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THE MANNER AND SPECIFICATION FOR THE CAPTURING OF SPATIAL DATA INCLUDING ANY APPLICATION FOR EXEMPTION FROM SUCH MANNER OR SPECIFICATION

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1. INTRODUCTION

The National Spatial Data Infrastructure (NSDI) Policy for Namibia requires that production of spatial data and development and operation of the NSDI must be carried out in an inclusive, cooperative and collaborative manner under the current policy and legal frameworks under the leadership of the NSA. Under section 36b(1) of the Statistics Act read together with schedule 1 of the NSDI Policy made

standards relating to the manner and specification for the capturing of spatial data, including any application for exemption from such manner or specification and measures relating to the avoidance of duplication of capture and safeguarding the integrity of captured spatial information.

2. SCOPE

The NSDI policy, Section 12.1 (d), requires that a government institution and any institution outside government that produces data for government or any institution that wishes to contribute to the NSDI shall do so only after confirmation has been obtained from the NSDI secretariat that the dataset proposed to be collected does not exist, and that there is a need to fill a gap with such data. The purpose of this specification is twofold; firstly to harmonise the respective annual or other budgets for geospatial data capturing by the different government bodies and secondly to provide guidelines for the manner of capturing spatial data. The regulation is directed at meeting the objectives of the NSDI as laid out in the Statistics Act, No. 9 of 2011.

3. CONFORMANCE

The specification requires a *certification or consent* to be issued to an applicant who, having submitted an application to the NSDI secretariat for new spatial data collection and such application having been duly assessed, meets the minimum requirements to potentially make the final datasets as forming part of the NSDI. A consent shall be granted subject to final data quality assessment reports and submission of the metadata meeting the metadata specification requirements.

In addition, a *notification* shall be provided to an applicant who, having submitted an application to the NSDI secretariat for new spatial data collection and such application having been duly assessed, does not meet the requirements of the NSDI policy. Note that products emanating from such undertaking shall not be designated as *official spatial datasets* and shall not form part of the NSDI. Such datasets shall not cause an authoritative source of information for government. The NSA shall provide an *improvement plan* to an applicant who did not meet the requirements within a timeframe of 7 working days from the date of submission of such feedback to the applicant.

4. TERMS AND DEFINITIONS

4.1 National Spatial Data Infrastructure

The Statistics Act No. 9 of 2011, establishes the NSDI as the national technical and institutional framework to facilitate the capture, management, maintenance, integration, distribution and use of spatial data.

4.2 NSDI Secretariat

Is interchangeably used in this specification to mean the Namibia Statistics Agency (NSA) which is the Agency tasked with the responsibility to coordinate the establishment of the NSDI.

4.3 Common, multi-purpose geospatial data

These are geospatial data that serve or can serve a multitude of purposes and includes data from which a number of specific datasets can be derived. All imagery including orthoimagery belongs to this data type, as well as those considered to be fundamental data.

4.4 Dedicated, specialised geospatial data

These are geospatial data that serve a specific purpose or a limited number of purposes that are highly specialised, collected and only used by a limited number of professions or experts.

4.5 New geospatial data

New geospatial data are any geospatial data that were previously not acquired and for which no clearly identified custodian/owner exists or for which the custodian/owner is unknown in Namibia. It also includes geospatial data for which only incomplete data are available and a new initiative is required to fill the spatial or attribute data gaps not part of an ongoing initiative.

4.6 Geospatial data requiring frequent updating

Under geospatial data requiring frequent updating is understood:

Geospatial data that was previously acquired but is part of a program requiring frequent updating, i.e. at less than five year time intervals.

4.7 Existing geospatial data

Under existing geospatial data is understood: Geospatial data that was previously purchased, collected or captured as a one off activity and that is not part of a program requiring frequent updating.

4.8 Public geospatial data

All geospatial data collected by government bodies that do not contain confidential data or contains security issues or contain data belonging to indigenous knowledge rights, or data that if published may pose risks to endangered or valuable animal and plant species or other natural resources, belongs to the public domain. Public domain data are freely usable without legal restrictions but as any other source should be properly cited when used.

4.9 Fundamental datasets

Fundamental datasets are spatial datasets that 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. Fundamental geospatial datasets should represent data that can be trusted, certified and described according to a common standard.

4.10 Framework datasets

Framework datasets in the Namibian SDI context are a class of fundamental datasets that provide reference for other fundamental and dedicated, specialised geospatial datasets. These datasets are often gazetted and are among the most stable datasets due to their authoritative nature. The datasets must always be produced at the highest accuracy as they provide a background to superimpose or orient any other datasets e.g. administrative boundaries.

4.11 GIS

A geographic information system or geographical information system (GIS) is a system designed to capture, store, manipulate, analyze, manage, and present all types of spatial or geographical data.

4.12 GPS

The abbreviation GPS stands for Global Positioning System, which is a global navigation satellite system (GNSS) that provides location and time information in all weather conditions, anywhere on or near the Earth where there is an unobstructed line of sight to four or more GPS satellites.

4.12 Mapping grade GPS receivers

A mapping grade receiver in the Namibian SDI context is a mapping GPS that is capable of averaging horizontal coordinates of positions to least one (1) meter or less.

5. THE MANNER AND SPECIFICATION FOR CAPTURING OF SPATIAL DATA

Requests for acquisition of geospatial data, except those that are exempted from this specification, need to comply with specifications for quality and metadata as prescribed in those specifications. Submissions for new data collection need to arrive at the NSDI Secretariat well in advance, at least three (3) months before the new annual budget hearing or 3 months before the product is required if it is part of an approved budget to allow the normal procurement procedures to be implemented.

In the case of commissioning of data not protected by copyright or licensing agreements, patents or similar, the handover of digital data, databases and software specifically developed for the tasks described in the procurement documents by third parties to the government body commissioning the data is mandatory and this clause has to be included in all tender dossiers and contracts to avoid that public domain data is restricted by contract law. The NSA will seek the advice of the Committee for Spatial Data for all requests that are not exempted from this specification.

For exemption purposes this specification differentiates between types of geospatial data, whether they are dedicated, specialised or a common, multipurpose dataset; whether they concern a new initiative; requiring frequent updating or one-off gap filling.

5.1 New geospatial data

- 5.1.1 New geospatial data are any geospatial data that were previously not acquired and for which no clearly identified custodian/owner exists or for which the custodian/owner is unknown in Namibia.
- 5.1.2 This includes geospatial data for which only incomplete data are available and a new initiative is required to fill the spatial or attribute data gaps as not part of an ongoing initiative.

5.2 Application procedure

The following are guidelines for submitting an application for new spatial data collection to the NSDI secretariat.

- 5.2.1 Verification of the existence of such data in the NSDI advance data collection calendar
 - An institution/applicant undertaking a new spatial data collection project must first verify that such datasets do not exist and are not entered into the NSDI release/advance calendar.
 - b) This is to avoid data duplication of efforts and wasting government resources.
 - c) Where such new dataset exists but technological advancement has allowed for a more superior method of collection with higher accuracy the project shall be treated as an updating project and only the NSDI advance release calendar shall be updated and the old dataset archived upon completion.
 - d) Note that some of the spatial datasets such as national, regional or constituency boundaries require gazetting in the government gazette. This process must be followed in order to consider such dataset official and fit for public usage.
- 5.2.2 Submitting an application of intent to the NSDI secretariat
 - a) Following subsection 5.2.1 the applicant is required to submit an application of intent to the NSDI secretariat motivating the need to fill the gap with this new dataset.
 - b) The application can be in form of a full written application or a project specification in form of terms of reference of such a project.

- c) The submitting organisation shall ensure alignment of the terms of reference of the new data collection exercise to the requirements of the Statistics Act, No. 9 of 2011 and the NSDI policy.
- d) The relevant minimum provisions are issues of:
 - *i.* Data collection methods to be used:

Note that mapping grade receivers shall be used where GPS technology is used in GIS data collection for framework fundamental datasets. Guidelines for cadastral mapping are clearly stated in the Land Survey Act of 1993 and related regulations. The methods or key requirements for collection should be properly documented in the terms of reference/application where appropriate, referring to peer-reviewed publications and reports where data is specialised. The use of tools that imply the use of a software having implications for further processing on such platforms should be avoided and only proposed when there is no alternative.

ii. Data processing procedures

Where data is generated from secondary sources, data custodians should always use verifiable sources of superior accuracy than the intended purpose of the data. When using secondary sources, custodians should be cognitive of the additive nature of errors, from inherited source errors to integration and processing errors. Data validation exercises should therefore be conducted to quantify both closeness to true position and semantic. The procedures for validation are included in the spatial data quality specification.

- *Minimum spatial data quality specifications* for each dataset for each of the quality parameters in the spatial data quality standard.
- iv. Accessibility:

Refer to Sections 12.7(b) and 13.4 (b) of the NSDI policy

- v. Copyright and Intellectual Property Rights:
 Refer to Sections 14 (a), 14 (d) and 14 (e) of the NSDI policy
- vi. Capacity building:

 Refer to Section 13.1 and 17 (c) of the NSDI policy

5.2.3 Sending Application to the NSDI Secretariat

- a) The application shall be addressed to the NSA by mail or email three (3) months before commencing with data collection.
- b) The NSDI secretariat shall acknowledge receipt of such application within 3 working days of receipt.
- c) The secretariat shall then conduct a preliminary assessment of the application or terms of reference mainly to verify if national legal and policy provisions are met by such an application.
- d) The application shall be forwarded to the Committee for Spatial Data immediately for deliberation if the NSDI secretariat feels that some issues in the application require committee inputs.

5.2.4 NSDI Secretariat Communicate Feedback with 15 working days

- a) The NSDI secretariat shall communicate feedback from the Committee for Spatial Data to the applicant, whether approval has been granted or there is a need for an improvement plan for the project.
- b) This feedback shall be passed within 15 working days from the application receipt date.
- c) Failure by the NSDI secretariat to respond within the stipulated period will be assumed to mean there is no objections to the request.

5.3 Resubmission for minor changes

- 5.3.1 Where recommendations for minor alteration to the application or terms of reference were made, the applicant resubmits the modified application to the NSDI secretariat for immediate feedback after verification of such changes without going through the Committee.
- 5.3.2 All major modifications will have to go through the Committee for Spatial Data and the normal 15 working days feedback timeframe shall be upheld.

5.4 Issuance of a Consent Letter

The NSDI secretariat shall in writing issue a consent letter to the applicant certifying that the project should go ahead and that the new dataset is potentially fit to be incorporated into the NSDI pending final data quality assessment reports.

5.5 Supplying of Data Quality Assessment Reports to the NSDI Secretariat

- 5.5.1 Once the project deliverables are obtained the organisation shall supply to the NSDI secretariat all the data quality assessment reports and mandatory metadata requirements.
- 5.5.2 The minimum metadata requirements should be in accordance with the approved NSDI metadata standard.

5.6 Assignment of Data Custodianship

- 5.6.1 The NSDI secretariat once satisfied, will consult the organisation responsible on the assignment of data custodianship.
- 5.6.2 Where the collecting organisation accepts custodianship the NSDI shall report such to the Committee for Spatial Data and register accordingly in the ADCC.
- 5.6.3 Where data custodianship is different from the data producing organisation, such assignment of custodianship shall only be approved by the Committee for Spatial Data after consultations with the relevant NSDI stakeholder(s).

5.7 Submission of Final Metadata

- 5.7.1 The assigned data custodian shall submit all the metadata according to the prescribed metadata standard, including any supporting documentation, in digital form to the NSDI secretariat.
- 5.7.2 Every data custodian that conform to and provide metadata for spatial data holding in accordance with the metadata standard shall be issued with a conformance certificate (Section 12.3 (d) of the NSDI policy).

- 5.7.3 Spatial datasets not complying with either the data quality or metadata specification shall not be included in the NSDI metadata catalogue and the public shall be informed accordingly.
- 5.7.4 The NSDI secretariat shall present the metadata into a catalogue as provided for in Section 11.1(c) of the NSDI policy.
- 5.7.5 Data custodians not meeting data quality specifications on their specific spatial datasets shall not be certified and users will be notified of such datasets.

6. EXEMPTIONS

6.1 Dedicated, specialised geospatial data

- 6.1.1 The acquisition, updating or gap filling of dedicated, specialised data as part of a programme of established Namibian custodians is exempted from this specification.
- 6.1.2 The exemption does not apply for the acquisition of a new dedicated, specialised dataset for which no custodian exists in Namibia or for such datasets for which custodianship in Namibia is not established.

6.2 Common, multipurpose geospatial data

- 6.2.1 Such data that are updated frequently, within a timeframe of five years, are exempt from a submission for the acquisition to the NSDI.
- 6.2.2 From this exemption are excluded: all imagery, including orthoimagery, all large countrywide geospatial data collections for updating common multipurpose data involving field based data collection (the motivation for this is that it is possible that with little extra effort some additional data might be collected as part of such a large activity that can be of value to others).
- 6.2.3 Such data acquisition must first be recorded in the NSDI Advance Data Collection Calendar (ADCC).
- 6.2.4 In a collaborative way, all NSDI data custodians shall be made aware of any upcoming data capturing by any member as registered in the ADCC to avoid duplication and maximise data sharing and utilisation.
- 6.2.5 Where a data acquisition is not registered in the ADCC, the data custodian is compelled to apply for clearance from the NSDI secretariat following the normal application procedure as per this regulation.

6.3 Emergencies

- 6.3.1 Exemptions for submission to the NSDI secretariat of the requirement of new geospatial data are national emergencies declared by the president or local emergencies for which any delays in purchase, capture, collection or production of geospatial data of any form would put lives or the economy at risk.
- 6.3.2 For declared emergencies exemption is automatically granted. Others need a motivation to be approved by the Committee for Spatial Data and a clearance letter issued by the statistician general.

7. DECLARATION OF INTEREST

- 7.1 Where a Committee for Spatial Data member is directly and substantively linked to the subject-matter of the application, such member shall excuse him/herself from such a meeting /application.
- 7.2 The declaration of interest shall be registered by all members before discussing the application.
- 7.3 All matters discussed on the application shall be treated with highest confidentiality, in compliance with the Statistics Act, to promote trust within and outside the NSDI environment.
- 7.4 The confidentiality clause in the Statistics Act, Part VIII shall apply when treating applications.