrain:** Generally varied with rugged hills, undulating slopes, gullies, water-logged
- **Administrative Structure:** 36 States; 774 Local Government Councils
- **National Assembly:** Senate + House of Representatives
- **Total area:** 923,770 km²
- **Land area:** 910,770 km²
- **Water area:** 13,000 km²
- **Land boundaries:** 4047 km

Maritime claims:

- **Continental shelf:** 200m depth or to the depth of exploitation
- **Territorial sea:** 30 nautical miles.
- **Exclusive Economic Zone:** 200 nautical miles.
- **Border countries:** Republic of Benin (773 Km); Cameroon 1,690 (Km); Chad (87Km); and Niger (1,497 Km).
- **Climate:** Varies - equatorial in south, tropical in centre, arid in north. Rainfall: 500 – 1800mm; Temperature: Minimum Temperature - 200C – 250C. Maximum Temperature - 280C -320C.
- **Terrain:** Generally varied with rugged hills, undulating slopes, gullies, water-logged areas, flat and undulating land surfaces. Specifically, it is characterized by southern lowlands merging into central Hills and plateaus; mountains in southeast, plains in the North.
- **Natural Resources:** Forests, Crude Oil, Natural Gas, Solid Minerals e.g. Bitumen, Tin, Limestone, Columbite, Iron Ore, Coal etc, Marine and Aquatic resources e.g fish, shrimps etc
- **Industries:** Oil (Upstream and Downstream), Agro-processing and manufacturing, Farming, Iron and Steel processing, Plastics, Textiles, and Pharmaceuticals.
- **Natural Hazards:** Occasional floods, rain storms, Drought and Desertification



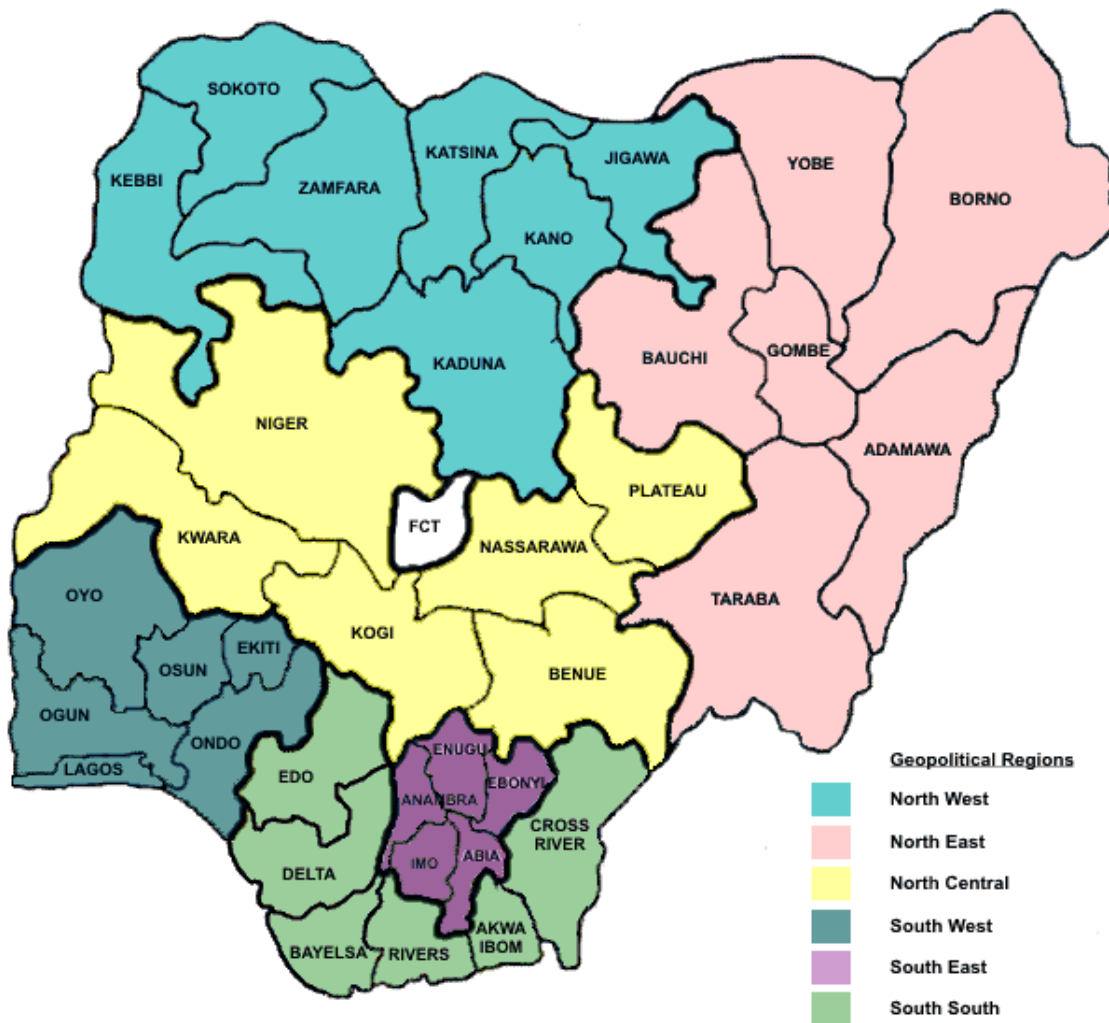


Figure 2. The States and Federal Capital Territory of Nigeria

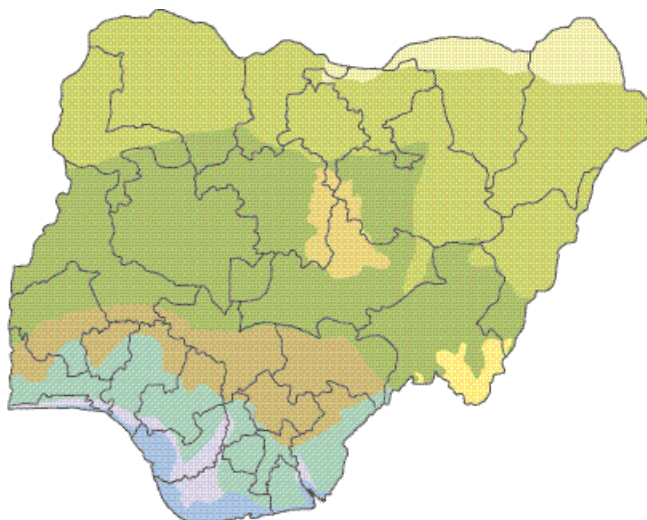
Political and Administrative Structure

Nigeria operates a federal system of government. There is a central government with its headquarters at Abuja. There are 36 states and the FCT. Local Government Areas (774 in number) constitute the third tier of government. It is now common for reasons of coordination and for representation in national affairs to regroup the 36 states into six geopolitical zones as follows in Table -.

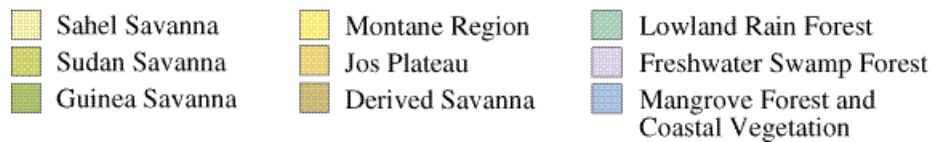
Table : Nigeria’s Geopolitical Zones

Zone	Constituent States
North West	Jigawa, Kaduna, Kano, Katsina, Kebbi, Sokoto, Zamfara
North East	Adamawa, Bauchi, Borno, Gombe, Taraba, Yobe
North Central	Benue, Kogi, Kwara, Nassarawa, Niger, Plateau
South West	Ekiti, Lagos, Ogun, Ondo, Osun, Oyo
South East	Abia, Anambra, Ebonyi, Enugu, Imo
South South	Akwa-Ibom, Bayelsa, Cross-River, Delta, Edo, Rivers
Federal Capital	The Federal Capital Territory (FCT)

NIGERIAN ENVIRONMENT: AN OVERVIEW



Ecological Zones – 1976/78



- Nigeria has a total land area of 923,773 square Kilometres and is richly endowed with abundant and diverse resources, both renewable and non-renewable. The country is blessed with mineral, physical, biological and energy resources. The mineral wealth of the country is vast and should enable it to establish a firm industrial base for rapid economic development.

- From the mangrove and rain forests of the south, through the various savannahs, and semi-arid ecosystems of the north, the nation is richly endowed with fishery resources, wildlife, timber, medicinal plants, mineral resources, water, ornamental and food crops.

Major Conservation Areas in Nigeria

Protected Area	State	Legal Status	Area (km ²)	Location
Game Reserves				
Alawa	Niger	Gazetted 1971	296.2	10°20'N 06°30'E
Dagida	Niger	Gazetted 1971	294.2	09°20'N 50°31'E
Gilli-Gilli	Edo	Gazetted 1960	363	06°05'N 05°20'E
Kwiambana	Sokoto	Gazetted 1970	2,614	10°50'N 06°00'E
Opara	Oyo	Gazetted 1971	2,486	08°09'N 02°50'E
Orle River	Edo	Gazetted 1960	1,100	06°49'N 06°50'E
Pai River	Plateau	Gazetted 1971	2,486	08°09'N 02°50'E
Pandam Wildlife Park	Plateau	Gazetted 1972	224	08°31'N 09°00'E
Wase Rock Sanctuary	“	Gazetted 1972	2,800	09°40'N 10°00'E
Falgore	Kano	Gazetted 1969	920	11°00'N 08°45'E
Lame Burra	Bauchi	Gazetted 1972	2,058	10°27'N 09°15'E
Sambisa	Borno	Gazetted 1978	686	11°00'N 14°30'E
Hadejia-Baturiya Wet-land/Game Reserve	Jigawa	Gazetted 1976	297	12°27'N 10°13'E
Biosphere Reserve				
Omo	Ogun	Forest Reserve	1,350.5	06°30'N 4°15'E
National Parks				
Kainji Lake	Niger	Decree Promulgated Aug.1975	5,309	09°40'N 03°30'E
Yankari	Bauchi	1993	2,240	09°30'N 10°00'E
Old Oyo	Oyo	Gazetted 1991	2,529	08°44'N 03°44'E
Gashaka-Gumti CRNP:	Gongola /Taraba	Gazetted 1975	6,363	06°40'N 11°10'E
Oban	C/River	Gazetted 1991	4,463	06°20'N 09°15'E
Okwangwo	C/River	Gazetted 1991	920	06°17'N 09°14'E
Chad Basin	Borno	Gazetted 1978	2,280	13°20'N 14°00'E
Okomu	Edo	Gazetted 1912	1,100	06°21'N 10°11'E
Kamuku	Kaduna	Gazetted 1999	1,127	10°45'N 06°30'E

Source: Nigerian Biodiversity Action Plan (2006), Published by the Federal Ministry of Environment, Housing & Urban Development, Abuja, Nigeria.

In general, the environment provides all life support systems in the air, on water and on land as well as the materials for fulfilling all developmental aspirations.

However, the Nigerian environment today is faced with many problems, arising from the impacts of human activities and natural phenomenon

Major Environmental Issues in Nigeria:

- (a) Soil erosion (ranging from sheet erosion to gulley erosion and landslides)
- (b) Coastal and Marine erosion and land subsidence occur particularly in the coastal areas;
- (c) (d) Flooding occurs throughout Nigeria in three main forms; coastal flooding, river flooding and urban flooding;
- (d) Drought and Desertification;
- (e) Oil Pollution (from spills, oil well blow-outs, oil ballast discharges and improper disposal of drilling mud from petroleum prospecting) have resulted in problems such as: the loss of the aesthetic values of natural beaches due to unsightly oil slicks; damage to marine wildlife, modification of the ecosystem through species elimination and the delay in biota (fauna and flora) succession; and decrease in fishery resources;
- (f) Urban Decay and Squatter Settlements;
- (g) Industrial Pollution and Waste;
- (h) Municipal Solid Waste: (i) the various non-biodegradable household petrochemical products such as polythene bags, plastic containers, Styrofoam packages and tyres which litter Nigerian cities; and (ii) the about 80 million litres of crankcase oil disposed from mechanic workshops; industries, power stations and commercial houses discharged carelessly into drains and ground surfaces in the cities;
- (i) Concrete Jungles/cities;
- (j) Loss of Biodiversity (Fauna and Flora);
- (k) Climatic Change/Ozone Layer Depletion Nigeria also has had to contend with global environmental issues such as climatic change or global warming is due to the increasing concentrations of atmospheric warming or green house gases (GHG), especially carbon dioxide (CO₂) whose concentrations have increased from 280 parts per million (PPM) in the 1800s to about 380 parts per million (PPM) now.

The Need for Environmental Statistics and Indicators in Nigeria

More than ever, there is a dire need for the development of environment statistics and appropriate indicators for measurement of environmental changes in Nigeria. This assertion is attributable to the following factors:

- (a) The growing population with its increasing demand for natural resources, space for expansion of human settlements, increasing pollution from industrial activities and waste generated from human consumption patterns;
- (b) If we must maintain a sustainable environmental development in Nigeria, we must know the factors that are contributing to environmental changes and be able to measure in quantitative terms, the degree of change over time.
- (c) There is need to identify the type of intervention required to control negative environmental changes;
- (d) We must be able to measure the effectiveness of our intervention on the environment over time.

Thus, environment statistics can help us to develop appropriate management tools in the following areas:

(i) ***Environmental policies which may include:***

- Development of strategic policies on the use of natural resources, environmental pollution and the use of space: Strongly linked to *sustainable development*, the control of throughput of scarce resources;
- Control of environmental impacts: Linked to *environmental performance*, i.e. how is a country progressing in cutting back on the use of resources and pollution;
- Management of environmental risks: Emergency measures to avoid health and environmental risks;
- Input for decision making on projects: EIA, *environmental impact assessment*;
- Research into environment-economic interactions (e.g. in *satellite accounting*);

(ii) ***Research which may include:***

- Input into models and projections: Policy forecasts;
- Research into environmental processes, and solutions to outstanding and emerging problems.

(iii) ***Public participation:***

- Facilitating public participation in environmental issues and management including general information to press and the public through the use of Television, radio, newspapers, Internet.

Efforts Made:

Since the last Workshop on Environment Statistics held in Dakar, Senegal in 2005, the following efforts have been made:

Federal Ministry of Environment:

Ongoing Legal Initiative: –

Section 49 (1) a-d of the Draft NIGERIAN ENVIRONMENTAL MANAGEMENT BILL December 2007 states that:

“ The Minister shall, in collaboration with the States, Local Governments, relevant public and private sector agencies and other stakeholders, carry out studies and environmental surveys and shall publish an annual state of the environment report which shall include the following:

- a) the extent of pollution of various environmental media;*
- b) air and water quality levels;*
- c) the status of forest estates;*
- d) any environmental disasters recorded within the report period and remediation measures taken.*

Section 53 of the Draft Bill states that:

“The Minister shall, in collaboration with relevant agencies and bodies, establish a national environmental information databank and network and shall conduct surveys, research and assessment of the environment to periodically update such databank and network”.

First National State of Environment Report (Draft):

The Draft of the first **State of the Environment Report** has been produced and it is at the last stage of stakeholders’ review. This draft document covers various aspects of environmental consideration from cultural heritage, biodiversity conservation to waste management and pollution of air, water and land classified into the following thematic areas:

- (i) Atmosphere, Weather and Climate
- (ii) Water Resources (including inland water)
- (iii) Land (including land-use change)
- (iv) Coast and Coastal Ocean Environment
- (v) Forests and Biodiversity
- (vi) Population, Human Settlement and Environmental Health
- (vii) Natural and Cultural Heritage
- (viii) Environmental Hazards and Environmental Disasters

The process involved collection of existing data from various agencies in various States of the country. It is hoped that the final production will be released before the last quarter of the year. The report is expected to provide the benchmark for our efforts in putting in place a sustainable system of environmental data collection in Nigeria.

Following the successful publication of the First National Communication on Climate Change in 2003, which a lot of data on Climate Change, materials for the second publication are being collated.

Recent Organizational Restructuring:

Following the merger of the Federal Ministry of Environment with Housing and Urban Development, the Department of PRS was renamed **“Department of Policy Analysis, Monitoring and Inspectorate (PAMI)”** in line with Government’s new directives. (please refer

to the proposed structure). The new structure is to have four Divisions: Policy Analysis, Monitoring & Inspectorate; International Affairs & Parastatals and Environmental Education & Awareness.

In addition, a **Specialized Unit of Data & Research Facilitation**, which is currently headed by a Deputy Director has been created in the PAMI Department. This Specialized Unit is expected to ensure the fast-tracking of our activities on environment statistics in the Ministry.

National Bureau of Statistics (NBS):

The NBS has established an Environment Statistics Division with four Statisticians on ground.

In order to familiarize its staff with concept of environmental statistics, the NBS has also organized a number of workshops as follows:

- (i) Induction workshop on Environment Statistics for relevant Officers held in Abuja 19-23 June 2006;
- (ii) Follow up workshop for selected officers held in Kaduna 19th -23rd March 2007;
- (iii) Workshop on Environment and Energy Statistics held in Ibadan 4th – 11th November 2007;
- (iv) Training workshop on designing of Environment Questionnaires held in Abuja 26th – 28th November 2007;
- (v) Stakeholders' workshop on Environment Statistics Questionnaires held in Enugu 5th – 8th December 2007;
- (vi) Stakeholders' workshop on environment statistics questionnaire held in Abuja 4th – 5th February 2008;
- (vii) Preparation of Environment Statistics Manual ongoing;
- (viii) Preparation for pilot survey on Environment Statistics (ongoing)

The above activities were done with regular consultation and collaboration with the Ministry of Environment, Housing & Urban Development.