

SECURITY SUMMARY	317
Principles	317
Strategic Objectives	318
Policy Substrates	319
General Objectives	340
Concepts	341
Policy Implementation	341
(a) Personnel	343
(b) Equipment	



GENERAL BACKGROUND PHILOSOPHY	
CHAPTER ONE: INTRODUCTION	347
1.1. Background	349
1.2. Terms of Reference and Membership of the Committee	349
1.2.1. Terms of Reference	350
1.2.2. Membership	351
1.3. Vision	352
1.4. Mission	352
1.5. Objectives	356
1.6. Scope	357
1.7. Acknowledgements	

SECTION TEN

**NATIONAL GEOINFORMATION
POLICY**

POLICY INTRODUCTION AND SCOPE	
CHAPTER TWO: GEOSPATIAL	
2.1. Preamble	
2.2. Fundamental Principles	
2.3. Objectives	
2.4. Policy Framework	
2.5. Vision	
2.6. Mission	
2.7. Objectives	
2.8. Scope	

TABLE OF CONTENTS

EXECUTIVE SUMMARY	337
Preamble.	337
Vision Statement	338
Mission Statement	338
Policy Statements	339
General Objectives	340
Strategies	341
Policy Implementation	341
(a) Institutional Framework	343
(b) Legal Framework.	

PART A:

GENERAL BACKGROUND AND PHILOSOPHY

CHAPTER ONE: INTRODUCTION

1.1 Background.	347
1.2 Terms of Reference and Membership of the Committee.	349
1.2.1 Terms of Reference.	349
1.2.2 Membership.	350
1.3 Vision Statement.	351
1.4 Mission Statement.	352
1.5 Glossary of Terms	352
1.6 Acronyms and Abbreviations.	356
1.7 Acknowledgments	357

PART B:

POLICY ISSUES ON NGDI COMPONENTS

CHAPTER TWO: GEOSPATIAL DATASETS.

2.1 Preamble	361
2.2 Fundamental Datasets	361
2.2.1 Preamble	361
2.2.2 Policy Statements	362
2.2.3 Objectives	363
2.2.4 Strategies	363
2.3 Thematic Datasets	

2.3.1 Preamble	363
2.3.2 Policy Statements	364
2.3.3 Objectives	364
2.3.4 Strategies	365

CHAPTER THREE: STANDARDS

3.1 Preamble	366
3.2 Policy statements	367
3.2.1 Data Production Standards	367
3.2.2 Data Transfer/Exchange	367
3.2.3 Hardware and Software	368
3.3 Objectives	368
3.4 Strategies	368

CHAPTER FOUR: METADATA

4.1 Preamble	370
4.2 Policy Statement	370
4.3 Objectives	371
4.4 Strategies	371

CHAPTER FIVE: LEGAL ISSUES

5.1 Preamble	373
5.2 Policy Statement	373
5.2.1 Ownership/Custodianship	373
5.3 Objective	375
5.4 Strategies	375

CHAPTER SIX: DATA ACCESS AND DATA SECURITY

6.1 Preamble	377
6.2 Policy Statements	377
6.3 Objectives	378
6.4 Strategies	378

CHAPTER SEVEN: ORGANISATIONAL ASPECT

7.1 Preamble	380
--------------	-----

7.2	Policy Statement	380
7.3	Objectives	381
7.4	Strategies	381

CHAPTER EIGHT: FUNDING

8.1	Preamble	382
8.2	Policy Statement	382
8.3	Objectives	383
8.4	Strategies	383

CHAPTER NINE: COMMERCIAL ASPECT

9.1	Preamble	384
9.2	Policy Statement	384
9.3	Objectives	384
9.4	Strategies	384

CHAPTER TEN: CAPACITY BUILDING

10.1	Preamble	385
10.2	Policy Statements	385
10.3	Objectives	386
10.4	Strategies	386

CHAPTER ELEVEN: RELATED NATIONAL POLICIES AND LEGISLATIONS INTERNATIONAL TREATIES, PROTOCOLS AND COOPERATION.

11.1	National Policies and Legislations	387
11.1.1	Preamble	387
11.1.2	Policy Statement	387
11.1.3	Objective	387
11.1.4	Strategies	387
11.2	International Treaties, Protocols and Cooperation	388
11.2.1	Preamble	388
11.2.2	Policy Statement	388
11.2.3	Objectives	388
11.2.4	Strategies	389

PART C
POLICY IMPLEMENTATION

**CHAPTER TWELVE: ADMINISTRATIVE/ORGANISATIONAL
FRAMEWORK**

12.1 Preamble	393
12.2 Policy Statement	393
12.3 Objectives	396
12.4 Strategies	396

CHAPTER THIRTEEN: LEGAL FRAMEWORK.

13.1 Preamble	397
13.2 Policy Statement	397
13.3 Objectives	397
13.4 Strategies	397

LIST OF FIGURES

- Figure 1: NGDI Organisational Framework.
Figure 2: NGDI Technical Framework.

EXECUTIVE SUMMARY

Preamble

Geospatial Information or Geoinformation (GI) is very essential to national development issues such as poverty alleviation, food security, improvement of quality of life, economic planning and natural resources management. It also plays a significant role in regional integration and international cooperation. Consequently, GI is very critical to the development of various sectors of the economy such as Petroleum, Solid Minerals, Forestry, Agriculture, Transport and Aviation, Environment, Security and Defence, Tourism, Population Census, Education, Health and Water Resources. In many developed countries, over 80 percent of planning and decision-making processes are based on GI, which is now applied to obtain solutions to a wide variety of economic, social and environmental problems.

In Nigeria at the moment, GI is acquired and stored mostly in analogue form by various agencies of government such as Ministries of Works and of Environment, and by the private sector for their own use and applications with attendant problems of unnecessary overlaps and duplication, lack of accessibility, and varying standards and formats. There is no coordinated production, management and dissemination of geospatial datasets that are commonly used by many agencies. Neither is there any policy for data quality, access, sharing and exchange.

Due to the increasing awareness of the use of GI for decision-making over the past years, coupled with the expected availability of primary dataset from the Nigerian Satellite, the country has realized the need to adopt policies for promoting greater awareness and public access to standard and coordinated geo-spatial data production, management and dissemination by all sectoral institutions and the need for the establishment of a Geospatial Data Clearinghouse at various levels in the country (local, state and federal) and linkages with the private sectors.

The establishment of a National Geospatial Data Infrastructure (NGDI) backed by a National Policy will certainly eliminate most of the problems experienced by geoinformation producers and users in Nigeria today. An efficient functioning NGDI and the associated National Policy should be regarded as vital requirements for sustainable national development.

Vision Statement

To enhance optimal use of Geospatial Information as a critical resource in all phases of sustainable national development for the alleviation of poverty and improvement of

quality of life of the people of Nigeria by establishing and maintaining a National Geospatial Data Infrastructure (NGDI).

Mission Statement

The mission of the NGDI is to:

- ♦ Generate geospatial databases, which are vital for development at the National, State and Local levels in Nigeria by facilitating cooperation and collaboration among GI stakeholders.
- ♦ Establish institutional, legal, technical and administrative frameworks for:
 - (a) a consistent and harmonized mechanism for geospatial data distribution;
 - (b) easy access to vital geospatial datasets and their efficient sharing and exchange
 - (c) integration of datasets through the application of common standards
- ♦ Promote research, training, education and capacity building related to geospatial data production, management and usage.
- ♦ Promote the production, dissemination and use of geospatial information for poverty alleviation, food security, job creation, improvement of quality of life, good governance, education and health care delivery, water resources management, environmental and disaster management, transportation, tourism, communications, gender mainstreaming, national defence and security, economic planning and natural resources management.
- ♦ Eliminate duplication in the acquisition and maintenance of geospatial data.

Policy Statement

The policy statements to guide the operations of NGDI cover the following items:

- ♦ Production, ownership/custodianship, archiving and maintenance of fundamental and thematic geospatial datasets.
- ♦ Standardisation of data production, transfer and exchange, and of hardware and software.
- ♦ Provision, standardization and maintenance of metadata for every geospatial data holding in the NGDI.
- ♦ Legal issues pertaining to ownership/custodianship of datasets, copyright/intellectual property, and confidentiality, privacy and liability.
- ♦ Modalities for data access and data security.
- ♦ Modalities for the organizational arrangement of NGDI, which takes

cognizance of the fact that management of geospatial datasets should be done as close as possible to source and it is non-threatening to the mandate of stakeholders. There shall be a NGDI Council composed of seven Ministers and chaired by the Vice President of the Federal Republic of Nigeria. With NASRDA as the NGDI lead agency, other GI producers shall be NGDI node agencies and a 27-member NGDI Committee shall be established under the lead agency for the operations of the NGDI.

- ♦ Funding of the NGDI with a provision for a NGDI fund, which shall accrue from: minimum of 2,5% of annual budget; 10% of National Ecological Fund (or an equivalent Fund); 0.5% of profit-after-tax of private organizations; all income generated from access charge and data sales; and international funding and grants.

- Commercial aspects with provision and guidelines for access and data fees, on differential basis, for research/educational, government to government, and commercial/private use of community, private and value-added datasets.

- Capacity building in terms of manpower and technology transfer making it mandatory: to include training component in GI projects; to locally implement GI projects to a minimum level of 75%; that all GI producers shall provide evidence of the local contents of their production activities in compliance with Government policy on local content; etc.

- Promotion of synergy, and amicable resolution of possible conflicts, among GI-related national policies and legislation while ensuring that geo-referenced data produced according to NGDI-endorsed standard shall be made a compulsory component of Environmental Impact Assessment (EIA) and Environmental

Sensitivity Index mapping (ESI) for all development projects for which EIA is mandatory in Nigeria. Appropriate action shall also be taken to incorporate

international legislation, the international obligations which Nigeria has assumed under conventions and treaties for the purpose of NGDI implementation including continued participation in the progressive development of international procedures on cooperation in Regional and Global Spatial Data Infrastructures.

General Objectives

- ♦ To facilitate coordinated production and utilisation of geospatial data which are common to multiple GIS applications thereby eliminating duplication of

- efforts and wastage of resources.
- To facilitate rapid socio-economic growth of the nation through widely available, accessible, current, reliable and authoritative GI for planning and decision-making.
- To encourage data providers to use NGDI-endorsed standards in order to create and maintain data at a high level of quality and consistency, which can improve value of the data in decision-making.
- To provide a legal framework for the production, management, distribution and use of geospatial datasets.
- To promote relationships among organizations to support the continuing development of the NGDI.
- To develop common solution that will enable discovery, evaluation, access and exploitation of geospatial data.
- To promote the awareness of GI and its applications.
- To ensure adequate funding to maintain the momentum of change towards the NGDI vision and sustain the spirit of cooperation and collaboration.
- To ensure effective technology transfer in GIT in the country.

Strategies

- Carry out User Requirements Survey and Analysis (Data Needs Assessment) including an inventory of the existing geospatial datasets and resources, and their standards.
- Make provision for immediate production of non-existent but essential fundamental datasets by the agency legally mandated to produce the dataset, in accordance with the NGDI standards.
- The custodian shall keep the dataset(s) it produced while making the metadata available to the NGDI Clearinghouse.
- Efforts should be intensified on the operationalisation of Nigerian Satellites to provide stable primary data source for the production and updating of the relevant fundamental datasets.
- Develop geospatial data standards for the NGDI, which shall strive to conform to the ISO standards.
- Facilitate the creation of preliminary standard services to help users understand and apply standards, at the initial stage of NGDI development and promote the benefits of using the NGDI supported standards.

- ♦ Define the metadata content and structure for the NGDI and produce detailed metadata implementation guidelines, including practical advice on maintenance and use of metadata.
- ♦ Establish clearinghouses by creating Geospatial Data Catalogues in the NGDI node agencies and enter the certified metadata of data producers.
- ♦ Facilitate adoption and legalisation of all agreements and protocols relating to NGDI operations.
- ♦ Put in place high-speed and high-bandwidth backbone carrier in the apex Clearinghouse as the main gateway and master server and implement a database server at each NGDI node agency.
- ♦ Set up a 27-member NGDI Committee to work on the implementation of the NGDI in collaboration with NASRDA as lead agency and set up NGDI focal unit in each node agency.
- ♦ Promote submission and early passage of the bill to establish NGDI, which shall include the policy items and funding.
- ♦ Encourage indigenous personnel with relevant skills in acquisition and analysis of GI in the country by ensuring that all GI related projects are locally implemented to a minimum of 75%.
- ♦ Put in place modalities to ensure that GI producers give evidence of local contents of their production activities.
- ♦ Promote synergy among GI-related policies.
- ♦ Liaise with Federal Ministry of Environment and the Department of Petroleum Resources to implement compulsory geo-referenced data requirements for EIA and ESI.
- ♦ Ensure adequate fiscal provisions and funding of the NGDI.

Policy Implementation

(a) Institutional Framework

1. Government shall establish a National Geospatial Data Infrastructure (NGDI) Council whose function shall be to develop all policy guidelines on NGDI with the Vice President of the Federal Republic of Nigeria as the Chairman and the Federal Ministry of Science and Technology as its Secretariat. The other members of the Council shall be:
Honourable Minister of Agriculture and Rural Development
Honourable Minister of Defence

Honourable Minister of Environment
Honourable Minister of Science and Technology
Honourable Minister of Solid Minerals
Honourable Minister of Water Resources
Honourable Minister of Works

2. Government shall establish a national committee on NGDI (called NGDI Committee) whose activities shall be coordinated by NASRDA as the lead agency (see Figures 1 and 2).
3. The stake-holders that would collectively ensure the successful realization of the NGDI vision shall include but are not limited to: Government at all levels; Private Sector Agencies; Non Governmental Organizations (NGOs); Academic and Research Community; Service Providers / Vendors and End users; Public Sector Agencies; Defence/Security Agencies.
4. The coordinating (lead) agency, NASRDA, shall work in close collaboration with Mapping Organizations at all levels and shall have powers to enforce rules and standards.
5. The NGDI committee, hosted by NASRDA, shall be composed of not more than 27 persons, whose Chairman shall be elected in rotation from among themselves for a maximum of two consecutive terms of one year each, and shall be composed as follows:
 - Two (2) persons fully employed by the coordinating agency whose rank shall not be less than a Director or its equivalent.
 - Two (2) persons not below the rank of Senior Lecturer from the relevant academic departments of Universities, with the Universities selected in rotation.
 - Two (2) persons not below the rank of Principal Lecturer from the relevant academic departments of polytechnics and monotechnics, with the institutions selected in rotation.
 - One (1) person from each of the six geopolitical zones chosen from any of the states' nodal agencies and whose rank shall not be less than that of a Director or its equivalent. The states shall be selected in rotation.
 - Four (4) persons chosen from GI related private sector, inter-governmental and non-governmental organizations.
 - One (1) person each from the following Federal Ministries/Agencies whose rank shall not be less than a Director or equivalent:

- (i) Ministry of Defence (Armed Forces)
- (ii) Federal Surveys Department
- (iii) Ministry of Agriculture and Rural Development
- (iv) Ministry of Solid Minerals
- (v) National Planning Commission
- (vi) Federal Capital Development Authority
- (vii) Nigerian National Petroleum Corporation
- (viii) Ministry of Environment
- (ix) Ministry of Water Resources
- (x) Ministry of Transport
- (xi) National Population Commission

6. The functions of the Committee shall be as follows:

- ♦ Develop the phases of implementation of the NGDI project
- ♦ Coordinate the GI-related activities of all NGDI node agencies.
- ♦ Develop, streamline and enforce standards and policies for the infrastructure.
- ♦ Sensitize and mobilize all stakeholders to participate.
- ♦ Appraise the manpower potentials of the nation in all sectors for a successful realization of the NGDI.
- ♦ Collate the inventory of geo-data sets from various producers and agencies.
- ♦ Mobilize local funding as well as foreign assistance whether technical or financial.
- ♦ Sustain at all times, the tempo or momentum of change that will remain a necessary tonic for the realization of the NGDI project.
- ♦ Create sub committees within it for specific tasks as necessary.
- ♦ Co-opt any persons (s) it considers relevant in its functions.

b. Legal Framework

Legislation shall be enacted to support the NGDI policy to ensure the realization of the NGDI vision.