Enhancing Geospatial Information Management Arrangements and Accelerating the Implementation of the Sustainable Development Goals

Sub-regional Workshop on United Nations Integrated Geospatial Information Framework for the Caribbean

St John's, Antigua and Barbuda
21 October 2024

Antigua & Barbuda

Surveys & Mapping Division

United Nations

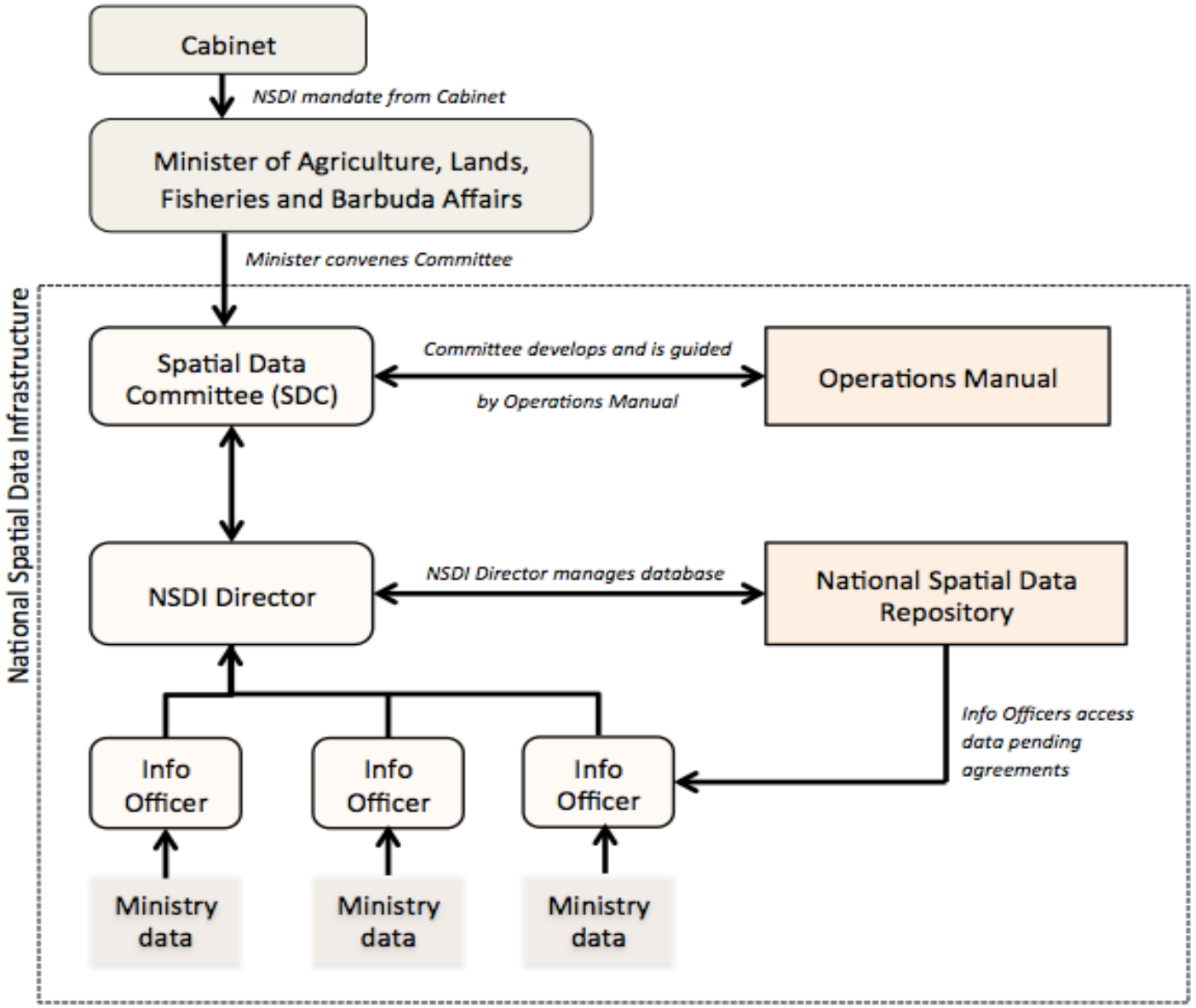
Antigua and Barbuda

SDG DATA ALLIANCE

Enhancing Geospatial Information Management arrangements
Accelerating the Implementation of the SDGs
Sub-regional Workshop on UN-IGIF for the Caribbean

Where is Antigua & Barbuda today on enhancing geospatial information?


GEO-SPATIAL
DATA
PUBLIC HEALTH
demographic
research
county
visualization
social determinants
epidemiology
states
MAPS
HEALTHCARE
population data
geodatabase
metropolitan
cancer
collection
rural
mortality
diabetes
statistics
surveillance
AMERICAN
HEART DISEASE
CENSUS
database
estimates
analysis
network
discovery
prevention
place
GIS
indicators
boundary
shapefiles
resources
coordinates
asthma
information
education
wonder
sources



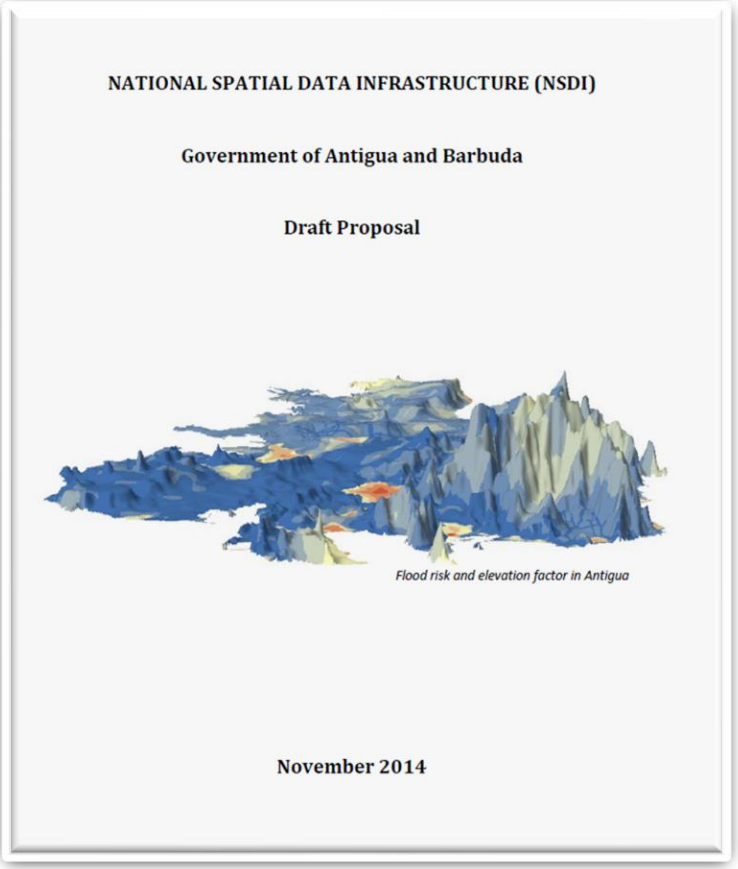
In an effort to establish a NSDI, a Spatial Data Committee was setup in 2012.

Multi-stakeholder Spatial Data Committee

- Fisheries Division
- Land Registry
- Inland Revenue Department
- Development Control Authority
- Statistics Division
- Ministry of Works
- National Office of Disaster Services
- Lands Division
- Local Government
- Survey & Mapping Division
- Department of Environment

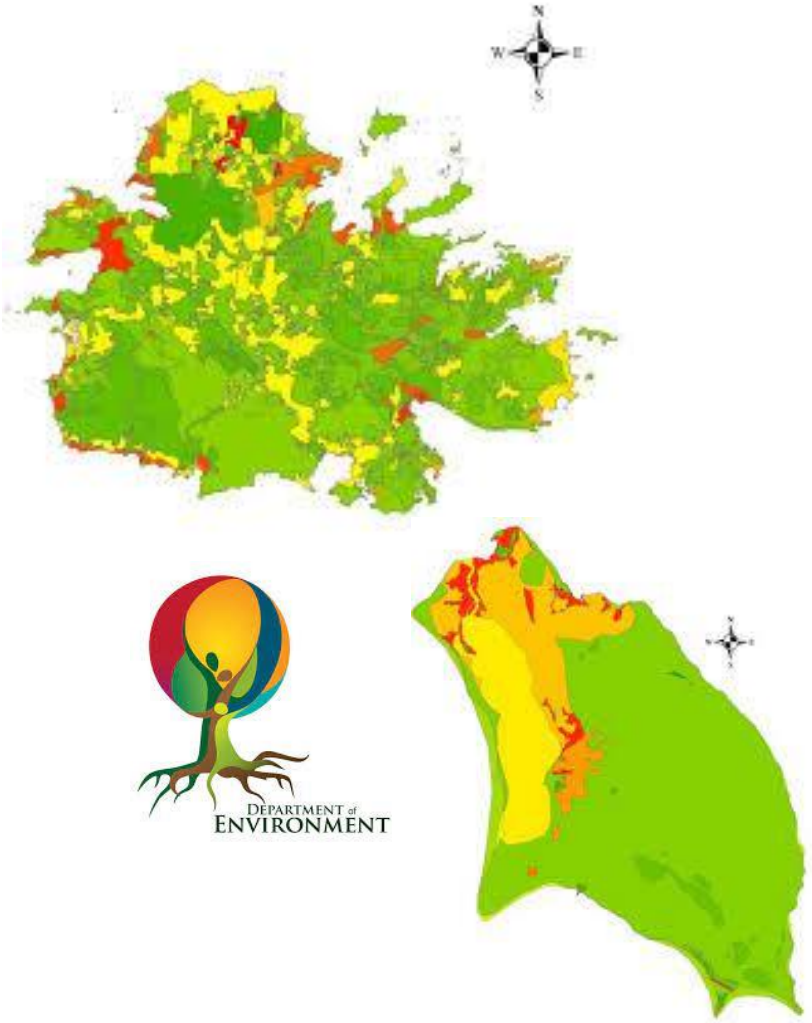
Progress towards Geospatial Information Enhancement

- NSDI draft to be legislated



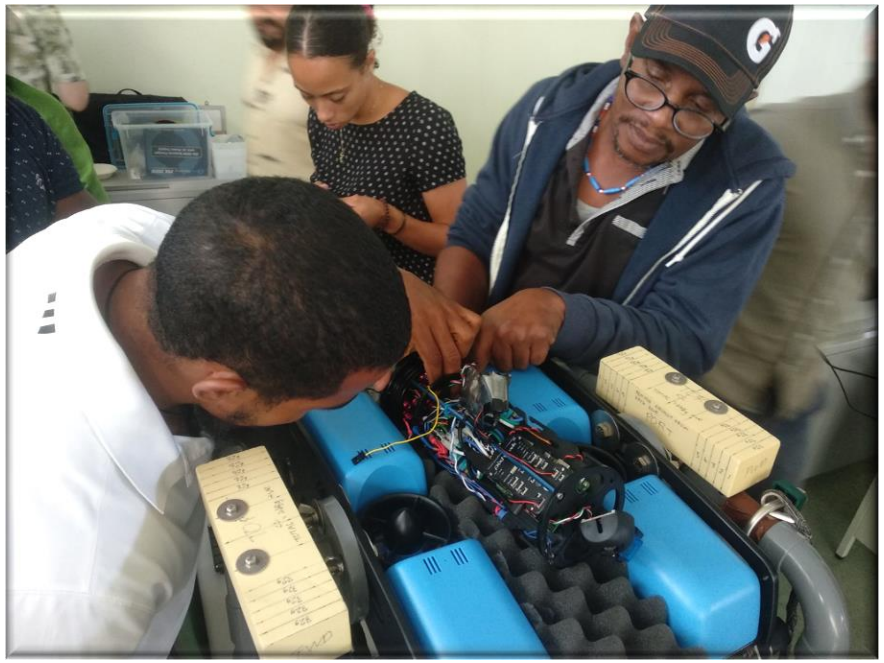
Progress towards Geospatial Information Enhancement

- Environmental Information Management & Advisory System



Progress towards Geospatial Information Enhancement

- Stakeholder engagement and training

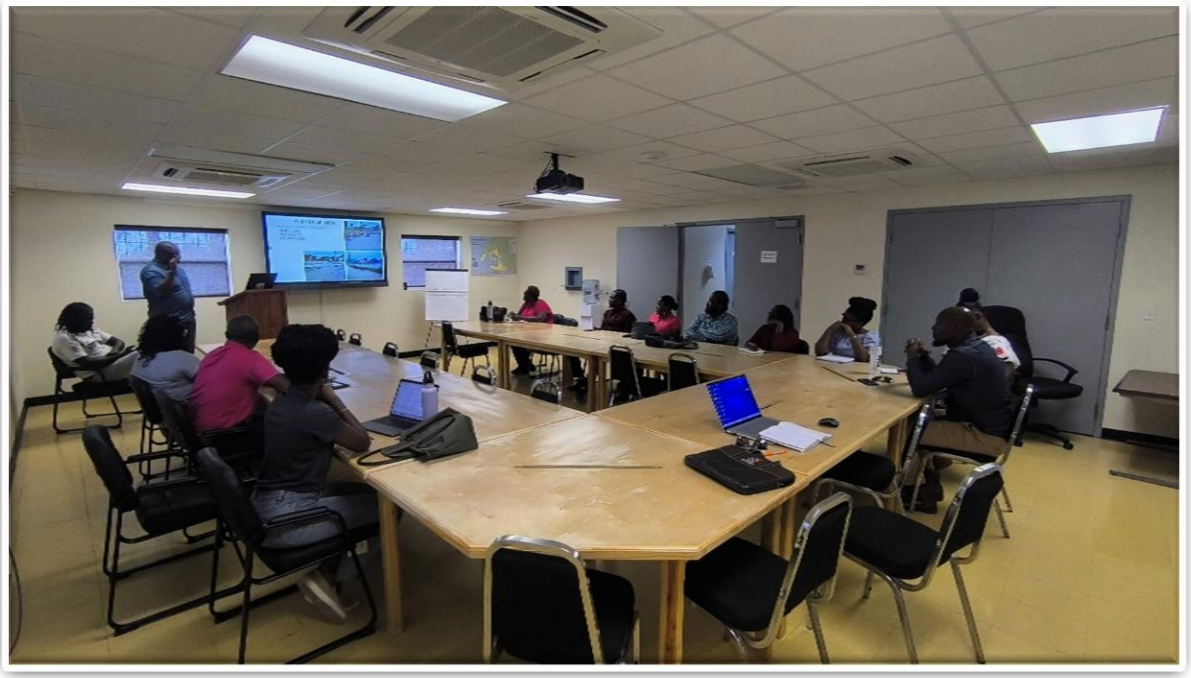


Progress towards Geospatial Information Enhancement

- Tri-Party Maritime Arrangement

Progress towards Geospatial Information Enhancement

- Geospatial Assets Inventory
- Streamlining geospatial parameters across sectors conducting surveys



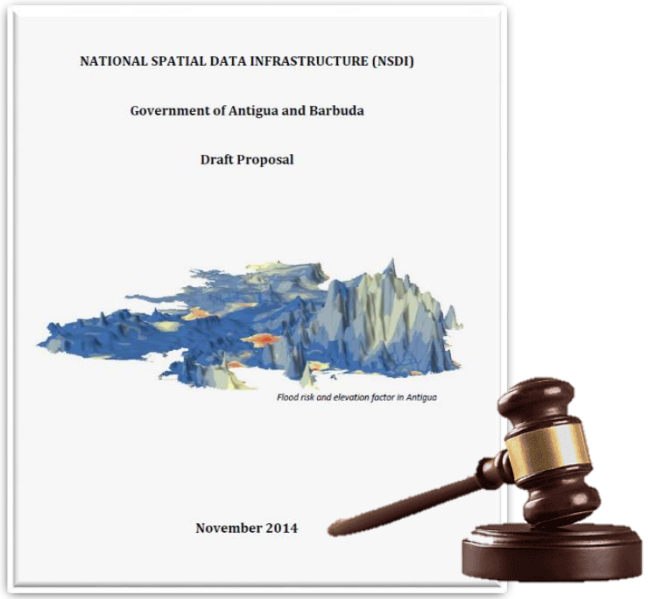
Progress towards Geospatial Information Enhancement

- SIDS Center of Excellence – SIDS Global Data Hub

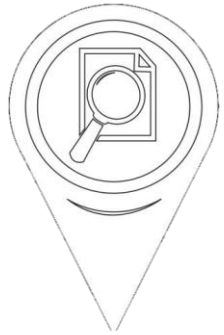
  “establish or improve national data centers”

Where does Antigua & Barbuda want to be in the next 5 years?

- NSDI legislated



- Improved Integrated Statistical Information by having Local Geospatial Parameters



- Increased Trained Human Resource

The main challenges in Antigua & Barbuda to get to this ‘ideal’ situation in the next 5 years.

- Political Administration Changes

- Fiscal Priorities

- Mid-term Strategic Goals may shift along planned agenda

BAHAMAS

The Bahamas National Geographic Information Systems (BNGIS) Centre

Ministry of The Environment and Natural Resources

MISSION STATEMENT: To Promote Educate, Coordinate and Advance the Practical and Efficient use of Geospatial Technologies in The Bahamas.

Where is The Bahamas on enhancing geospatial information?

- **Cabinet approved Geospatial Strategic Transformation and Implementation Plan** in alignment with the provisions of the **Bahamas Spatial Data Infrastructure (BSDI) Act**;
- **Ongoing Implementation of the Plan- Geospatial Governance Structure**:
  - Strengthening of the BNGIS Centre;
  - Identification and adoption of 8 Foundation Themes;
  - Established Foundation Theme Working Groups with TOR and Annual Plans;
  - Adopted 106 Geospatial Standards advanced in collaboration Bahamas Bureau of Standards and Quality;
  - Addressing Data sharing and licensing etc.
- **Advanced a proposal for establishment of Bahamas Geodetic Reference System.**
- **Reconvened the Geospatial Advisory Council.**
- **Assessing the BSDI Portal** for hosting and disseminating data.
- **Advancing the need for authoritative geospatial imagery and data acquisition .**

Where does The Bahamas want to be in the next 5yrs

- **Geospatial Governance Structure** is in place that supports creation & Maintenance of Authoritative geospatial data ensuring Collaboration & Coordination through out Government
- **Maintained Authoritative geospatial data is available,** organized by Geospatial Foundation themes and accessible
- **Dedicated Geospatial Standards**, Policies & Procedures are adopted and universally used
- **Geospatial Capacity Development Program** is in place that provides Technical Training, Professional Development, Awareness Training & Long Term Capacity Development
- **The Geospatial Implementation Plan is fully operational** with adequate resources, well communicated Annual Plans that are strategically measured and monitored

Main challenges to get to this 'ideal' situation in the next 5 years?

- **Rapid Technological Changes &** Keeping abreast of fast-paced advancements in technology = continuous investment in Research & Development and training.
- **Integration of Diverse Data Types & Sources** can be complex, leading to potential inconsistencies & difficulties in analysis. Data continues to be created on ad-hoc basis.
- **Skills Shortage** in the geospatial field capable of leveraging new technologies.
- **Funding and Resource Allocation** especially in uncertain economic climates.
- **Resistance to Change and Bureaucratic delays** : Stakeholders may resist adopting new technologies or methods that can impede progress.
- **Lack of understanding regarding benefits of geospatial technologies** as a crucial element of e-government & decision-making which hinders effective responses to critical national and global challenges i.e. climate change, national security, and achieving Sustainable Development Goals.

BARBADOS

LANDS & SURVEYS DEPARTMENT

Where are you today as a country on enhancing geospatial information?

- Robust national geodetic infrastructure including Real Time GNSS Network
- National geoportal to facilitate data discovery and access
- Collaboration with other MDAs to support the use of geospatial information across other sectors e.g. Agriculture, Health, Land Registry, CZMU, NCF
- Generating political buy-in through the successful completion of national projects e.g. National Digital Parcel Fabric, Barbados Building IDs
- Engagement and participation in regional and global geospatial working groups to improve capacity and knowledge base

Where does your country want to be in the next 5 years?

- Modernized national vertical datum
- Establish a multi-stakeholder council/agency to manage geospatial information in Barbados
- Develop and implement the UN-IGIF as part of an enacted national geospatial strategy
- More GIS and geospatial-related jobs across the public and private sectors
- Increased funding through national budget and greater engagement with donors and international institutions

What do you see as the main challenges in your country to get to this ‘ideal’ situation in the next 5 years ?

- Loss of momentum in visibility and political buy-in
- Lack of legislation to help remove data silos and barriers to collaboration
- “Brain drain” within the Public Service.
- Insufficient students with a focus on STEM

GUYANA

Guyana Lands and Surveys Commission

Where are you today as a country on enhancing geospatial information?

Guyana: Baseline Geospatial Landscape in

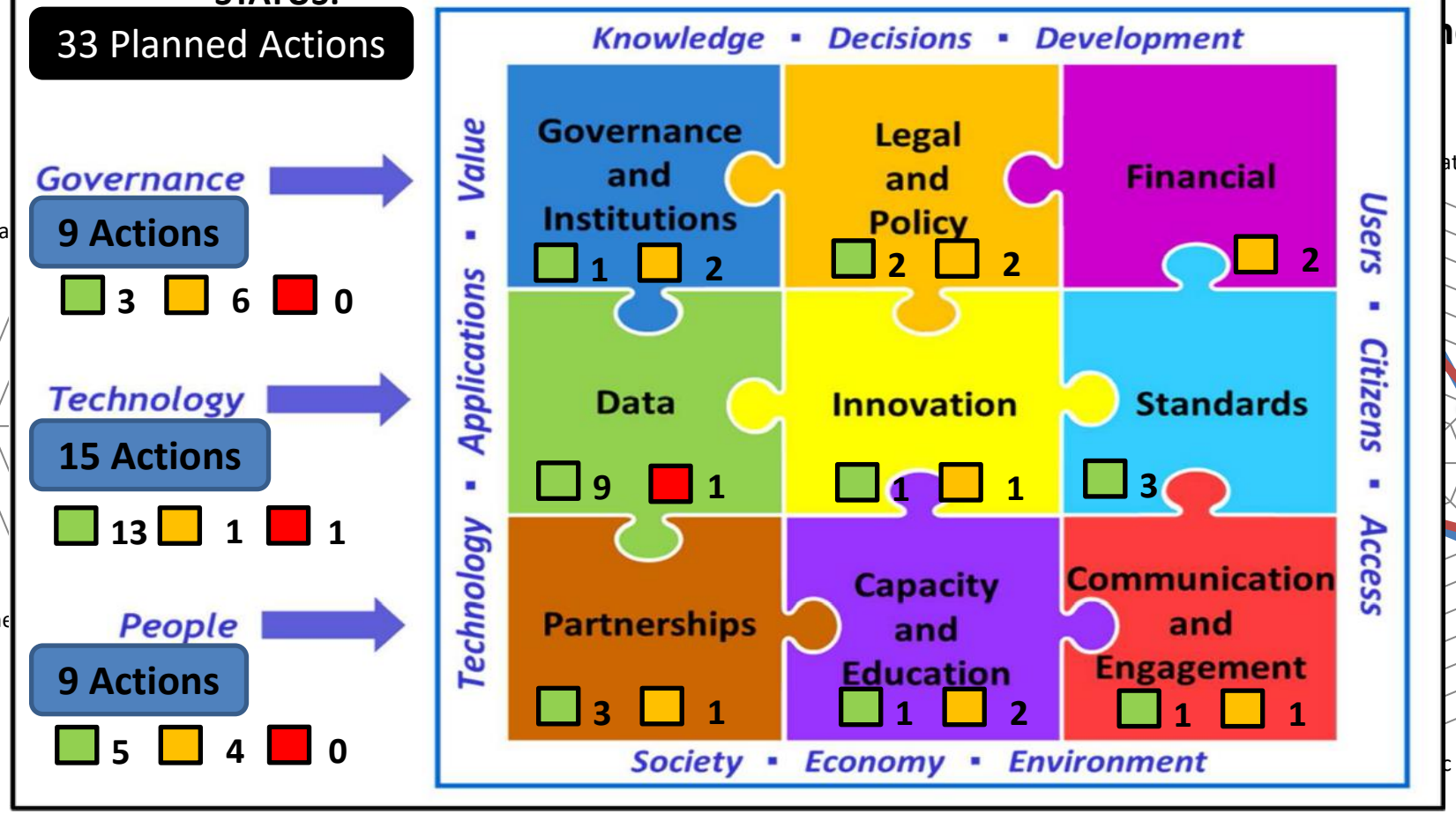
ACTIVITY STATUS: IN PROCESS · ON HOLD / FOR REVIEW · NOT STARTED

33 Planned Actions

Governance — 9 Actions: 3 · 6 · 0

Technology — 15 Actions: 13 · 1 · 1

People — 9 Actions: 5 · 4 · 0

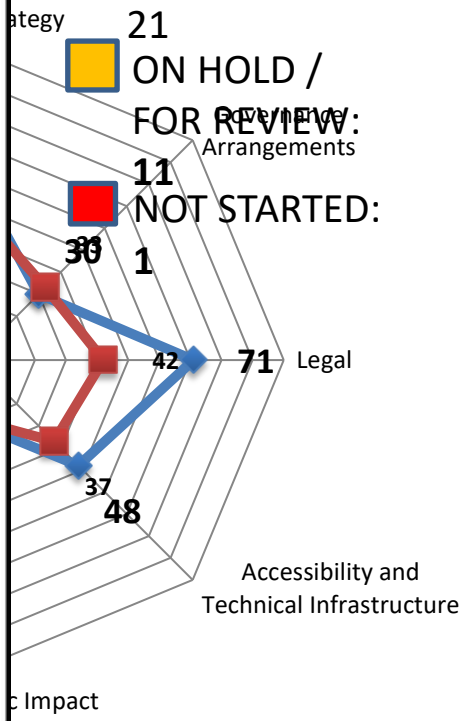


ndscape 2019-2024

IN PROCESS: 21

ON HOLD / FOR REVIEW: 11

NOT STARTED: 1



Core Da

Innovation and Partnership

Capacity Developme

United Nations · Antigua and Barbuda · SDG DATA ALLIANCE

Where does your country want to be in the next 5 years?

1. Implementing 2nd or 3rd iteration of IGIF Country-level Action Plan.
2. Delivering relevant geospatial products and services that are meeting needs/ challenges of our society, the environment and a “high-income” economy.
3. Implementing a sustainable cycle of data acquisition, curation, management and updates to all 14 UN-GGIM fundamental geospatial datasets.
4. Cybersecurity framework and underpinning IT/IS infrastructure continually being strengthened.
5. Working with a proven and reliable portfolio of local, regional and global win-win public-private-philanthropic partnerships and collaborations.
6. Adequate in-country knowledge, skills and expertise and capacity building strategy to sustain all of the above aspirations.

INTEGRATED GEOSPATIAL INFORMATION ECOSYSTEM_BLUEPRINT GEOGY

UN·IGIF

Internet & Web-enabled platforms / E-governance Platforms / Citizen Participation

Agencies' Geoportals

GLSC Geoportal

Mobile Apps

NSDI Geospatial Platform

NSDI Geoportal

Nat'l Data Discovery Portal

GLSC Enterprise Land Information System

Data Acquisition

Data Preparation

Valuation

ngLMS

DCdb

NTdb

NAdb

Geodetic Reference Framework
Geographical Names
Addresses
Functional Areas
Settlements
Land Parcels
Transport Networks
Elevation/Depth
Population Distribution
Land Cover/Use
Geology/Soils
Physical Infrastructure
Ortho Imagery
Water

Core Datasets / Databases

Land Tenure Administration

Land Use Planning

Integrated Land Administration Functions

Land Valuation

Land Development

Geospatial Products

Geospatial Services

Geospatial Investment Packages

Capacity and Education Strategy

Geodetic Infrastructure

CORS Network

ITRF-SIRGAS

National CRS

Geoid Model

ICT Infrastructure

United Nati

Networking

Antigua and

Comms & Cloud Services

Security

SDG DATA ALLIANCE

Policies & Standards

Software

Data Centers

Power

Enhancing Geospatial Information Management arrangements

What do you see as the main challenges in your country to get to this ‘ideal’ situation in the next 5 years ?

1. Need a sustainable political champion for national geospatial information arrangements.
2. Need to mainstream UN-GGIM and IGIF outside of the National Geospatial and Mapping Agency
3. Lack of effective communication of value propositions for GI to all groups (e.g. policy makers to students) especially using relevant geospatial use cases.
4. Advocacy and adoption of national GI policies and standards needed.
5. No local, active communities of practice for geospatial technologies and information driving innovation and nurturing capacity building (e.g. open-source solutions).
6. Lack of human capabilities and capacity to develop and sustain the national integrated geospatial ecosystem.
7. Strategic pathway actions for appropriate sustainable funding needed.

St. Kitts and Nevis

Department of Lands and Surveys

MINISTRY OF SUSTAINABLE DEVELOPMENT

Leading Into The Future

Where are you today as a country on enhancing geospatial information?

- Acquisition of relevant software & hardware
- Capacity Building
- Compilation of Geospatial database
- Recruitment of trained personnel
- Densification of Geodetic Network

Where does your country want to be in the next 5 years?

- Central Integrated repository for all Geospatial Information
- Establish a CORS Network in the Federation
- Establish legislative framework for Geospatial Data
- Provision of a Digital Searchable Portal for Geospatial Information Metadata
- Begin the discussion on conducting a Federal Government Mapping Exercise.

What do you see as the main challenges in your country to get to this ‘ideal’ situation in the next 5 years ?

- Lack of trained staff
- Limited Resources
- Development of a Legislative framework
- Establish partnerships across public and Private sectors
- Sensitisation of General public

SAINT LUCIA

DEPARTMENT OF PHYSICAL DEVELOPMENT AND URBAN RENEWAL

Where are you today as a country on enhancing geospatial information?

- The St Lucia National Spatial Data Infrastructure (NSDI) Draft Policy and The St. Lucia NSDI Action Plan
- Cabinet Memorandum to endorse the NSDI Policy, Action Plan and ToRs for the National GIS Coordinating and Technical Committees
- Maintaining the integrity of its geospatial information:
  - Street View Data Capture Exercise
  - Street Naming Project
- Formulation of New Initiatives for the upcoming financial year 2025/2026 to provide funding for:
  - An NSDI Unit and Actions as stated within the Action Plan
  - The implementation of the Street Naming Project
- Capacity Building exercises:
  - Use of the drone tasking Manager
  - Earth Observation Fundamentals (Remote sensing, LiDAR and machine learning using Opensource tools)

Where does your country want to be in the next 5 years?

- The NSDI Action Plan has a list of short-term (1yr), mid-term (2-3yrs) and long-term (5yrs) actions to be implemented.
- Set up of a harmonized legal framework
- Data this is Easily Accessible, Easily Reusable & Regularly Updated
- Data transparency, more efficient business transactions
- Online access
- Full implementation of Geographic information in the decision making process

What do you see as the main challenges in your country to get to this ‘ideal’ situation in the next 5 years ?

Financing/Funding
Enacting the proposed laws
Failure to implement major supporting projects
The placement of the NSDI unit

St. Vincent and the Grenadines

Keith R Francis

Chief Surveyor

Ministry of Transport Works Lands and Physical Planning

Where are you today as a country on enhancing geospatial information.

- We are piggybacking on a project (CARDTP) in order to obtain updated imagery, hardware, software and personnel. One of the main aims of the project is to provide for faster and easier land transactions, however the Department has in mind dual usage of the recourses being supplied to us and are tailoring our requests accordingly.

Where does your country want to be in the next 5 years?

Develop and implement an Integrated Geospatial Infrastructure Framework (IGIF) and a national action plan covering areas such as governance, institutions, policy, legal, financial, data, innovation, standards, partnership, capacity, education, communication, and engagement.

Implement and maintain a National Multipurpose Cadaster including cartography development and cadastral surveying.

Design and implement a parcel-based Land Information System with a standardized parcel-based data architecture **that enables inter-operability of Cadaster and Land Registry information with other key datasets such as disaster risk management, building permits, and other planning information.**

What do you see as the main challenges in your country to get to this ‘ideal’ situation in the next 5 years ?

- … Cost
- … Lack of expertise
- … Buy in from Stakeholders
- … The resistance to change
- … Natural Disasters (the double edge sword)