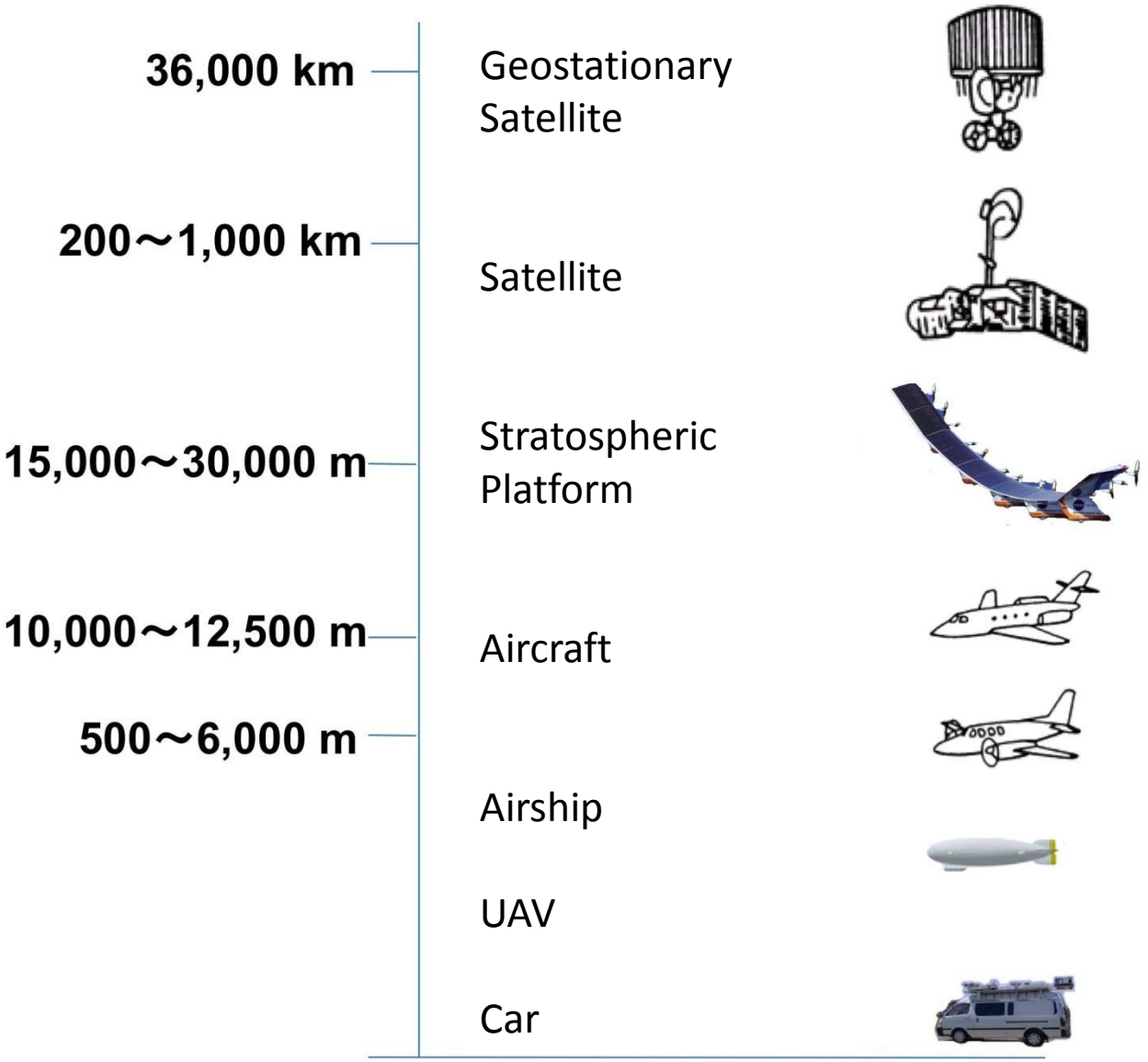
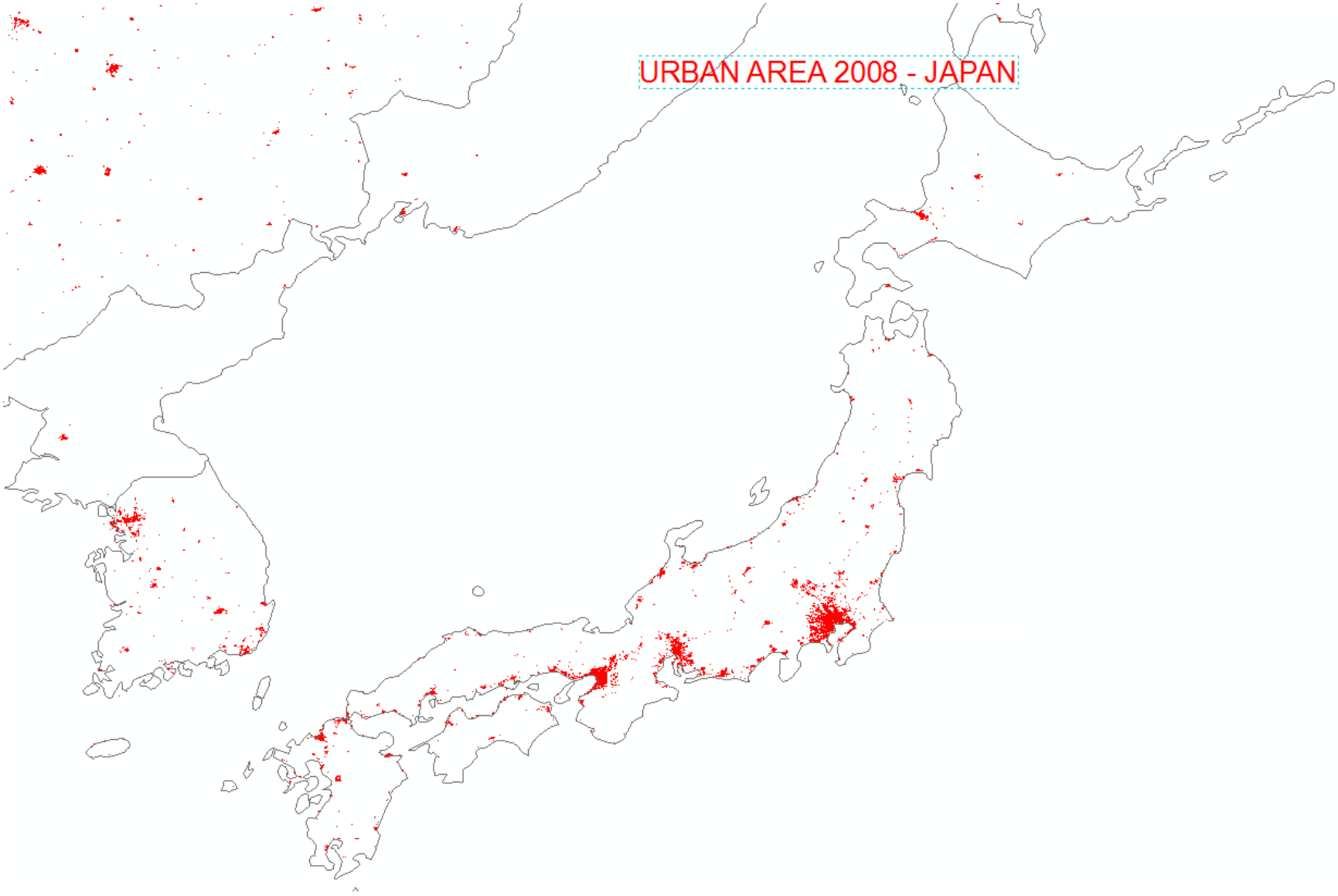
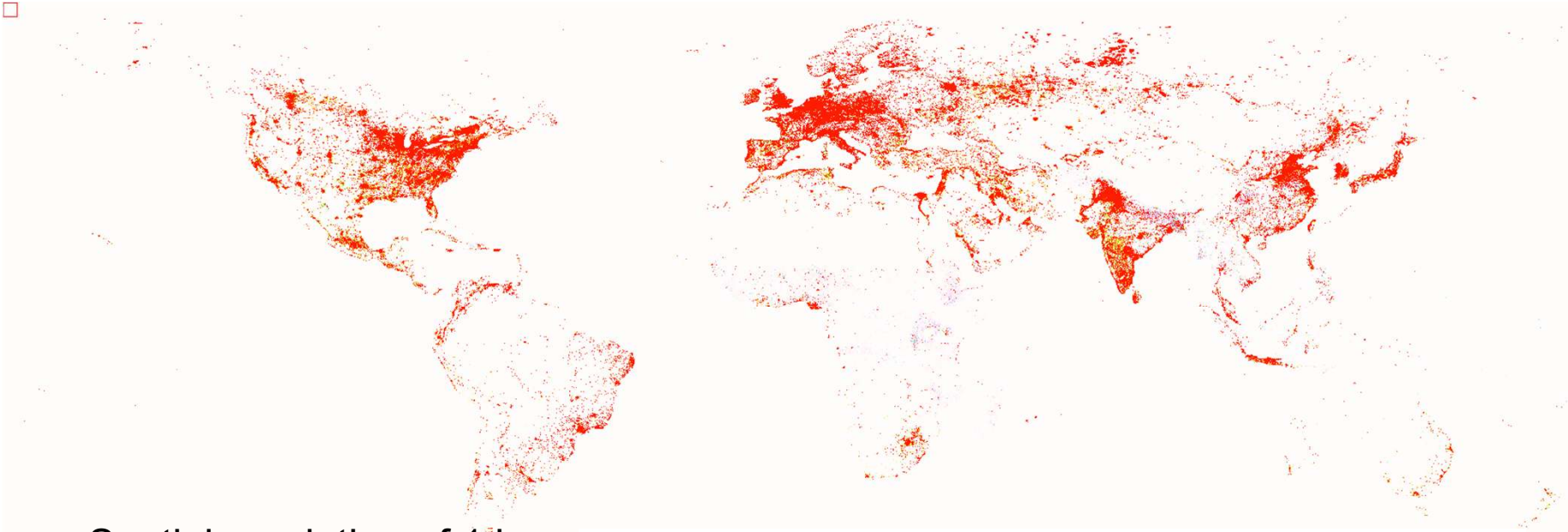
Platform of Remote Sensing




URBAN AREA 2008 - JAPAN

4-Global Distribution and Density of **Constructed Impervious Surfaces** 2010
(EstISA : Estimate the density of constructed Impervious Surface Area)



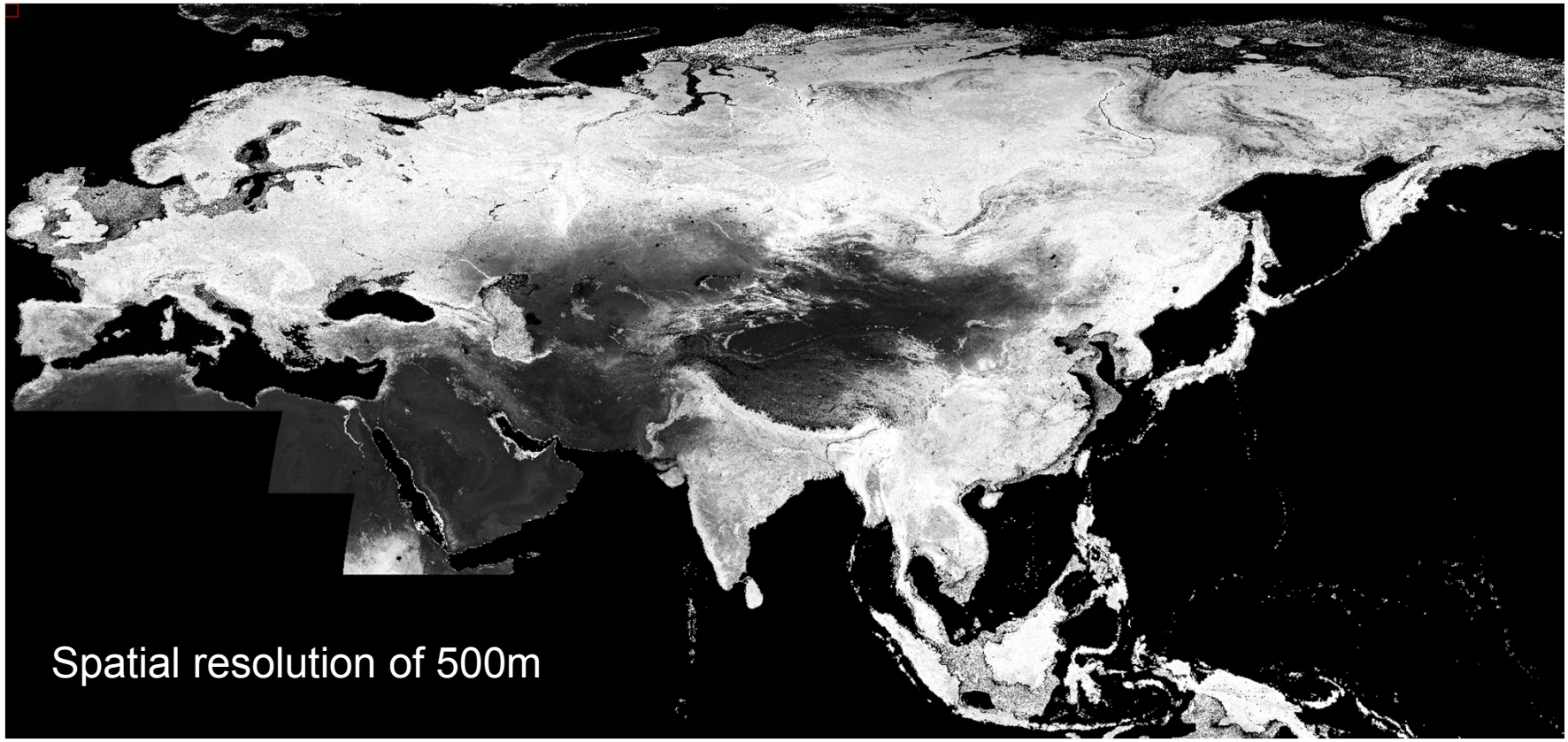
Spatial resolution of 1 km

Global Distribution and Density of Constructed Impervious Surfaces 2010

(Source : http://www.ngdc.noaa.gov/dmsp/download_global_isa.html)

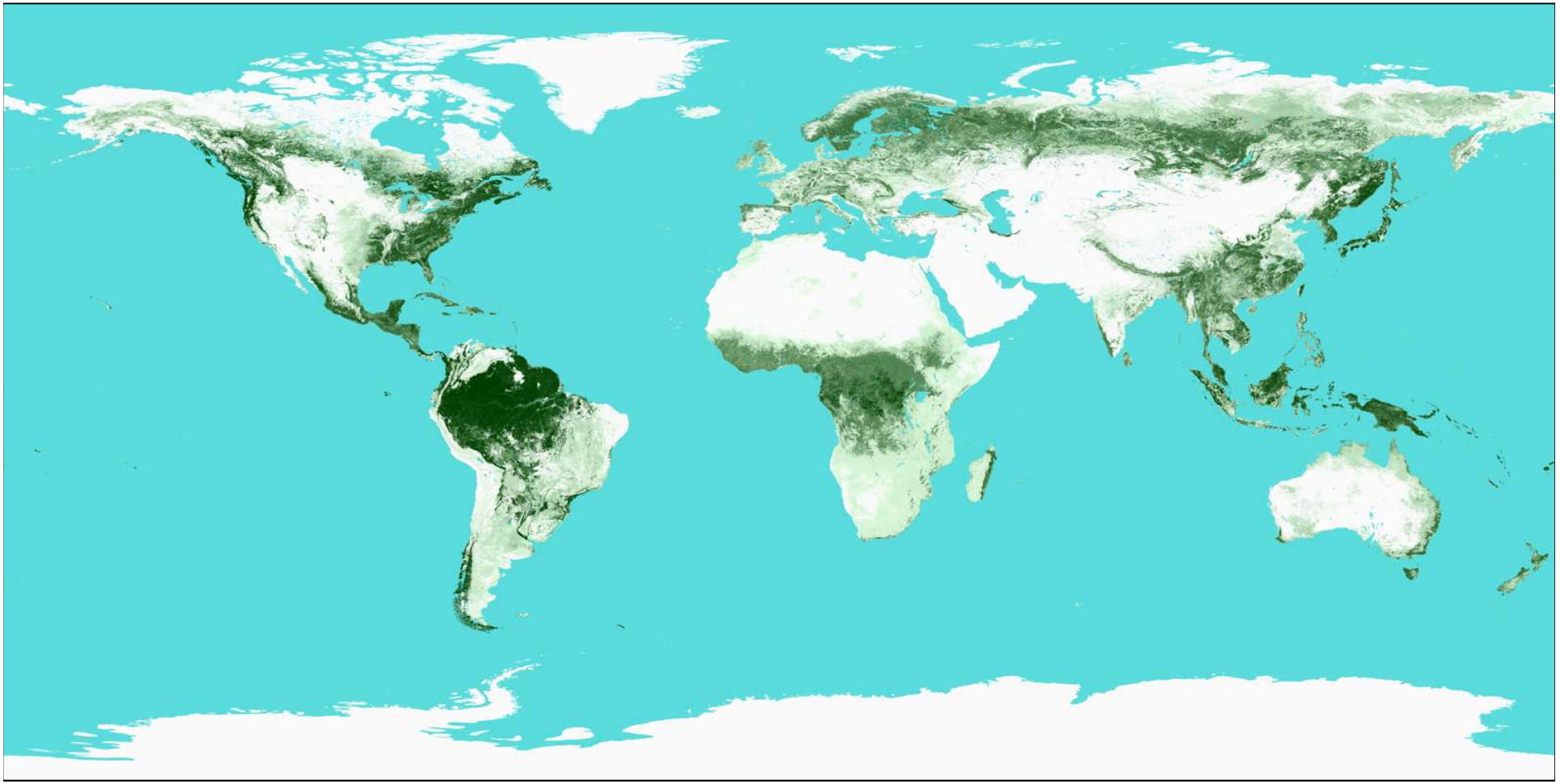
Vegetation

3- MODIS 2008
Global MODIS 2008 Data processed by CEReS, Chiba Uni. MODIS-NDVI Data.

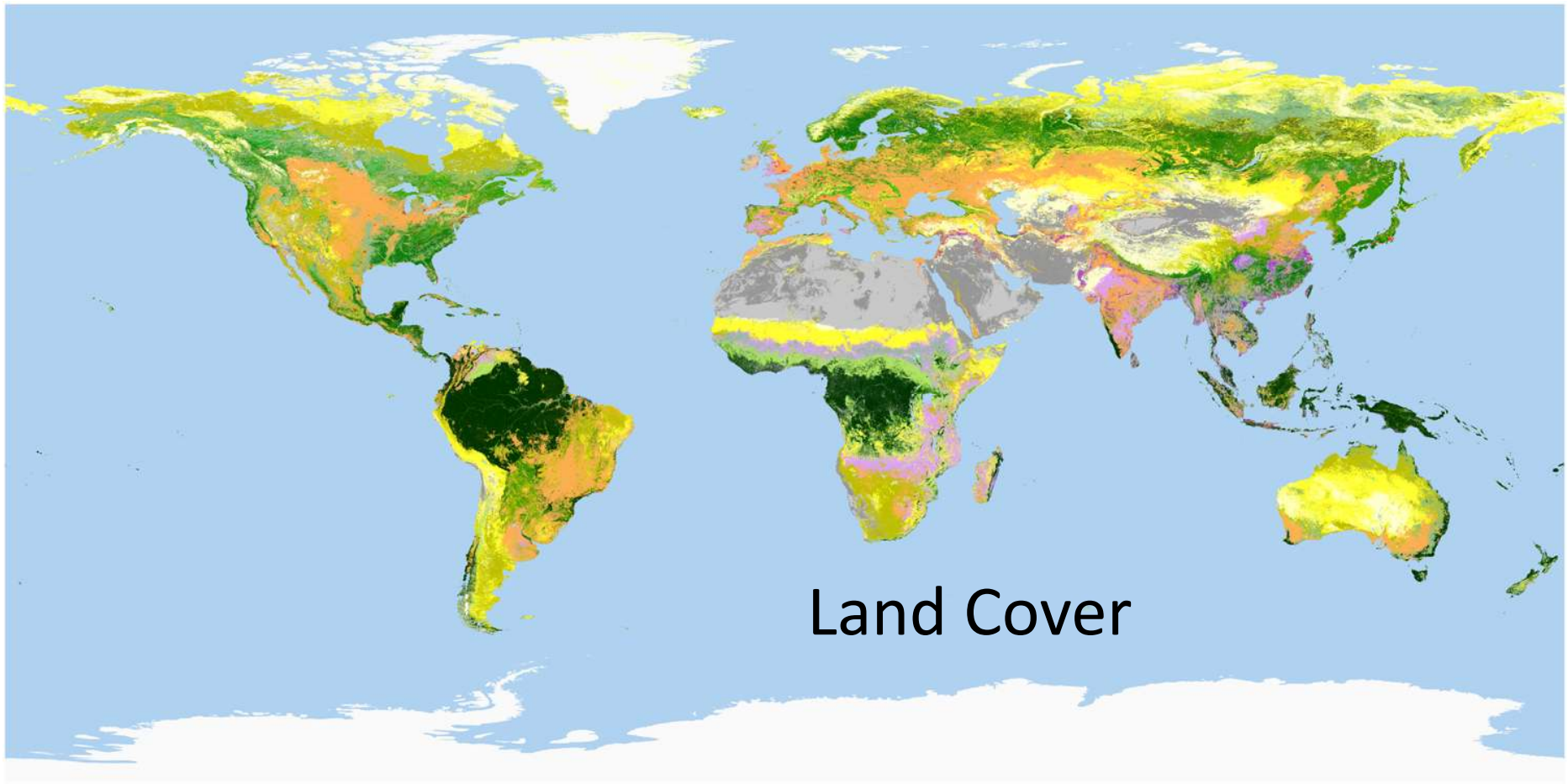


(Example : Result NDVI Average(Max1,Max2) of Eurasia)

Global Percent Tree Cover Map



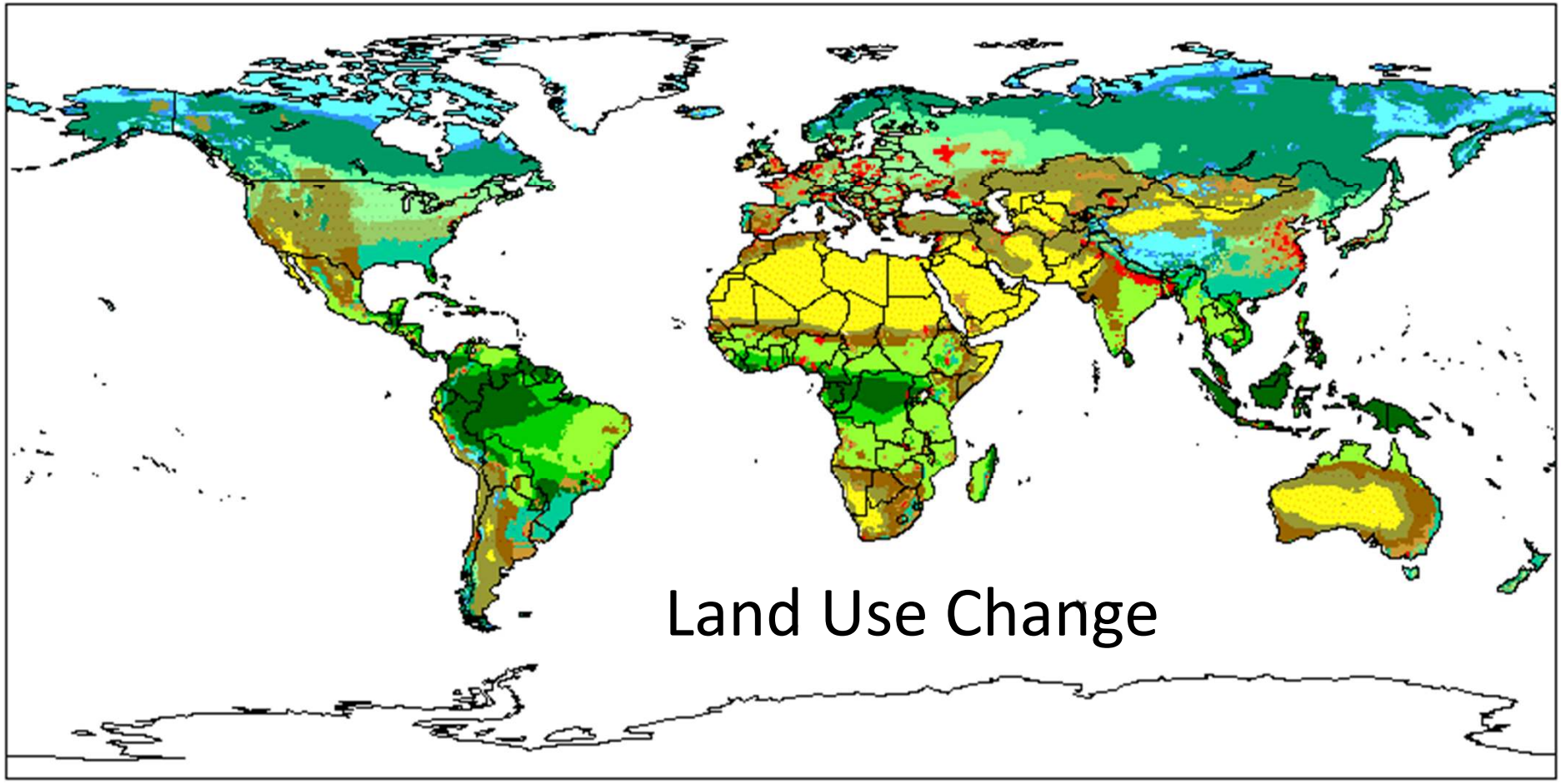
available from http://www.iscgm.org/



01 Broadleaf evergreen forest
02 Broadleaf deciduous forest
03 Needleleaf evergreen forest
04 Needleleaf deciduous forest
05 Mixed forest
06 Tree open
07 Shrub
08 Herbaceous
09 Herbaceous with sparse tree / shrub
10 Sparse vegetation
11 Cropland
12 Paddy field
13 Cropland / other vegetation mosaic
14 Mangrove
15 Wetland
16 Bare Area, consolidated(gravel, rock)
17 Bare Area, unconsolidated (sand)
18 Urban
19 Snow / ice
20 Water bodies

year 1700

http://www.ngdc.noaa.gov/paleo/ctl/landuse.html

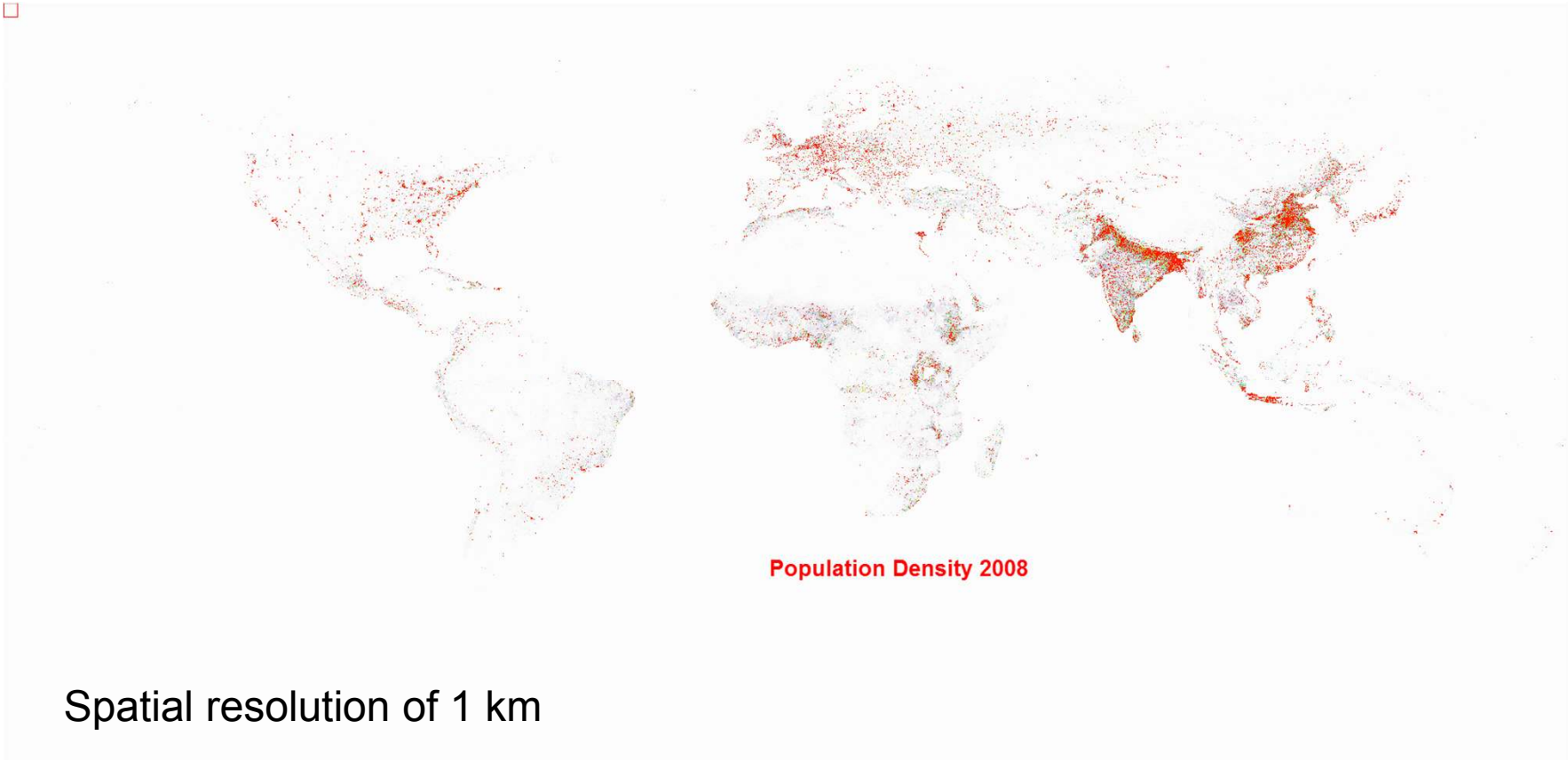


The animation above is from the joint gateway of the Historic Land Use Estimation Efforts by the National Institute of Public Health and the Environment (RIVM, Netherlands) and the Center for Sustainability and the Global Environment (SAGE, USA).

Population Data 2008

GIST(Geographic Information Science and Technology)

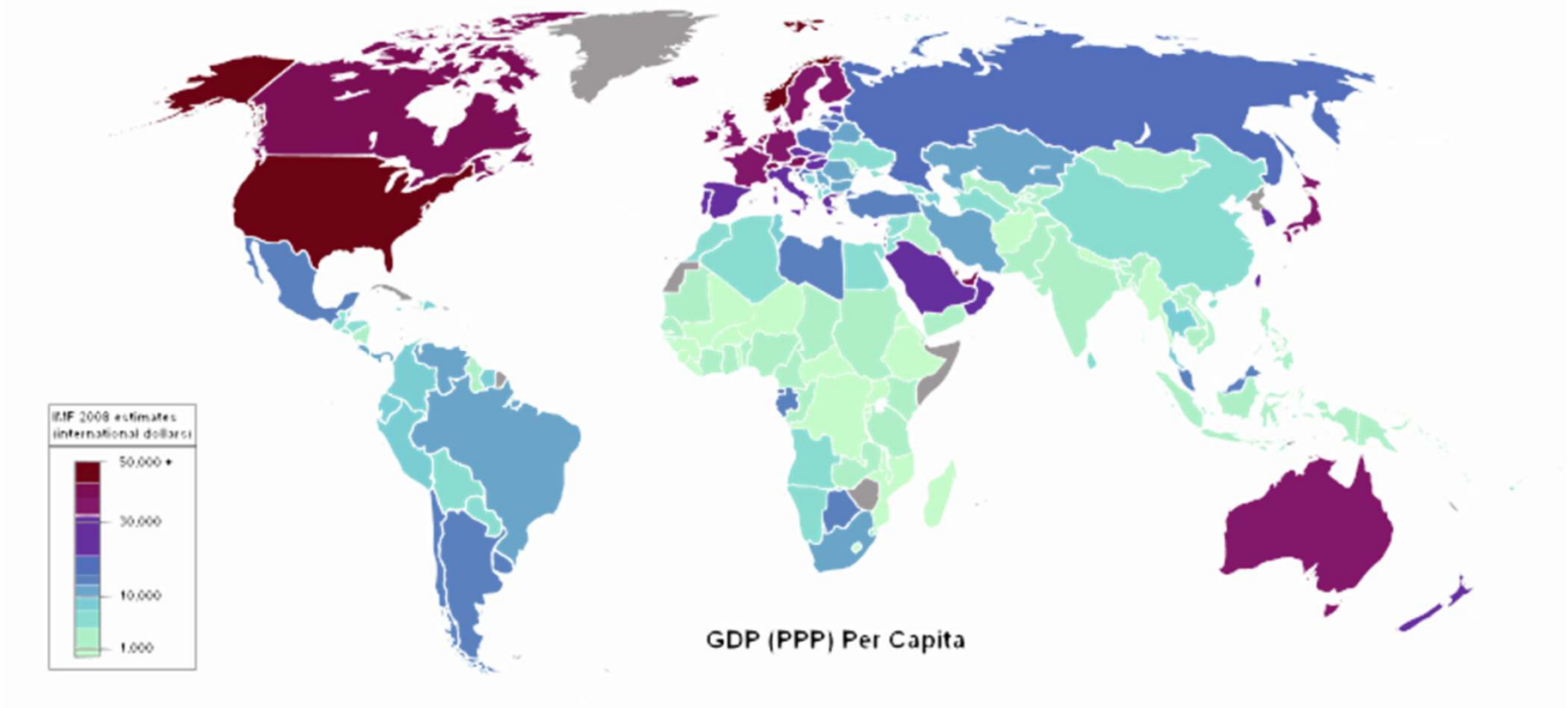
LandScan 2008 Global Population Database 2008. Population counts at 30 arc second resolution (1km).



Spatial resolution of 1 km

(Source : http://www.ornl.gov/sci/landscan/)

5- Gross domestic product based on purchasing power parity (PPP) per capita **GDP** 2008
(Source : The International Monetary Fund (IMF)



Session 2 Water - Survey & Analysis

Conclusion

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Presentations in Session 2 on Water

Tadashi Yamada	uncertainties in runoff
Maung Maung Than	water resource, Myanmar
Enrico C. Paringit	flood, DREAM LiDAR program, Philippines
Danai Thaitakoo	water and landscape, Bangkok
Toshiaki Ichinose	UAV, urban environment

- water quantity/quality
- flood, need of hydrological data and other data
- warning system
-

(water supply facilities)

How can high/new technologies contribute to solve water-related problems?:

Problems:

Flood : preparation and warning system
Water pollution (quality) : monitoring system
Water resources (quantity) : planning and facilities
- **population growth, urbanization**
- **agriculture (irrigation)**
- **manufacturing industry**

1. Target

Happy comfortable life

2. Factors to be considered

- Comfortable environment
- Efficiency
- Economy
- Culture/tradition

3. Problems

Problems felt by people

- traffic jam
- pollution
- disaster

Problems recognized by the government

- energy supply
- land use planning
- water resources
- carbon reduction
- others

4. Candidate of projects

- Disaster mitigation (hazard mapping, early warning, and recovery)
- National land use planning based on national land geospatial database
- National transportation system + urban transportation system
- Design of pollution-free comfortable city
- Design of sustainable water resources

Candidate of project

- Analysis/planning of sustainable city/region

including
disaster prevention/mitigation
water resource
energy supply
transportation
design of pollution-free comfortable city
reduction of carbon emission
education
-
etc.

Proposed project for e-Asia

Analysis/planning of sustainable city/region

past

future

environmentaly

economically

socially (culturally)

disaster

geogaphical size

Sustainability is harmonization of :

	Environment (ecology)	Economy	Society (culture)	Disaster mitigation
South east Asia	- land cover (ecology) - CO_2	- GDP	- population	
Selected belt zones		-energy (power system) -transportation		
Selected Cities/villages	- pollution - CO_2	- energy (power system) - transportation	- traditional behavior (culture)	- flood

Infrastructure

Sustainability is harmonization of :

	Environment (ecology)	Economy	Society (culture)	Disaster mitigation
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Infrastructure