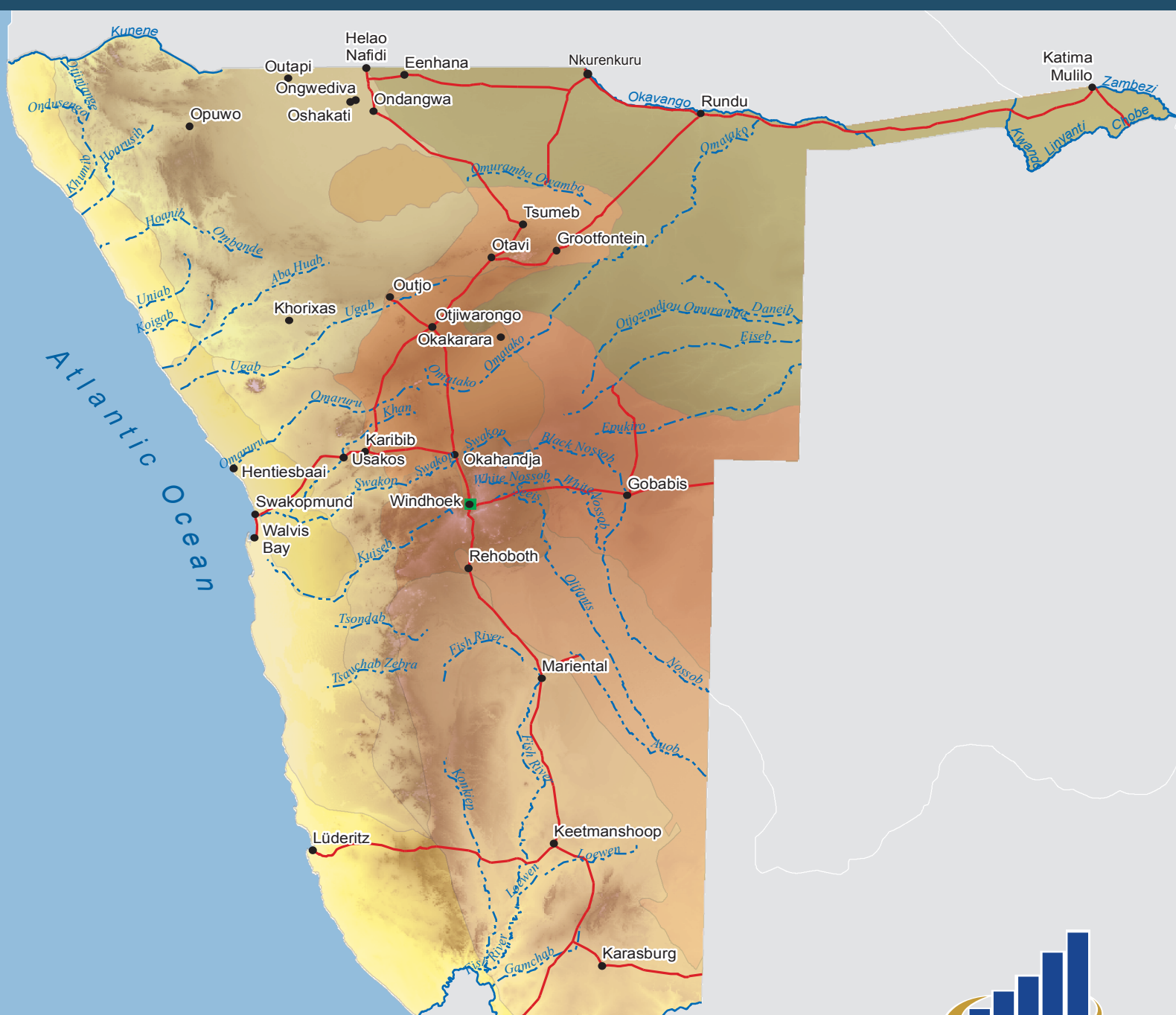


NATIONAL SPATIAL DATA INFRASTRUCTURE

2015

2020

STRATEGY AND ACTION PLAN



**Namibia Statistics
Agency**

Mission

To coordinate, facilitate and support the implementation of an information infrastructure that ensures efficient production, use, maintenance and dissemination of relevant, quality and accurate spatial information that is fit-for-purpose, particularly in providing evidence-based decision making at all levels of society.

Vision

To be a leader for quality spatial data delivery in Africa in accordance with international standards and best practices.

Core Values

Focus on service delivery to all stakeholders.

Transparency of spatial data practices and procedures with all Custodians.

Accuracy in spatial data and metadata.

Timeliness in provision of spatial data and metadata.

Extensive stakeholder engagement.

Supporting spatial data partnerships within government and other sectors of society.

Publication Date: October 2015

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FOREWORD FROM THE MINISTER

Knowledge of what exists somewhere in any country is a very important mean for governments to plan, evaluate, monitor and execute developmental projects aimed at improving the socioeconomic conditions of their societies. Location information ensures environmental sustainability and promotes sustainable development and utilization of a country's natural resources.

The Government of the Republic of Namibia is utilising spatial or geographic information in many ways, among them are spatial planning, disaster management, monitoring and evaluation, inventorying of government facilities, poverty mapping and analysis, research, and national security, etc. Because of the multifaceted nature of spatial data in terms of use and reuse and its potential for value-addition, it is important for any government to build, conserve, and safeguard its national spatial data.

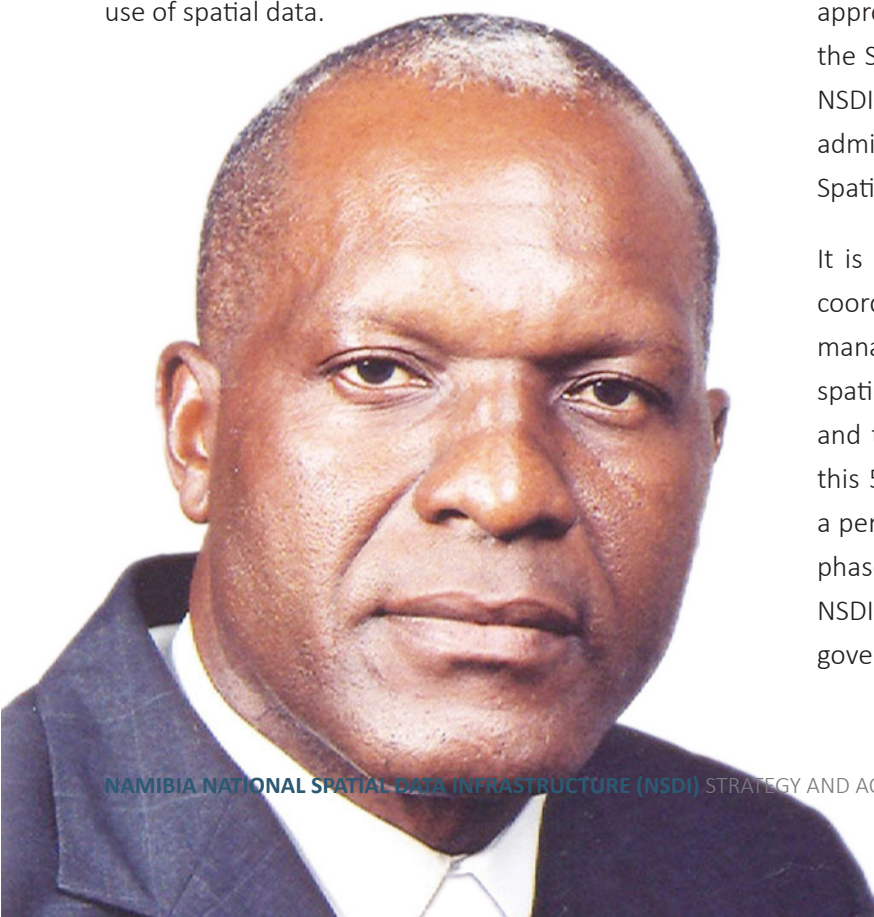
In light of the above, Government is certain that coordinating the production, maintenance, dissemination, and archiving of national spatial data in the country is critical to national development. Thus the Statistics Act, No. 9 of 2011, section 41 (1) establishes a National Spatial Data Infrastructure (NSDI) as the national technical and institutional framework to facilitate the capture, management, maintenance, integration, distribution and use of spatial data.

Section 48 (1) establishes a committee known as the Committee for Spatial Data which must perform its functions in accordance with the Act mainly to advise the Minister and the NSA on matters relating to the capture, management, maintenance, integration, distribution and use of spatial data in the country. The Minister of Economic Planning, in consultation with the Minister of Lands, appoints persons with vested interest in the NSDI to the committee. I must state that this committee was appointed in November 2013 to commence with the implementation of the Act, including the finalisation of the NSDI policy.

The Statistician-General and the Surveyor-General as defined by section 1 of the Land Survey Act, 1993 (Act No. 33 of 1993), are members of the Committee by virtue of their offices. The committee worked tirelessly since 2014 to put in place guidelines for the implementation of the Statistics Act. Thus, in March 2015 Government approved and gazetted the NSDI policy as stipulated in Part IX of the Statistics Act. This policy forms the means to coordinate national spatial data in the country.

NSA is the coordinating body for the NSDI in Namibia and as stipulated in section 8 of the policy, an organisational unit titled the NSDI Secretariat, is to be established and appropriately staffed as an integral part of the NSA, to assist the Statistician-General to implement and administer the NSDI, and provide secretarial services both technical and administrative functions to support the Committee for Spatial Data in its work.

It is anticipated among many benefits that through this coordination, spatial data will be well maintained and managed, readily accessible for socio-economic and spatial planning, not duplicated therefore saving costs, and that copyright of the state shall be protected. I see this 5 year strategy and action plan document, spanning a period from 2015 through 2020, as the second building phase in the whole construction process of the Namibia NSDI following the setting of the legal framework by government.



It is my hope that the strategy shall serve as a road map to guide both the technical and institutional frameworks upon which a successful NSDI shall be implemented in Namibia. Government shall ensure adequate funding of NSA in order to fulfil its coordination functions. I encourage also all participating government institutions to avail resources needed to successfully execute the NSDI related tasks in their organisations as required by the NSDI policy. It is through our joint effort that we shall be able to monitor progress through this soft infrastructure.



Hon. Tom Alweendo

Minister of Economic Planning

National Planning Commission

“It is anticipated among many benefits that through this coordination, spatial data will be well maintained and managed, readily accessible for socio-economic and spatial planning, not duplicated therefore saving costs, and that copyright of the state shall be protected.”

Namibia has taken a giant stride in recognizing information with location attributes as an important national infrastructure. On 06 March 2015, the Government of Namibia approved a National Spatial Data Infrastructure Policy (NSDI) to guide the acquisition, maintenance and dissemination of spatial data in Namibia.

As we know, almost all human activities have a spatial dimension. As the effects of global climate change become more pronounced, especially in an ecologically fragile environment like ours, Governments around the world are becoming more conscious of the need to effectively and efficiently manage their resources. To do this, we need a framework to facilitate the coordinated exchange of geospatial information on natural resources, environment, land ownership, natural and man-made features, demography and socio-economic indicators amongst geospatial stakeholders in Namibia. For Namibia, this framework is the Statistics Act, No. 9 of 2011 which gives effect to the National Spatial Data Infrastructure Policy.

This policy was preceded by the establishment of a Committee for Spatial Data by Section 47 of the Statistics Act. This Committee comprises 10 members appointed by the Minister of Economic Planning and Director General of the National Planning Commission, Hon Tom Alweendo, in November 2013. This membership includes the Surveyor-General as the Chairperson and the Statistician General. The NSDI Secretariat resides at NSA.

In addressing the governance issue for geospatial data, Namibia made two principal conscious decisions. The first is to locate the Secretariat in an organization that is not a primary custodian of spatial data. Secondly, to have the custodians store and maintain their own respective data, but providing a central portal where metadata are published, including information on ownership and intellectual property rights, access and usage conditions, and technical specifications (in particular, currency, data models, quality and accuracy definitions).

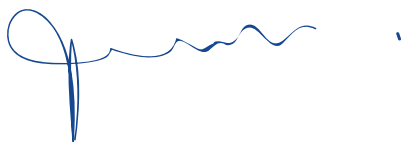
The importance of this development in Namibia cannot be over-emphasized as the policy is geared towards promoting the following:

- Geospatial advocacy: promoting geospatial applications that support sustainable development, economic growth, poverty eradication and climate change adaptation.
- Collaboration and coordination: encouraging national and local collaboration fundamental to the facilitation of improvements in the development, management, use and exchange of geospatial information, as well as the integration of statistical data and other information as a prelude to creating new knowledge and supplying products and services meeting user needs.
- Continuous development and recognition of work: commitment to policies and practices that support continuous capacity building, professional competence and ethical practices of geospatial information practitioners.
- Improved access to data: promoting access to spatial data as a means of engendering innovation, efficient and effective decision making and a spatially enabled society.
- Adherence to geospatial standard: Namibia is committed to promoting the development of, adherence to and use of nationally and internationally recognized standards. Combined with the open transfer of data among organizations, platforms and applications, we expect to benefit from the reduced cost, increased transparency, international compatibility and cooperation among users and practitioners.



My expectation is that all geospatial practitioners in Namibia, private or public, will embrace this opportunity created by Government to improve governance in spatial data by complying willingly to this policy. All of us should be geospatial advocates and should spread the good news far and wide.

I am delighted to be part of this Namibia journey towards Namibian spatial data infrastructure governance.



Uzochukwu Okafor

Chairman: Committee For Spatial Data

Surveyor-General

“Combined with the open transfer of data among organizations, platforms and applications, we expect to benefit from the reduced cost, increased transparency, international compatibility and cooperation among users and practitioners.”

EXECUTIVE SUMMARY

The NSDI Strategy provide the much needed guideline to the Namibia Statistics Agency (NSA) for implementing the NSDI policy. Studies show that generally the benefit to cost ratio of implementing an NSDI at a minimum is in the region of 4:1. This means the benefits are four times the costs of implementation. At NSA we estimate the ratio to be at 2:1 in the initial stage of the implementation which encompass the current strategic period of 2015 - 2020. This is mainly due to the foundational high Government funding required to building the technical capacity and institutional frameworks at both NSA and in different participating institutions. The benefits are expected to be more pronounced in the second strategic period as the expected shift from data quality, access and dissemination issues change to data harmonisation, interoperability, value addition and innovation. NSA anticipate more return on government investment as a result of increased consumption of spatial data and global technological advancements.

Like in many parts of the world, the NSDI concept is fairly new to Namibia. Normal to any implementation of this nature come the many challenges. At NSA we foresee two major challenges among others. The first challenge is funding to enable adequate resources for the implementation of this strategy. Secondly and equally compelling is the availability of technical skills needed to effectively build a sustainable NSDI. As you might be aware, NSDI is technology-oriented and linked to government strategies such as e-Government and data and platform interoperability. One critical technical function for example is that spatial data will be standardized and harmonized across government departments/agencies to enable data to be discoverable and transferrable via web services.

There are four (4) strategic goals with a total of twelve (12) strategic objectives. The estimated total cost of implementing this strategic plan is N\$44.664 million. The estimate is inclusive of the additional human and physical resource development plan that NSA needs to implement in order to successfully build the NSDI. The estimate is also inclusive of a comprehensive 5 year Communication Plan as a means for outreach and NSDI advocacy nationwide.

The annual funding requirement is informed by prioritising activities for the next 5 years. This is indicated in the table below:

Strategic Year	Required Amount (N\$)
2015 / 16	849 000.00
2016 / 17	10 400 500.00
2017 / 18	12 514 500.00
2018 / 19	11 033 500.00
2019 / 20	9 866 500.00
Total	44 664 000.00

Note: The NSDI Policy was gazetted by government on 06 March 2015. During the 2015/16 financial year, NSA prioritised NSDI foundational operational activities including the development of this strategic plan. UNFPA, through their continued support of NSA, also contributed financially to the development of this strategy.

Despite the enormous challenges ahead, I am very optimistic that government and donor agencies will step up efforts to assist NSA in fulfilling this mandate of building a soft infrastructure of spatial data nationally. NSA is indeed highly encouraged by this government initiative and appreciate the trust bestowed upon the agency.



Finally, I call upon my fellow captains of participating government agencies, i.e. Permanent Secretaries, Chief Executive Officers, and Managing Directors and the private sector to commit to this government vision. Through the NSDI policy, Namibia has an opportunity to build a spatially-enabled society where decisions shall be strengthened by evidence where a location component is important.



Sikongo Haihambo

Acting Statistician-General

“Despite the enormous challenges ahead, I am very optimistic that government and donor agencies will step up efforts to assist NSA in fulfilling this mandate of building a soft infrastructure of spatial data nationally.”

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ABBREVIATIONS AND DEFINITIONS

Abbreviations

ADCC	Advance Data Capture Calendar
CSD	Committee for Spatial Data
GIS	Geographical Information System
ICT	Information Communications and Technology
ICZMP	Integrated Coastal Zone Management Plan
IPR	Intellectual Property Rights
ISO	International Standards Organisation
MLR	Ministry of Land Reform
NDP4	National Development Plan 4
NGO	Non-Governmental Organisation
NSA	Namibia Statistics Agency
NSDI	National Spatial Data Infrastructure (Section 47 of the Statistics Act, 2011)
DQAF	Data Quality Assessment Framework
SDI	Spatial Data Infrastructure
SWOT	Strength, Weakness, Opportunities and Threats analysis

Definitions of Key Terms

- Action** – Steps to be taken to achieve Strategic Objectives, typically involving expenditure of resources.
- Activity** – Specific activities undertaken to complete a planned Action, defined mainly for detailed implementation planning and identifying resource requirements.
- Committee for Spatial Data** – The committee established under section 48 of the Statistics Act, including the Statistician-General, chaired by the Surveyor-General, plus such other members as may be appointed by the Minister.
- Compliance Certificate** – An official certificate issued by the NSDI Secretariat, as approved by the Committee for Spatial Data, recognizing that a spatial dataset or service created or administered by an organisation participating in the NSDI meets the defined NSDI standards and specifications.
- Custodian** – The organisation that is appointed as custodian of a dataset, regardless of ownership. The Custodian need not be the Owner of a dataset.

ABBREVIATIONS AND DEFINITIONS

Discovery service – A web-based facility for discovering what spatial datasets and services exist based on publication and search functions for standardized metadata describing datasets and services.

Download service – A web-based facility by which users can access and download spatial data, obeying any rules, regulations and/or restrictions that may be imposed by the dataset Owner or Custodian, including payment, if required.

Fundamental datasets – Spatial datasets with national coverage and in wide use across many government departments and sectors of society, for a variety of purposes, by many users, typically considered to be public goods.

Framework datasets – Key Fundamental datasets that provide underpinning (spatial) data for other datasets, both Fundamental and Thematic.

Geospatial data - Georeferenced data pertaining to the location of geographical entities together with their spatial dimensions presented in the form of printed maps, charts, and publications; in digital simulation and modelling databases; in photographic form; or in the form of digitized maps, charts or attributed positional data.

Key Performance Indicator (KPI) – A measure of performance to evaluate how successful are the Actions and Activities in meeting Strategic Objectives and Goals. The indicators vary according to Objectives and Goals and may include indications of time, cost, quantity or quality that can be measured.

Metadata - A description of the content, quality, condition and other characteristics of spatial data.

Milestone – a date and time by which specific Targets have been met. Monitoring achievement of milestones is part of the Strategy implementation process.

Minister – The Minister for Economic Planning.

NSDI Committee – The Committee for Spatial Data (see above).

NSDI Fund – A Fund to be established by Government for NSDI activities and to be administered by the NSA under the advice of the NSDI Committee as per NSDI Policy, section 17 (a).

NSDI Geoportal – The website that serves as a primary source of access to information on the NSDI, spatial datasets and services.

NSDI One-Stop-Shop – A website that permits discovery, viewing and downloading of spatial datasets that follow NSDI standards and specifications.

NSDI Policy – Policy governing creation and operation of the NSDI as set out in the Namibia Statistics Agency: National Spatial Data Infrastructure (NSDI) Policy (General Notice No. 103 of 6 March 2015).

NSDI Secretariat – An organizational unit authorized by NSDI Policy, section 8, and appropriately staffed as an integral part of the NSA, to assist the Statistician-General to implement and administer the NSDI and provide secretarial services (technical and administrative functions) to support the NSDI Committee (CSD) in its work.

Outcome – The desired result achieved by expenditure of resources in reaching Strategic Objectives and Goals by specific times (Milestones) or spanning planned time frames.

Owner – The organisation that creates a spatial dataset and/or pays for a dataset to be produced by a third party. The Owner need not be the official Custodian of a dataset.

ABBREVIATIONS AND DEFINITIONS

Producer – The organisation that produces a dataset, which can be different from both the intended Owner and Custodian.

Spatial data - Information that identifies the geographic location and characteristics of natural or constructed features and boundaries on the earth, derived from remote sensing, global positioning systems, geographic information systems, cartographic techniques, geo-coded statistical information, computer-aided design, total ground stations or other surveying techniques, including all geospatial data.

Stakeholder – Any person, government agency or institution that has a part to play in creating and/or using the spatial data provided with the NSDI framework.

Standards Compliance Log – The record of compliance to NSDI standards and specifications, maintained by the NSDI Secretariat, in regard to spatial datasets and services of organisations participating in the NSDI.

Statistician-General - The person appointed under section 23 of the Statistics Act, 2011.

Statistics Act - The Act of Parliament, No. 9 of 2011.

Strategic Objective – A specific, measurable statement of a desired result for meeting Strategic Goals. Objectives are achieved by implementing Actions, their associated specific Activities, resulting in defined Outcomes according to agreed Milestones.

Surveyor-General - The person appointed under section 1 of the Land Survey Act, 1993 (Act No. 33 of 1993).

Targets – The level of performance to be achieved in reaching the desired Outcomes for Strategic Objectives and Goals, over agreed time scales. Targets typically also relate to specific Milestones in implementing the Strategy.

Thematic datasets – All spatial data sets other than those designated as Fundamental datasets, with national or sub-national coverage, used by many users or for specific tasks, funded by government (public goods) or the private sector (private goods).

View service – A web-based facility by which users can view (but not download) spatial datasets, typically using online maps.

1. INTRODUCTION

Many parties, individuals and organisations, are involved in the production and use of spatial data in Namibia. The main producers of spatial data are the various line Ministries in Government who are involved in spatial data collection, processing, integration, storage, exchange, access and dissemination. The private sector and Non-Government Organisations also produce spatial data. The main users of spatial data and related services are Government, utility companies, public services, private sector commercial and professional users, research institutions, international organisations, the donor community and the general public. An important characteristic of spatial data is that many datasets may serve a variety of purposes and the same datasets are therefore useful for many data users.

With the advance of Geographic Information Systems (GIS), it is possible to link all data with a spatial component in large (geographic) spatial databases. Today spatial data is digital with the location element linked to an increasingly larger set of attributes. For planning and monitoring purposes it is important to know where something is, its current status, requirements and other attributes. With these technological developments and the high cost of producing spatial data, the need for effective and efficient management of spatial data from production to use has emerged.

The National Spatial Data Infrastructure (NSDI) is established as the national technical and institutional framework to facilitate the capture, management, maintenance, integration, distribution and use of spatial data as per the Statistics Act, No. 9 of 2011, section 47 (1).

The NSDI Policy of March, 2015, Section 5, provides the framework for development of the NSDI Strategy and Action Plan for development, implementation and on-going maintenance of the NSDI, and prepares the groundwork for preparation of sectoral spatial data plans by government Ministries responsible for Fundamental data sets.

The NSDI Policy, Section 10, separates spatial data into two types. These are Fundamental datasets and Thematic datasets. Fundamental datasets are those that are in wide use across many government departments and sectors of society. There is also a class of Fundamental data that underpins all other data. This is called Framework Fundamental data and includes data sets such as the national topographic data, geology, transport networks (roads, railways, rivers and canals), utility networks (telecommunications, power and water distribution), boundaries, hydrographic data, cadastral data, etc.

Thematic datasets are all spatial data sets other than those designated as Fundamental. They may have national or less than national coverage, may be widely needed by many users or compiled for specialised purposes with few users or for specific tasks. They may be funded by government (or donors) and considered public goods, or may be funded by the private sector and be considered private goods. Thematic datasets typically rely on Fundamental datasets to provide the underpinning location-related framework.

Experience from across the globe demonstrates that implementing the NSDI is a lengthy process, involving hundreds of stakeholders across Government, private industry, NGOs, and citizens generally, affecting all socio-economic sectors of a nation. This 5-year Strategic Plan (2015/2016 to 2019/2020) sets out the first and most critical phase of a longer term implementation strategy to achieve the ultimate goals of a national SDI in the future. During the 5-years covered by this Strategy and associated Action Plan the most critical groundwork will be laid for all that is to follow, including:

- inventorying and documenting existing datasets available in different government agencies,
- building capacity in government institutions responsible for maintenance and management of fundamental datasets,

- creating the many standards that are needed if all stakeholders (data producers and users) are to receive the most benefit from implementing the NSDI,
- setting the many policies to be followed by all stakeholders for efficient operation of the NSDI, including protecting IPR; data access, sharing, use and re-use policy; and pricing and licensing policies,
- developing and implementing a comprehensive Communication Plan for raising awareness, informing all stakeholders of progress in the NSDI, and providing practical support in NSDI delivery,
- ensuring wide spread access to and use of quality fundamental datasets and services,
- mediating over national spatial data collection projects in order to ensure compliance and avoidance of duplication and wasteful of government resources.

1.1. NSDI Key Issues

Nations across the globe are implementing National Spatial Data Infrastructures (NSDI) for a variety of reasons. Beginning in the last decade, governments became more aware of the value of 'location' when attached to numerous other attributes of government data, permitting new forms of spatial (location-based) analysis to be performed. Research from the 1990s indicated that as much as 80% of all government data includes a location attribute, e.g. a place name, address, map reference, GPS coordinates or similar. Countless government agencies, at all levels of government in scores of countries, have benefited from better decision-making based on spatial analysis in disciplines as disparate as transport and land use planning, locating health and education infrastructure to simply providing better information to citizens that improve their daily lives.

1.2. NSDI Cost-Benefit

Cost-benefit studies have been conducted on the value and cost of implementing NSDIs in many countries and multi-national regions, for example in Europe. The benefit:cost ratios resulting from these studies range from 4:1 to as high as 22:1, depending upon the nation/region involved, the type of spatial data covered by the analysis, scope of the study and the methodology chosen. Note that in no case has the cost of implementing NSDI ever been found to be greater than the benefit gained. These ratios relate primarily to financial benefits from cost savings (avoiding duplication of data collection) and wider use of spatial data by government, businesses and civil society in innovative new ways. Added benefits related to making better decisions and thus to govern more efficiently are an extra bonus which is not always easily quantifiable, except on a case-by-case basis.

One of the key benefits of formalising and harmonising Meta data (data that describes datasets), and publishing this information widely and accessibly, is avoiding duplication of collecting the same data multiple times. Also, it is important to accept that all spatial data created or collected by government is first of all 'government data' and then becomes 'spatial' for those datasets which contain location attributes. Therefore, lessons have been learned in many countries of the importance and value of ensuring that development of an NSDI is executed in parallel, and in cooperation with, national e-Government initiatives and programmes to improve the ICT infrastructure of a nation.

1.3. NSDI Capacity Building

An NSDI is first and foremost an information infrastructure and one that is built on, and implemented via, information and communications technology, requiring skills in data collection, management and dissemination, in communication (typically via the Internet or corporate intranets), in mechanisms for protecting intellectual property rights (IPR) and private and sensitive data, implementing licensing infrastructures, and more. Experience shows that many government agencies and other non-governmental organisations participating in the NSDI often do not have the required skills in-house. In some cases, access to even external experts or consultants with the required skills may prove to be difficult if there are insufficient trained persons coming from the higher educational institutions. At the most basic capacity building level, it is imperative that such training programmes exist and are producing technical people with the required skills – skills that are also officially recognised by government and the wider geomatics industry.

Capacity building spans a number of areas that are critical to success of an NSDI. There must be sufficient technical capability firstly in the NSDI implementation unit or agency. These people will typically be called upon to assist other government departments in implementing those components of the NSDI for which each department is responsible, for example the owners or custodians of key Fundamental datasets. The technical infrastructure implemented to create the NSDI must be able to support approved policies on data access, sharing, use and re-use, if that data is to be of most value to the nation as a whole. These are areas in which work is still on-going in even the most advanced NSDI implementations around the globe. It is the responsibility of each government department that engages with the NSDI to budget for the level of capacity building that it deems necessary.

1.4. NSDI Stakeholder Engagement

The NSDI may be established mainly with spatial data (Fundamental and Thematic datasets) produced by government agencies at all levels of government who require such data to fulfil their legally mandated public tasks. However, experience from across the globe has demonstrated that other key spatial data creators and users include the business sector, academia and civil society in general, including NGOs/non-profit organisations and citizens. These latter stakeholder groups are becoming more important as new technology makes it possible to collect ever more spatial data even by individuals, for example by ‘crowdsourcing’ using personal mobile devices.

With such a potentially wide spatial data user base, the challenge of stakeholder engagement is a real one that has no one solution but requires innovative approaches and government support. In Europe, as long ago as 1994, the European Union funded creation and support for EUROGI – the European Umbrella Organisation for Geographic Information – an association of national GI/GIS associations. This was a driver for those European countries that did not yet have a national GI/GIS association to create one, in order to interact more formally with the EU hierarchy in implementing national SDIs and a regional, pan-European SDI. These national GI/GIS organisations continue to exist today and are an important source of both input and feedback on key issues relating to NSDI implementation. Ideally, such national organisations are open to anyone, from any sector of society, who has an interest in collecting, processing or using spatial data. Their members become a valuable source of intelligence, advice and expertise in overcoming the many challenges in implementing the NSDI. Implementing a well-constructed and well-executed Communication Plan in the years ahead will be critical to achieving successful stakeholder engagement.

2. HIGH LEVEL STATEMENTS

2.1. Mandate from the Statistics Act, 2011

The Statistics Act, No. 9 of 2011, Section 7 (1) (d), states that NSA is to develop and coordinate the NSDI. Section 7 (2) (a) (ii), states that NSA is to formulate the NSDI policy of Namibia setting out the requirements and guidelines for the collection, processing, integrating, storing, distribution, and improved access and utilisation of spatial data and services. Section 7 (3) (b) states that NSA may establish and maintain such offices in Namibia as the Agency considers necessary, having regard to objectives of the NSDI. Section 47 (4) states that the Statistician-General must administer the NSDI.

Under Section 7 (2) (b) (iii), (iv), (vi), and (vii), NSA is mandated to determine and exercise final responsibility regarding the formulation and implementation of its work program, including:

- the coordination and development of the NSDI to facilitate the capture, management, maintenance, integration, distribution and use of spatial data,
- the manner in which spatial data are processed, documented and stored,
- development work in spatial data, and
- the discontinuance of a spatial data collection for statistical purposes.

Section 7 (2) (c) (ii) states that NSA “acting on its own or in collaboration with a government body or private sector or international organization, after consultation with the Committee for Spatial Data, must facilitate the capture, management, maintenance, integration, distribution and use of spatial data.”

The NSDI Policy provides the framework within which the Strategic Plan for development of the NSDI and sectoral spatial data plans are prepared. (NSDI Policy, section 4)

The following objectives for NSDI are set out in the Statistics Act 47 (2):

- facilitate the capture of spatial data through cooperation between government bodies and other organs of state;
- promote effective management and maintenance of spatial data;
- promote the use and sharing of spatial data in support of spatial planning, socioeconomic development and related activities;
- create an environment which facilitates coordination and cooperation among stakeholders regarding access to spatial data;
- eliminate duplication in the capturing of spatial data; and
- facilitate the protection of copyright of the state in works relating to spatial data.

The NSDI Strategy and Action Plan aims to achieve the above objectives, while identifying additional supporting objectives set out in this Strategy.

2.2. NSDI Mission Statement

To coordinate, facilitate and support the implementation of an information infrastructure that ensures efficient production, use, maintenance and dissemination of relevant, quality and accurate spatial information that is fit-for-purpose, particularly in providing evidence-based decision making at all levels of society.

2.3. NSDI Vision Statement

To be a leader for quality spatial data delivery in Africa in accordance with international standards and best practices.

2.4. NSDI Core Values

- Focus on service delivery to all stakeholders.
- Transparency of spatial data practices and procedures with all Custodians.
- Accuracy in spatial data and metadata.
- Timeliness in provision of spatial data and metadata.
- Extensive stakeholder engagement.
- Supporting spatial data partnerships within government and other sectors of society.

2.5. Links to National Development Plans

The NSDI supports NDP4 Desired Outcome 5.5 (DO5.5) in regard to information infrastructure for spatial data:

By 2017, adequate ICT infrastructure will be in place to facilitate economic development and competitiveness through innovation, research and development by creating and maintaining the National Spatial Data Infrastructure and demonstrating how effective use of the NSDI can bring positive socio-economic benefits to all sectors of Namibian society.

2.6. Links to e-Government Strategy (eGASP)

Namibia is now implementing the e-Government Strategic Action Plan for the Public Service of Namibia (eGSAP), which contains five strategic thrust areas and 15 strategic objectives. NSDI policy and implementation actions directly support the thrust areas 'Collaboration and Networking' (CRN) and 'Consistency and Standardisation' (CNS). CRN aims to achieve networked sharing of Government resources (data, infrastructure, services and solutions) through a collaborative approach by 2018. CNS aims to achieve a homogeneous, standardised and consistent approach, interfaces and interactions for developing and implementing solutions and rendering of services by Government by 2016. These objectives and associated targets all fall within the same time frame as NSDI implementation.

It is important to remember that government geospatial data which is the focus of the NSDI Strategy and Action Plan is first and foremost 'government data' – in this case e-Government data – and becomes 'geospatial' when that data has an associated location attribute. Global research indicates that 80% of all government data has a location attribute, i.e. it is geospatial e-government data.

Therefore, it is imperative that NSDI development, including policies, technology (IT and standards) and stakeholder engagement, are all developed and implemented in parallel with eGASP and support relevant strategic objectives of eGASP.

2.7. Links to Vision 2030

The NSDI is not only a key element to help fulfil NDP4 Outcome 5.5, and a key component in the e-Government Interoperability Framework to enable the e-Government Strategy 2014-2017, it also features widely, if often indirectly, in meeting targets and objectives in Vision 2030.

A large body of research and practical experience shows that access to, and use of, spatial data is a powerful aid to informed, evidence-based decision making in any sector of the economy. Spatial data and services help decision-makers move from sectoral planning to integrated planning within and between sectors and institutions.

Many targets and objectives of Vision 2030 can be better achieved through availability of a well populated NSDI with accurate, timely and accessible spatial datasets. Typical of these are the goal of “Improving public access to environmental information” for Production Systems and Natural Resources or “Adopting and implementing a well-researched ICZMP in an attempt to limit unnecessary coastal degradation, without restricting coastal development” in Targets for Marine Resources.

The Vision 2030 objective “To achieve the development of Namibia’s ‘Natural Capital’ for the benefit of the country’s social, economic and ecological well-being” includes many targets supported by an effective NSDI, especially those relating to better decision making for planning.

The open data policies inherent to the NSDI Policy also support “Responsible decision making ... to be in a position where relevant, high quality information and knowledge are readily accessible within the public domain” and “developing strong incentives for information to be shared widely in the public domain, with all government institutions leading by example.”

2.8. NSDI Whole of Government Responsibilities

- The NSDI Policy applies to all government institutions and bodies producing spatial datasets and to those spatial datasets.
- The NSDI Policy guides spatial data activities of public, private and civil society organisations in Namibia at national, regional and local levels.
- Private sector institutions which produce spatial datasets are encouraged to follow the relevant provisions of the Policy. (NSDI Policy, sections 2 and 5)
- The Government shall ensure appropriate and sustainable funding and capacity to establish and maintain the NSDI and its structures and ensure its effectiveness. (NSDI Policy, section 17)
- Furthermore, Government institutions (NSDI Policy, section 12.1) will:
 - provide ready exchange of spatial data among government departments,

HIGH LEVEL STATEMENTS

- o seek confirmation from the NSDI Secretariat before commencing a new spatial data collection that the proposed dataset to be collected does not exist,
- o advise the NSDI Secretariat when producing a new spatial dataset or updating an existing dataset including details of the update,
- o advise the NSDI Secretariat whether a dataset is available for public access or for limited access, the reasons for any limitation, and procedures for ascertaining conditions under which the available limited access may be obtained,
- o advise the NSDI Secretariat when discontinuing any spatial data collection being carried out for statistical purposes if the need for the collection is deemed to be no longer sufficient to justify the collection (Statistics Act 7(2)9b)(vii).

3. QUALITY DATA UNDERPINS GOOD DECISION MAKING

Data Custodians will produce relevant, accurate and reliable spatial data, according to agreed quality standards, to meet needs for development, planning, decision making, monitoring and evaluation in the public and private sectors. Datasets meeting the standards will be certified as compliant with the NSDI Policy. The NSDI comprises two types of datasets – Fundamental and Thematic (NSDI Policy, section 13.2 and Statistics Act, section 35 (10)).

3.1. Fundamental Datasets

Fundamental spatial datasets typically have national coverage and are widely needed for a variety of purposes by many users. They are typically produced and funded by government (or donors) and are considered public goods. The following datasets are proposed as Fundamental datasets in Namibia, subject to confirmation by the Committee for Spatial Data:

- geodetic control,
- digital imagery,
- geographical names,
- administrative boundaries,
- land parcel/cadastral boundaries,
- transportation,
- hydrology,
- land cover/vegetation/food security,
- elevation,
- utilities (power, telecommunications, water supply, sewerage),
- geo-demographic data/population/settlement,
- geology,
- climate,
- education, health facilities, social services,
- business and economy.

3.2. Thematic Datasets

Thematic datasets are all spatial datasets other than those designated as Fundamental. Thematic datasets may have national or sub-national coverage and typically are needed by many users or may be compiled for special purposes with few users or for specific tasks. Thematic datasets may be funded by government (or donors) and considered as public goods or they may be funded by the private sector and considered as private goods. As thematic datasets are added to the NSDI, they must adhere to the standards developed for Fundamental datasets, especially regarding metadata to enable discovery of the datasets.

3.3. Duties of Fundamental Dataset Custodians

- All current and historical Fundamental spatial datasets and metadata will be made available by Custodians, in existing formats, at no production cost, other than a fee which may be charged to cover the costs of meeting a request, the charging of which shall be at the option of the Custodian. (NSDI Policy, section 13.6)
- The Custodian of each Fundamental dataset will update the dataset on a continuous basis but not later than ten years after production, unless it can be demonstrated that a dataset is stable and does not need revision. The Custodian of each Thematic dataset will update the dataset on a regular basis. (NSDI Policy, section 13.1)
- A Custodian will be designated for each spatial dataset by the Statistician-General in consultation with the producer and upon the advice of the NSDI Committee, unless a custodian is already recognized by law. The custodianship will not be unreasonably withheld by those producers not recognized by law. The responsibilities and rights of Custodians include (NSDI Policy, section 9):
 - development of the dataset,
 - determining methods of data capture, quality control and assurance,
 - complying with standards, legislation, policies and guidelines,
 - data content and formats,
 - archiving, storage and security,
 - maintenance and updates of data and metadata,
 - consulting with users about their needs and striving to meet those needs,
 - dissemination of data including setting access conditions and pricing,
 - notifications about the data and metadata to the NSDI Secretariat, and
 - serving and protecting the interests of the Owner of the dataset (if not the Custodian).
- Custodians will publish and distribute the data and metadata applicable to this Policy via publishing media that make them easy to find, easy to understand and easy to use and data access will be simple and speedy, within current technical and financial limits.
- Custodians will function with professional independence and present all data and information objectively to maintain public confidence and trust in public spatial data (NSDI Policy section 12.4).

QUALITY DATA UNDERPINS GOOD DECISION MAKING

- Custodians will ensure transparency of practices and procedures in compiling, processing and disseminating spatial data (NSDI Policy, section 12.5).
- Custodians will establish a backup storage policy to prevent loss of or damage to spatial data and metadata, and all historical spatial data and its metadata will be archived, after updating (NSDI Policy, section 13.7).
- Custodians will take legal steps to protect the copyright of the State relating to spatial data for which they are responsible.
- Custodians will promote a culture of confidentiality among their staff and will maintain the privacy of data provided through surveys or other data collection means, and will maintain the confidentiality of the information provided, using the collected information only for the purposes for which the data collection was undertaken, while ensuring the physical protection and security of collected data.
- Custodians will act to protect the Government from liability in relation to clients using spatial datasets provided by the Custodian.

3.4. SWOT Analysis for the NSDI

In order to determine where the nation is today in regard to an effective NSDI, the Secretariat has carried out a SWOT analysis looking at Strengths, Weaknesses, Opportunities and Threats.

Helpful in achieving goals STRENGTHS	Harmful for achieving goals WEAKNESSES
<ul style="list-style-type: none"> • Strong legal mandate to create the NSDI from the Statistics Act, 2011, and the NSDI Policy, 2015, and a legally mandated executing agency (NSA). • Legally mandated Secretariat to oversee NSDI implementation. • Stakeholders ready to engage and with great interest in using spatial data for decision making. • Strong political support for the NSDI at all levels of government. • Existence of NSA regional offices with support 'in the field' to reach all levels of society. • Two higher education institutions in Namibia offer GIS and related spatial technology courses to support creating a pool of skilled professionals in using spatial data. 	<ul style="list-style-type: none"> • Current absence of standards for NSDI implementation across all government institutions that create or use spatial data. • Lack of knowledge of what spatial data exists across government, leading to duplication of effort and wasted resources in data acquisition. • Data policies are not aligned or compatible across government, on data access/sharing with stakeholders, and for use/re-use of spatial data, inside and outside of government. • Confirmed and adequate sources of funding are needed for the identified implementation actions, ongoing operation and maintenance of the NSDI. • Lack of a proper framework and official responsibilities for implementing NSDI across all of government. • Lack of regular communication between government departments regarding information infrastructure development, for spatial data. • Lack of adequate technical infrastructure, e.g. data storage, internet connectivity, network-based tools, etc. across all of government. • Insufficient resources (human, technical and financial) for the level of NSDI capacity needed. • NSDI leadership needs to be at a high level of authority within the NSA executive agency. • Lack of relevant metadata leads to lack of knowledge of what spatial data exists and of the quality of that data. • Lack of knowledge of what spatial data exists, and lack of harmonisation and interoperability for that data, leads to inability to meet customer expectations seeking help with data. • Insufficient GIS capacity within many government institutions/agencies.
OPPORTUNITIES	THREATS

QUALITY DATA UNDERPINS GOOD DECISION MAKING

Helpful in achieving goals	Harmful for achieving goals
<ul style="list-style-type: none"> • The NSDI has a strong legal mandate to actively implement spatial data information, coordination and collaboration across government. • Uniform NSDI standards will be developed and implemented across all government institutions that create, provide or use spatial data, ensuring that spatial data management follows common standards and a consistent approach to collection and delivery of spatial data. • The legally mandated requirement to create and publish metadata for all spatial data in government, at all levels, counteracts a key current weakness caused by lack of knowledge of what spatial data exists. • Data policies can be aligned and made compatible across government on data access/sharing with stakeholders, and on use/re-use of spatial data, both inside and outside of government, thus increasing efficiency in use of existing spatial data in all sectors. • The NSDI will help raise public awareness and increase understanding of the value to society of spatial data, spatial awareness in decision making and GIS technology at all levels of education, especially if introduced to the national education curriculum. 	<ul style="list-style-type: none"> • If the metadata describing spatial data holdings is not created and published on time, then the implementation timeframe for the NSDI and its effectiveness will suffer. • Capacity building across all levels of society is time consuming and demands significant resources which might not appear when needed, delaying the NSDI implementation timeframe. • Uneven status of nation-wide internet access, speed and capacity could lead to uneven ability to capitalize on the advantages of the NSDI across society as a whole. • Lack of GIS recognition as a profession in government could prevent students from enrolling in the education programmes needed to build a strong geo-aware work force to support all stakeholders across all sectors of society. • Potential lack of full, active cooperation on NSDI development by some institutions could result in uneven introduction of the benefits of NSDI to different sectors of society. • Low priority by some institutions for updating datasets and lack of resources to do that properly, especially for Fundamental datasets, could have serious negative downstream effects on those who need to build on such datasets. • Uncertain long-term, sustainable funding for NSDI development could jeopardize the future usefulness and effectiveness of the NSDI framework and infrastructure, especially regarding Fundamental datasets.

4. NSDI GOALS, OBJECTIVES AND ACTIONS

Four principle goals have been identified for the NSDI in Namibia. Each goal has associated with it a number of Objectives, leading to specific Actions to be implemented in the NSDI Action Plan, each with identified Outcomes.

4.1. Strategic Goals

The National Spatial Data Infrastructure (NSDI) is a set of policies, standards and procedures under which organisations and technologies interact to foster more efficient production, management, access and use of spatial data in a country. The current Goals for implementing a successful NSDI in Namibia are set out below.

Goal	Description
1	An NSDI with a governance structure that can efficiently operate the NSDI and sufficient funding to ensure its implementation and long-term sustainability nationwide.
2	An NSDI that facilitates access to, and maximizes the use of, quality, timely and accurate spatial data.
3	An NSDI that commits sufficient attention and resources to building capacity nationally to sustain national development and that helps create an informed society.
4	An NSDI that helps to eliminate duplication of effort in spatial data collection and use and reduces waste of limited resources.

4.2. Strategic Objectives

Goal 1 - An NSDI with a governance structure that can efficiently operate the NSDI and sufficient funding to ensure its implementation and long-term sustainability nationwide.

Strategic Objective	Actions
1.1 From 2015, ensuring and facilitating quarterly meetings of the Committee for Spatial Data to effectively administer the NSDI.	<ul style="list-style-type: none">• Liaise with Committee for Spatial Data.
1.2 To strengthen coordination and collaboration in order to optimize the benefits from wide use of spatial datasets and services.	<ul style="list-style-type: none">• Create and manage the Steering Executive Committee (SEC) consisting of high-level management representatives from all key participating agencies.• Create and manage the Permanent Technical Committee (PTC).• Foster strong collaboration through Partnership Agreements among all key NSDI stakeholders• Develop, offer, promote and use a collaboration platform, framework and infrastructure to engage with all stakeholders, especially government agencies
1.3 To protect State copyright in ownership and provision of spatial datasets and services.	<ul style="list-style-type: none">• NSDI Governance Working Group to investigate policy issues, means and methods to protect State copyright in spatial datasets and services, i.e. both the databases and the software developed for spatial data processing, dissemination or use.
1.4 To protect confidential, privileged and/or sensitive data.	<ul style="list-style-type: none">• NSDI Governance Working Group to investigate protection of confidential, privileged and/or sensitive data in regard to implementation of the NSDI.
1.5 Secure adequate funding to implement, maintain and sustain the NSDI.	<ul style="list-style-type: none">• Justify, secure and manage the NSDI Fund.

NSDI GOALS, OBJECTIVES AND ACTIONS

Goal 2 - An NSDI that facilitates access to, and maximises the use of, quality, timely and accurate spatial data.

Strategic Objective	Actions
2.1 To ensure the capture, conservation and maintenance of fundamental and thematic spatial datasets.	<ul style="list-style-type: none"> Inventory all Fundamental spatial datasets and services that exist in government agencies and institutions, and what capture and conservation practices are already in use, by conducting the spatial data Environmental Scan. Promote the use of open source (FOSS Tools) software in spatial data creation, analysis, management, and dissemination.
2.2 To establish standards and guidelines on their implementation in order to increase the value, timeliness and quality of spatial datasets and services.	<ul style="list-style-type: none"> Implement NSDI standards, specifications and guidelines on their implementation and use across all levels of government. Define the compliance programme for NSDI standards and specification. Implement compliance programme for NSDI standards and specification.
2.3 To facilitate the access, exchange, sharing and use of standardized spatial data to serve public and private stakeholders and users at all levels of government and society.	<ul style="list-style-type: none"> Facilitate meta data capture of all fundamental datasets across government. Prepare online information services to facilitate discovery, access, exchange, sharing and use of spatial data. Define and implement pricing and licensing policies for spatial datasets and services provided by different owners/custodians, to different types of user and for different types of uses.

Goal 3 - An NSDI that commits sufficient attention and resources to building capacity nationally to sustain national development and that helps create an informed society.

Strategic Objective	Actions
3.1 To increase the awareness and understanding of the rationale, vision, concepts and benefits of implementing the NSDI.	<ul style="list-style-type: none"> Develop and implement a comprehensive NSDI Communication Plan to increase NSDI awareness and understanding. (See Annex 1)
3.2 To provide spatial data and services support for national economic and social development and to foster environmental sustainability.	<ul style="list-style-type: none"> Ensure adequately trained staff to effectively provide technical functions of the NSDI. Ensure adequate physical resources to implement NSDI technical functions. Provide support services to government departments / agencies and the public relating to use of spatial data and services. Facilitate GIS adoption by government entities through targeted capacity building actions with stakeholders (government institutions first). Conduct annual user/producer GIS training workshops in regions to strengthen GIS capacity at regional level. Facilitate the collection of timely and accurate near real time data for disaster risk management, food security, and environment (drought, flooding, grazing condition, land cover, etc.).
3.3 To contribute to building an efficient and inclusive information society through education and awareness creation - and enhancing spatial planning nationally.	<ul style="list-style-type: none"> Provide educational and awareness material for use by all stakeholders relating to vision, goals, objectives and socio-economic benefits of the NSDI.

Goal 4 - An NSDI that helps to eliminate duplication of effort in spatial data collection and use and reduces waste of limited resources.

Strategic Objective	Actions
4.1 To reduce costs or eliminate duplicating data collection and ensure shared responsibility for spatial data acquisition.	<ul style="list-style-type: none"> Implement an Advance Data Collection Calendar (ADCC). Monitor the use of the ADCC.

5. NSDI PERFORMANCE INDICATORS

An annual performance report shall be produced and shared with NSDI stakeholders as from the 2018/2019 financial year. However some aspects of the performance indicators can be implemented already as work progresses. The performance indicators shall be benchmarked in the following areas:

- user satisfaction,
- timeliness of information dissemination,
- effectiveness of NSDI services, e.g. number of spatial data requests serviced by the NSDI,
- availability and accessibility of the NSDI Website and NSDI Geoportal,
- website statistics of user accesses to the NSDI Website and NSDI Geoportal, and
- activeness of NSDI user group(s),
- GIS adoption rate and NSDI implementation in government entities,
- employment of staff with degrees in geospatial sciences.

6. CRITICAL SUCCESS FACTORS

Critical Success Factors (CSF) are the key areas of activities in which the organisation must perform well to ensure successful execution of the planned Strategy. For the NSDI, two types of CSF should be considered – those for the NSDI itself, as a key part of the government’s information infrastructure, and those for the NSA which has the legal mandate to plan and execute the NSDI.

6.1. Critical Success Factors for the NSDI

Critical Success Factors (CSFs) for the NSDI include:

- achieving harmonised data and information policies relating to spatial data, across government, including protection of state copyright and confidential, privileged or sensitive information,
- achieving quantifiable cost savings by avoiding duplication of spatial data collection work,
- achieving capacity building goals for all agencies to be able to implement NSDI standards efficiently and effectively,
- achieving wide stakeholder engagement both inside and outside government, including businesses and civil society,
- achieving more open and widespread data sharing across government departments.

6.2. Critical Success Factors for the NSDI Secretariat

The Critical Success Factors (CSFs) below relate to activities identified in which the Secretariat must perform well in order to ensure the successful execution of the NSDI Strategy.

Leadership

Have a committed leadership team that is able to motivate and inspire other NSDI Secretariat and NSA staff members to have the desire and commitment necessary to execute the plan successfully.

Communication

Via the NSDI Communications Plan, effectively communicate the content of, and regular progress on, the Strategy and Plan, to all NSDI stakeholders, so that all understand the Strategy, the Plan, what is expected of them and how they can contribute to the successful implementation of the NSDI.

Budget

Ensure that budget provisions are sufficient to support all initiatives and activities in the Strategy and Action Plan and that budgets made available for the NSDI are efficiently and effectively engaged, monitored and spent.

CRITICAL SUCCESS FACTORS

Measurement and Reporting

Measure, monitor and report on the implementation of the NSD Strategy on a regular basis and take necessary remedial actions if problems are found.

Operationalise the Strategy

Ensure availability of the required resources, staff and skills needed to implement the Strategy successfully and to support other NSDI stakeholders as and when necessary in targeted capacity building activities.

7. NSDI STRATEGIC ACTION PLAN

High Level Goals, Objectives and Actions	Activities	Outcomes	Time Frame	Cost N\$
Goal 1 - An NSDI with a governance structure that can efficiently operate the NSDI and sufficient funding to ensure its implementation and long-term sustainability nationwide.				
Strategic Objective 1.1 – From 2015, ensuring and facilitating quarterly meetings of the Committee for Spatial Data to effectively administer the NSDI. Key Performance Indicators Indicator 1: CSD meetings are well prepared and executed, on schedule				
<ul style="list-style-type: none"> • Liaise with Committee for Spatial Data (CSD) 	<ul style="list-style-type: none"> • Contribute to the agenda of the CSD meetings. • Implement resolutions of the CSD (Act on requests from the CSD resulting from the meetings) • Commission the formulation of an NSDI strategy and action plan 	<ul style="list-style-type: none"> • Effective management of quarterly CSD meetings • Timely implementation of resolutions of the CSD • 5 year NSDI Strategic Plan 	Quarterly September 2015	500,000 309,000
Strategic Objective 1.2 - To strengthen coordination and collaboration in order to optimize the benefits from wide use of spatial datasets and services. Key Performance Indicators Indicator 1: Number of agencies actively participating in the Steering Executive Sub-committee (SEC). Indicator 2: Number of partnership agreements concluded per year. Indicator 3: Level of activity recorded on the collaboration platform, e.g. number of registered users, number of logins.				
<ul style="list-style-type: none"> • Create and manage the SEC consisting of high-level management representatives from all key participating agencies. • Create and manage Working Groups. 	<ul style="list-style-type: none"> • Define Terms of Reference for the Steering Executive Sub-committee (SEC) and Working Groups. • Establish and enlist members of the SEC and those of Working groups. • Administer the SEC and Working Groups. 	<ul style="list-style-type: none"> • Quarterly SEC meetings providing feedback on progress to the CSD. • Timely Working Groups reports and standards provided to CSD. 	2016 - 2020	750,000
<ul style="list-style-type: none"> • Foster strong collaboration through Partnership Agreements among all key NSDI stakeholders 	<ul style="list-style-type: none"> • Create, administer and monitor Partnership Agreements. • Create and administer a focal group of contact technical persons from all participating organisations. 	<ul style="list-style-type: none"> • Properly managed Partnership Agreements 	2015 - 2017	260,000
<ul style="list-style-type: none"> • Develop, offer, promote and use a collaboration platform, framework and infrastructure to engage with all stakeholders, especially government agencies 	<ul style="list-style-type: none"> • Define the requirements for the collaboration framework, platform and infrastructure. • Manage the collaboration platform, framework and its effective use. 	<ul style="list-style-type: none"> • A well-managed and effective internet-based collaborative working package to provide the framework for collaboration. 	2018 - 2020	250,000

High Level Goals, Objectives and Actions	Activities	Outcomes	Time Frame	Cost N\$
Strategic Objective 1.3 To protect State copyright in ownership and provision of spatial datasets and services. Key Performance Indicators Indicator 1: Copyright protection legislation is enhanced to protect spatial data.				
NSDI Governance Working Group to investigate policy issues, means and methods to protect State copyright in spatial datasets and services, i.e. both the databases and the software developed for spatial data processing, dissemination or use.	NSDI Governance Working Group to liaise with relevant bodies of government and key stakeholders in regard to copyright issues not already covered by the Copyright Act, 1994.	A formal recommendation to government about modification to the existing Namibia Copyright Act in order to protect digital databases.	2016 - 2017	250,000
Strategic Objective 1.4 - To protect confidential, privileged and/or sensitive data as required by the NSDI Policy and existing NSA regulations. Key Performance Indicators Indicator 1: Guidelines produced and widely distributed to government agencies. Indicator 2: Number of government agencies implementing the guidelines.				
NSDI Governance Working Group to investigate protection of confidential, privileged and/or sensitive data in regard to implementation of the NSDI.	NSDI Governance Working Group to liaise with relevant bodies of government and key stakeholders regarding existing safeguards for confidential, privileged and/or sensitive data as these may apply to spatial data.	A report to the CSD on the issues and findings to consider if further action can or needs to be taken within the remit of the NSDI Policy. Guidelines on how to protect confidential, privileged and sensitive data for all government departments holding spatial datasets	2016 - 2017	Combined with Objective 1.3
Strategic Objective 1.5 - Secure adequate funding to implement, maintain and sustain the NSDI. Key Performance Indicators Indicator 1: NSDI Fund established. Indicator 2: Total NSDI funding received from government and other sources during the 5 year period. Indicator 3: Approved utilization statements for the NSDI Funds.				

NSDI STRATEGIC ACTION PLAN

High Level Goals, Objectives and Actions	Activities	Outcomes	Time Frame	Cost N\$
Justify, secure and manage the NSDI Fund.	<p>Prepare the annual funding requirements spanning the five-year Strategy and Action Plan and communicate this to the Minister.</p> <p>Establish and administer the NSDI Fund.</p> <p>Promote the NSDI fund locally and internally to donor agencies and the business community.</p>	<p>Report on funding requirement to be presented to the Minister.</p> <p>The NSDI Fund is established.</p> <p>Long-term financial and legal management of the NSDI Fund</p> <p>Potential investment sources of funds identified locally and internationally.</p>	2015 - 2020	350,000
Goal 2 - An NSDI that facilitates access to, and maximizes the use of, quality, timely and accurate spatial data.				
<p>Strategic Objective 2.1 - To ensure the capture, conservation and maintenance of fundamental and thematic spatial datasets.</p> <p>Key Performance Indicators</p> <p>Indicator 1: Inventory of existing government fundamental spatial datasets and services.</p> <p>Indicator 2: Adoption rate of open source software across government.</p>				
Inventory all Fundamental spatial datasets and services that exist in government agencies and institutions, and what capture and conservation practices are already in use, by conducting the spatial data Environmental Scan	<p>Define the parameters for the Environmental Scan.</p> <p>Define the procedure and methodology to carry out the Environmental Scan across all government departments.</p> <p>Define the resource requirements for conducting the Environmental Scan.</p> <p>Implement the Environmental Scan plan.</p>	Report on results of the Environmental Scan to the CSD relating to Fundamental datasets held by government and current capture and conservation practices.	2015 - 2017	100,000
Promote the use of open source (FOSS Tools) software in spatial data creation, analysis, management, and dissemination.	<p>Research and advise on the stable and sustainable open source software to use in government entities.</p> <p>Monitor and assist in the use of recommended open source software.</p>	<p>Increased adoption of open source software across government.</p> <p>Government saving in use of free open source software.</p>	2016 - 2018	560,000
<p>Strategic Objective 2.2 – To establish standards and guidelines on their implementation in order to increase the value, timeliness and quality of spatial datasets and services.</p> <p>Key Performance Indicators</p> <p>Indicator 1: Standards (all types) developed and approved within agreed timescale.</p> <p>Indicator 2: Guidelines accepted by stakeholders as adequate for implementing the standards.</p> <p>Indicator 3: Achieve targets for issuing compliance certificates.</p>				

NSDI STRATEGIC ACTION PLAN

High Level Goals, Objectives and Actions	Activities	Outcomes	Time Frame	Cost N\$
Implement NSDI standards, specifications and guidelines on their implementation and use across all levels of government.	<p>Create the NSDI Technical Working Group terms of reference (what is required, work assignments, and delivery target dates).</p> <p>Create the required standards, specifications and guidelines.</p> <p>Create promotional material about the standards, specifications and guidelines to ensure all stakeholders know that they exist, what they are, and how to use them.</p> <p>Publicize and promote NSDI standards, specifications and guidelines.</p>	<p>Fully functional NSDI Working Groups.</p> <p>NSDI Standards and Specifications documents.</p> <p>NSDI Standards implementation guidelines (one for each standard or specification).</p> <p>Promotional material about the standards, specifications and guidelines to ensure all stakeholders know that they exist, what they are, and how to use them.</p> <p>An active promotional calendar showing which dates and/or frequency that promotional material will be delivered, to whom and by what means.</p>	2015 – 2018	200,000
Define the compliance programme for NSDI standards and specification.	Create the NSDI standards compliance methodology and guidelines for achieving compliance.	Standards compliance methodology and guidelines.	2016 - 2017	250,000
Implement compliance programme for NSDI standards and specification.	<p>Certify compliance by implementing the methodology across government spatial datasets, beginning with Fundamental data.</p> <p>Issue and record NSDI Compliance Certificates.</p> <p>Create an online NSDI Standards Compliance Log to record those spatial datasets that have achieved compliance with the standards.</p>	<p>Fully functioning standards compliance system implemented.</p> <p>Standards Compliance Log maintained.</p> <p>Certificates issued.</p>	2018 - 2020	
<p>Strategic Objective 2.3 - To facilitate the access, exchange, sharing and use of standardized spatial data to serve public and private stakeholders and users at all levels of government and society.</p> <p>Key Performance Indicators</p> <p>Indicator 1: Amount and types of meta data captured each year in the agreed time frame.</p> <p>Indicator 2: Quality of the meta data captured and reports is acceptable.</p> <p>Indicator 3: Number of visitors to NSDI Geoportal per annum.</p> <p>Indicator 4: Agreed pricing and licensing policies are implemented by stakeholders.</p>				

NSDI STRATEGIC ACTION PLAN

High Level Goals, Objectives and Actions	Activities	Outcomes	Time Frame	Cost N\$
Facilitate meta data capture of all fundamental datasets across government.	<p>Assist government entities to capture meta data by 2018.</p> <p>Create a NSDI Website to host NSDI documentation and data discovery services.</p>	<p>Meta data of existing fundamental datasets available and accessible to the public.</p> <p>The NSDI Website, populated with initial documentation and access to discovery services.</p> <p>Widespread access to metadata and spatial datasets for socio-economic planning.</p>	2015 - 2018	1,600,000
Prepare online information services to facilitate discovery, access, exchange, sharing and use of spatial data.	<p>Create NSDI Geoportal for discovering metadata for Fundamental datasets (first) and Thematic datasets (second).</p> <p>Create the NSDI Discovery metadata catalogue service.</p> <p>Create pilot NSDI spatial data View service.</p> <p>Monitor and help maintain the NSDI Geoportal discovery metadata for all Fundamental and Thematic spatial datasets identified in the Environmental Scan.</p>	<p>NSDI Geoportal created and tested.</p> <p>An operational Discovery service accessible from the national NSDI Geoportal.</p> <p>Metadata from the highest priority Fundamental datasets available in the portal for discovery.</p> <p>At least one pilot NSDI View service is available.</p> <p>Continuously updated and verified content in the NSDI Geoportal discovery metadata.</p>	2016 - 2018	
Define and implement pricing and licensing policies for spatial datasets and services provided by different owners/ custodians, to different types of user and for different types of uses.	<p>Identify, initiate and manage liaison and consultation with the data owners/ custodians, who retrain copyright in the metadata, datasets and services provided by them.</p> <p>Prepare pricing policy guidelines, taking into account current pricing policies across government.</p> <p>Prepare licensing policy guidelines, taking into account current licensing policies across government.</p>	<p>Pricing policy guidelines for Fundamental and Thematic datasets and services.</p> <p>Licensing policy guidelines for Fundamental and Thematic datasets and services.</p> <p>Recommendations on model licensing contracts and/or standard terms and clauses to be used by government departments for Fundamental and Thematic datasets, where such licenses may be required.</p>	2016 - 2017	80,000
Goal 3 - An NSDI that commits sufficient attention and resources to building capacity nationally to sustain national development and that helps create an informed society.				

High Level Goals, Objectives and Actions	Activities	Outcomes	Time Frame	Cost N\$
<p>Strategic Objective 3.1 - To increase the awareness and understanding of the rationale, vision, concepts and benefits of implementing the NSDI</p> <p>Key Performance Indicators</p> <p>Indicator 1: Number of shared information platforms (listed in the Communication Plan).</p> <p>Indicator 2: Positive user satisfaction surveys.</p>				
Develop and implement a comprehensive NSDI Communication Plan to increase NSDI awareness and understanding.	<p>Implement the individual actions set out in the Communication Plan (see Annex I).</p> <p>Regular monitoring of the effectiveness of the Communication Plan</p> <p>Embrace a large group of active NSDI participants in promotion and communications activities.</p>	<p>Effective communication with all stakeholders as set out in the Communication Plan.</p> <p>A spatially enabled society measured through user satisfaction surveys.</p>	2015 - 2020	4,526,000
<p>Strategic Objective 3.2 - To provide spatial data and services support for national economic and social development and to foster environmental sustainability.</p> <p>Key Performance Indicators</p> <p>Indicator 1: Competent technical staff providing support.</p> <p>Indicator 2: Number of help desks services, e.g. data requests, website hits, etc.</p> <p>Indicator 3: Number of capacity building initiatives offered to government entities and staff trained.</p>				
Ensure adequately trained staff to effectively provide technical functions of the NSDI.	<p>Prepare the human resources recruitment plan to provide the required level of support.</p> <p>Implement the Recruitment Plan.</p> <p>Build technical capacity of the NSDI Secretariat staff.</p>	<p>The budget for the implementation and support plan and funding request (Recruitment Plan executed).</p> <p>Technical staff trained to the required standard of the Recruitment Plan.</p>	2016 - 2020	<p>15,219,000</p> <p>1,000,000</p>

NSDI STRATEGIC ACTION PLAN

High Level Goals, Objectives and Actions	Activities	Outcomes	Time Frame	Cost N\$
Ensure adequate physical resources to implement NSDI technical functions.	Prepare resource requirement at NSA to provide the required level of support.	NSDI technical functions executed including support across government entities, e.g. resources include office operation, transport, office space rentals, material supplies, etc.).	2016 - 2020	11,300,000
Provide support services to government departments / agencies and the public relating to use of spatial data and services.	Define functions and requirements for the NSDI Help Desk (Information Kiosks) Establish the NSDI Help Desk. Operate the NSDI Help Desk on daily basis.	The Help Desk operating budget determined and funding request made. NSDI Help Desk in daily operation. Number of public spatial data requests received on a quarterly basis.	2016 - 2020	1,800,000
Facilitate GIS adoption by government entities through targeted capacity building actions with stakeholders (government institutions first)	Define the capacity building actions needed, in liaison with stakeholders. Assist, promote, train and follow agency capacity building efforts	Defined capacity building implementation plan. Different agencies' capacity building plan shared. GIS adopted by government entities.	2016 - 2020	1,600,000
	Prepare and implement a uniform annual GIS training plan for regional and local stakeholders. Encourage GIS professional certification and recognition by government.	GIS Training Guidelines prepared. GIS workshops conducted in the regions. GIS as a profession by government.		
Facilitate the collection of timely and accurate near real time data for disaster risk management, food security, and environment (drought, flooding, grazing condition, land cover, etc.).	Identify critical themes and encourage the creation of key spatial datasets for near real time monitoring.	Availability of timely and near real time data for disaster risk management.		3,000,000
Strategic Objective 3.3 – Contribute to building an efficient and inclusive information society through education and awareness creation - and enhancing spatial planning nationally.				
Key Performance Indicators Indicator 1: Achieving positive results on user needs and satisfaction surveys. Indicator 2: Positive assessment of educational material from users.				

NSDI STRATEGIC ACTION PLAN

High Level Goals, Objectives and Actions	Activities	Outcomes	Time Frame	Cost N\$
Provide educational and awareness material for use by all stakeholders relating to vision, goals, objectives and socio-economic benefits of the NSDI.	<p>Define the user needs and user satisfaction survey questions and methodology.</p> <p>Conduct a regular user needs and user satisfaction survey on a regular basis and publish the results.</p> <p>Prepare primary and secondary school educational materials.</p> <p>Prepare specific case studies on socio-economic benefits of NSDI.</p>	<p>The survey content and methodology defined.</p> <p>Survey executed and results published.</p> <p>Educational and awareness materials created.</p> <p>Published case studies.</p>	2015 - 2020	450,000
Goal 4 - An NSDI that helps to eliminate duplication of effort in spatial data collection and use and reduces waste of limited resources.				
<p>Strategic Objective 4.1 – Reduce costs by eliminating duplicating data collection and ensure shared responsibility for spatial data acquisition.</p> <p>Key Performance Indicators</p> <p>Indicator 1: Number of shared data acquisition plans secured.</p> <p>Indicator 2: Calculated cost saving by government.</p>				
<p>Implement an Advance Data Collection Calendar (ADCC), monitor its use, and facilitate and mediate data acquisition plans put forward by stakeholders.</p> <p>Monitor the frequency of updating fundamental datasets vis-à-vis public and national data demands to maximise usefulness.</p>	<p>Define the format and content of the ADCC.</p> <p>Implement the ADCC on the web, accessible from the NSDI Website (so all stakeholders can see this information).</p> <p>Inform all stakeholders as to what is being collected and when via NSDI Website news and the NSDI Newsletters.</p> <p>By monitoring the ADCC, identify where data collection tasks are being planned which may result in duplication of data acquisition.</p> <p>Arrange consultation between stakeholders where duplication of data acquisition may occur and help develop a least-cost acquisition plan.</p> <p>Assess public and national spatial data demands through user satisfaction surveys.</p>	<p>An up-to-dated ADCC (list of known current plans to collect new spatial data) visible to all stakeholders via the web.</p> <p>Harmonized spatial data acquisition plans from stakeholders that result in least cost to collect the data.</p> <p>Acceptable frequency of spatial data updating.</p>	2016 - 2018	310,000

1. INTRODUCTION

Communication includes all written, spoken, and electronic interaction with audiences. Effective communication is the prerequisite for the attainment of the goals of any National Spatial Data Infrastructure (NSDI) which exists to facilitate collection, sharing, access, dissemination, and use of spatial data for the information community. The Communication Plan in the Namibia NSDI context is the framework for management of all NSDI components, providing the means by which users and producers of spatial data obtain and exchange information.

This Communication Plan sets out a framework and plan of actions aimed at educating, sharing and bringing to the foreground information relating to interagency and public and private collaboration in spatial data collection, sharing, use, dissemination, and access through the NSDI. The document sets out the target audiences and lists the communication tools, performance measures and timeline for implementing the plan. The document is aligned to the draft communication policy of the Namibia Statistics Agency (NSA) as the NSDI coordinating body and these should be read together. The Communication Plan provides guidance to the NSDI Secretariat in carrying out its functions in accordance with the Statistics Act, No. 9 of 2011 and NSDI Policy of 2015.

The NSDI Secretariat in NSA will provide a leadership role in advancing the importance of spatial information in economic development, natural resources management, national security, public safety, environmental quality and stability, social services provision, and research. The communication plan specifically aims to:

- Contribute to reduced duplication of spatial data investments and expenditures;
- Enhance interagency cooperation;
- Educate and awareness creation in order to build an information society;
- Enhance access to spatial data

The strategy of the NSDI Communication Plan is to:

- Inform;
- Educate and build an information society;
- Share, disseminate, and distribute spatial data and projects in the spatial information community;
- Elucidate and celebrate best practices.

2. GOALS

- A united and shared NSDI vision for mutual benefit;
- Contribute to reduced duplication of data investments and expenditures;
- Enhanced interagency cooperation and information sharing;
- Clearly defined and unified NSDI future directions;
- A spatially-enabled information society built for Namibia.

3. OBJECTIVES

- Enhance public communication and information dissemination
- Provide education, training, and outreach services
- Facilitate spatial data discovery and accessibility
- Facilitate data access and integration
- Enhance spatial data production and maintenance in support of the NSDI
- Clearly defined custodianship roles and responsibilities
- Encourage data sharing, dissemination, and distribution
- Encourage research and applications using spatial data

4. TARGET AUDIENCES

Primary Target Audiences:

- Government (local regional and national);
- Public and private sectors;
- Community-based organisations (CBO's);
- Non-governmental organisations (NGO's);
- Education and Research Institutions;
- Non-geospatial communities of users;
- Utility organisations;
- General public within Namibia.

Secondary Audiences:

- Media;
- Entrepreneurs /Innovators;
- SADC;
- Africa;
- Global public.

5. COMMUNICATION STRATEGIC OBJECTIVES, TOOLS AND ACTIONS

Strategic Objective C1. Communications, Awareness and Promotion

- NSDI Identity Materials
 - Design an NSDI logo for publicity;
 - Procure NSDI corporate gear and materials for public awareness campaigns.
- NSDI Website
 - Create a NSDI Website by 30 September 2015;
 - Include information page to report on NSDI progress;
 - Create the NSDI geo-portal;
 - Provide links to other NSDI stakeholders.
- NSDI Newsletter
 - Formulate a newsletter;
 - Collect and compile NSDI news from NSDI stakeholders and NSDI Secretariat;
 - Release newsletter quarterly.
- NSDI PowerPoint Template
 - Design common NSDI PowerPoint template;
 - Share NSDI PowerPoint template with NSDI stakeholder for use in NSDI related presentations;
 - Develop NSDI PowerPoint promotional materials e.g. NSDI policy, basic concepts of NSDI, strategic plan for NSDI, etc.
- Periodic print publications
 - Write periodical articles to the media on NSDI progress;
 - Prepare media releases and public relations materials.
- Communiques
 - Timely dissemination of Committee for Spatial Data communiques to the different communication platforms;
 - Timely dissemination of NSDI Secretariat communiques to the different communication platforms.

Strategic Objective C2. Outreach

- Email Contact List
 - Create and maintain a mailing-list for NSDI stakeholders.
 - Establish a mail list for users.
- Active User Group
 - Revive GISNA to serve as the NSDI user group.
 - Use GISNA platform to advance NSDI programs.
 - Encourage GIS professional certification.
- Workshops, Meetings and Conferences
 - Conduct quarterly socialization workshops/meetings with NSDI stakeholders.
 - Conduct country-wide public awareness campaigns.
 - Together with GISNA, arrange and host NSDI conferences.
 - Education public awareness campaigns.
 - Represent the NSDI at international platforms, meeting, workshops and conferences.
- Interoperability Forums
 - Join the GSDI Association, Africa SDI and other regional SDI initiatives.
 - Actively participate in global SDI discussion forums.
 - Participate in NSDI interoperability platforms for SADC, AU and GSDI.
 - Cooperate with other regional countries in NSDI initiatives.
- Sponsorships and Awards
 - Encourage NSDI stakeholders to sponsor events or individuals through the NSDI.
 - Prepare an annual award plan in geography, mathematics, statistics and related fields for students and learners at primary, secondary and tertiary institutions.
 - Prepare education competitions in specific GIS critical areas to encourage innovation e.g. creative map design, GIS programming, remote sensing, spatial statistics, 3-D cities, etc.
- Metadata Certifications
 - Prepare conformance certificates for metadata and other NSDI standards.
 - Confer conformance certificates to data custodians.
 - Publish a list of NSDI standards certified institutions and inform the general public accordingly.

6. PERFORMANCE MEASURES

An annual performance report shall be produced and shared with NSDI stakeholders as from the 2018/2019 financial year. However some aspects of the performance indicators can be implemented sooner, as work progress. The performance indicators shall be benchmarked on the following broad areas:

- User satisfaction;
- Timeliness of information dissemination;
- Effectiveness of NSDI services e.g. number of spatial data requests;
- Availability and accessibility of NSDI Geo-portal;
- Website statistics of users;
- Activeness of the user group;
- GIS adoption rate in government agencies.

NSDI COMMUNICATION PLAN ACTIONS

High Level Goals, Objectives and Actions	Activities	Outcomes	Time Frame	Cost N\$
Strategic Objective C1. Communications, Awareness and Promotion				
Key Performance Indicators				
Indicator 1: The NSDI is readily and widely recognized across government and by business and civil society.				
Indicator 2: The NSDI Website is used regularly (monitor using standard web analytics methodologies).				
Indicator 3: NSDI news and information (articles, press releases) are distributed widely and frequently.				
<ul style="list-style-type: none"> NSDI identity materials 	<ul style="list-style-type: none"> Design an NSDI logo. 	<ul style="list-style-type: none"> Agreed NSDI logo available in various formats for publicity. 	2015	150,000
	<ul style="list-style-type: none"> Define and procure NSDI corporate gear and materials for public awareness campaigns, incorporating different themes. 	<ul style="list-style-type: none"> Public awareness material ready for use. 	2015-2016	
<ul style="list-style-type: none"> NSDI Website 	<ul style="list-style-type: none"> Develop a NSDI Website. 	<ul style="list-style-type: none"> NSDI Website is available. 	30/09/2015	
	<ul style="list-style-type: none"> Include information page to report on NSDI progress. 	<ul style="list-style-type: none"> Information page available. 	2015-2016	
	<ul style="list-style-type: none"> Integrate the NSDI Geo-portal. 	<ul style="list-style-type: none"> NSDI Geoportal is available. 	2015-2016	
	<ul style="list-style-type: none"> Provide links to other NSDI stakeholders. 		2016-2017	
	<ul style="list-style-type: none"> Monitor website usage / statistics. 	<ul style="list-style-type: none"> Website usage statistics report. 	2017-2018	
<ul style="list-style-type: none"> NSDI Newsletter 	<ul style="list-style-type: none"> Formulate a newsletter (style, etc.). 	<ul style="list-style-type: none"> Newsletter style defined. Pilot Newsletter produced 	2015-2016	500,000
	<ul style="list-style-type: none"> Collect and compile NSDI news from NSDI stakeholders and NSDI Secretariat (ongoing). 		2016-2017	
	<ul style="list-style-type: none"> Promote the ADCC (Advance Data Capture Calendar). 		2016	
	<ul style="list-style-type: none"> Create, edit and publish the newsletter (online and other digital formats - quarterly). 	<ul style="list-style-type: none"> NSDI Newsletters published. 	2016-2017	
<ul style="list-style-type: none"> NSDI Promotional Materials 	<ul style="list-style-type: none"> Design common NSDI PowerPoint template. 	<ul style="list-style-type: none"> The NSDI PowerPoint template. 	2015	10,000
	<ul style="list-style-type: none"> Develop NSDI PowerPoint promotional materials, e.g. NSDI policy, basic concepts of NSDI, strategic and action plan for NSDI, benefits of NSDI. 	<ul style="list-style-type: none"> NSDI Promotional material. 	2015	
	<ul style="list-style-type: none"> Share NSDI promotional material with NSDI stakeholders. 	<ul style="list-style-type: none"> NSDI promotional available. 	2015-2016	
<ul style="list-style-type: none"> Periodic Print publications 	<ul style="list-style-type: none"> Write periodical articles for the media on NSDI progress. 	<ul style="list-style-type: none"> NSDI articles sent to public media and on NSDI Website and Newsletter. 	Quarterly	100,000
	<ul style="list-style-type: none"> Prepare media releases and public relations materials. 	<ul style="list-style-type: none"> Press releases for distribution to media and on NSDI website. 	Quarterly	

NSDI STRATEGIC ACTION PLAN

High Level Goals, Objectives and Actions	Activities	Outcomes	Time Frame	Cost N\$
<ul style="list-style-type: none"> Communiques 	<ul style="list-style-type: none"> Timely dissemination of Committee for Spatial Data communiques to the different communication platforms. 	<ul style="list-style-type: none"> CSD Communiques distributed. 	Quarterly	100,000
	<ul style="list-style-type: none"> Timely dissemination of NSDI Secretariat communiques to the different communication platforms. 	<ul style="list-style-type: none"> NSDI Secretariat Communiques distributed. 	Quarterly	
Strategic Objective C2. Outreach				
Key Performance Indicators				
Indicator 1: The GISNA is re-established and becomes active in support of NSDI implementation.				
Indicator 2: Achieve high visibility in national, regional and global SDI forums, programmes and activities.				
Indicator 3: Stakeholder engagement targets are met both inside and outside government, including participation in awards and competitions.				
Indicator 4: Annual targets for issuing NSDI Standards Compliance Certificates are met.				
<ul style="list-style-type: none"> Email Contact List 	<ul style="list-style-type: none"> Create and maintain a mailing-list for NSDI stakeholders. 	<ul style="list-style-type: none"> Stakeholder E-mail list created. Stakeholder E-mail list updated. 	2015-2016	3,000
	<ul style="list-style-type: none"> Establish a mail list for users to NSDI Secretariat. 	<ul style="list-style-type: none"> Mail list established. Mail list updated. 	2015-2016	
<ul style="list-style-type: none"> Active user group 	<ul style="list-style-type: none"> Initiate discussion with GISNA on the possibility to revive the association. 		2016-2017	533,000
	<ul style="list-style-type: none"> Define and support the functions of GISNA to serve as the NSDI user group. 	<ul style="list-style-type: none"> ToR for support functions of GISNA as NSDI User Group. 	2017	
	<ul style="list-style-type: none"> Provide liaison with GISNA as a key platform to advance NSDI programs. 		2017	
	<ul style="list-style-type: none"> Encourage and promote GIS professional certification. 	<ul style="list-style-type: none"> Liaise with government on behalf of the GIS profession. 	2016-2017	
<ul style="list-style-type: none"> Workshops, meetings and conferences 	<ul style="list-style-type: none"> Prepare for, promote and conduct quarterly NSDI Socialization workshops with NSDI stakeholders. 	<ul style="list-style-type: none"> Strengthened NSDI stakeholder relationships. 	Annually	680,000
	<ul style="list-style-type: none"> Prepare for, promote and conduct country-wide public NSDI awareness campaigns. 	<ul style="list-style-type: none"> Contribute to an information society. 	Continuously	
	<ul style="list-style-type: none"> Arrange and host annual NSDI Conferences with GISNA. 	<ul style="list-style-type: none"> 2 conferences hosted in the reference strategy period. 	Biennially (every 2 years)	970,000
	<ul style="list-style-type: none"> Create material for and execute spatial data/ SDI education public awareness campaigns. 	<ul style="list-style-type: none"> Contribute to an information society. 	Continuously	450,000
	<ul style="list-style-type: none"> Represent the NSDI at international platforms, meeting, workshops and conferences. 	<ul style="list-style-type: none"> International exposure of Namibia NSDI. 	Ad hoc	

NSDI STRATEGIC ACTION PLAN

High Level Goals, Objectives and Actions	Activities	Outcomes	Time Frame	Cost N\$
<ul style="list-style-type: none"> Interoperability Forums 	<ul style="list-style-type: none"> Evaluate and report on active interoperability platforms. 	<ul style="list-style-type: none"> Interoperability platform evaluation report. 	2017-2019	500,000
	<ul style="list-style-type: none"> Participate in NSDI platforms e.g. SADC, AU and GSDI. 	<ul style="list-style-type: none"> Monitor the forums. Send articles and messages to the forums. 	2016-2017	
	<ul style="list-style-type: none"> Liaise and cooperate with other regional countries in NSDI initiatives. 	<ul style="list-style-type: none"> Define Terms of Reference for liaison with external groups. Manage the liaison and ensure active cooperation. Report on the cooperation. 	2016-2017	
<ul style="list-style-type: none"> Sponsorships and Awards 	<ul style="list-style-type: none"> Encourage NSDI stakeholders to sponsor events or individuals through the NSDI. 	<ul style="list-style-type: none"> Identify potential sponsors. Define type and level of sponsorship needed, and potential benefits to the sponsors. Liaise with potential sponsors. Monitor and manage the sponsorship execution. 	2016	10,000
	<ul style="list-style-type: none"> Prepare an annual award plan in geography and GIS related fields for students and learners at primary, secondary and tertiary institutions. 	<ul style="list-style-type: none"> Define goals/ToR(s) for the awards. Liaise with education sector (NEID) in promoting the awards. Secure sponsorship for the awards. Conduct award competition. Publicize the results. 	2016	100,000
	<ul style="list-style-type: none"> Prepare education competitions in specific GIS critical areas to encourage innovation, e.g. creative map design, GIS programming, remote sensing, spatial statistics, 3-D cities, etc. 	<ul style="list-style-type: none"> Define goals/ToR(s) for the competition(s). Liaise with education sector (NEID) in promoting the competitions. Secure sponsorship for the awards to be given. Conduct the competitions. Publicize the results. 	2016-2017	200,000
	<ul style="list-style-type: none"> Prepare an 'Organisational SDI Best Practice Award' for Namibian institutions implementing the NSDI (inside and outside government). 	<ul style="list-style-type: none"> Set ToR for the award. Seek sponsor(s) for the Award. Promote the award. Conduct the award procedure. Publicize results. 	2017-2018	100,000

NSDI STRATEGIC ACTION PLAN

High Level Goals, Objectives and Actions	Activities	Outcomes	Time Frame	Cost N\$
<ul style="list-style-type: none"> NSDI Standards Certification Announcements 	<ul style="list-style-type: none"> Publish a list of NSDI standards certified compliant institutions and inform the general public. 	<ul style="list-style-type: none"> Monitor the NSDI Standards Compliance Certification database. Update and publish (online) the list of certified institutions. 	Certification by 2017	120,000

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