

NSDI HIGHLIGHTS

NAMIBIA NSDI HIGHLIGHTS, VOLUME 1, ISSUE 4, OCTOBER – DECEMBER 2017

2nd Committee for Spatial Data



When the term of the 1st committee for spatial data ended on 31 March 2017, the Minister of Economic Planning in consultation with the Ministry of Land Reform appointed members of the 2nd committee to serve for the next three (3) years (2017-2020). The following people were nominated to serve on the committee:

1. Mr. Ndilipunye Shanyengana , Surveyor-General and Chairman
2. Mr. Alex Shimuafeni, Statistician-General and Administrator of the NSDI
3. Mr. Faniel Maanda (City of Windhoek)
4. Ms. Anna Nguno (Ministry of Mines and Energy)
5. Dr. Lisho Mundia (Ministry of Higher Education, Training and Innovation)
6. Mr. Mathias Metz (Geocarta Namibia)
7. Ms. Anna Erastus (Marine Expert nominated by Minister of Fisheries & Marine Resources)

Message from the Statistician-General

The NSA has since February 2016 to date conducted more than 20 high level management socialisations to government Offices, Ministries and Agencies (OMAs) with the aim to sign and formulate NSDI partnership agreements (memoranda of understanding). However, only twelve (12) institutions have signed the NSDI partnership agreement so far while some major institutions are yet to sign the partnership agreement.

Any successful NSDI must include establishing:

- Spatial data sources (in Namibia these are official producers of government data);
- Metadata system to discover, evaluate and use spatial data;
- Network services and technologies for delivery spatial information and services;
- Implementation rules and agreements on spatial data sharing, exchange, access and use;
- Terms of use of spatial information and related services;
- Coordination and monitoring mechanisms;
- Processes and procedures including standards;
- NSDI geographic portal or geoportal for accessing metadata and spatial information;
- Physical and human resources
- Strong national awareness, advocacy and political will

You, our esteemed stakeholders are very important as the NSDI cannot function without your cooperation and quality and authoritative spatial data which is in your custodianship. You are therefore highly requested to participate in the establishment and maintenance of the infrastructure to ensure that we have quality and up to date spatial data that is representative and is able to assist in spatial planning at national level.



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Agency**



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Development and Launch of the National Geographic Portal of Namibia

The NSDI Policy states that the NSDI Secretariat (NSA) shall ensure that there are mechanisms in place to access spatial data and metadata. Since national geographic portals are commonly and widely used to find and access spatial data, the NSA embarked on developing a geoportal and metadata catalogue for spatial data in Namibia. In order to ensure that the stakeholders are involved and their inputs are incorporated, NSA hosted a geoportal appraisal workshop on the 7th of June 2017. The workshop served as a platform for stakeholders to give their recommendations regarding access to and dissemination of spatial data. The installation of the initial national geoportal and metadata portal on NSA's infrastructure was done during the period of 12 to 16 June 2017. More than five (5) NSA staff were fully involved as part of building capacity in the Agency.

Honourable Tom Alweendo, Minister of Economic Planning in consultation with Hon. Utoni Nujoma, Minister of Land Reform officially launched the national geographic portal on 21 August 2017 at Safari Hotel in Windhoek. Hon Tjekero Tweya, Minister of Information and Communication Technology and Major-General Shilunga, NAMPOL also witnessed the official launch, alongside other high level officials from various institutions including our development partners. Hon. Alweendo appealed to all government directorates to live up to their mandate by maintaining and documenting their data. He further emphasized that we risk to have a system that is redundant with outdated information if we do not live up to our mandates.

Hon. Utoni indicated that due to the NSDI's magnitude and technical nature, support is required from the donor community and private sector to build a responsive information infrastructure.

In order to create awareness to a wider audience of spatial data producers and users, the national geographic portal was later rolled out to the regions during the period of 8 to 21 October 2017. The roll out plan was aimed at stressing the objectives and importance of the NSDI as well as to inform the regional stakeholders about the existence of the geoportal, educate them on how the geoportal functions and to encourage them to use the system for spatial related services that they may require. All the regional councils across the country were targeted as they can bring together all the stakeholders in their respective regions.



geofind.nsa.org.na

"Building a Spatially-Enabled Society"

Online search, view and perform basic geospatial analysis on fundamental datasets held by government bodies and available private sector bodies.

A graphic with a blue background. On the left, there are three devices: a laptop, a tablet, and a smartphone, all displaying the geofind.nsa.org.na interface. On the right, the website name is written in large white letters, followed by the slogan in a blue italicized font. Below that, a short description of the portal's capabilities is provided in white text.

National geographic portal user statistics: 21 august – 31 October 2017

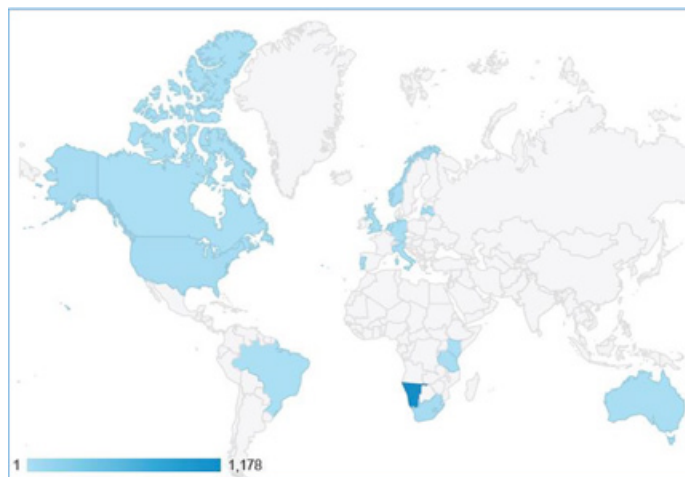
The NSDI Secretariat has been tracking user statistics since the official launch of the national geographic portal. The user statistics serve as a management information tool to anticipate the best possible solution and also to understand user needs. Both the metadata catalogue and the map viewer have the capability to automatically generate user statistics. This report provides an overview of the trend in users on both the systems.

URL 1: <http://www.digitalnamibia.nsa.org.na/>

Location Overview

The map below shows the location of active sessions on the geographic portal, the intensity of the blue colour represents the amount of sessions. More than 90% percent of sessions were from Namibia.

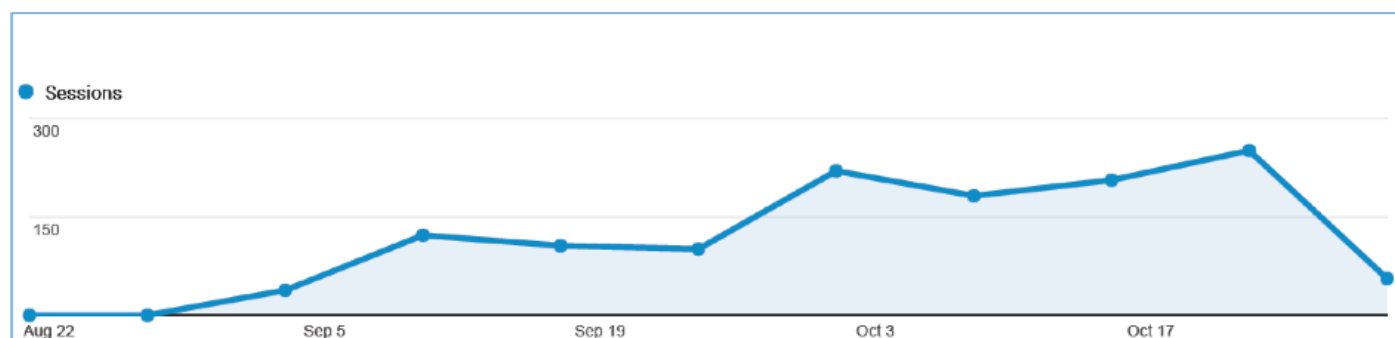
Outside Namibia, the United States of America topped the user list of the geoportal during the period under review (21 August to 31 October 2017). In Africa, South Africa is top of the user list followed by Tanzania.



		1,282
		% of Total: 100.00% (1,282)
1.	Namibia	1,178 (91.89%)
2.	United States	31 (2.42%)
3.	South Africa	24 (1.87%)
4.	Norway	12 (0.94%)
5.	Portugal	8 (0.62%)
6.	Tanzania	7 (0.55%)
7.	Australia	6 (0.47%)
8.	Germany	5 (0.39%)
9.	Netherlands	3 (0.23%)
10.	Brazil	1 (0.08%)
11.	Canada	1 (0.08%)
12.	United Kingdom	1 (0.08%)
13.	Italy	1 (0.08%)
14.	Kenya	1 (0.08%)
15.	Lesotho	1 (0.08%)
16.	Latvia	1 (0.08%)
17.	(not set)	1 (0.08%)

Audience Overview

The graph below gives an overview of the users from 21 August until 31 October 2017. It shows a steady rate of increase of users on the national geographic portal. The peaks are in October as this is when the roll out plan was executed as well as the GIS user producer training in Mariental and Swakopmund.



National geographic portal user statistics: 21 august – 31 October 2017

New users who have accessed the geographic portal were 544 since the launch date to 31 October and they have had 1 282 active sessions on the portal with an average session lasting 11 minutes and 14 seconds. Total registered users on the portal stands at 80 to date. New visitor percentage is 42.4% and returning visitor is 57.6%, meaning that more than 50% of the users return having used the portal. It is pleasing to note that the geoportal has recorded a bounce rate of only 0.23% during the period under review.



URL 2: <http://www.geofind.nsa.org.na/>

This URL leads to the metadata catalogue as a component of the geoportal system. Mostly users who visit this site are interested in searching for and evaluating the condition of the spatial datasets in the infrastructure. It must be noted that like with the map viewer, the number of people interested in evaluating the datasets is increasing. A total of 9 641 searches are recorded since the deployment of the system end of June 2017. It must be noted that the most preferred search criteria is by visible records. The mean searches by month was 241. The most popular record is UTL_3G_Network_Coverage from CRAN.

Service	Criteria	Number of Searches
Search	_op2	3059
Search	Visible by	3054
Search	Type of record	1210
Search	_locale	931
Search	_owner	578
Search	_dummy	542
Search		
Search	_rating	115
Search	_id	41
Search	Indexing error	33
Search	Service type	30
Search	_uuid	19
Search	_root	16
Search	Topic	5
Search	Full text	4
Search	Category	2
Search	Keyword	2
	Total	9641

Data and Information Workshop

Spatial data is one of the critical components in any given National Spatial Data Infrastructure. The Namibia Statistics Agency recently hosted a five day Data and Information workshop at Heja Game Lodge from the 2nd to the 6th October 2017 where 13 institutions were represented by 65 participants. The main objective of the workshop was to assess the current state of the national spatial data in the infrastructure and create a national priority list for data acquisition. The points of discussion included the following:

- The need for national and institutional awareness on NSDI;
- Data quality and documentation;
- Data security and protection of copyright of the state;
- The manner of refusal of access to, and dissemination of spatial data;
- Possible cooperation model for the private and NGO;
- Review of data gaps;
- Generation of a national priority list;
- Upcoming and ongoing national spatial data collection by government;
- Data that is currently not available but is required and needs to be part of the NSDI;
- Ideas for the development of a Namibia Aerial Imaging Programme (NAIP)

NSDI capacity building workshops

As per the capacity building initiative of the NSDI, it is of importance that government ministries and agencies are able to use and understand GIS and its applications as this will speed up the implementation of the NSDI in the country. It is against this background that NSA conducted NSDI capacity building trainings simultaneously from the 23rd to the 27th of October 2017 in Swakopmund and Mariental. The Swakopmund training catered for Erongo, Otjozondjupa and Khomas regions while the Mariental training catered for the //Karas, Hardap and Omaheke regions.

Eighty (80) participants were expected, but eighty five (85) eventually attended the trainings. The training focus areas were the introduction of the NSDI development strategy and NSDI products such as the national geographic portal, use of GPS, basic spatial analysis, query tools, Google Earth and map creation. Overall, the trainings were successful as the objectives were met and the participants found the content covered very useful for their work.

Draft Advance Data Collection Calendar

As per the NSDI policy, the NSDI secretariat is to provide information about the current and planned spatial data in the country. In order to fulfil this mandate, the NSDI secretariat embarked on the establishment of an advanced data collection calendar to generate a list of future spatial data collection activities in the country within the current strategic plan (2015-2020). Stakeholders were engaged on envisioned spatial data collection projects at the recently held data and information. This resulted in the generation of a national priority list. The proposed dates for the collection of national priority datasets could not be specified as all the institutions are facing financial challenges during this financial year. For further planning the NSDI Secretariat, through the committee for spatial data will have a high level socialisation to the permanent secretary forum to introduce the national priority list and emphasise on budget allocation for these activities.

National Priority List

Priority Item No.	Priority Item Name	Working Group	Lead Agency
1.	Acquisition of national high resolution aerial images	MLR, NSA, MME, MAWF	MLR
2.	National Geodetic Network	MLR, NSA, MME	MLR
3.	National Cadastre	MLR, NSA, MAWF, Telecom	MLR
4.	National multi-hazard early warning system	NSA, OPM, Ministry of Work, MAWF, Ministry of health, MLR ...	OPM, MAWF
5.	Geoscience Infrastructure	MME, NSA, MAWF, OPM, MLR (NSDI institutions)	NSA
6.	Capacity Building in OMAs	OMAs	NSA
7.	High resolution (cm) Digital Elevation Model for flood-prone areas	MAWF, MLR, NSA, OPM, Finance Ministry	MAWF
8.	National Build up Structure frame (DU frame)	MURD, NSA, MITSME, Shack dwellers, MLR	NSA
9.	National Parks	MET, MLR, MAWF, NSA	MET
10.	National Heritage (Heritage Sites, arts, intangible cultural heritage) and Tourism Activities	MEAC, National Heritage Council, NSA, Museum Association of Namibia, MET-Tourism,	National Heritage Council

The Namibia Institute of Town and Regional Planners embraces the NSDI

A high level NSDI presentation was made to the Namibia Institute of Town and Regional Planners on Friday, 27 October 2017. The institute held its spring school in Windhoek. Among the key elements emphasised is the need for town planners to stop keeping raw town planning data paid for by the government after a consultancy. The protection of copyright of the state need to be upheld and those who violate this provision can be legally taken to task. The Institute welcomed the NSDI and hope this will be among the main driver towards the development of the national spatial development framework for Namibia as per the town and regional planning bill. Similar efforts are being made to engage the Namibia Council of Professional Land Surveyors and Survey Technicians (SURCON).

Lack of national technical expertise hampers the development of the Namibia Spatial Data Quality Handbook

As part of the roadmap to certification of national spatial data as official, the NSA, is formulating a structured capacity building plan for participating government institutions. The two parts programme consists firstly of a focused capacity building programme in mapping and Geographical Information Systems (GIS) provided to regional and national technical personnel of different government bodies. Secondly is the development of standards practical implementation guidelines which are to be structured into a focused capacity building programme. The practical handbook shall document both quantitative and qualitative spatial data quality elements as per the NSDI standard using Namibian examples.

The NSA is currently facing challenges with regards to technical capacity in the country to develop the practical handbook. Several GIS firms and academic institutions were approached to provide proposals for the handbook but no interest was expressed. The NSA is thus looking for assistance from the global community through the Global Spatial Data Infrastructure Association (GSDI) to find a suitable professional to develop this highly technical document.

Dreams for the NSDI conference 2018

The NSDI secretariat is planning to host a SDI national conference to create national and international awareness on the importance of the NSDI. The secretariat is looking for inputs from our NSDI stakeholders and the public on the realisation of this conference. For information and inputs please contact Ms. Lovisa Nangombe on 0614313200 or email lnangombe@nsa.org.na. Interested stakeholders can also visit us at the NSA head office FGI house in Post Street Mall Windhoek.

Internship experiences at the NSA (Department of GIS and NSDI Coordination)

MCDelan Bowe

I have always wanted to be part of the NSA team since the beginning of my studies and well, nothing has changed much since then. Now that I have gotten to be even just a temporary part of the team as I am only an intern I am still having a better time and experience than I imagined. The NSA has a very warm and comfortable atmosphere and environment to work in. I have been exposed to meeting many new and interesting people during my time here. Not to mention the large number of new skills and qualities I have gained from my time so far at the NSA. If there is one thing that I have learned while being here that stands out from the rest it is that teamwork is a very important aspect within an organization and needs to be highly encouraged.



Elisia Gottlieb

Since my first year at NUST, I have always wanted to be part of the NSA team. My dream came true when I joined the team in September 2017. NSA is a friendly workplace where people work together and organise their work with one another so that the work flows. As a result, the workplace is managed in a coordinated manner and the atmosphere here is good. The fresh, beautiful faces that I see every morning remind me of how confident, hard-work and successful one can be.

Overall, my work experience at NSA has been fruitful so far. I am very happy with the skills I have acquired and the experience I have gained during the past two months that I have been here.



1. Census mapping in preparation for the 2021 PH census by the NSA

The Census pre-enumeration cartographic work also known as census mapping is the foundation for a successful Population and Housing Census (PHC) exercise. It defines, demarcates, and systematically codes every inch of land in the country into smaller geographical areas known as Enumeration Areas frame (EAs). This process is required to ensure that the frame is complete and accurate.

This exercise is normally done well in advance before the next census enumeration to take into account changes that occurred after the previous census such as population growth and administrative boundary changes. The census mapping exercise also provides the opportunity to collect other relevant information such as data on Infrastructure in the country and geo-referenced household listing information (Dwelling Unit Frame). This multifaceted information is vital for effective government service delivery to all the people and will make the NSDI benefits more apparent to all the sectors of society.

The dwelling unit frame being one of the outputs of the mapping exercise will benefit the nation in the following manner;

- The rationalization of the country's main geographical areas (i.e. regions, constituencies, towns, municipalities) can be done more correctly at a dwelling level.
- Changes to the country's official political boundaries puts great stress on census and survey data, to continuously keep in synch and back tracking of time series data for comparison purposes. Having exact dwelling locations can be provided with greater accuracy for frequently changing political geographies.
- Information on the number and location of households and other structures is beneficial for statistics related to education, health, policing, businesses, etc. and improved service delivery, which goes beyond the statistics scope.
- Generally a Dwelling Unit Frame promotes public accountability as it allows for the easier assessment of the effectiveness of service delivery to citizens.

The NSA plans to undertake this project two years ahead of the 2021 Population and Housing Census, but with the current financial situation that the country is facing it might be a challenge securing the required funds to undertake this project. It is hoped that through partnerships and cooperation with organization, ministries and agencies this project will be a success.

Article submitted by: Nevel Ngahahe-Hangero (Senior GIS Analyst, NSA)

2. Experience of the Namibian NSDI by a PhD Student

The Namibian government through the Namibia Statistics Agency (NSA) is developing a National Spatial Data Infrastructure (NSDI). Through my interaction with the NSDI Coordinator at NSA I had been given the privilege of attending a one-week workshop conducted for the NSDI stakeholders from 2nd to 6th October 2017. This invite occurred in appreciation of my PhD research work which recognises Namibia as an important informant. The workshop took place at Heja Lodge in the country side and my impression of the workshop location was that it was an awesome place to hold such a workshop as it took participants away from the city centre, their daily activities and focussed them on fundamental NSDI issues.

The emphasis of this workshop was to gather information from participants as much as it could be possible regarding NSDI issues such as awareness, policies, geospatial data and institutions. It was noted with much appreciation the level of representation of the various government departments and Parastatals in the workshop which generally averaged around five participants per organisation. In addition, participation by the Private Sector have been traced but It will be good if the participation of private Sector and Non-Governmental Organisations (NGOs) can increase at this early stage. Regarding the level of representation, it makes sense to accede that there is a clear intention to make the NSDI truly national.

In acknowledgement of the participation drive it was noted that all those who are involved did come on board and participated fully in order to ensure that their main concerns are taken on at an early stage. When the major thrust of the workshop shifted towards data sets it was realised that interest levels of organisations went up with telling contributions coming from the participants. All the main stakeholders such as Geological, Agriculture, Land Reform, Health, Statistics and Utilities gave very good accounts of the geospatial data that they are responsible for and gave indication of their ongoing data acquisitions and future plans.

What impressed the most in the data custody issues is how NSA would readily take responsibility of some data sets where custodianship could not be ascertained, this in my view speaks volumes for continuity. In overall the Namibian NSDI will provide a lot of data to my research work and the expectation is that it will go to confirm or dispute a number of theoretical consideration in my PhD studies.

Article submitted by: Lopang Maphale (PhD Candidate, University of Cape Town)

3. Reflection on the NSDI Capacity Building Training (Mariental)

The Namibia Statistics Agency (NSA) invited different line Ministries to attend and participate in a training on Geographic Information Systems (GIS) and Global Positioning Systems (GPS). Mr. Albertus Engelbrecht – Deputy Director: Lands //Kharas, Ms. Nolene Thompson – Development Planner: Lands //Kharas and Mr. Junias Amadhila – Development Planner: Planning & Development Services were nominated and delegated by the //Kharas Regional Council to attend the five (5) day training.

The capacity building training included both theoretical presentations and practical sessions. This was very useful as practical exercises contribute more towards the overall understanding and performance of tasks involved. The introduction to Open Source software like QGIS and OziExplorer helped a lot as participants can now perform tasks at their Offices on their own. Spatial data analysis using vector and raster data contributed to the understanding of how to create and interpret maps using different layers/shapefiles. The training therefore contributed a lot to town and regional planning and effective communication.

This training has equipped us with the basic functionalities and benefits of GIS. The end goal is to help officials make well informed decisions with the help of spatial data. Participants were informed that an advanced GIS training will be offered in future.

This training will directly contribute towards the achievement of the Strategic Objective: Enhance Spatial planning in the region as stipulated in the Strategic Plan 2017 – 2022 of //Kharas Regional Council.

It is recommended that a bigger venue be organized when such trainings are conducted, as the venue that was used was too small, seeing the fact that each participant had to work on his/her own laptop. We would also like to recommend that the //Kharas Regional Council establish a GIS Section within the Division- Planning and Development Services. This Section shall consist of staff members of Division- Planning and Development Services and Division Lands. The staff members assigned to this Section shall be responsible for the assessment (suitability and ownership) and mapping of land in //Kharas Region.

Compiled by: *Albertus Engelbrecht, Deputy Director: Lands //Kharas*
Nolene Thompson, Land Use Planner: Lands //Kharas
Junias Amadhila, Development Planner: Planning & Development Services

New data release bulletin

- National Sampling Frame September 2017 from NSA
- 2017 Network Coverage from CRAN

4. Reflection on the NSDI Capacity Building Training (Swakopmund)

The importance of GIS within our institutions cannot be overemphasised. As Town Planners we use GIS as a tool to profile our informal settlements, create various maps, and incorporating information to have it in one place. We can use GIS to show availability of different municipal services e.g. water, sewer and electricity lines. The training held in Swakopmund gave practical emphasis on the use of GIS as a tool that can assist many professionals within our Local Authorities and not only Town Planners. The recently held GIS training by the NSA team in Swakopmund has been truly appreciated as it clearly highlighted the importance of using GIS in our various institutions. The efforts by NSA to create a spatially enabled society are therefore appreciated. It is my wish that many other people have an opportunity to attend such trainings in the future. Thank you NSA for the training offered.

Article Submitted by Hilma Nambahu (Town Planner, Otavi Town Council)

Did you know?

Spatial data official certification

According to the Statistics Act 9 of 2011 all official and other statistics must be certified for quality. This includes national spatial data. Within the framework of NSDI, NSA will commence with the preparation of a national compliance programme for spatial data as per the NSDI strategic plan 2015-2020.



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