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Development of a knowledge base for geospatial information

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Report of the Secretary-General

Summary

The present paper contains a proposal for the development of a knowledge base for geospatial information to be located at the United Nations.¹ The report provides the context for the proposal and indicates that a key function of the Committee is to compile and disseminate the best practices of national, regional and international bodies on issues related to geospatial information management, in particular in respect of institutional arrangements, technical processes and the establishment of spatial data infrastructure. Member States have identified the issue as a priority for discussion.

The report considers the creation of a searchable and continuously updated repository, to be built on the existing resources of the website of the United Nations Initiative on Global Geospatial Information Management, which is maintained by the Statistics Division secretariat and provides information on current practices in managing geospatial information around the world. In addition, the report describes the contents of the knowledge base, illustrated by examples of geospatial infrastructure initiatives at the national, regional and global levels, and ways in which the contents will be structured. The Committee is invited to express its views on the development of a knowledge base for geospatial information.

* E/C.20/2012/1.

¹ The full report is available in the language of submission only from http://ggim.un.org/ggim_committee.html.

I. Introduction

1. The resolution of the United Nations Economic and Social Council (ECOSOC) establishing the UN Committee of Experts on Global Geospatial Information Management (UNCE-GGIM) “emphasizes the importance of promoting national, regional and global efforts to foster the exchange of knowledge and expertise, to assist developing countries in building and strengthening national capacities in this field.”² It goes on to explicitly identify in the terms of reference one of the main functions of the Committee as follows: “to compile and disseminate best practices and experiences of national, regional and international bodies on geospatial information related, inter alia, to legal instruments, management models and technical standards, thus contributing to the establishment of spatial data infrastructures, while allowing for flexibility in the development of national geospatial activities”.

2. After the inaugural session of the UN Committee of Experts on GGIM in October 2011, the secretariat, following a mandate given by the Committee, conducted a round of consultations with experts from Member States about an inventory of geospatial information issues for the Committee’s consideration at future sessions. The issue of a “Resources and Knowledge Base” was identified as one of the priority issues for the Committee to address³.

3. It is based on this mandate that this report proposes some options on the development of a knowledge base for the global geospatial information community, that can provide information, knowledge and support to the national geospatial information authorities and other users and stakeholders, who are interested to share and exchange information on best practices and experiences in the geospatial information area.

II. The Proposal

4. The current GGIM website, located at <ggim.un.org>, already has a section titled “SDI & RP: National Practices in Geospatial Information Management”, which is populated with information and documents provided by the national geospatial information authorities of the countries to provide information on national situations. It is proposed to build on this existing repository and expand on it to obtain a searchable and living repository, providing information on current practices in national geospatial information around the world, including guidelines on mapping organizations management, existing models of institutional arrangements, and development strategies. Information on regional and global data infrastructures could also be provided.

III. Contents

5. The development of the knowledge base reflects the commitment of the GGIM secretariat to facilitate the sharing of experiences and best practices in the management and development of national spatial data infrastructures and arrangements. This work will start with the collation of good practices in institutional arrangements, legislation and regulatory frameworks, and will continue to improve the contents and functionalities of the website. The initial contents may include the following:

(i) Profiles of National Geospatial Information Authorities including: history, legal framework, geospatial data collection methods, analysis and dissemination mechanisms,

² ECOSOC resolution 2011/24

³ Refer also to E/C.20/2012/5

and quality assurance frameworks. The profiles will also include the specific roles the National Geospatial Information Authorities' have in providing quality, current and authoritative national geospatial information for their governments;

(ii) Links to existing websites of national and international institutions and organizations involved in geospatial information management as well as links to relevant events, in order to facilitate the continuous exchange of information among the major players;

(iii) Documents and analysis of existing national and international strategic geospatial information frameworks, legislations, policies, principles and guidelines which communicate and exemplify the value of geospatial information to politicians, decision makers, and other influential champions.

(iv) Key technical features of National, Regional and Global Spatial Data Infrastructures, including documents provided by countries, regional and international organizations;

(v) Good practice guides, which give examples of how countries are building and developing their national geospatial information capacity, in order to facilitate the sharing of knowledge and practices in all aspects of the development of national spatial data infrastructures;

(vi) Technical documentation and reference material that provides information on matters such as: geodetic reference frames and positioning; developing and implementing core framework datasets; data management and integration models; legislative and statutory frameworks; data licensing policies and practices; and geospatial standards and interoperability principles. Guidelines, studies and important reports on other technical aspects and institutional arrangements will also be included;

(vii) On-line questionnaires from the UN on the status of geospatial information in the world. The information collected will be used to develop country profiles, good practices and lessons learned in the dissemination and use of geospatial data;

(viii) Best practices in relation to the implementation of the Statement of Ethics when it is introduced.

6. These elements of content are a starting point to be enriched and completed by proposals from countries, regional and international organizations, as well as the geospatial community at large. In order to function well and maintain a high degree of relevance, it is imperative that the knowledge base will be continuously updated with information provided by countries and the geospatial information community. This will require the full commitment of all partners to contribute fresh information to this knowledge base.

IV. Structure

7. It is proposed that the main ordering principle for the knowledge base should be the three levels of national, regional and global. At the national level, examples of national geospatial information activities such as the Canada Geospatial Data Infrastructure, the Spain NSDI, and the Malaysian SDI will be provided; at the regional level, the example of the European INSPIRE initiative which has defined the policy, governance, and technical guidance for a pan-European standards based geospatial information infrastructure would be presented; and at the global level, the knowledge base would incorporate information on OneGeology, Global Map, GEOSS, etc. to show how geospatial information concepts can

successfully be deployed as a global asset.

8. Plans for further development of the knowledge base in the future include adding educational material such as learning activity modules and also developing the online forum for discussions. This could be done in cooperation with the Geographic Information Knowledge Network (www.giknet.org), already initiated by GSDI Association.

9. The development of a knowledge base as a resource center for geospatial information has been identified by Member States as one of the priority issues to be addressed by the UN Committee of Experts on GGIM. In response to this need, The GGIM Secretariat has formulated this proposal as a starting point to be enriched and developed further. The report outlines the initial content and the structure of this proposed knowledge base.

V. Points for discussion:

10. The Committee is invited to:

- (a) Express its views on the development of the knowledge base for geospatial information, in particular its content and structure.**
- (b) Call on all partners to actively contribute relevant information and documentation to the knowledge base.**