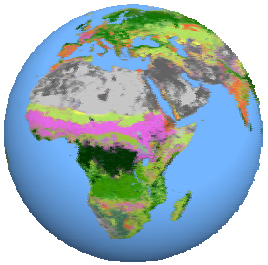
GEOSS Asia and the Pacific Symposium

Feb. 5, 2009

Kyoto Research Park



Global Mapping Project

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What is Global Map?

- Digital geographic dataset
  - Covering the Whole land area
  - Spatial Resolution: 1 to 1 million or 1km
  - Unified specifications
  - Worldwide open distribution
    - freely download for non-Profit purposes
- For…
  - Analyses for solving global environmental problems
  - Achieving sustainable development and
  - Mitigating Large scale disasters

Organizations

- Each National Mapping Organization (NMO) is assumed to develop Global Maps for each country.
  - Supporting schemes available for those who are not able to develop Global Map by themselves.
  - Global Map data are open to public through the Internet
- International Steering Committee for Global Mapping (ISCGM)
  - 20 members, mainly heads of NMOs
  - Liaisons including ISO/TC211
  - Chair: Prof. D.R.F. Taylor (Carleton Univ., Canada)
  - The Secretariat is located in Geographical Survey Institute of Japan

History of Global Mapping Project

Establishment of the Project

Development of Global Map Data

1992

Agenda 21 was adopted at Earth Summit (UNCED).

Japan proposed "Global Map" concept.

1996

ISCGM was established.

2000

Started providing Global Map data

2002

Johannesburg Summit (WSSD)
Global mapping is included
in adopted "Implementation Plan".

WSSD

2008

Completion of Global Map Version 1

Participation status

- Participation
  - 164 countries and 16 regions
    - 97% of global land area coverage
- Data released
  - 69 countries and 4 regions
    - 60% of global land area coverage
  - Global coverage for land cover and vegetation layer

Global Map data layer

- 8 thematic layers
  - Vector data
    - Boundaries
    - Drainage
    - Transportation
    - Population centers
  - Raster data
    - Elevation
    - Land Cover
    - Land Use
    - Vegetation (Percent Tree Cover)

Vector layers

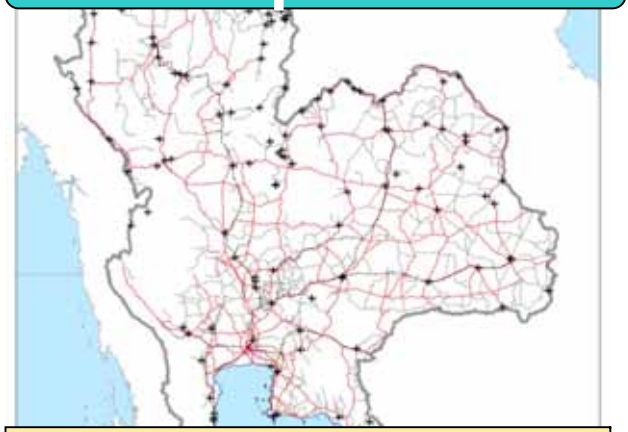
Boundary

Coastline, Administrative boundaries

Drainage

River, Inland water, Dams

Transportation



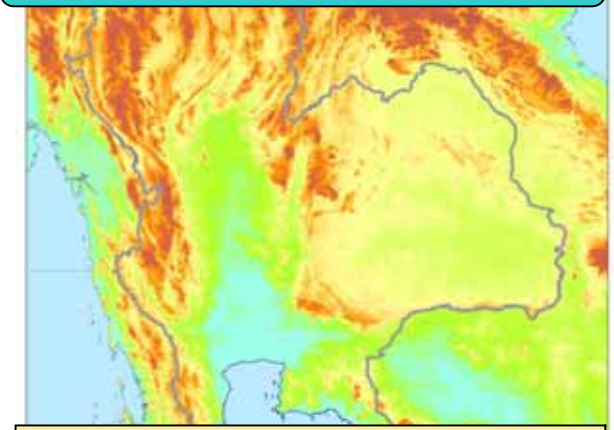
Road, Railway, Airport

Population centers

Location, Name of Cities

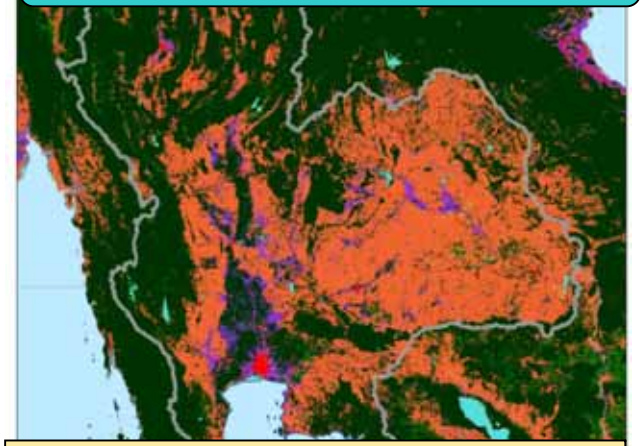
Raster layers

Elevation



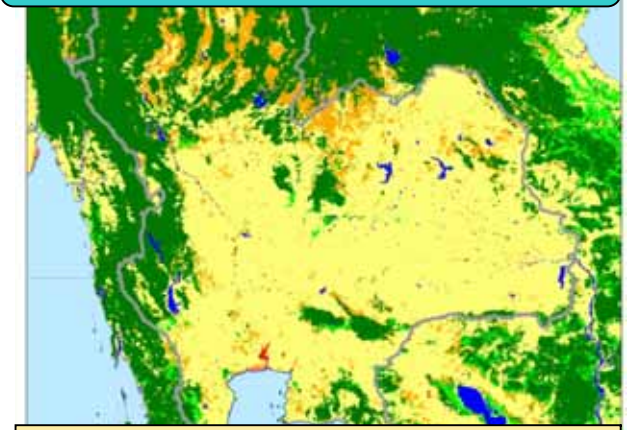
1m step information

Land cover



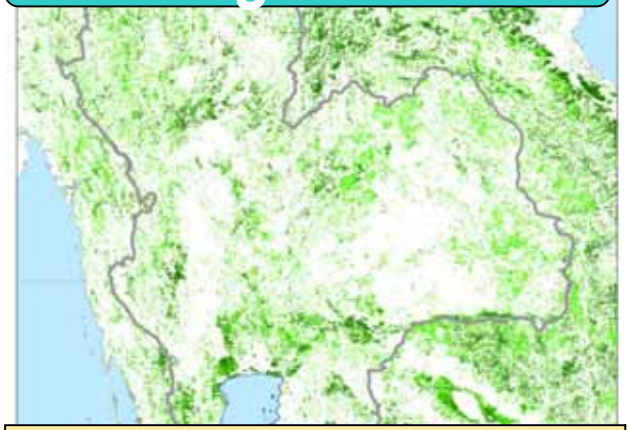
20 categories

Land use



9 categories

Vegetation



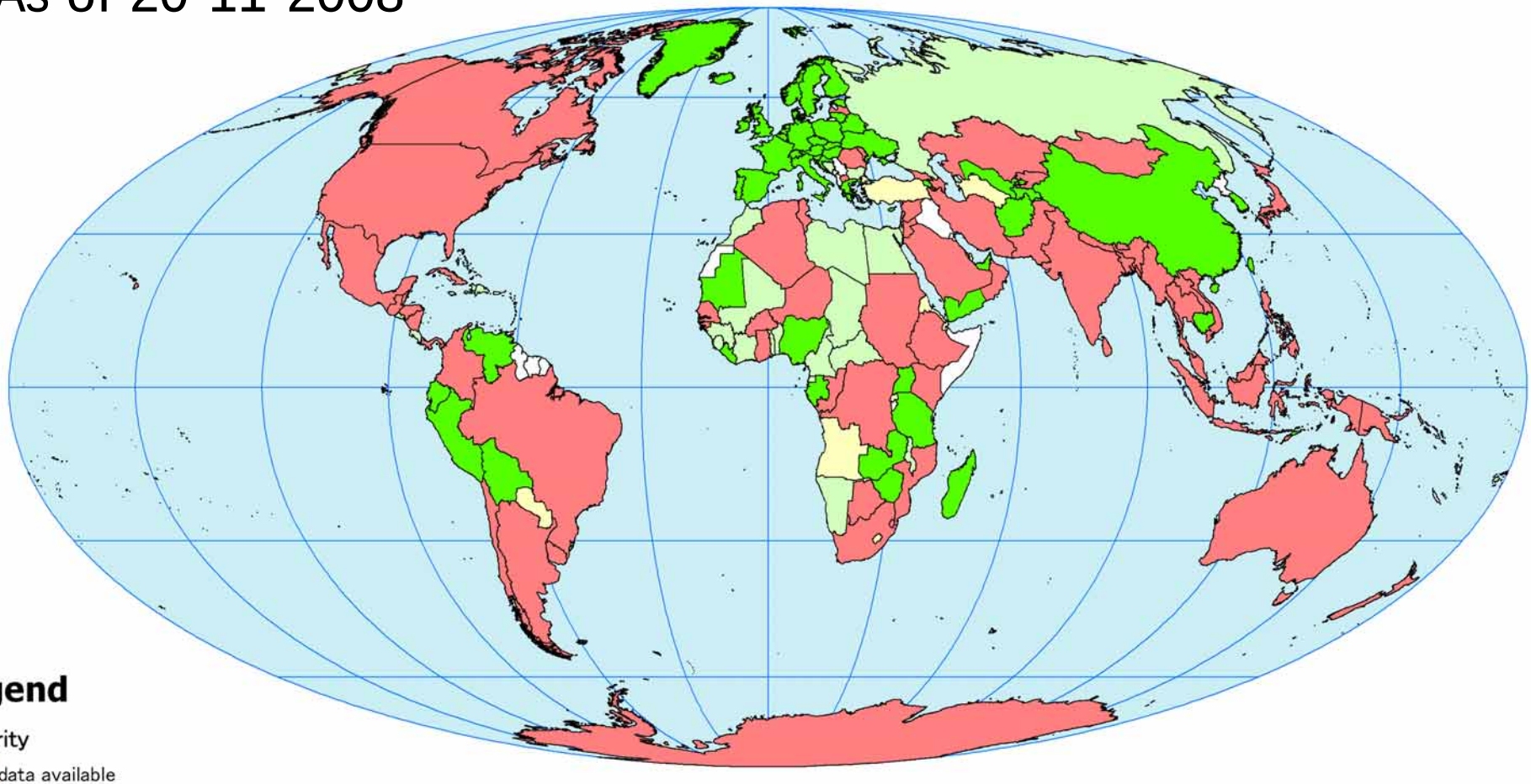
Percent tree cover

Development Approaches

	National / Regional (73 datasets)	Global
Vector layers	Mostly available in existing datasets	
Raster Layers	Some are available	Land cover and Vegetation (percent tree cover) *NMOs contributed to collecting ground truth data and data validation

Progress of vector layers

As of 20-11-2008



Legend

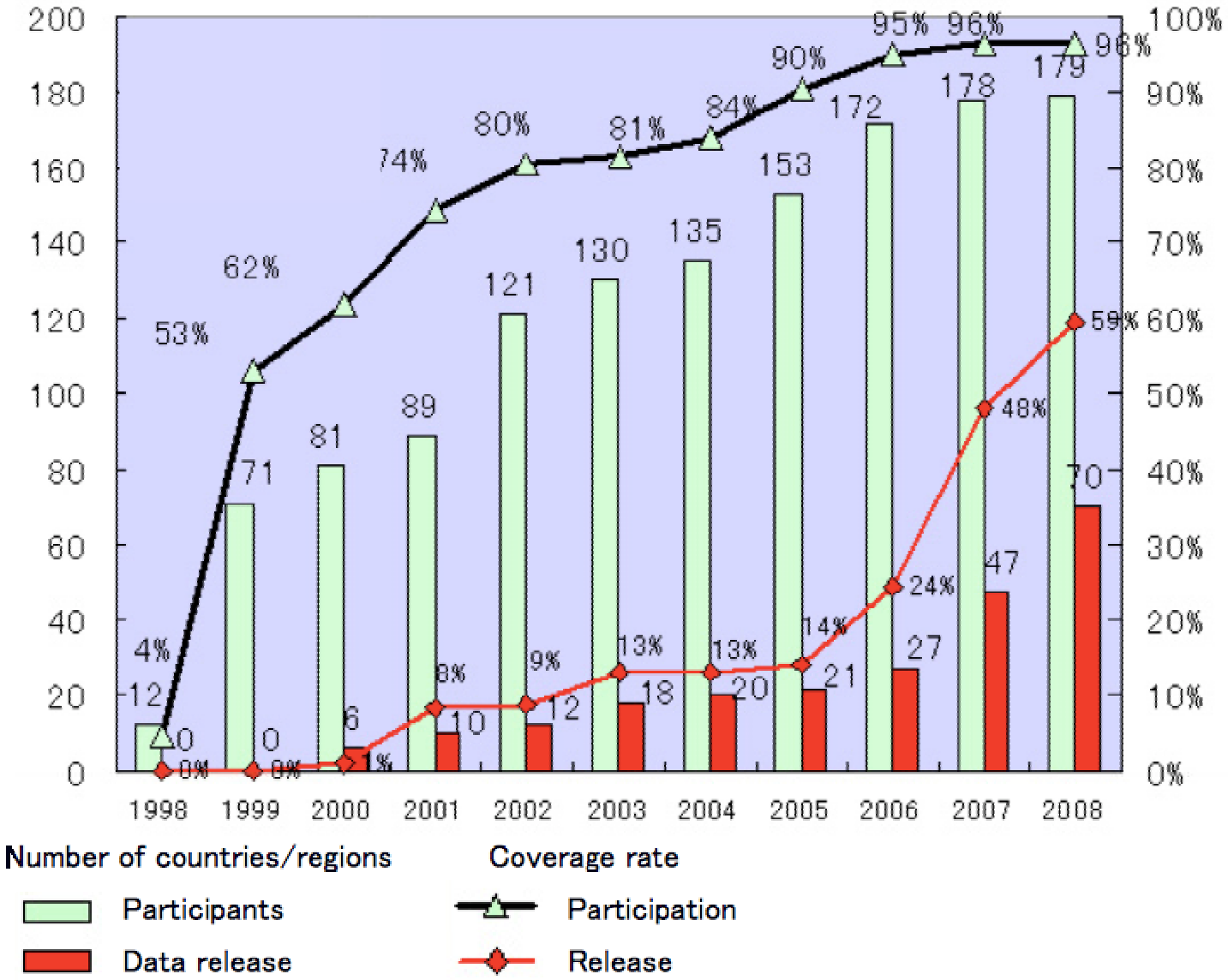
maturity

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

Most elevation data of current Global Map are compiled from GTOPO30, 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.

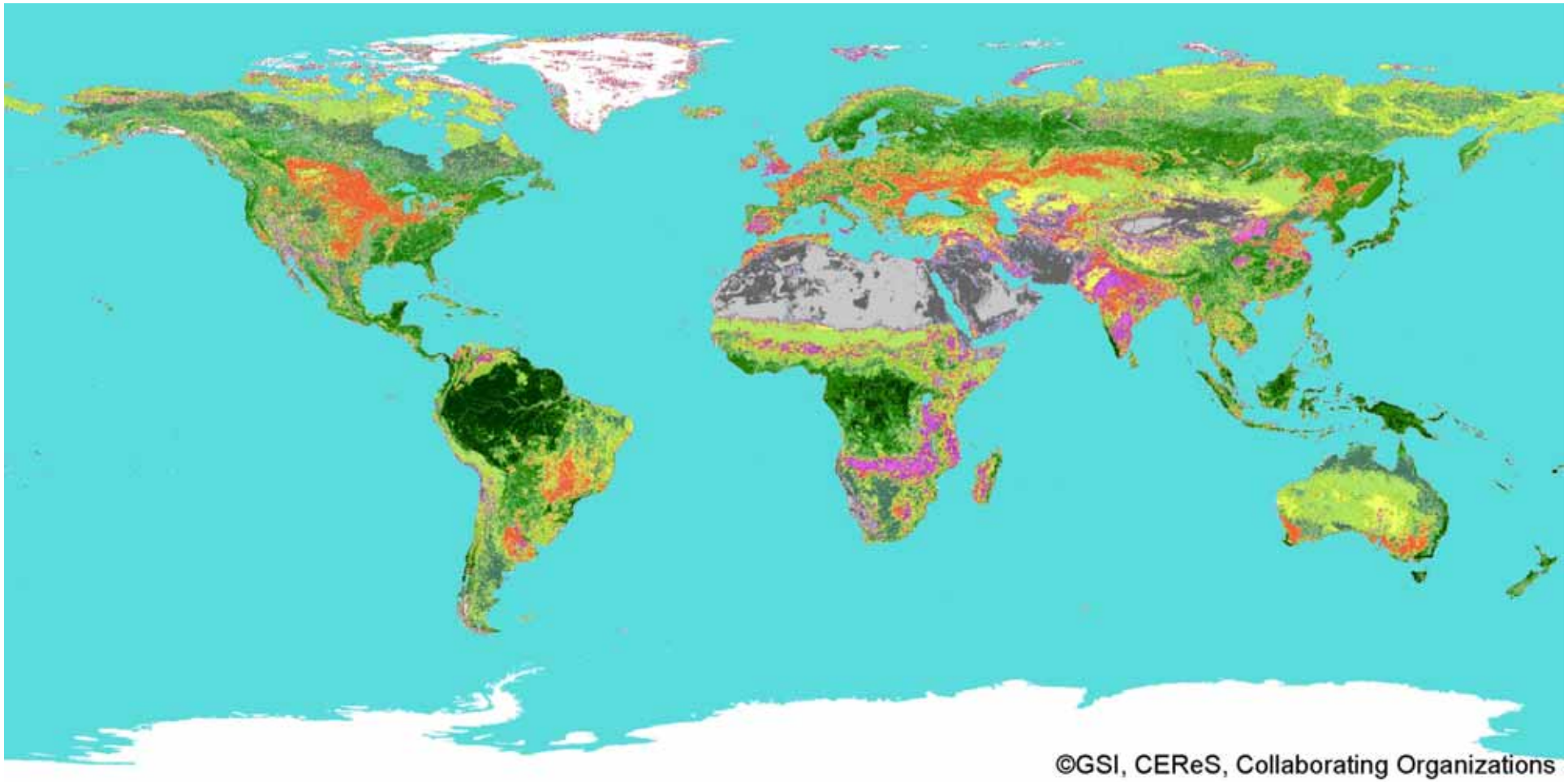
Progress of GM vector layers



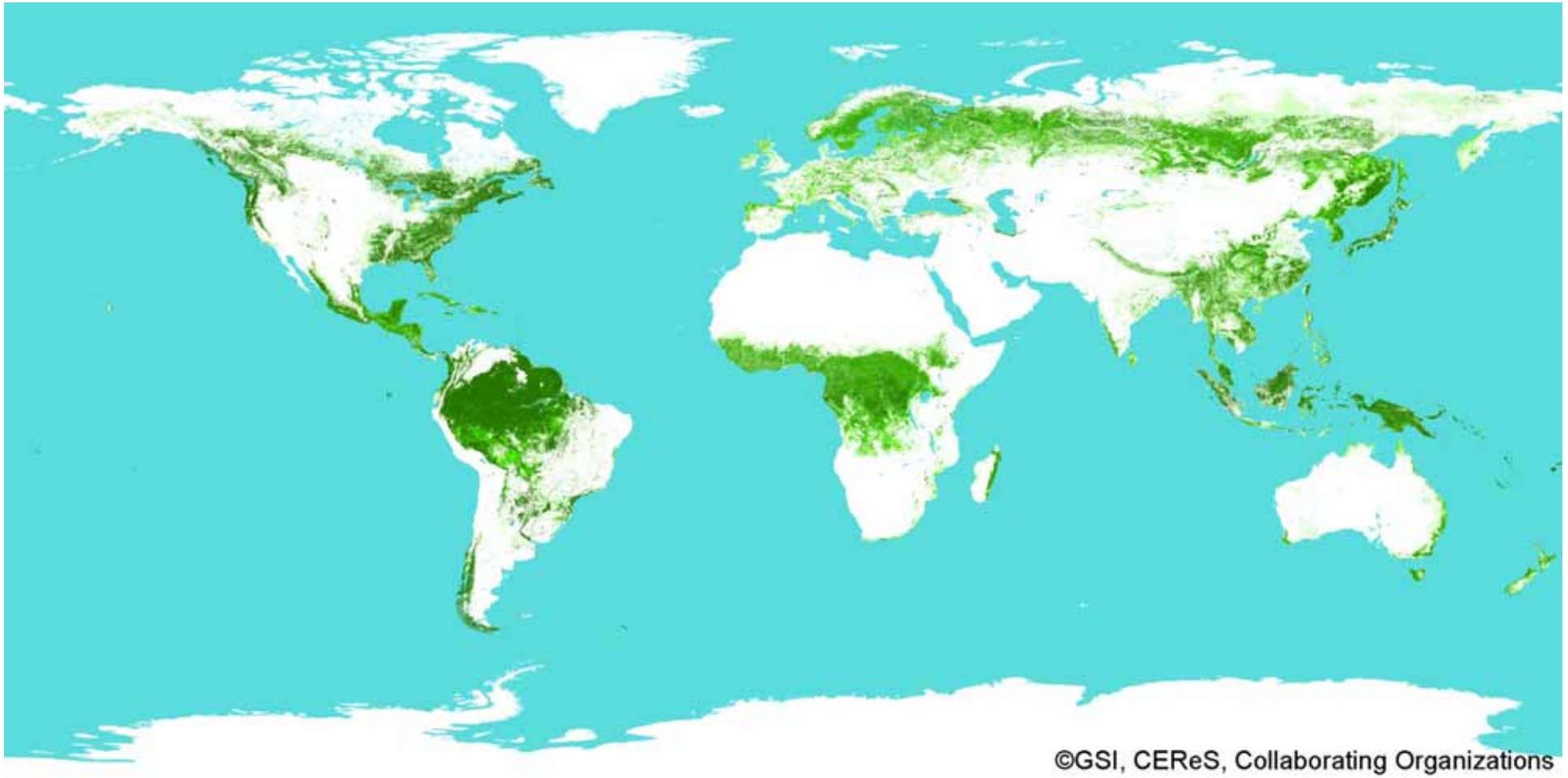
Global Raster Data Development

- Land use, land cover and vegetation
  - Similar each other, burdensome to NMOs
- Development by global approach using satellite images for the following two layers
  - Global Land Cover by National Mapping Organizations (GLCNMO)
  - Percent Tree Cover (as Vegetation layer)
- Developed by GSI, Chiba Univ. with field check of NMOs

Global Land Cover (GLCNMO)

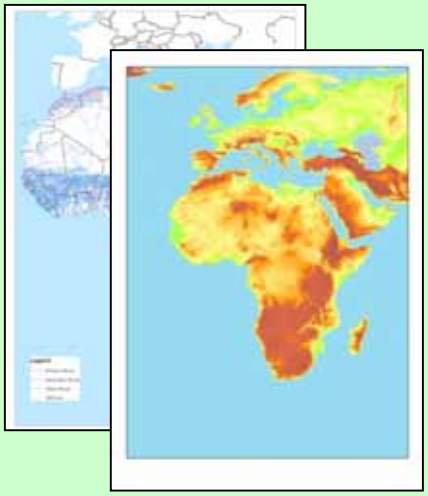


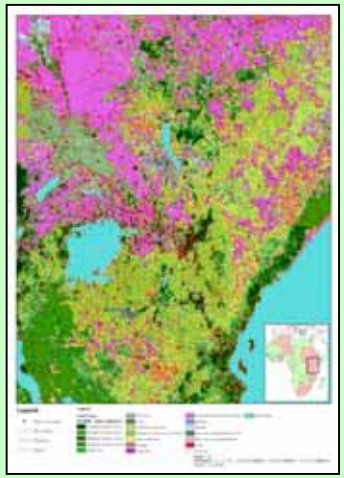
Global Percent Tree Cover



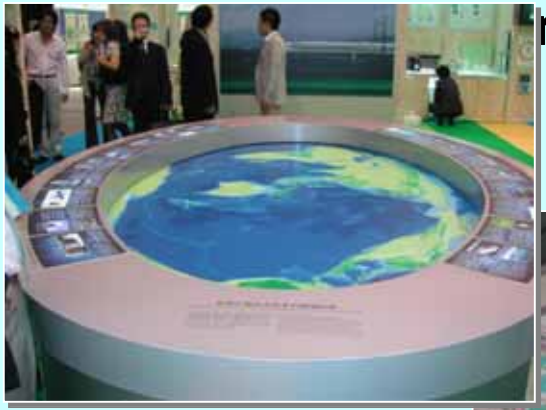
Activities of Global Mapping Project for the Events Relevant to"G8 Hokkaido Toyako Summit"

"TICAD IV" held in Yokohama





G8 Environment Ministers Meeting



n KOBE"

G8 Toyako Summit "Integrated Exhibition of the Environment"

"Environmental Showcase"

北海道洞爺湖サミット記念
環境総合展2008
INTEGRATED EXHIBITION OF THE ENVIRONMENT IN CELEBRATION OF THE HOKKAIDO TOYAKO SUMMIT

Discussion on new format of GM vector data

- **New format should be ;**
  - **Pervasive throughout the world**
  - **Comply with the requirements of distribution of geo-information through web service**
- Introduction of GML3 (ISO19136) has been considered at previous ISCGM meetings.
- As for metadata ISO19115 is also being considered.

Land cover layer

- Land cover layer (GLCNMO)
  - One of the Essential Climate Variables (ECVs), identified by GCOS (Global Climate Observation system)
- GLCNMO adopted Land cover classification system (LCCS) proposed by FAO, being discussed in TC211 (ISO19144)

The way to new GM specifications

- Questionnaire survey on spefcification
  - NMOs, Liaison organizations
  - Registered users
- Consideration on Specification by WG2
- **Workshop on Specification**
  - **September 2009, Tsukuba**
- To be adopted at ISCGM16
  - 25 October 2009, Bangkok
- Comments and suggestions are welcomed

For More Information...

- Please access ISCGM Home Page:

  http://www.iscgm.org/

  - Global Map for 69countries & 4 regions
  - Global Map Specifications
  - Global Map News Letter (Quarterly)
  - And more...

- Please mail to sec@iscgm.org

If you have any questions or advices!

Guideline of Basic Geographic Data

- GEO Task DA-06-05

  Lead Organizations: GSI/ISCGM

  Completed in September 2008
- Purpose

  Develop a guidance document (including format, precision, accuracy etc.) taking into relevant national, regional and global initiative
- Contents

  Geodetic reference frame, Map projection, Basic Geographic Data, Good examples of Use of the Data in Earth Observations, Standards

  including survey result of 60 datasets.

Guideline of Basic Geographic Data

- The guideline can be downloaded at:
  ISCGM Website menu /applications/geo
  http://www.iscgm.org/

- Detailed presentation will be made at:
  GEO Architecture & Data Committee meeting
  Feb. 9 (Monday) at Kyoto Research Park

- US-09-03a (GEO Workplan 2009-2011)
  Lead: ISCGM
  Align Global Map Specifications considering GEO Societal Benefit Area

Thank you