Global Mapping Project by National Mapping Organizations on the Globe

Hiromichi MARUYAMA, Hisakazu SASAKI, Takaki OKATANI

International Steering Committee for Global Mapping (ISCGM)
April 2005

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What is Global Map

- Digital geographic dataset with
  - Global coverage
  - Consistent specifications (1:1 million scale)
  - Worldwide open distribution

- Purpose
  To be used for
  - Implementing measures for environmental protection
  - Attaining sustainable development
  - Mitigating natural disasters

- Development under international cooperation
  - Voluntary participation by NMOs (National Mapping Organizations)
  - Contribution according to capacity of the organization
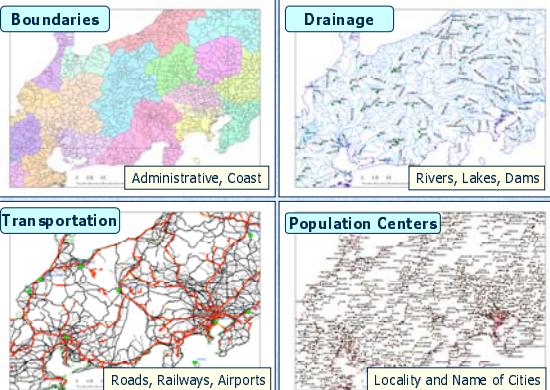 - Update regularly (about every 5 years)
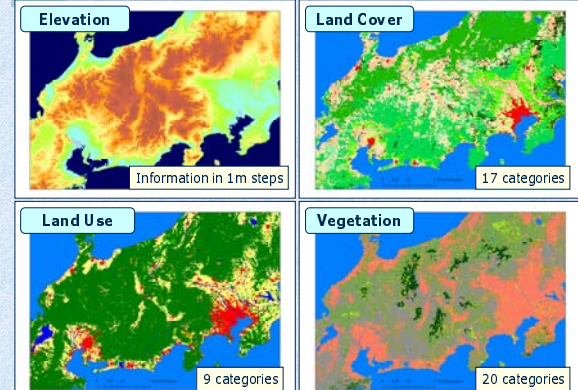
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Global Map Specifications

- Spatial resolution: 1km
  (equivalent to 1:1,000,000 scale)
- 8 layers
  - Vector data (point, line, area)
    Boundaries (Administrative/Coast) ,Drainage (Rivers/Lakes) ,Transportation (Roads/Railways/Airport) ,Population centers
  - Raster data (grid)
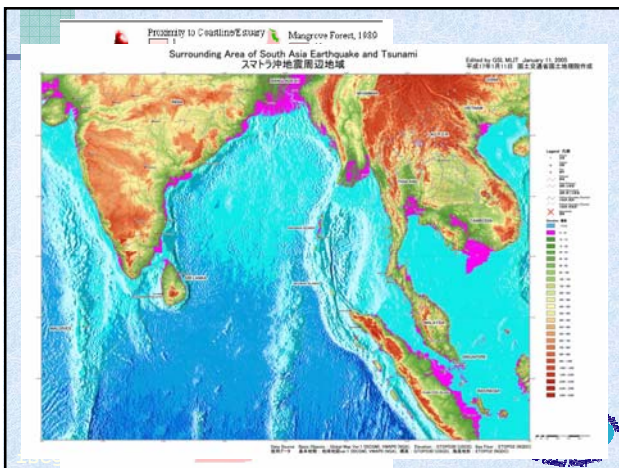   Elevation, Land Cover, Land Use, Vegetation

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Global Map Data (Vector Data)

Boundaries — Administrative, Coast
Drainage — Rivers, Lakes, Dams
Transportation — Roads, Railways, Airports
Population Centers — Locality and Name of Cities

Global Map Data (Raster Data)

Elevation — Information in 1m steps
Land Cover — 17 categories
Land Use — 9 categories
Vegetation — 20 categories

●1

Tokyo, JAPAN

Nairobi, KENYA

地球地図ケニア鳥瞰図

Gaborone, Botswana

Surrounding Area of South Asia Earthquake and Tsunami
スマトラ沖地震周辺地域
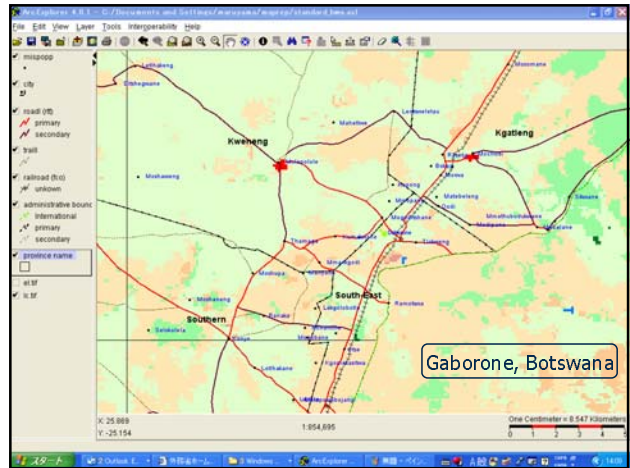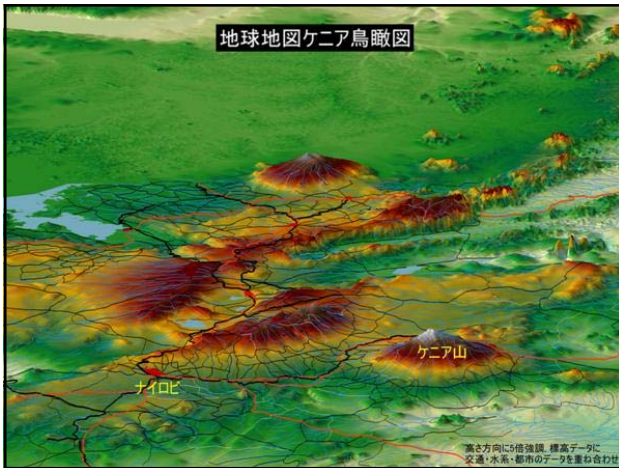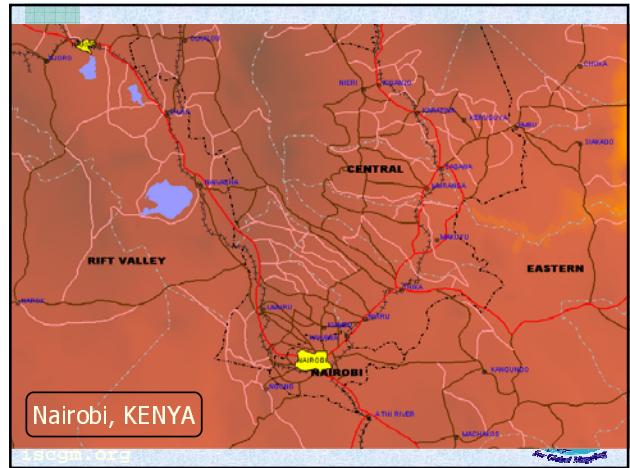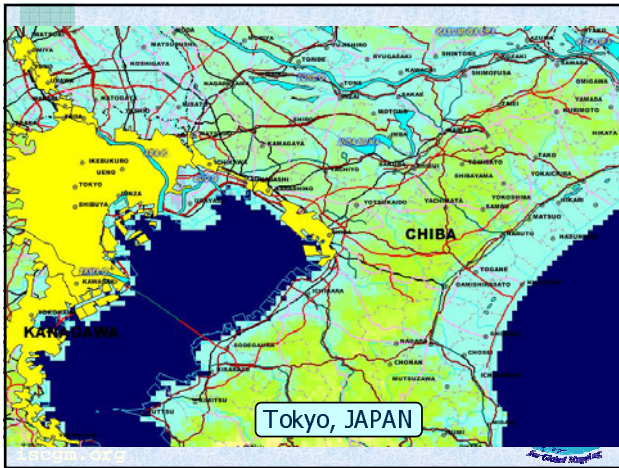
History of Global Mapping

- **1992** UNCED
  - Adoption of "Agenda 21"
    Global Mapping Concept proposed by Japanese Government
- **1996** Establishment of International Steering Committee
- **1997** Rio+5(UN General Assembly Special Session)
  - necessity of Global Mapping included in the adopted "Programme for the further implementation of Agenda 21"
- **2000** Release of Global Maps through the Internet
- **2002** WSSD
  - Adopted document "Plan of Implementation" describes global mapping
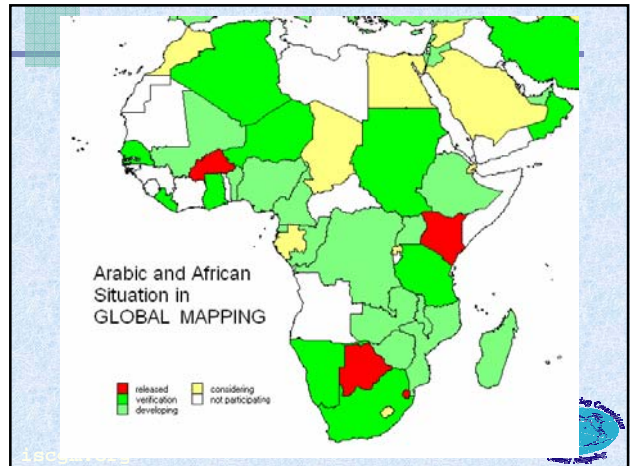- **2007** Complete land surface of the Earth to be covered by Global Maps

Present Status of Global Mapping

- **142 countries and regions** participate (86% of the global land area coverage)
- **20 countries** (13% of the global land area coverage) already released Global Maps
  - 2000 : Japan, Lao P. D. R., Nepal, Sri Lanka, Thailand,
  - 2001 : Australia, Bangladesh, Colombia, Mongolia, Philippines.
  - 2002 : Panama, Kenya
  - 2003 : Burkina Faso, Kazakhstan, Kyrgyz, Mexico, Myanmar.
  - 2004: Swaziland, Samoa
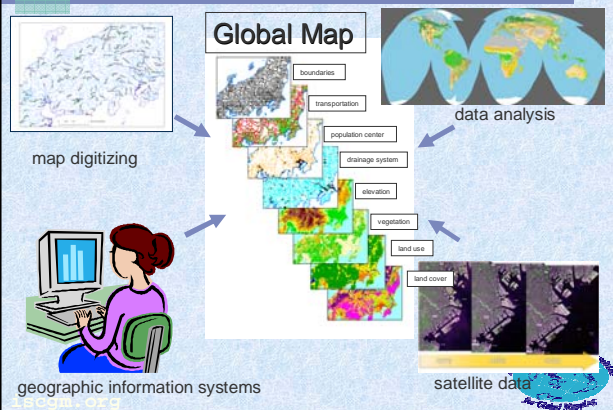 - ※ With data for verification phase (27 countries and regions) , 58% of the global land are being covered.

Progress of Global Mapping Project
as of 2005-03-09
Secretariat of
International Steering Committee for Global Mapping

Legend
- data available
- data for verification
- developing data
- considering joining the project
- not participating in the project

Most raster data of current Global Map are compiled from GTOPO30 and GLCC, contribution of United States of America.
This map is for the purpose of reference and the boundaries in this map are not authorized by any organizations.

African Situation

- Participation : 27out of 53 countries

  LANGUAGE?   **INSUFFICIENT COMMUNICATION?**

  More effort is necessary
- Data released: 4 countries

  Proof of effectiveness of the project scheme
- ISCGM activities:
  - 3 committee members (Kenya, Niger, South Africa)
  - Liaison : UNECACODI-GEO
  - Global Mapping seminar in Nairobi

Arabic and African Situation in GLOBAL MAPPING

- released
- verification
- developing
- considering
- not participating

How to Produce Global Map Version 1.0?

Global Map
- boundaries
- transportation
- population center
- drainage system
- elevation
- vegetation
- land use
- land cover

map digitizing

data analysis

geographic information systems

satellite data

Management of the Project

- Who makes Global Map?
  - NMOs (National Mapping Organizations) are assumed to make Global Maps for their countries
  - Support scheme available for those who are difficult in making Global Maps by themselves

- Who manages the implementation of the project?
  - International Steering Committee for Global Mapping (ISCGM)
    - Core body to promote Global Mapping
    - 20 members incl. Heads of 17 NMOs
    - Chair : Prof. D. R. F. Taylor, Carleton Univ., Canada)
    - Secretariat: Geographical Survey Institute (GSI), Ministry of Land Infrastructure and Transport (MLIT), Government of Japan

Management of the Project (2)

- Relation with other communities
  - Many liaison organizations to ISCGM
    - Global or regional SDIs (GSDI, PCGIAP, PCIDEA, UNECACODI, ISDE)
    - UN organizations (UN statistic division, UNEP/DEWA)
    - Academic institutions (ICA, ISPRS)
    - International organizations (ISO/TC211, PAIGH)
  - UN sustainable development
    - Global Mapping is registered as Type II partnerships / initiatives
    - Involvement in CSD activities with consultative status
  - GEOSS (Global Earth Observation System of Systems)
    - ISCGM is a participating organization of GEO

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Benefits of Participation

- Joining the world community of geo-information
- More opportunities for capacity building
- Grant programs by GIS vendors
- Driving force to NSDI establishment

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Capacity Building Programs

- Global Mapping Partnership Program
  - Coordination by MLIT, Japan
  - Further strengthen partnership especially with developing countries
  - Typical example is 5 day long GM seminar at RCMRD in Nairobi
    - Aug. 2002, Aug 2003, Nov. 2004
- The Group Training Course on Global Mapping
  - 2 and half months long training conducted by JICA, implemented by GSI
  - Started in1994, and 67 people from 36 countries completed the course
- Grant Programs by GIS vendors
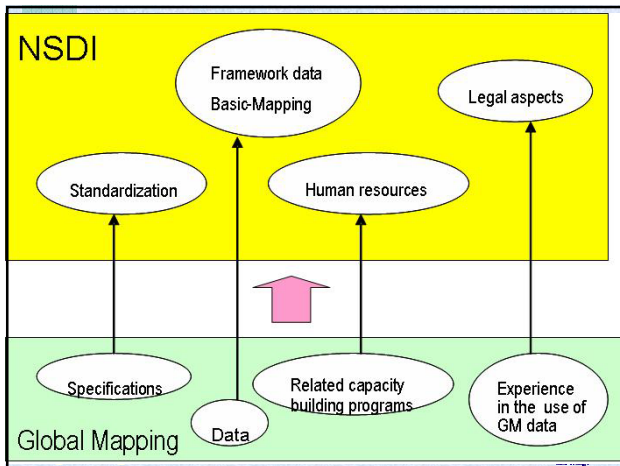 - e.g. ESRI Global Map/GSDI grant, Intergraph grant

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From Global Map to an NSDI

- Basic Mapping in 21st century should be implemented within the concept of NSDI
- Experience of Global Mapping provides NMO with main components of NSDI
  - Framework data: 1:1,000,000 GM of the country concerned
  - Human resources: trained through GM development
  - Standardization: GM specifications are basically compliant with ISO/TC211
  - Legal issues: use of GM will provide such experience
  - Sustainability: assured in a network of NMOs

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NSDI
Framework data
Basic-Mapping
Legal aspects
Standardization
Human resources
Specifications
Related capacity building programs
Experience in the use of GM data
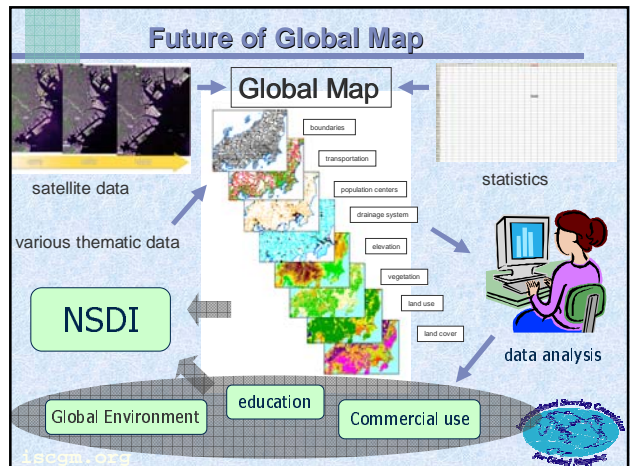Data
Global Mapping

Let's participate in Global Mapping

- Support by United Nations
  - Sent recommendation letter inviting NMOs
- Contribution depending on capacity
  - Level A: help creation of coverage for Level C countries in addition to their own national coverage
  - Level B: create their own national coverage
  - Level C: provide source materials to A countries while developing national capacity
- Easy participation
  - No participation fee
  - Send application form with plan of data development
- Inquiry
  - URL: http://www.iscgm.org, e-mail:sec@iscgm.org

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Issues to be solved

- Participation more countries to the project
  - 86% -> 100%
- Modern format fitting Internet era
- Expansion of use of Global Map to broader areas
- Preparation of framework data at larger scale than 1:1,000,000
- Increase sustainability of the project
  - Regularly update must be operational

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Future of Global Map

Global Map
boundaries
transportation
population centers
drainage system
elevation
vegetation
land use
land cover
satellite data
various thematic data
statistics
NSDI
data analysis
Global Environment
education
Commercial use

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Conclusion

- Participation in Global Mapping brings various benefits to NMOs
  e.g.necessary components to establish an NSDI
- More participation of NMOs is necessary to complete GM development by the year 2007
- Global Mapping project and NSDI rely on each other. Let's participate in Global Mapping project for the establishment of NSDI

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