

Scoping Note on
Critical Issues in Global Geographic Information Management (GGIM)
Listed in the Agenda Item of the Second Preparatory Meeting
of the Proposed United Nations Committee of Experts on GGIM
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1. Introduction

Thanks to the timely initiative of UN Statistical Division/DESA and UN Cartographic Section/DFS on global geographic information management (GGIM), the geographic information community now has an unprecedented opportunity of significantly contributing to the world under auspices of the United Nations in solving outstanding global issues including climate change and disaster management by employing its expertise and experiences on geographic information management. What is lacking now is an international framework that could integrate such expertise and experiences and make them yield tangible outcomes to the world. This idea is addressed more in detail in the scoping paper submitted by Dr. Kazuo Komaki of GSI to the first preparatory meeting held in Bangkok in conjunction with the United Nations Regional Cartographic Conference for Asia and the Pacific in October 2009, and its full text is quoted at the end of this note for easy reference.

Based on the scoping paper, this short note addresses the views of GSI on some of the subjects listed under the agenda item “Critical Issues in Global Geographic Information Management” in the provisional agenda of the second preparatory meeting of the proposed UN Committee of Experts on GGIM.

2. Governance: global consultation and governance

There have been many efforts on the use of geographic information, including projects and initiatives conducted by international organizations, but no formal international framework exists to enable member States to provide assistance to such efforts in dealing with global issues including devastating natural disasters and climate change. We need a new formal international framework under UN auspices that enables the member States to provide support to the UN agencies in managing and employing geographic information in dealing with global challenges without relying on efforts made by voluntary countries and organizations. Such an international framework should also be able to provide technical assistance, including capacity building and technology transfer, to some of the member States that do not have adequate resources and expertise in using geographic information.

3. Technical Reviews

There are many important technical issues that need to be addressed and solved in the Committee of Experts, including technical standards, data integration and data policy. However, the Committee will greatly benefit from enormous efforts that have already been made on these subjects by many national, regional and international organizations. The Committee should build on these achievements when it discusses the technical aspect of GGIM in detail once it is established.

* As of 1 April 2010, the official English appellation of GSI was changed from the Geographical Survey Institute to the Geospatial Information Authority of Japan. The organizational structure, the responsibilities in the Government, the abbreviation of the appellation and the internet domain name all remain the same.

For example, ISO/TC211 and OGC have developed very important technical standards that should be adopted for GGIM without reinventing the wheel, with some necessary adaptations for global profiles.

With regard to public rendering of geographic information by the private sector, it is noted that recent development of satellite positioning and GIS technologies has significantly improved the capability of the industry and even individuals to develop and use geographic information, which has been playing an important role in disseminating the use of geographic information to the general public. However, geographic information in general is closely associated with national sovereignty of individual nations, except some general image data widely available in the public, and hence not every geographic information developed or owned by private companies or individuals should be used for official purposes without prior clearance by the government authorities. Geographic information that includes formal designation on national territories and used for official purposes should be, in principle, prepared and authorized by each sovereign nation.

4. Additional critical issues

The preparatory meeting should address the following points that are considered to help define the scope of the Committee. It is hoped that the participants will reach basic agreement on them (this should be the goal to be achieved during the preparatory meeting):

- i) What are the global issues and challenges, to which the geographic information community should contribute (this is not to prepare a complete list of applications, but to identify some outstanding issues that should be targeted to get tangible outcomes with improved GGIM)?
- ii) What could or should the geographic information community do for the global issues and challenges in terms of GGIM?
- iii) What is lacking and what needs to be done by the UN member States, if there is any, in support of UN agencies to improve GGIM? Is establishing a new international framework that enables member States to provide technical assistance to UN agencies in terms of GGIM an effective option to be considered?

Scoping Paper for the Proposed United Nation Committee of Experts on Global Geographic Information Management

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The complexity of the current global issues, including climate change, frequent devastating natural disasters, rapid population growth, food & water shortage and poverty, definitely require highly sophisticated uses of geospatial information. However, geospatial information has been least acknowledged by policy makers in the world and has not been well employed in solving them. In this respect, the proposed UN Commission of Experts (UNCoE) on Global Geographic Information Management (GGIM) should, as it is envisioned by the United Nations Statistics Division and the United Nations Cartographic Section, involve the member states in its discussion as it will raise the awareness of their policy makers on geospatial information.

Once the proposed UNCoE is established with the member states, the first thing the UNCoE would need to do is to address to the member states that the world cannot do without GGIM in solving the daunting global issues we are all currently and will be facing, as we try to safely navigate our planet Earth and save it for the future generations. In order to do that, it would of course be necessary to clearly define what we mean by GGIM and elaborate on its benefits for the member states and the world. Fortunately, many global and regional initiatives including GSDI, ISCGM, ISO/TC211, OGC, PCGIAP, PC-IDEA, INSPIRE and EUROGI (just to name a few) have already been working on different aspects of GGIM for a number of years with much technical expertise, have acquired a lot of knowledge and experience to help GGIM move forward, and have provided substantial deliverables (data, standards, institutional framework, etc.). Strong leadership of the proposed UNCoE under a UN mandate with adequate cooperation and support from the academia and industry would make these initiatives well coordinated and help them further improve GGIM that would enlighten many member states about its importance and meet the immediate needs of geospatial support to the world in solving the outstanding global issues.

In addition to the coordination of these existing global and regional initiatives, it would be crucial for the proposed UNCoE to make such global/regional efforts and GGIM sustainable, and it would be vital that each member state be positively involved in the above process by improving the geospatial information management in the country and be urged to make full use of the aforementioned existing information and resources. However, this seems to be where significant difficulty arises based on our experience with regional efforts through PCGIAP. Countries are so different in their knowledge and experience in geospatial information management or in developing their own spatial data infrastructure (SDI) as well as available resources and capacities. Many countries still need to establish their geodetic datum and prepare their base maps before even talking about an SDI, though such development is an important element of SDI. It would be important for UNCoE to address such needs of some member states and take leadership in tapping into available resources and coordinating technical and financial assistance to them. Then, those countries would be able to employ such existing resources with their own information for their applications and eventually provide support to sustain the GGIM.

As we try to involve the member states for sustainable GGIM, on the other hand, we may face some outstanding political issues including international boundaries, geographic names and

data policies that are difficult to find short-term solutions or compromises. While these are very important for some member states and should not be ignored, they should not bring hindrance to the furtherance of or jeopardize the sustainability of GGIM or UNCoE activities. In this respect, it is suggested that while taking careful note of such delicate political issues between some countries, UNCoE should find ways which will not allow them to deter its activities or distort its vision, in order to achieve truly sustainable GGIM for the benefit of all member states.

Furthermore, given that national mapping organizations (NMOs) have been leading national SDI efforts with adequate technical expertise in most countries, and representing their countries in UN conferences including UNRCCs and UNGEGN, NMOs would be the most appropriate stakeholder in the geospatial community to represent the member states and play important roles in UNCoE. In this connection, it is crucial that the UNCoE members should include NMOs as the primary organizations that represent the member states. In the case of Japan, for example, Geographical Survey Institute (GSI) is the national mapping organization and has been leading the national SDI initiative since 1995. In 2007 a new NSDI legislation was enacted as the result of our technical support to the lawmakers. GSI has also been providing technical assistance to developing countries with the Japan International Cooperation Agency (JICA) by preparing base maps and offering group training courses on surveying and mapping. Since the establishment of ISCGM in 1996, we have been serving as its Secretariat and providing substantial support to the progress of Global Mapping project. Our repeated experiences on responses to natural disasters with geospatial information and its analyses in our earthquake-prone country are another example of our potential role in disaster mitigation in the world. Once UNCoE is established under a UN mandate with NMOs as the core members, many NMOs including GSI would have stronger foundation in contributing to GGIM with more support from the respective governments, and be able to provide further assistance to other member states for sustainable GGIM. Most NMOs have participated in Global Mapping project. Therefore, I believe that the activities of UNCoE should have close relationship with the GM project.

Finally, it should be noted that much time has been spent so far in so many international conferences to discuss how we could develop a global SDI. While all these conferences greatly contributed to many global/regional initiatives and it is important to have proper understanding on what we are going to do for global SDI or GGIM, it may now be time for us to start acting on outstanding issues and producing tangible outcomes to the world. The proposed UNCoE should take an action oriented approach based on what we have achieved on global SDI, and become increasingly productive in its deliverables.