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United Nations Geographic Database amd on the United Nations Maps*

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UNITED NATIONS GEOGRAPHICAL DATABASE AND ON THE UN MAPS

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Background:

As the recognized mapping authority in the UN, the UN Cartographic Section prepares numerous maps for the briefing and reports that are presented at meeting including the Security Council consultation. These maps assist the audience in locating unfamiliar places through geographic names that are referred to in the briefings and reports. Consequently, correct representation of the geographical names plays an important role in the process of understanding the situation on the ground and ultimately in the decision making process.

Due to the growing demand of maps for these briefings and reports, the Cartographic Section decided to develop a common UN geographic database to enhance the map preparation process.

One of the important objectives of the UN Database Project is to increase the capabilities of the UN staff in using geographic information in the UN documents on a daily basis. The accomplishment of this objective largely depends on how well geographic names can be integrated into the database to assist all UN staff in using geographical information. This paper summarizes the current status of the UN geographical database and the requirements for geographic names incorporated into the UN maps.

UN Geographic Database Project:

The concept of creating a UN geographic database was initiated and developed by the UN Cartographic Section, in consultation with various UN agencies. In August 1999, during the International Cartographic Association (ICA) conference in Ottawa, a special meeting was held to which over thirty experts and representatives from national mapping agencies and other organizations were invited to comment on the project.

Since then, the concept of UN Geographic Database Project has been presented in many international and regional conferences. Many international, regional and national organizations, research institutes and industries have expressed their support and have

endorsed the project. Through a strategic alliance, these organizations have agreed to provide in-kind services including data access, advisory service, training and donation of software/hardware.

The project has received strong support from many UN agencies leading to the formal establishment of the UN Geographic Information Working Group (UNGIWG) in March 2000. The ultimate goal of the Working Group is to promote the use of geographic information within the UN system for better decision-making. Since their creation the Working Group had four annual meetings.

The primary goal of the project is to create and maintain a global geographic database consisting of basic cartographic elements and toponymic information. This will, serve as a geo-referenced base for UN operations and for overlaying and exchanging information within the UN system. As planned the project should have several phases of implementation.

Phase I of the project funded by the UN Foundation started in August 2001 and is now at the final stage before completion. Scope of work of this phase included four major components namely strategic planning, geographic data inventory and clearinghouse, quick impact data development and application pilot

1. UN Geographic Information Strategic Plan

The development of the UN Geographic Information Strategic Plan was contracted out to the Open GIS Consortium (OGC), a non-profit organisation with more than 250 members of industry, academia, NGOs and governments. Based on interviews and questionnaires, OGC developed the Plan, which recognizes the importance of geographic information in the UN operations and provided a number of recommendations that should be implemented to maximize the use of geographic information. For example, the Plan recommends that the Member States be invited to establish a UN Commission on Geographic Information to develop data sharing partnerships by interacting with the Member States, NGOs, industry and academia. Such a forum would ensure sustainability of the UN Spatial Data Infrastructure.

2. Geographic Data Clearinghouse

As part of an attempt to establish a clearinghouse for the UN system to ensure easy access to information on existing geographic data, a clearinghouse node was successfully created in the Cartographic Section to assess the feasibility and identify difficulties in implementing such a system.

3. Quick Impact Data

The quick impact data consists of 3 data sets, which include international boundaries, administrative boundaries and country profile data.

The international boundaries database is one of the most important data layers of the quick impact data. The initial development has been completed and technically ready to be shared. It allows UN cartographers/map makers to use a common worldwide database.

An agreement was reached with the World Health Organization (WHO) in Geneva to jointly develop the Second Administrative Level Boundaries database (SALB), which will form part of the quick impact data. WHO has finished collecting publicly available boundaries data and is in the process of validating and edge matching of those data. As for countries that do not have boundaries data available in the public domain, the WHO has created the data for those countries. The validation process is being done by communications with the Member States through the Cartographic Section and the UN Map Library. The SALB project will require a few more years to complete its initial data coverage.

The Cartographic Section has been producing country profile maps since its establishment. However, the production and the maintenance of such products are time-consuming without a common global database. It is expected that the quick impact data will accelerate the production of these small-scale maps

To meet the requirements of the country profile database, first two comprehensive geographical datasets of the level of detail of 1:5 million and 1:10 million scales have been developed. While these datasets are considered to satisfy most of the needs in the UN HQ for briefing maps, the implementing partners requested more detailed data, in particular, for African continent. It was decided to develop a 1:1 million-scale dataset that covers the areas including Africa, the Middle East, Central/South Asia and Caucasus that have important UN activities. World gazetteer developed by NGA (the US National Geospatial-Intelligence Agency; former NIMA) serves as the main source for geographical names on all these datasets.

4. Application Pilot

Application Pilot is a software application and a key component in this project to allow the users in the UN HQ to easily get access to and make use of quick impact data and other geographic data available in the internet including those provided by the field missions for their preparation of briefing and reporting materials. In order to allow successful searches even on small geographic objects, the application is designed to accept local gazetteers in addition to the pre-loaded World gazetteer of NGA.

The above-mentioned components of the UN geographical database and especially Quick Impact Data and the Application Pilot include many aspects that deal with geographical names. In fact the complex of geographical names is an integrated part of the Database. It is very important to continue improving the practice of using the names of the geographical objects on the products developed in the UN Cartographic Section.

Geographic Names:

The geographical names that appear on the UN maps come from different sources. For the name of the country, which is a member of the UN, we use the name officially provided by the country to the UN. The names of the Member States could be found in the UN Terminology Bulletin maintained by the UN Terminology Section. All other names are collected from different maps. The priority of course is given to the maps made by the country itself. Sometimes the Member States provide the UN with the official maps that spell the names according to the view of that particular country.

We also have to keep in mind that some names could appear in the disputed areas and could reflect the view of only one party; therefore we have to apply a disclaimer to geographical names on all UN maps. The disclaimer on the UN maps is also necessary because in most of the cases for the preparation of the map showing the territory of particular country we have to use the material produced by other countries.

The geographical names are very important components of the geographical database and in particular the UN geographical database. While the World gazetteer developed by NGA is a very comprehensive source for the geographical names that is digitally available, we very often need to use other sources for more detailed information. Very often there are two or more variants of spelling of the name of the same object that could be found in different sources. There are several locations with the same name could be found in one country.

In order to make the maps that accompany the UN documents more informative and objective we need to include into the UN Database the reliable national and local digital gazetteers that contain all geographical names used in the country or region concerned. Unfortunately the countries where the UN operates are very often in crises and/or have no resources available for creating such gazetteers. The UN largely depends on the international community and member states to improve this situation.

It would be also helpful to have additional attributes into digital gazetteers to produce more informative GIS and cartographic products. The most useful of these additional attributes would be the information on the population, especially at the town level.

Including additional attributes into the geographical database could help to solve a problem with finding the correct location of the geographical objects that have the same name. For example the Office of Coordinator for Humanitarian Affairs (OCHA) is using P-code (abbreviated from Place-code) that has been used very successfully in their field operations.

As mentioned above, it is very important to harmonize the spellings of geographical names on the map with those in the text of the UN report. There are two issues that should be solved:

1) Appropriate spellings of the names need to be selected and applied to both the map and the text. Local digital gazetteers would help solve this issue.

2) Suitable ways of handling diacritical marks for the maps and the text need to be developed.

While the development of local digital gazetteers would help choose the appropriate spelling of names, the technical problem of presenting the diacritical marks, especially in the text of reports, still remains. The lack of easy solutions for incorporating certain diacritical marks into the text with the word processing program with English or French (UN working language) keyboard also prevents us from using these marks on the maps, although there is a technical solution, for the sake of consistency between the text of the report and the map.

Conclusion:

The UN Cartographic Section provides maps for many UN reports and briefings. The development of the UN Geographic Database is expected to enhance this important task. Integration of correct geographic names information is critical for the successful development of this database. Cooperation with the Member States and other international/regional organizations would be a key for the successful development of the UN Geographic Database.