



# GLOBAL MAPPING NEWSLETTER 41

## Global Map: A Decade of Progress

*Prof. D. R. Fraser Taylor*  
*Chairperson of ISCGM, Professor of Carleton University, Canada*



**Prof. Taylor**

The year 2006 marks the 10th anniversary of the formal establishment of the International Steering Committee for Global Mapping. Preparations and discussions on the need for Global Mapping predated the establishment of ISCGM and in February 1991 a publication entitled *An Image Survey: Watching the Earth* was published by GSIJ which formed the basis for Global Map. The First International Workshop on Global Mapping was held in Izumo, Japan in 1994 followed two years later by the Second International Workshop of Global Map in Tsukuba. A concrete result of these two workshops was the establishment of ISCGM with Professor John E. Estes as Chair. Estes was a strong proponent of the need for core global datasets to support environmental decision making as was Kunio Nonomura, the Director General of the Geographical Survey Institute of Japan around that time.

The vision of the early pioneers of Global Map was impressive and great progress has since been

made towards making that vision a reality. In 1997 a proposal from Japan and the United States that Global Map be formally part of the Program for the Further Implementation of Agenda 21 was formally accepted by the 19th Special Session of the United Nations General Assembly. The National Mapping Agencies of all countries were invited to participate in the Global Mapping project and the foundational version of Global Map was released in 2000. Global Map received further support from the United Nations at the World Summit on Sustainable Development held in Johannesburg in 2002 and since that time the pace of the development of Global Map has accelerated. There are now 158 countries and regions involved with Global Map, an increase of over 20 percent since the Okinawa Declaration was made in 2003 by the participants attending Global Mapping Forum 2003 which stated "By having complete Global Map coverage by 2007 we will provide a spatial framework to facilitate the actions of the countries of the world both individually and collectively to conserve our fragile environment and make the development of our societies more viable and sustainable for future generations."

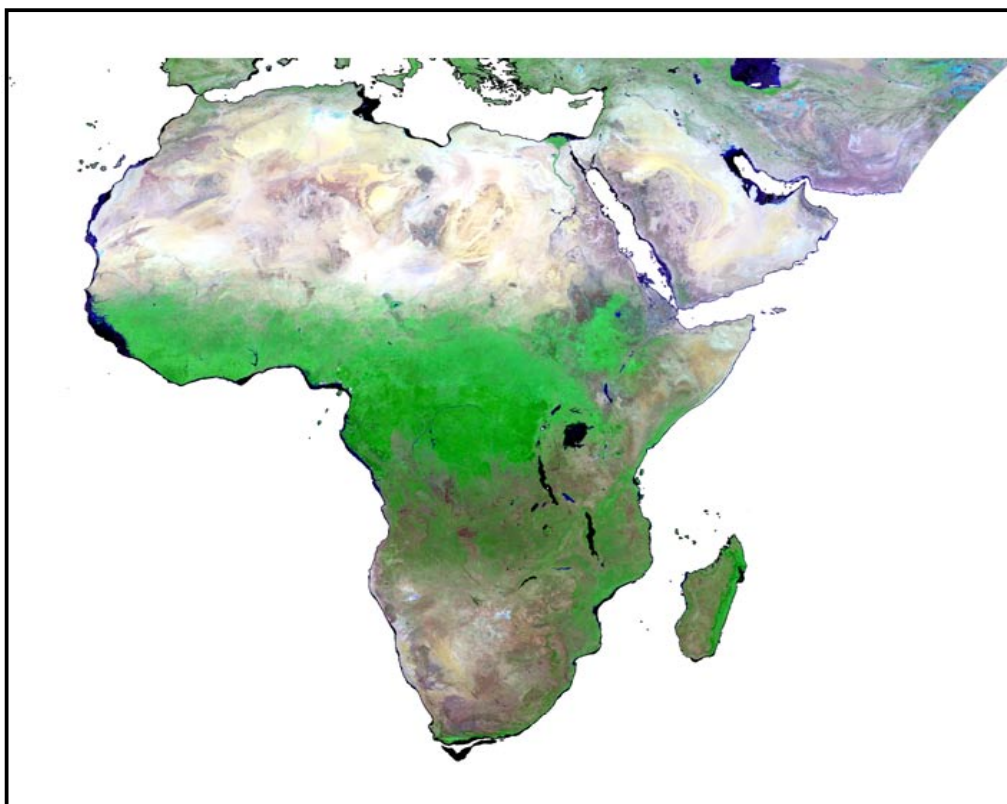
Global Map has developed new specifications, important new partnerships and is benefiting from regional cooperative efforts in Asia, Europe, Africa and Latin America. More nations are joining the Global Map family and existing members are intensifying their efforts to make Global Map a success. We have seen ten years of solid progress and although challenges remain the future are very bright.

## GLCNMO

*Prof. Ryutaro Tateishi*  
*Chairman WG4 of ISCGM, Professor of Chiba University*

The Global Mapping project has a plan to develop global land cover data by 2007 as land cover layer of Global Map. The planned product is called Global Land Cover by National Mapping Organizations (GLCNMO). The GLCNMO will have 1-km pixel size with approximately 20 land cover classes. The strategy and methodology to produce GLCNMO was proposed by the ISCGM WG4 on Raster Data Development and it was approved at the 11th and 12th meeting of ISCGM in February 2004 and April 2005 respectively. The GLCNMO is produced using MODIS data observed in 2003. The preprocessing of the MODIS data was completed by the Center for Environmental Remote Sensing, Chiba University. The figure shows preprocessed continental MODIS image after cloud removal. Land cover classification will be done using 16-day composites of 2003. At present, approximately one thousand

ground truth data (land cover training data) are being collected by about one hundred National Mapping Organizations throughout the world. The main contribution of the GLCNMO production will be to distribute not only land cover data but also collected ground truth data to any non-commercial users. By publishing and sharing ground truth data in data producer's communities, future land cover mapping attempts will be much improved. Another feature of GLCNMO is that its legend is based on the Land Cover Classification System (LCCS) developed by FAO. It enables to compare and integrate the GLCNMO with other LCCS-based land cover products. In addition to the global land cover data, the GLCNMO includes national/regional data which will be produced by some NMOs. It will be produced to meet regional/national requirements and regional/national geographical conditions.



**MODIS 1 km Data of July 12 to 27, 2003**

**RGB: Band 7 (Middle IR), Band 2 (Near IR), and Band 4 (Green)**

## Americas Global Map

*Mr. Edwin Hunt (Military Geographic Institute of Chile)  
Project Coordinator of the Americas Global Map*



**MGA Executive Committee - November 2005**

The Americas Global Map project is a new component of the Global Mapping project, strengthening it in the American Continents. It is an initiative of the Pan-American Institute for Geography and History (PAIGH), a specialized agency reporting to the Organization of American States (OAS). Discussions for a regional coordination in the Americas started after PAIGH entered ISCGM with a liaison agreement (2003).

The proposal developed over 2004-2005, gathered support from PAIGH National Sections, was established as a PAIGH Technical Assistance Project to obtain limited funding, and held its first meeting in Venezuela (November 2005), where it established an Executive Committee with members from several countries around the Americas. The general objectives are those of ISCGM at world level; however, to achieve those ends and reinforce Global Mapping, the Americas Global Map (MGA) works towards the following goals :

- Improve Compatibility between the Global Map materials provided by participating countries
- Help the progress of Global Map V.1 and V.2 in those countries
- Enable Global Mapping to re-focus on realities at regional level, thus improving the usefulness of the Global Map for final users
- Participate in the design of Global Map V.2

The specific tasks considered for 2006 are the following:

- Gather, assess and compare the existing Global Map Vector layer materials from participating countries.
- Determine strategies for communicating with

cartographic agencies and other relevant bodies that have not participated fully so far in the Global Mapping program, determine their needs, problems and situation in relation to the Global Map.

- Plan a Regional Global Mapping training workshop in coordination with ISCGM.
- Begin assessing issues and available related to thematic mapping and geodesic frameworks, in order to provide input to ISCGM and its working groups in relation to the Raster layers.
- Develop contacts with other organisations to achieve technical cooperation and to search for alternative sources of funding and financial support.
- Hold a second MGA meeting in conjunction with ISCGM-13 and GSDI-9 in November (Santiago, Chile – see [www.gsdi9.cl](http://www.gsdi9.cl) ).

Beyond 2006, assuming that financial support can be found, these activities should lead to :

- The coordination of a continuous map of the American continents based on the existing Vector material.
- Assistance for countries that have so far suffered from limitations to their participation, including (i) the regional training workshop, (ii) advice on their options for GM projects (iii) reports on results of the assessments of existing vector maps, and (iv) searches for solutions in countries where no such vector maps have yet been created.
- Above-mentioned advice (ii) to include recommendations for the Raster layers, determined in consultation with ISCGM and WG 2 and 4.

The continental map would be limited to vector data; no new Raster material is to be created separate from (i) materials prepared by ISCGM, from (ii) Land Cover databases to be produced under LCCS methodology in FAO-GLCN projects and from (iii) existing DEM compatible with the SIRGAS reference system. Even the Continental Vector Map would be based largely on existing Global Map data rather than creating a completely new map, although the unification of the existing national maps may prove to be a challenging task.

The MGA is intended to coordinate and adapt the Global Mapping project both in regional terms (for the Americas) and in terms of the changed situation for Global Mapping, now enormously different from when ISCGM started its task. Global Mapping needs to update its strategy, with the aid of organisations and initiatives such as the Americas Global Map. But the MGA project itself needs assistance to get started; any contributions are welcome, so please contact us through :

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Anna Lucia Freitas

(IBGE – Brazil) : Project

Executive Secretary

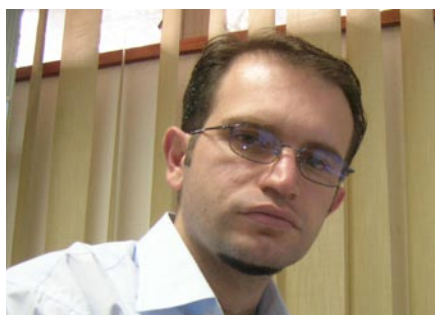
annafreitas@ibge.gov.br



## Global Mapping Presentations in Macedonia and Kosova

*Mr. sc. Bashkim Idrizi*

*Head of the Cartography Department, State Authority for Geodetic Works, R. Macedonia*



**Mr. Bashkim Idrizi**

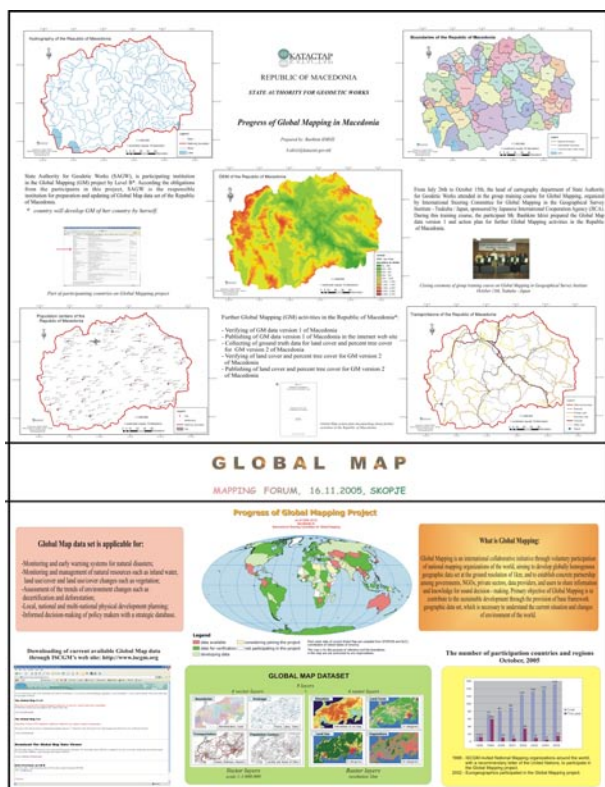
On November 2005, Bashkim Idrizi – leader of Global Mapping project in Macedonia, who has already successfully completed "Group Training Course on Global Mapping – 2005" at Geographical Survey Institute (GSI) in Tsukuba, Japan, organized by Japan International Cooperation Agency (JICA) in collaboration with GSI and ISCGM (International Steering Committee for Global Mapping), has made two presentations of Global Mapping project in the capital cities of Macedonia and Kosova.

On November 16th 2005, in Alexandar Palace Hotel in Skopje, the mapping forum with the title "New era of mapping in Macedonia" took place. The forum was organized by JICA in cooperation with SAGW (State Authority for Geodetic Works). The main objective of this forum was to gather at one place all government and non-government institutions, agencies, as well as private companies, individuals and practically everyone who is related to production of maps and to give an overview of the past and present situation of mapping in Macedonia and review together how mapping should be in the future. Beside the other presentations, the poster with title "Progress of Global Mapping in Macedonia", prepared by Bashkim Idrizi, was presented in the

exhibition hall. The aim of this poster was to present the main objectives of the Global Mapping project and the current status of Global Mapping in Macedonia. As it can be seen in the photo below (GM Poster in Mapping Forum in Skopje), the poster was divided in two parts. The first presents the actual status of the Global Mapping project in the Republic of Macedonia through examples of 5 maps (transportation, elevation, drainage, population centers and boundaries of Macedonia) which represents five layers of the GM project. In addition of the first part, some basic data for group training course on Global Mapping 2005, future GM activities in Republic of Macedonia, the Global Map action plan, and the Macedonian level of participation in this project are given. In the second part of presentation the following general data for Global Mapping project, definition of Global Mapping, the number of participating countries and regions until October 2005, the Global Map dataset, progress of Global Mapping project until 10-31-2005, usage of GM dataset, as well as the internet address that can be used to download current available GM data through ISCGM's web site, are given also.



**View from the Mapping Forum in Skopje**



### GM Poster in Mapping Forum in Skopje

On November 17th and 18th, 2005, under organization of the Faculty of Civil Engineering and Architecture of the University of Prishtina, the International Symposium in Prishtina took place. The Symposium was organized on the occasion of the 40th anniversary

of this Faculty. There were 54 papers in the fields of constructions, constructive materials, seismic, geotechniques, architecture, hydro techniques, geodesy, transportations, management, and other engineering sciences published.

In the part of presentations from the geodesy field, the paper with its title "Global Map in scale 1:1.000.000 Based on GIS", prepared by Bashkim Idrizi, was published. The paper starts with a short Abstract in which brief general data for Global Mapping project are given. Later, the paper is divided in 8 chapters, in which the main objectives of Global Mapping project are given. Moreover, there are information on its usage, short history of GM project, some basics for the functionality of International Steering Committee for Global Mapping, data resources which can be used for preparing of GM dataset for each country, Global Map dataset with the details of its structure of vector and raster layers, present status of countries in this project until 10.31.2005 followed by the map of Progress of Global Mapping project, current available Global Map data by using the ISCGM's web site, as well as the list of references which has been used while preparing of this paper. On 18th November 2005, its author presented this paper.

### From the Secretariat

- Dr. Robert O'Neil, an important member of ISCGM was replaced by Mr. Peter Paul, Team Leader, National Frameworks, Canada Centre for Remote Sensing, Earth Science Sector, Natural Resources Canada due to Dr. O'Neil's retirement from the public service of Canada. ISCGM expresses our sincere thanks to Dr. O'Neil for his dedication over six years for ISCGM and welcomes Mr. Paul as his successor.
- In conjunction with 13th Meeting of ISCGM, GSDI 9 will be held in Santiago, Chile, from November 6 - 10, 2006, in which Global Mapping Session is scheduled from 9 - 10:30 o'clock on November 10. We will welcome submission of paper on Global Mapping or issues related to geographich information in global and local scales. If you know someone who is interested in, please forward this announcement. The deadline for abstract submission is May 2 (<http://www.gsdi9.cl/>).
- Global Mapping project has 158 participating countries/regions now. The newly participated organizations are: Yemen Survey Authority & L. R., Yemen on February 27th; Federal Administration for Geodetic and Real Property Affairs of Bosnia and Herzegovina on March 1st; and Department of Lands, Surveys & Records of Vanuatu on March 9th.
- Global Map Macedonia was released on March 8. This is the 22nd country whose data are available for download from the ISCGM Home Page (<http://www.iscgm.org>).

## Second Meeting of the Group on Earth Observation (GEO-II) in Geneva

*Hiromichi Maruyama*  
Secretary General, ISCGM



Second Meeting of the Group on Earth Observation (GEO-II) was held at World Meteorological Organization (WMO) in Geneva from 14-15 December 2005. About 200 participants from 43 countries and 35 international organizations participated in GEO-II and discussed various issues such as 2006 Work Plan and establishment of 4 committees (Architecture and Data, Capacity Building, User Interface, Science and Technology) and one special working group on Tsunami. One behalf of ISCGM, I and another staff of secretariat participated in the meeting.

As a result, 2006 Work Plan was accepted as a living document, which will be finalized in early 2006 including refinement of 95 Task Sheets identified in the work plan (Present version is available at GEO

web site <http://earthobservations.org/>). Establishment of committees and working group were decided and 95 tasks described above are supposed to be watched by one of committees on their progress. It should be noted that ISCGM is a member of Architecture and Data Committee and Working Group of Tsunami and applying to be a member of Capacity Building and Science and Technology.

It is now in the middle of refining the work plan. That is, committees are scheduled to be held in early March and plan to discuss the Task Sheets which describe detail of the tasks. ISCGM volunteered to contribute to the implementation of two tasks related to geographic data (DA-06-04, DA-06-05) and other two tasks related to land cover (AG-06-03, AG-06-04).

### Global Map and Related Meetings

Followings are Global Map and related meetings. Information on related meetings will be highly appreciated.

#### 2006

- **25 - 26 May, Orland, Florida, USA**  
ISO/TC 211 22nd Plenary
- **23 - 27 August, Jakarta, Indonesia**  
The First Indonesian Geospatial Technology Exhibition
- **29 August - 1 September, Bangkok, Thailand**  
Map Asia 2006
- **18 - 22 September, Bangkok, Thailand**  
17th UNRCC-AP

- **6 - 10 November, Santiago, Chile**  
GSDI 9th Conference
- **11 November, Santiago, Chile**  
13th Meeting of ISCGM
- **14 - 15 November, Riyadh, Saudi Arabia**  
ISO/TC 211 23rd Plenary

#### 2007

- **15 - 20 July, Cambridge, England**  
Cambridge Conference

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