



# XXVII FIG CONGRESS

11-15 SEPTEMBER 2022  
Warsaw, Poland

Volunteering  
for the future –  
Geospatial excellence  
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## “Digital Namibia” — a National Geographic Portal data for urban planning

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## INFORMAL SETTLEMENTS IN NAMIBIA

Approximately 60% of the world populations now reside in urban areas (UN-Habitat, 2020).

By 2018, an estimated 30%- 40% of Namibia's population were living in shacks.

The Namibian government recently declared informal settlements a humanitarian crisis due to precious conditions of limited access to water, sanitation and tenure security (Republic of Namibia, 2011).



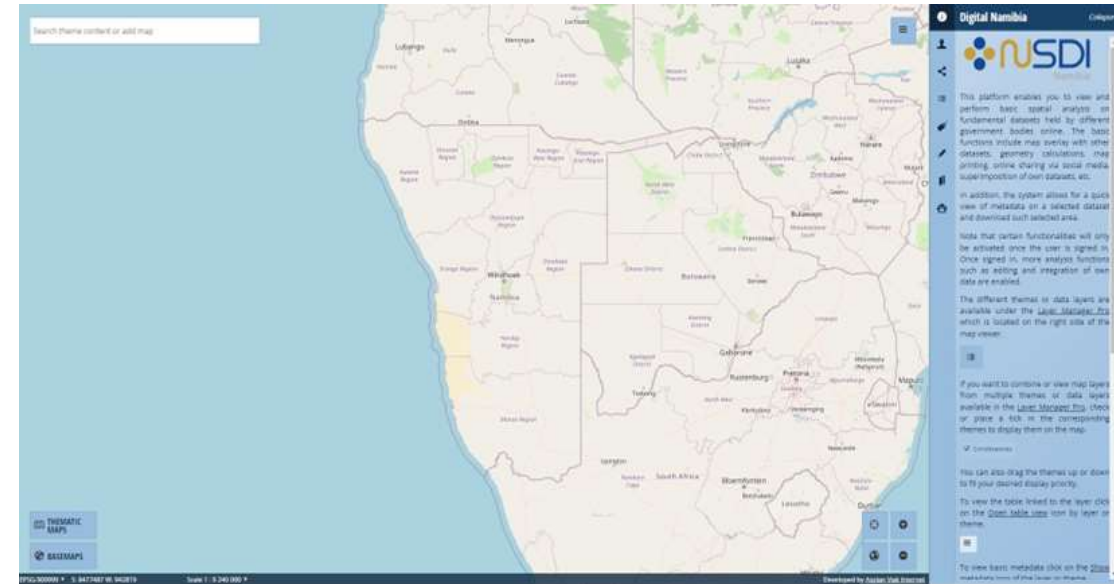
Informal Settlements in Windhoek

## WHY GEOGRAPHIC DATA?

- Geographic data for planning can help address rising informal settlement challenges in Namibia.
- It enables the visualisation of geographical locations' attributes and metadata (such as terrain and demographic information, etc.) in reading, comprehending, and disseminating scenarios in a spatial development process.
- Geo-data is important for spatial planning, as it is affordable when available and can inform the design and planning of rapid growing cities.
- Planners use geographic information to inform designs and provide solutions to spatial challenges.
- The use of geo-data in planning provides opportunities for land management and can support the attainment and measuring of SDG 11 (United Nations, 2008).
- This information enables relevant authorities or institutions to implement evidence-based policy decisions and activities.

## INTRODUCING THE NATIONAL GEOGRAPHIC PORTAL OF NAMIBIA

- The Namibia Statistics Agency (NSA), established in 2012, has the mandate of collecting, sharing and providing awareness on the use and benefits of spatial data in Namibia (Republic of Namibia, 2011).
- Furthermore, the National Spatial Data Infrastructure (NSDI) Policy was promulgated on the 6th of March 2015 as guided by the Statistics Act No. 9 of 2011.
- The NSDI Policy mandates the NSA to ensure that instruments are established to provide spatial data freely accessible. Geographic portals are internationally used to access spatial data, the NSA thus established the National Geographic Portal on the 21st of August 2017.



Namibia National Geoportal web page

## REGIONAL ROLL-OUT OF THE NATIONAL GEOGRAPHIC PORTAL

Since 2015 the NSA has conducted training workshops in the Kunene, Oshana, and Oshikoto and Zambezi regions .

Through the training workshops, the NSA assessed the readiness of the regional council's information technology infrastructures.

Institutions were trained and introduced to QGIS (Quantum GIS) as an open source GIS application.



NSA awareness and training workshops

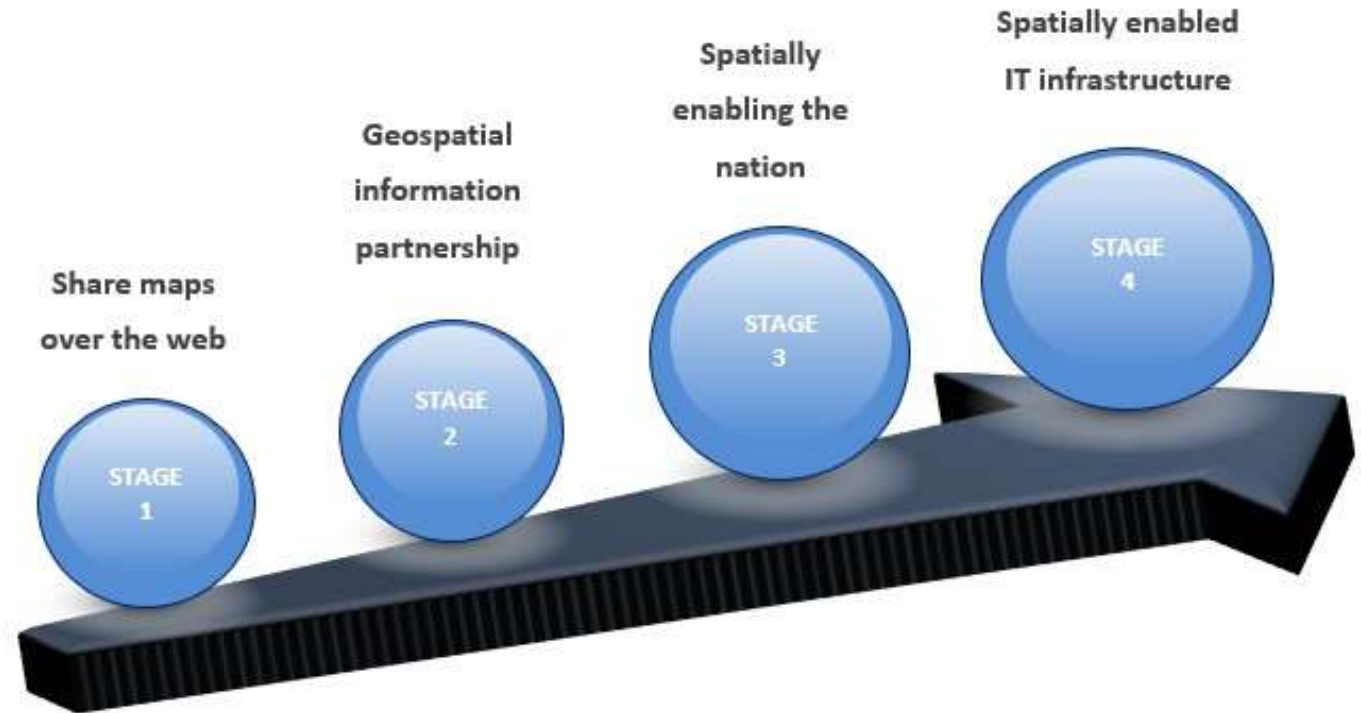
## CHALLENGES FACING THE NATIONAL GEOGRAPHIC PORTAL

- The portal experiencing some downtimes as reported from some users.
- Loading layers under the Layer Manager takes time and sometimes results in unsuccessful outputs.
- The system/platform is generally slow in terms for editing.
- Data on the portal is not complete nor is it up to date. This might be a result of how data is integrated.

# BRIDGING THE GAPS AND WAY FORWARD

Spatial Data Quality Elements	
<b>Completeness</b>	This measures the degree with which a dataset is detailed <u>e.g.</u> level of omission, aspect of fitness of use (Guptill& Morrison, 2013).
<b>Logical consistency</b>	Datasets should be logically consistent with the real world and encoded geographic data (NSA,2022).
<b>Positional accuracy</b>	The accuracy of the measurement of horizontal and vertical numerical of the feature. After transformation has been performed on a feature, this may alter the longitudinal and latitudinal measurements (Guptill& Morrison, 2013).
<b>Temporal quality</b>	This describes how accurate the dataset is to the world time and geographical database time (NSA,2022).
<b>Thematic/attribute accuracy</b>	The accuracy of all attributes of a dataset that is tied to an earth position must be accurate along with the values of such an attribute (Guptill& Morrison, 2013).

# BRIDGING THE GAPS AND WAY FORWARD



Geospatial Levels of Standards Use (Source: United Nations ,2015)



## TAKE HOME POINTS

- Geographic data for planning can help address rising informal settlement challenges in Namibia.
- Geo-data is important for spatial planning, as it is affordable when available and can inform the design and planning of rapid growing cities.
- The implementation Spatial Data quality elements enable a global sharing of geospatial data that is compatible with the global GIS interface.
- Geographic portals are important for planning and socio-economic development
- Awareness campaigns should be carried out nationwide, for all the relevant institutions to utilise the National Geographic Portal for planning purposes.

## Taking the discourse forward

### INVITATION TO UPCOMING EVENTS

- FIG SPECIAL SESSION: Perspectives on urban-rural land governance for a spatially inclusive future - needs and actions for China(Re)structuring institutions and governance (15 September 8-10 am CET)
- CONFERENCE: Land governance and Societal Development Conference (Hybrid 8-11 November 2022)
- All events are facilitated by the Namibia University of Science and Technology (NUST) and the Hanns-Seidel Foundation, Shandong (China)
- Other partners: the GLTN and China Land Surveying and Planning Institute



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