Summary of Global Mapping Forum 2003 in Okinawa and its Outcomes

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Abstract

Global Mapping Forum 2003 in Okinawa was held on July 12-15, 2003 at Ginowan City, in Okinawa Prefecture, Japan. This forum was attended by over 200 participants from 41 countries and 7 international organizations. The technical program of the Forum included 30 presentations and 2 panel discussions with vigorous discussion about Global Mapping. A major outcome of this forum was the unanimous adaptation of the Okinawa Declaration on Global Map. In the words of the Declaration, "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."

1. Brief History of Global Map and Global Mapping Forum

Global Map is a project of developing fundamental geographic digital database for the global land area with consistent specification, currently 1 km of spatial resolution or a 1:1,000,000 scale, which is requisite for understanding the existing condition of the global environment. This is a suggestion from the survey and mapping sector to contribute to global environment preservation.

In 1992, the World Summit, the so-called Earth Summit, was held in Rio de Janeiro, Brazil. This summit was held to review the status of global environment implementation and to make concrete plans of action for sustainable development. Eight chapters of Agenda 21, especially Chapter 40 on "Information for Decision Making," describe the need for geographic information for sustainable development.

However, geographic information of scientific quality was still insufficient at that time to provide an adequate understanding of the state of the global environment. Consistent, reliable and accurate geographic information must be developed and such information must be easily accessible to the public, decision makers, and global environment researchers. In this context, in 1992, the Ministry of Construction (the current Ministry of Land, Infrastructure and Transport (MLIT)) of Japan and the Geographical Survey Institute (GSI) proposed the concept of Global Mapping, in which the cooperation of the national mapping organizations of the world is indispensable.

The first international meeting on the Global Mapping, "International Workshop on Global Mapping", was held in Izumo, Japan in 1994. There, "The Resolution of Izumo Conference" was adopted, including promoting technical cooperation for creating the Global Map. The second International Workshop on Global Mapping was held in Tsukuba, Japan in 1996, and the International Steering Committee for Global Mapping (ISCGM) was established. The framework of Global Map was consolidated and great progress was observed in Global Mapping membership and data production, and a new proposal on holding a Global Mapping Forum was made as a venue for exchanging views and information at the International Seminar on Global Mapping held in Santa Barbara, USA, in 1996. The first Global Mapping Forum was held in 1997 in Gifu, Japan, and the second one in 1998 in Sioux Falls, USA. The third one was held in 2000 in Hiroshima, Japan, where 12 countries' Global Map data was released.

2. Global Mapping Forum 2003 in Okinawa

2.1 The Purpose of the Forum

"Global Mapping Forum 2003 in Okinawa" is the fourth Forum of this kind. It was organized by ISCGM, MLIT and GSI and held under the joint auspices of Okinawa Prefecture, the Ministry of Foreign Affairs, the Ministry of Environment, the Ministry of Education, Culture, Sports, Science and Technology, the National Space Development Agency (NASDA, current Japan

Aerospace Exploration Agency (JAXA)) and the Japan International Cooperation Agency (JICA).

The purpose of this Forum was to further promote the development and utilization of Global Map, which is currently being developed with international cooperation to protect the global environment for the 21st Century. 217 people, including 78 overseas participants from 41 countries and 7 international organizations, participated, mainly specialists from the environment, regional development and mapping fields.

The Forum was composed of 9 sessions, the Opening Session with Special Lecture, the Lecture Session, the Panel Discussion Session, 5 General Presentation Sessions and the Closing Session. A technical tour was made on the last day.

2.2 Opening Session - Greetings, Keynote Speech and Special Lecture

In the morning session of the first day, July 12, Mr. Hisakazu Oishi, Vice-Minister for Engineering Affairs of MLIT, delivered an opening address, which was followed by speeches by Mr. Hirokazu Miyao, Engineer General of Okinawa Prefecture, and Dr. Takashi Morita, Vice President of the International Cartographic Association. Professor D. R. Fraser Tailor, Chairperson of ISCGM, gave a keynote speech titled "Global Mapping: The Status and The Future."

Following the keynote speech, Mr. Yoshihisa Hoshino, Director General of GSI, reported in his presentation titled "Global Map Data Development by GSI Japan" that, in addition to the data of 12 countries that was already available, 6 countries' data was newly released on that day.

Photo 1 Opening Session.

The morning session of the day was closed with a special lecture titled "Protection of Wildlife in Okinawa and the Global Map" by Dr. Jiro Kondo, Professor Emeritus at the University of Tokyo as well as Chairperson of the Science and Technology Foundation of Japan. Dr Kondo explored damage to living things with some examples including wildlife in Okinawa. He said that international collaboration is key for protection of the environment, and for collaboration we need to understand the environmental situation of different countries. In this regard, Global Map is indispensable because it provides us with information about other countries.

2.3 Lectures, Panel Discussion and General Presentations

In the afternoon of the day, 3 lectures and 1 panel discussion were made.

Photo 2 Greeting from Vice-Minister for Engineering Affairs of MLIT.

Photo 3 Special Lecture of Dr. Jiro Kondo.

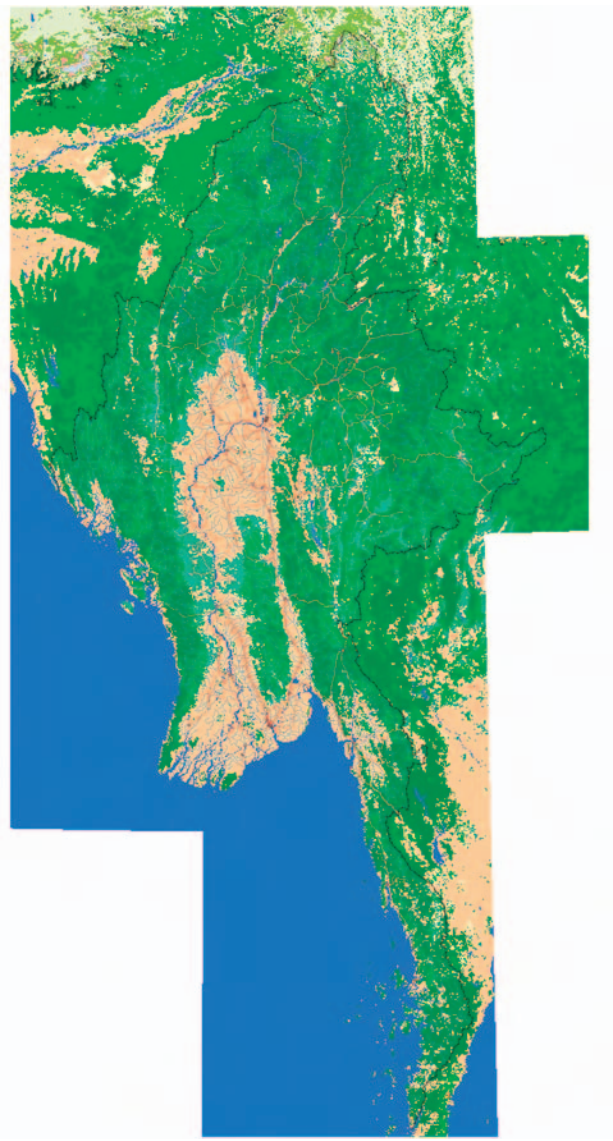

Fig. 1 Newly Released Global Map (1) Myanmar.

Fig. 2 Newly Released Global Map (2) Mexico.

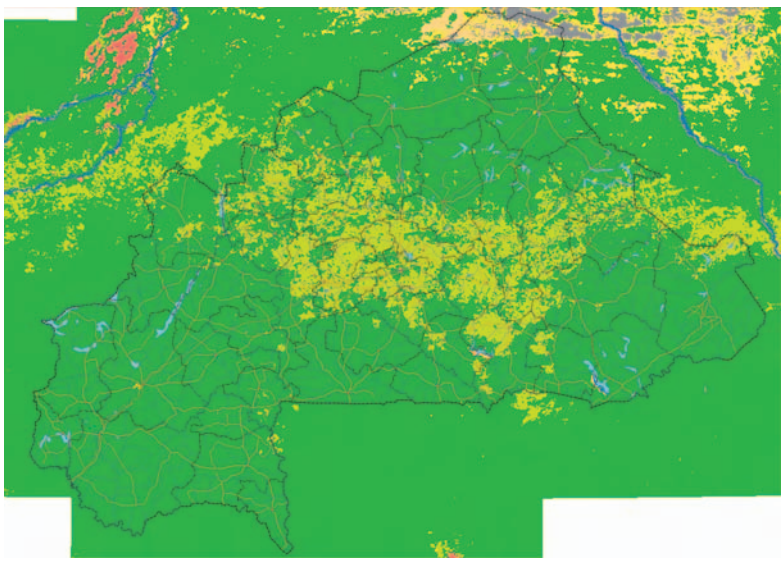

Fig. 3 Newly Released Global Map (3) Burkina Faso.

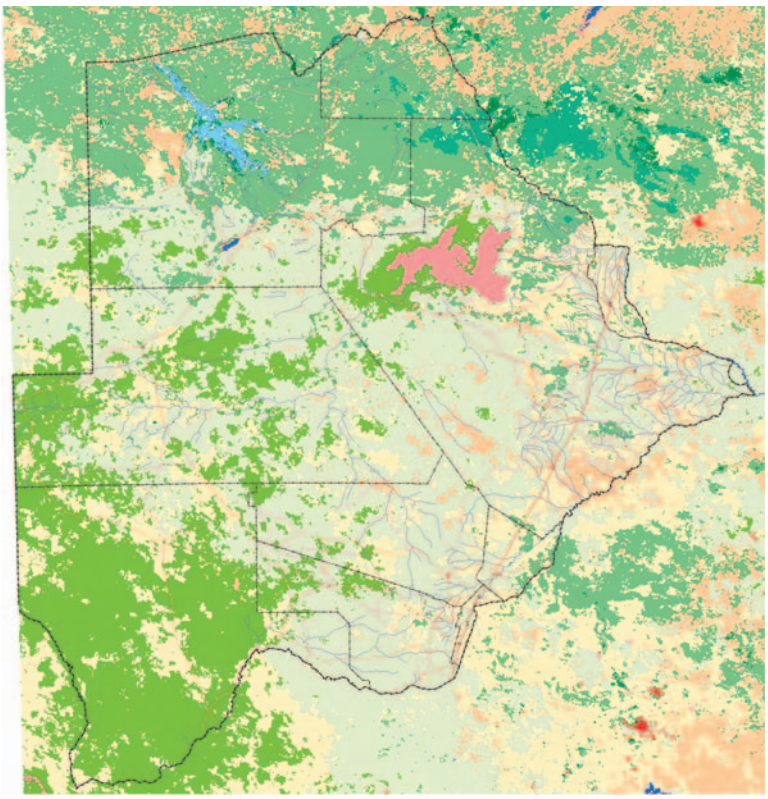

Fig. 4 Newly Released Global Map (4) Botswana.

Fig. 5 Newly Released Global Map (5) Kyrgyzstan.

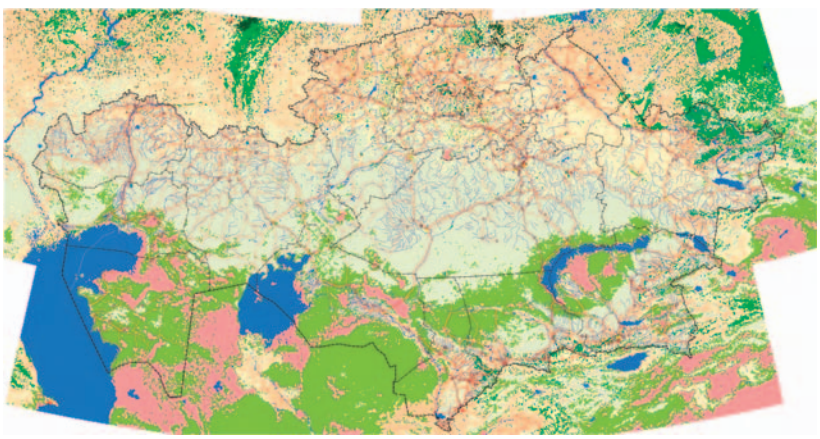

Fig. 6 Newly Released Global Map (6) Kazakhstan.

In the lectures session, Mr. Santiago Borrero-Mutes, President of the Cartographic Commission, Pan-American Institute for Geography and History, lectured on "Contributions of Global Maps to Development of Spatial Data Infrastructure in the Americas." Dr. Milan Konecny, Vice President of the International Cartographic Association, lectured on "Knowledge-Based Society and the Role of Global Mapping." And Mr. Hiromichi Maruyama, Secretary General of ISCGM, lectured on "Enhancement of Partnership in Global Mapping."

The panel discussion was about how to solve water problems such as water shortages or flood disasters by Global Mapping, titled "Application of Global Map towards Solving Water Problems." The coordinator summarized the session: It was noted that the application of geographic information is already being prepared to solve the problems and further application is planned. The importance of enhancing communication between users and producers was reiterated in the discussion, as was the importance of promoting application of Global Map.

General presentations on a variety of topics, the current status of global geographic information, development of global geographic information by remote sensing, application of Global Map to environment and disaster prevention, etc. were made, starting from the morning of June 13 and continuing to the morning of 14. We had 5 sessions and 25 presentations in the general presentation sessions. Summaries of these sessions are follows:

Session I: Development of Global Geographic Information

This session provided an opportunity to understand knowledge of the development of a flexible search engine and an appropriate visualization system for the utilization of global geospatial data. Knowledge of the current situation of various global geospatial information projects, future development plans, and challenges that they are facing, were also deepened.

Session II: Development of Global Geographic Information by Remote Sensing

This session provided an opportunity to deepen knowledge of application of remote sensing technology, imagery classification methods and applicability of remote sensing data on Global Map and earth monitoring.

Session III: Application to Human Activity, Disaster Prevention and Environment

This session provided an opportunity to deepen knowledge about the importance of maps in disaster management, application of digital data in the economic and engineering fields, simulations using geographic data, and evaluation of economic activities using remote sensing.

Session IV: Distribution of Geographic Information in the IT Era

This session provided an opportunity to deepen knowledge of the possibilities and challenges of Open Source Software, evaluation of OSS packages and examples of GIS application.

Session V: Geographic Database in the Countries

This session provided an opportunity to understand the current conditions of data development in various countries, the possibilities of digital data application and expectation for spatial data.

Photo 4 Panel Discussion Session.

2.4 Closing Session - The Okinawa Declaration - and Technical Tour

In the Closing Session of the Forum, under the chairmanship of Professor D. R. Fraser Taylor, Chairperson of ISCGM, 5 panelists made presentations under the themes of "In the Future Plan of the Global Mapping Project." After each presentation and the last of panel, there were vigorous discussions and comments from the chair, each panelist and especially participants on the floor. The Forum was concluded with the Okinawa Declaration, which was adopted in the Closing Session, pledging that Global Map for the global land area should be completed

Fig. 7 Progress of Global Mapping Project as of Jan. 2004.

by 2007 under the combined effort of the countries of the world to protect the global environment and contribute to sustainable development.

A technical tour to the Okinawa Subtropical Environment Remote-Sensing Center of the Communications Research Laboratory, Ocean Exposition Commemorative Park and Manzamo was conducted on July 15, the last day of the Forum.

3. Outcomes of Global Mapping Forum 2003

During the Forum many discussions took place on the plans for the next phase of Global Map to make Global Map more easily available and to allow the increased involvement of smaller nations by accepting coverage at larger scales than 1:1,000,000. It also discussed showing applications of Global Map- this is very important and key to the success of the Global Mapping Project.

At the World Summit on Sustainable Development held in Johannesburg in South Africa in August 2002, the importance of Global Map attained global recognition and "global mapping" was incorporated into the implementation plan adopted at the Summit.

According to Prof. Tailor, chairperson of ISCGM, the major outcome of Global Mapping Forum of 2003 was "a strengthening and re-invigoration of the process which bodes well for the future". Based on the results of WSSD and Okinawa Forum, we should make more cooperative relationships with the nations of the world and interested international organizations, and strengthen linkages with other global initiatives.

As of January 2004, Global Map membership amounts to 132 countries and regions, the data of 18 countries is available at the website of ISCGM, and also over 20 countries' data is ready to be released. We must progress in the way that will ensure continued success of the project.

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The Okinawa Declaration on Global Map

Over 200 participants from 41 countries and 7 international organizations met in the City of Ginowan, Okinawa, Japan, at Global Mapping Forum 2003 to discuss the progress of Global Map and to make plans for the future. The participants adopted the following statement at the closing session of the Forum on the 14th of July 2003.

Recalling that during the Earth Summit in 1992, the nations of the world committed to the vision of globally sustainable development and adopted a plan of action – Agenda 21;

Recalling also that in 1994, the idea of the International Steering Committee for Global Mapping (ISCGM) was introduced in Izumo, Japan, to create, through technical cooperation, a digital map of the world, a Global Map, by the year 2000, to support the implementation of Agenda 21, and ISCGM was formally established in 1996;

Recalling further that a statement was made at Global Mapping Forum 2000 in Hiroshima, Japan, celebrating the release of Global Map Version 1 and restating the willingness to cooperate with nations and organizations for the creation, maintenance, and promotion of Global Map;

Recalling furthermore that the need for Global Map and the activities of ISCGM were recognized and supported at the World Summit on Sustainable Development in Johannesburg, South Africa, in August 2002 and recorded in the official documents of the Summit, where ISCGM was recognized as a type two implementing agency.

We strongly support the goal of ISCGM to develop a global map for the entire land surface of the earth. We express our gratitude to 130 countries which have already committed themselves to the development and maintenance of Global Map.

At the same time, we recognize the need to further strengthen coordination with the users of Global Map concerned with sustainable development in a variety of application situations. To this end, we will develop new methods to make Global Map more easily available on the world wide web, and to facilitate linkages with other global data sets.

We also call on all those countries not yet committed to Global Map to join and help make Global Map a truly global map of the world.

We greatly appreciate the hospitality of the citizens of Okinawa Prefecture. We reconfirm the importance of sustaining and respecting the splendor of the global environment symbolized by the magnificence of the Islands of Okinawa.

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. We acknowledge with thanks the support and leadership of the Government of Japan in this respect.