

GLOBAL MAPPING NEWSLETTER 15

The Need for Global Mapping in Kenya *A K Njuki, Director of Surveys, Survey of Kenya*



It is an honour and privilege to have been invited by the ISCGM secretariat to author a paper to be published in this edition of the Global Mapping Newsletter on the involvement of Kenya with the Global Mapping Project. Survey of Kenya is the survey and mapping agency charged with the responsibility of producing and maintaining various types of topographical maps required for development, planning and management purposes. The department has produced maps covering the whole country at the scale of 1:250,000 consisting of forty seven (47) sheets. Sixty three percent of the country is covered by maps at the scale of 1:50,000. There are five hundred and twenty three (523) sheets covering the agricultural potential areas of Central, Western, Southern Western and Southern parts of the country. The arid and semi-arid areas of North-Western, North-Eastern and Eastern parts are covered with topographical maps at the scale of 1:100,000.

Kenya has been a member of the International Steering Committee for Global Mapping (ISCGM) since its inception. This is in recognition of the importance of the Global Mapping Project in the collection, processing and dissemination of data that will facilitate access to information on global environmental issues and

the advantages that will accrue once the project is implemented.

Survey of Kenya has produced maps for the whole country at the scales of 1:1 million and 1:1.25 million. The maps provide spatial data on elevation, vegetation, land use, drainage system, transportation and administrative boundaries that is required for the production of the Global Map. Since we have not computerized our survey and mapping operations, we are participating in the Global Mapping Project at level C; and are willing to co-operate with any level A National Mapping Organization that can develop suitable data for us for use in the Global Mapping initiative.

The publication of the global map will be of great use to us and other countries in Africa. One of the major challenges facing us is the eradication of poverty. Kenya is committed to poverty reduction as a key ingredient to building an economically strong and prosperous nation. According to United Nations Secretariat, poverty is an ethical, social, political and economic imperative of humankind, whose causes should be addressed in the concept of sectional strategies, such as environment, food security, population, migration, health, shelter, human resources development, clean water and sanitation and rural development. The lack of accurate and well documented information in these sectors has proven to be major limiting factor in the proper planning and management of our natural resources and the monitoring of our environment.

The United Nations Conference on Environment and Development in promulgating Agenda 21 recognized that in order to promote sustainable development, more extensive knowledge is required of the Earth's carrying capacity including the processes that could either impair or enhance its ability to support life. To achieve sustaina-

ble development measures must be taken to develop agriculture and forestry; harness our mineral resources and monitor water effectively and create or enhance infrastructure network for these are the most important resources that comprise the total carrying capacity. These resources can be managed only with a good geography of the area where these management activities are to take place; and this information with a spatial dimension can only be effectively represented by a map.

In order to eradicate poverty and implement the recommendations of Agenda 21 on environment and sustainable development, maps will be required to store, manage and analyze spatiality related data necessarily useful for natural resources and environment management. The Global Map, is such a tool, and will also be a useful instrument to the policy makers and researchers within the international community involved with mitigation of disasters and environmental hazards. It will provide environmental data globally showing the status and trends of the planets ecosystems natural resources and reduce the gap in the availability, quality, coherence, standardization and accessi-

bility of data that has existed between different countries. This will enhance the capabilities of countries to make informed decisions concerning environment and sustainable development.

We, in Kenya, have recognized the necessity of accelerating the development of our natural resources that has been degraded and depleted as a result of our increase in population. We have to establish measures to mitigate environmental hazards; develop food security early warning systems and assess biodiversity in order to stimulate social economic development. The publication of the Global Map will enhance these measures and foster and improve the management of our natural resources and monitoring our environment.

Survey of Kenya hopes that its participation and support of the Global Mapping; will in return be introduced into the digital mapping world that will facilitate frequent revisions of its maps through the use of satellite imageries and the consequence will be availability of up-to-date maps and data for our decision makers, planners, environmentalists and researchers.

Global Mapping Session in the Cambridge Conference



Cambridge Conference was held on 19-23 July 1999 at St. John's College, Cambridge, United Kingdom. This is a global conference for national mapping organizations hosted by the Ordnance Survey. The conference theme was "National mapping in changing times: global technology, policies and practice." Some 232

participants from 73 countries gathered and discussed common problems facing most national mapping organizations today.

The conference was composed of nine sessions. The Wednesday morning session was arranged as the session for Global Mapping chaired by

Prof. John E. Estes, UCSB, USA and organized by Mr. Motoyuki Kidokoro, GSI, Japan.

At the beginning of the session, four speakers presented their papers. They are "Needs of the Global Map for Global Environment Problems" by Mr. Kidokoro, "Global Land Cover: The need for a Dynamic, Long-term database" by Dr. Will Steffen, IGBP, Sweden, "Use of Global Geospatial Data for Hazard Reduction and Mitigation" by Dr. K. Eric Anderson, USGS, USA and "The Contribution of the Global Map to a GSDI" by Mr. Drew Clarke, Ausindustry, Australia. Prof. Estes also addressed the importance of Global Map using viewgraph to the floor.

After the presentation, vital debate took place. Global Mapping was basically applauded by potential data users such as scientific community and industry. Non-participating National Mapping Organizations also recognized the importance of Global Mapping and sincerely consider possibilities of their cooperation. Several

countries announced their participation during the session.

It was recognized that Global Map is useful not only for studying global environmental issues but also for big disasters such as hurricane, volcanic eruption or earthquake.

Some country raised the issue that in order to justify their participation in the project they need a convincing reason based on short and long term benefit to their country, especially small island countries.

On the other hand, private sectors from GIS industry expressed their interest in Global Map as a basic geo-spatial data set and would seek the possibility of their related business.

The session was very successful and schedule of the Sixth ISCGM Meeting on Saturday was announced for further discussion.

The Sixth Meeting of International Steering Committee for Global Mapping

The Sixth Meeting of the International Steering Committee for Global Mapping (ISCGM) was hosted by the Ordnance Survey and held on 24 July 1999 at St. John's College, Cambridge, United Kingdom following the Cambridge Conference.

By taking advantage of the Cambridge Conference where many top leaders of the national mapping organizations in the world gathered, ISCGM invited as many participants as possible and it resulted in the participation of more than sixty people in the meeting.

Prof. John E. Estes, UCSB, USA was reelected as Chairperson. Dato' Abdul Majid Bin Mohamed was appointed as Vice-Chairperson, Mr. M. Akiyama as Secretary General, and Dr. H. Murakami as Assistant Secretary General. Dr. Michael Wood of the ICA and Mr. Daniel Claasen of UNEP were introduced as advisors. It was the first meeting since official registration of participation in the Global Mapping project had started with the UN recommendation letter. The Chairperson addressed the importance of Global Map at the beginning of the meeting especially for the sake of newly participated and anticipated countries' representatives. Then, activities of secretariat and working groups were reported. Number of participating

countries in Global Mapping was reported as 66 and 36 countries were under consideration as of the day. Four other countries announced their participation during the meeting. It was announced that participation of European countries would be discussed at the CERCO General Assembly in September.

Despite the importance of Data Policy in Global Mapping, Working Group 3 had not been active. It was commented that CERCO could lead and activate this working group.

Regarding matching between level A and C countries, it was noted that there is a rich history of certain countries assisting others. Therefore, it is expected that level C countries would inform the Secretariat if they have any preference of working with a specific level A country.

Other topics discussed at the meeting were: procedure of reporting and monitoring of the Global Mapping project implementation; strategy for phase 2 of Global Mapping project; collaboration with industry and others.

The next meeting will be held in Cape Town on 16 March 2000 immediately after the GSDI meeting.



Global Map and Related Meetings

Followings are Global Map and related meetings. Information on related meetings will be highly appreciated. Meetings with "*" mark are to be confirmed, and with "?" mark to be determined.

1999

- **27-28 September, Florence, Italy**
CERCO General Assembly
- **29-30 September, Kyoto, Japan**
9th Plenary Meeting of ISO/TC211
- **18-22 October, Lisbon, Portugal**
16th Directorate of Geographic Institutes in South America, Spain and Portugal Meeting
- **1-5 November, Fremantle, Australia**
6th South East Asian Surveyors Congress
<http://www.isaust.org.au/40thcong/index.htm>
- **8-12 November, Guatemala City, Guatemala**
The Pan American Institute of Geography and History - PAIGH 1999 Meeting

2000

- **9-10 March, South Africa**
10th Plenary Meeting of ISO/TC211
- **13-15 March, Cape Town, South Africa**
4th GSDI Meeting

- **16 March, Cape Town, South Africa**
7th Meeting of ISCGM
- **27-31 March, Cape Town, South Africa**
28th International Symposium on Remote Sensing of Environment
- **11-14 April, Kuala Lumpur, Malaysia?**
15th UNRCCAP
- **14-26 July, Amsterdam, Netherlands**
19th ISPRS Congress
- **28-29 September, USA**
11th Plenary Meeting of ISO/TC211

2001

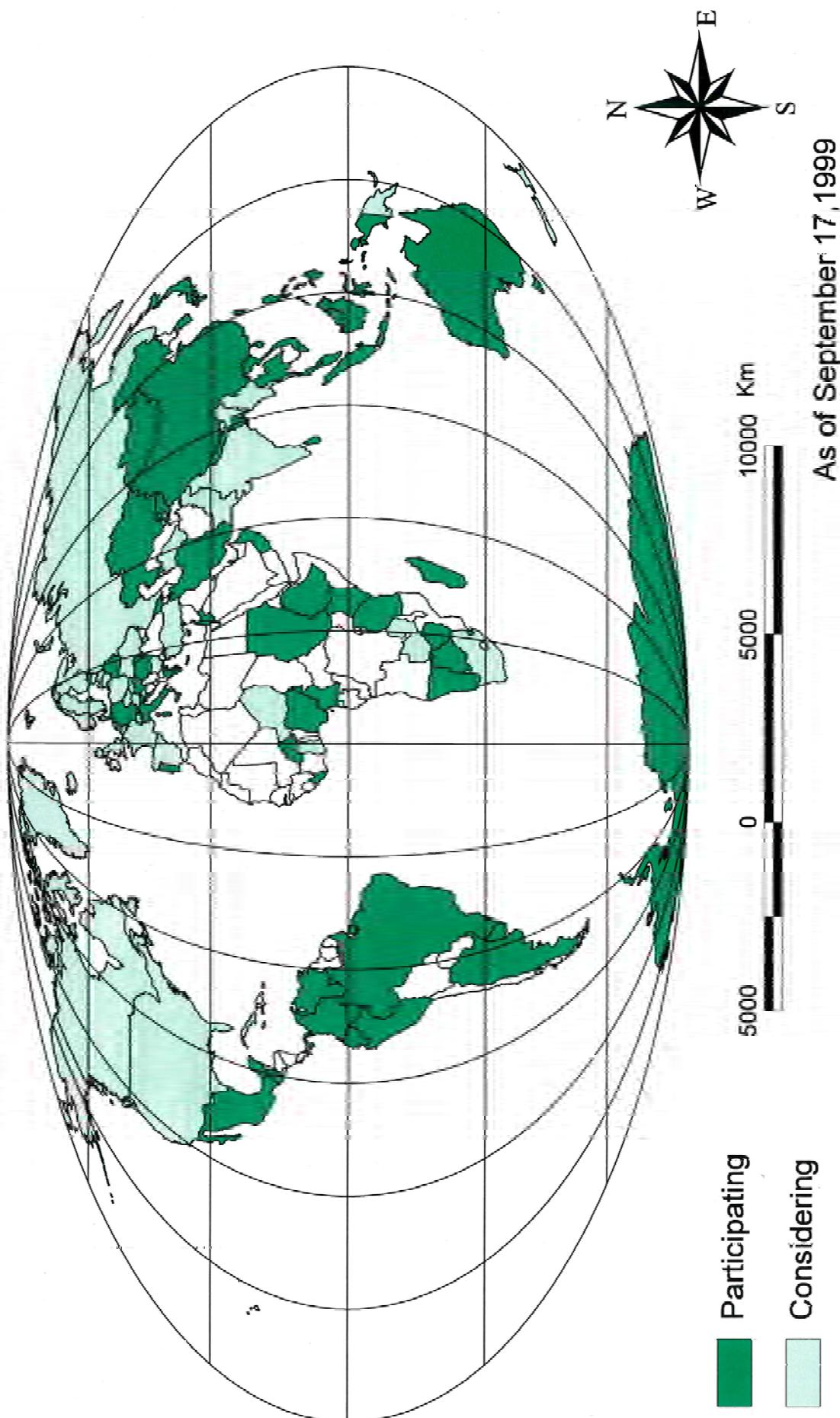
- **March - April, Portugal***
12th Plenary Meeting of ISO/TC211
- **April, Colombia**
5th GSDI Meeting
- **April, Colombia**
8th Meeting of ISCGM*

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Current Participation in Global Mapping Project



Participating (as of September 17, 1999)

| Country, Region | Organization | Organization |
|----------------------|--|---|
| American Samoa | Survey and Land Information Division | National Geography Institute |
| Antarctica | SCAR Working Group on Geodesy and Geographic Information | Mapping Unit, Ministry of Defence |
| Argentina | Secretaria de Recursos Naturales y Desarrollo Sustentable - Dirección de Recursos Forestales Nativos | Geodevtska Uprava Republike Slovenije |
| Australia | Australian Surveying & Land Information Group | Sri Lanka |
| Bangladesh | Survey of Bangladesh | Sudan Survey Department |
| Belarus | State Committee for Land Resources, Geodesy and Cartography | Surveyor General's Department |
| Botswana | Department of Survey and Mapping | Tanzania |
| Bermuda | Ministry of Works & Engineering, Bermuda Government | Thailand |
| Brazil | Instituto Brasileiro de Geografia e Estatística (IBGE) | Royal Thai Survey Department |
| Brunei | Survey Department | Uruguay |
| Burkina Faso | Institut Géographique du Burkina | Servicio Geográfico Militar |
| Cameroon | Institut National de la Cartographie | Venezuela |
| Cayman Islands | Lands & Survey Department | Servicio Autonomo de Geografia y Cartografia Nacional |
| China | State Bureau of Surveying and Mapping | Vietnam |
| Colombia | Instituto Geográfico Agustín Codazzi | General Department of Land Administration |
| Cyprus | Department of Lands and Surveys | Zimbabwe |
| Ecuador | Instituto Geográfico Militar | Department of the Surveyor General |
| Ethiopia | Ethiopian Mapping Authority, Ministry of Planning and Economic Department | Hong Kong, China. |
| Fiji | Ministry of Lands & Mineral Resources | Apologies! In the list of participating countries on the 14th issue of the Newsletter, please read Hong Kong as |
| Georgia | The State Department of Geodesy and Cartography | Hong Kong, China. |
| Germany | Büro für Kartographie und Geodäsie | |
| Greece | Hellenic Mapping and Cadastral Organization | |
| Guatemala | Instituto Geográfico Nacional "Ingeniero Alfred Obisols Gomez" | |
| Hong Kong, China | Lands Department, the Government of the Hong Kong Special Administrative Region of China | |
| Hungary | Department of Lands and Mapping, Ministry of Agriculture and Regional Development | |
| Indonesia | National Atlas Centre, BAKOSURTANAL | |
| Iran | National Cartographic Center (NCC) | |
| Israel | Survey of Israel | |
| Italy | Italian Geographic Military Institute | |
| Japan | Geographical Survey Institute | |
| Jordan | Royal Jordan Geographic Center | |
| Kazakhstan | Scientific Technical Enterprise of Digital Cartography and GIS, The Committee for Management of Land Resources, Ministry of Agriculture STE "Kartinform" | |
| Kenya | Survey of Kenya | |
| Kiribati | Land Management Division | |
| Kyrgyz | State Service of Cartography and Geodesy of Kyrgyz Republic | |
| Liberia | Liberian Cartographic Service, Ministry of Lands, Mines and Energy | |
| Macau | Direccao dos Servicos de Cartografia e Cadastro | |
| Madagascar | Institut Géographique et Hydrographique | |
| Malaysia | Department of Survey and Mapping, Malaysia | |
| Maldives | Ministry of Construction and Public Works | |
| Malta | Mapping Unit Planning Authority | |
| Mexico | Instituto Nacional de Estadística Geográfica e Informática | |
| Moldova | National Agency of Cadastre, Land Resources and Geodesy | |
| Mongolia | State Administration of Geodesy and Cartography Mongolia | |
| Namibia | Direction of Survey and Mapping, Ministry of Lands, Resettlement and Rehabilitation | |
| Nepal | Survey Department | |
| Netherlands Antilles | Cadastral Service | |
| Nigeria | Federal Ministry of Works & Housing, Federal Surveys Department Headquarters | |
| Oman | National Survey Authority | |
| Panama | National Geographical Institute | |
| Peru | National Geographic Institute | |
| Philippines | National Mapping and Resource Information Authority | |
| Portugal | Direccao-Geral do Ambiente Ministerio do Ambiente / Instituto Portugues de Cartografia e Cadastro | |
| Romania | The National Office of Cadastre, Geodesy and Cartography / Institute of Geography, Romania Academy | |

Considering (as of September 17, 1999)

| Country, Region | Organization | Organization |
|------------------|---|--------------|
| Ascension Island | Office of Administrator | |
| South, Atlantic | Bundesamt für Eich und Vermessungswesen | |
| Austria | Institut Geographique National | |
| Belgium | Ministry of Regional Development and Construction | |
| Bulgaria | GeoAccess Division Canada Center for Remote Sensing | |
| Canada | Dizavna Geodeska Uprava | |
| Croatia | Oficina Nacional de Hidrografía y Geodesia | |
| Cuba | Ceský úřad zeměměřický a katastrální | |
| Czech Republic | Kont & Martikelsyreisen | |
| Denmark | Estonian National Land Board | |
| Egypt | Maanmittauslaitos | |
| Finland | Institut Géographique National | |
| France | Survey Department Ghana | |
| Ghana | Landmaelingar Islands | |
| Iceland | Survey of India | |
| India | Oifig na Suirbhéireachta Ordnais | |
| Ireland | State Land Service of the Republic of Latvia | |
| Latvia | Väistöyhine geodezijos ir Kartografijos tarnyba | |
| Lithuania | Administration du Cadastre et de la Topographie | |
| Luxembourg | Survey Department | |
| Myanmar | New Zealand | |
| Niger | Land Information New Zealand | |
| Northern Ireland | Institut Géographique National du Niger | |
| Norway | Ordnance Survey of Northern Ireland | |
| Pakistan | Statens Kartverk | |
| Papua New Guinea | Survey of Pakistan | |
| Poland | National Mapping Bureau | |
| Russia | Landmatrikel | |
| Slovakia | Topografische Dienst Nederland | |
| South Africa | Główny Urząd Geodezji i Kartografii | |
| Spain | Federal Service of Geodesy & Cartography of Russia | |
| Sweden | Urząd geodezji, kartografie a kataszu Slovenskej republiky | |
| Switzerland | Survey and Mapping | |
| The Netherlands | Centro Nacional de Informacion Geografica | |
| Turkmenistan | Landmatrikel | |
| Turkey | Bürografen für Landesgeodäsie | |
| Ukraine | Turkmenistan State Committee on Geodesy, Cartography and Cadaster | |
| United Kingdom | Mili Savunma Bakanlığı, Harita Genel Komutanlığı! | |
| USA | Main Administration of Geodesy, Cartography and Cadastre | |
| Zambia | Ordnance Survey | |
| | Survey Department | |