



GLOBAL MAPPING NEWSLETTER 55

International Workshop on the Revision of Specifications for Global Map Version 2

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The Science Museum of Map and Survey, GSI

International Workshop on the Revision of Specifications for Global Map Version 2 was held at the Geographical Survey Institute (GSI) in Tsukuba, Ibaraki prefecture, Japan from 8 to 10 September 2009.

The workshop was held to discuss the revision of specifications including adoption of new data items and data formats for the development of Global Map Version 2 to facilitate the utilization and provision of Global Map data. It was organized by GSI and the International Steering Committee for Global Mapping (ISCGM) attended by experts of respective countries to discuss the contents of new specifications.

On the 8th of September, the first day of the workshop, an open forum extended also to the general public took place with the participation of 72 people including 13 lecturers from Australia, Brazil, Indonesia, Japan, Kenya, Nigeria and USA.

During the workshop, research and utilization of global geographic information including Global

Map in various fields, such as climate change and disaster prediction, were introduced by the Japanese experts, where opinions were made for the development and provision of Global Map in the future. At the same time, reports were presented on the status of spatial data infrastructure of National Mapping Organizations (NMOs) of respective countries and about the specifications of their data.



Open forum

On the second and third days of the workshop, discussions were held on the draft specifications on the basis of a draft which summarizes opinions and requests from project-participating NMOs, by referring to the opinions made on the previous day, on the 8th of September. Nineteen people participated in the discussions including the experts of the above-mentioned NMOs and the ISCGM Secretariat, etc.



Discussion at the workshop

The contents discussed at this workshop will be submitted to the 16th Meeting of ISCGM scheduled to be held in Bangkok, Thailand on the 25th of October and will be determined as new Global Map Specifications.



Discussion at the workshop

The main points revised at the workshop are as follows:

- *To include "Port" as a feature
- *To integrate "Marshall yard" into "train station"
- *To include IATA (International Air Transport Association) code, and distinction of Domestic/ International in "Airport" feature
- *To include Population value and SALB (Second Administrative Level Boundaries) code in "Administrative boundary" and "Population centers" features
- *To include type attributes, e. g. "Lake," "Reservoir" and "Glacier" in "Inland water" feature
- *Adoption of ISO 191316 GML format and ISO 19115 Meta data standards
- *Tile size of Vector data to be determined by each country, etc.



Global Map Exhibits Debut at ESRI International User Conference

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To promote the availability and use of the Global Map among a large group of geographic information professionals, two new exhibits were displayed at the recent ESRI International User Conference and Education Expo (July 11-17, 2009).

Easiest to spot was a large (3.7- by 9.2-meter) reproduction of the Version 1 Global Land Cover map. This colorful and arresting image drew great interest from the many visitors to the exhibition hall. The land cover map mosaic was prepared in seven individual strips by ESRI staff using data provided by the Global Map Secretariat and then paneled together into one very large map.

A more traditional exhibit was designed and staffed by employees of the National Atlas of the United States and the U.S. Geological Survey. This attractive 2.1- by 3-meter exhibit was designed to visually convey the essence of the Global Map project using maps and images rather than words. Visitors to the Global Map booth were presented with background information on the project and its data offerings. This

included on-line demonstrations, a Global Map slide show, and the latest project handouts. Two of these, the Global Mapping brochure and a fact sheet describing how to obtain Global Map data, are available on-line in Portable Document Format here:

<http://www.globalmap.org/cd2/brochure.pdf>

and here:

<http://nationalatlas.gov/fs/CombinedGlobalMapFS.pdf>

(respectively).

This exhibit is available for the use of all organizations participating in the Global Map.



Reproduction of the Version 1 Global Land Cover map

The 9th United Nations Regional Cartographic Conference for the Americas

Yoshikazu Fukushima
Secretary General, ISCGM

Prof. Fraser Taylor, Chair of ISCGM, and Yoshikazu Fukushima, Secretary General of ISCGM, attended the Conference held in New York from 10 to 14 August 2009. Since UN conference halls were not heavily populated and the Conference was well prepared by UNSD and PCIDEA, discussions by 91 participants from 29 nations were very effective and productive.

The Conference focused on important SDI issues of member nations of the UN. National, regional and global SDI and their applications to disaster prevention, environment and statistics were presented. The Global Map - as a tool of disaster mitigation - was presented by Prof. Taylor. The presentation was welcomed by participants.

Beautifully designed big Global Map Exhibit prepared by US National Atlas team was displayed at the entrance of the Conference hall. It also showed importance of Global Map. In the resolution of the Conference, it was recognized that one of directions is high quality of Global Map.



Global Map Exhibit at the entrance (rear panel)

Development of Integrated Flood Analysis System (IFAS) using Satellite-based Rainfall Data

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Population growth as well as concentration and sophistication of assets in recent years have been leading to an increase of damage and impact of water-related disasters. In order to mitigate the damage in countries where river improvements are not sufficient, it is important to make known the risk by using means such as hazard maps and to evacuate by flood forecasting and warning. In these countries, however, the flood forecasting and warning systems are not properly developed due to the financial difficulty and lack of rainfall data.

The International Centre for Water Hazard and Risk Management (ICHARM) has been

developing the Integrated Flood Analysis System (IFAS) by using satellite-based rainfall data, in collaboration with Infrastructure Development Institute-Japan and civil engineering consulting companies. The objective of the development is to enable these regions where hydrologic information is insufficient to quickly and efficiently construct the flood forecasting and warning systems. The IFAS enables us to use not only precipitation data from ground rainfall gauges, but also rainfall data observed by satellites. At the same time, the system is equipped with functions to create models including a function to estimate parameter by using global GIS data such as Global Map; a runoff analysis engine by the distributed-type

runoff analysis model; and a function to display the results. The system enables us to calculate a series of runoff necessary to issue a flood forecast. The main functions and activities for the dissemination are introduced here.

1. Use of satellite-based rainfall data

In order to make runoff calculation necessary for flood forecasting, real time or semi-real time rainfall data are indispensable. Currently, satellite-based rainfall data products, which cover almost the entire globe, are released on the Internet from several organizations including the Japan Aerospace Exploration Agency (JAXA). The merit of these products is that one can obtain rainfall data not by installing ground rainfall gauges, but by simply downloading the data through the Internet. However, when these products are used for flood forecasting, it tends toward underestimation due to the lower accuracy compared with the rainfall data observed on the ground. In order to cope with this problem, ICHARM is developing a function to correct satellite-based rainfall data by automatically calculating a correction value by using the rainfall area movement information of the satellite-based rainfall data products.

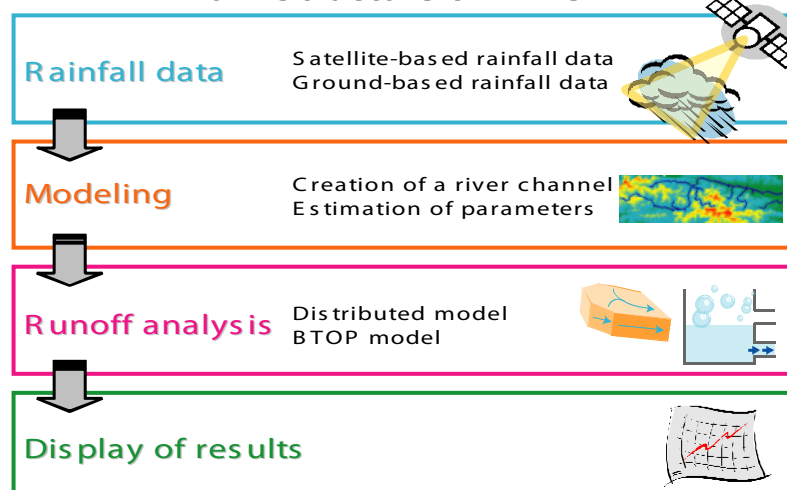
2. Parameter estimation by GIS data and a function for model creation

IFAS enables us to automatically create a basin boundary and a river channel network by using digital elevation data of such as Global Map provided by the International Steering Committee for Global Mapping (ISCGM). Similarly, it has a function for the primary estimation of the parameter necessary for the runoff analysis by using the data, such as land use, land cover, geology and soil type. Through the use of these functions, IFAS enables us to easily create runoff analysis models without preparing special and expensive GIS analysis software, and in the area where hydrologic information is insufficient.

3. Activities for dissemination

IFAS can be downloaded free of charge from the Web site of ICHARM. Further, ICHARM carries out training courses for the accuracy verification of IFAS and for the building of flood forecasting and warning systems by using IFAS, in cooperation with the World Meteorological Organization (WMO) and the International Flood Network (IFNet), for the persons in charge of flood forecasting and warning in developing countries.

Main Structure of IFAS



The Seventh Workshop on Greenhouse Gas Inventories in Asia (WGIA7)

Noriko Kishimoto
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The 7th WGIA was held in Seoul, Republic of Korea from 7 to 10 July 2009 hosted by the Ministry of the Environment of Japan (MoEJ) and the National Institute for Environmental Studies (NIES). The workshop was attended by 100 participants in total, including representatives of government and research institutes of eleven countries: Cambodia, Indonesia, Japan, Lao, P.D.R., Malaysia, Mongolia, Myanmar, the Philippines, Republic of Korea, Thailand, and Vietnam, in addition to two international organizations: UNFCCC and IPCC.

The author made a presentation on the Global Mapping project at the working group of LULUCF sector. At the presentation, I introduced how to interpret Land Cover classes defined in Global Map into 6 LULUCF and how to calculate each area of land cover 6 classes of LULUCF concretely. The participants learnt the existing global scale GIS datasets such as Global Map and their usability.

They became aware of and recognized the importance of cooperation between GIS or Remote Sensing experts, including officials at National Mapping Organizations, and people in charge of climate change especially GHG inventories.

GSI expects relationship be built between GIS or Remote Sensing experts, including officials at National Mapping Organizations, and people in charge of climate change especially GHG inventories; skills of relevant people be improved; and Global Map be utilized in promoting GHG inventories in the countries of Asia and the Pacific Region.



From the Secretariat

Global Map Data Release and Participation in the Global Mapping Project

As of September 25, 2009, 164 countries/16 regions participate in the Global Mapping Project. Among them, data of 70 countries/4 regions have been released.

Global Map and Related Meetings

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

2009

- **12 October, Quebec, Canada**
ISO/TC211 29th Plenary
- **25 October, Bangkok, Thailand**
16th Meeting of ISCGM
- **26 - 29 October, Bangkok, Thailand**
18th UNRCC-AP/15th PCGIAP Meeting
- **26 - 29 October, Kampara, Uganda**
AfricaGIS 2009
- **15 - 21 November, Santiago, Chile**
XXIV International Cartography Conference

- **17 - 18 November, Washington D. C., USA**
GEO-VI

2010

- **11 - 16 April, Sydney, Australia**
XXIV FIG International Congress 2010
- **6 May, United Kingdom**
ISO/TC211 30th Plenary
- **October, Singapore**
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The Newsletter is distributed as information paper on Global Mapping to more than 1,200 people of NMOs, Global Map data users and other interested people of the world. Your contribution of articles, requests of subscription and provision of relevant information will be very much appreciated.

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