

Geospatial Technologies to Reach the Millennium Development Goals

Orhan ALTAN
President of ISPRS
Istanbul Technical University

What is Changing?

The EastAfrican|Business Daily|NTV|Daily Monitor|The Citizen|Mwananohi|NMG Investor Briefing

DAILY NATION

THURSDAY
September 4, 2009



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Hailstorm in Nyahururu, Rift Valley Province



Mr Joseph Mwangi, samples the ice that snowballed Gathanji Forest in Nyahururu Town last evening.



Add a comment (17 comments so far)

You need to login first to submit a comment.

Submitted by soketoh
Posted Eyt8l 05, 2009 04:43 PM
wo!wo! hold on here, snow in Kenya? what is going on mother nature? i hope it was a one day thing.

Submitted by Rikamanda
Posted Eyt8l 05, 2009 06:16 PM
A true reversal of Climate, we have been so accustomed to tropical weather that...are we seeing the start of Kenyan Alps? Blessings!

Submitted by srtkims

Most Popular

- CHARLES ONYANGO-OBBO: A rich ugly king
- Obama hits 50 mark in Gallup poll
- Drink to your health, so leave medicines out
- Power feud raises fear of higher bills
- Mother tongue under attack
- Raila steps into row over NSSF sacking
- 15 die as matatus collide head-on
- My rights abused, says double-sex prisoner
- Young, beautiful and breastfeeding
- KRA rejects musicians' proposal

In Pictures

Hailstorm in Nyahururu, Rift Valley Province



Mr Joseph Mwangi, samples the ice that snowballed Gathanji Forest in Nyahururu Town last evening...



Sotik ODM nominations

Obama acceptance speech

NTV Kenya

ALTAN

What is Changing?



18th UN Regional Cartographic Conference

Orhan ALTAN

What is Changing? (Floods-Droughts)

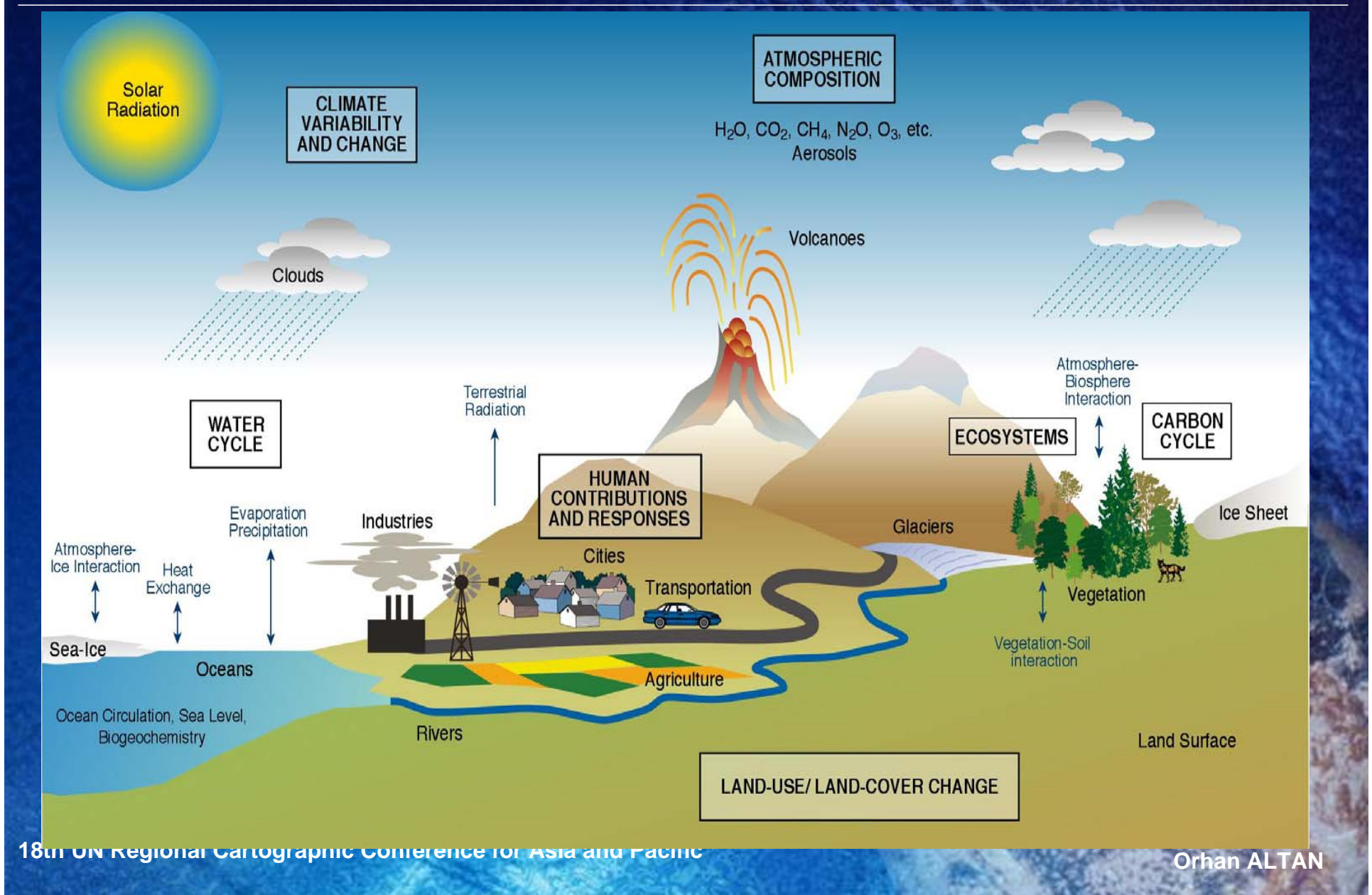
Heavier precipitation,
more intense and longer droughts....



What is Changing?



Our Planet is a System of Systems



World Water Assessment Programme

- Established in 2000,
- Considered as the flagship programme of UN-Water,
- Works in close cooperation with 25 UN Agencies,
- Input is provided by governments, prominent NGOs, research institutes, universities etc.
- Hosted by UNESCO.

World Water Assessment Programme

"...shows the United Nations at work, helping the world to confront current and impending water crises. I recommend this publication to the widest possible audience."
Kofi Annan



Water for People Water for Life

The United Nations
World Water Development Report



"...shows that collective responsibility is essential for assessing and monitoring progress and for meeting internationally agreed targets and goals."
Kofi Annan

Water

a shared responsibility



The United Nations
World Water Development
Report 2

- **Unsustainable Consumption Patterns**

“20% of the world’s population consumes 80% of its resources. If everyone consumed at this level, it would take four extra planets to provide the necessary resources. Global marketing of this consumer lifestyle is headed for natural disaster.”

The Ecological Footprint

- **Current Status**

Humans have directly or indirectly affected almost every corner of the earth through various activities:

- Natural/pristine ecosystems are disappearing,
- Human-dominated or influenced ecosystems are inevitably and increasingly becoming common place.
- Just like any other sector, business also has contributed to this degradation

- **Solution: Integrated Approach**

- There is an urgent need to integrate ecology with human demography, behaviour and socio-economics in order to understand and manage ecological patterns and processes.
- Business community plays an important role in this as they shape the consumption patterns.

GLOBAL CHALLENGES



The Millennium Project

2009 STATE OF THE FUTURE



JEROME C. GLENN, THEODORE J. GORDON,
and ELIZABETH FLORESCU

Box 1. Where Is Humanity Winning and Losing

Where we are winning:

- Life expectancy
- Infant mortality
- Literacy
- GDP/capita
- Conflict
- Internet users

Where we are losing:

- CO₂ emissions
- Terrorism
- Corruption
- Global warming
- Voting population
- Unemployment

G8 Hokkaido Toyako Summit



Advance Further from Heiligendamm Agreement at Toyako

Heiligendamm Summit (June 2007, Germany)

- “Seriously consider cutting global greenhouse gas emissions by at least half by 2050 from the current levels.”

US President Bush (Remarks on climate change on April 16, 2008)



- “The only way to achieve these goals is through continued advances in technology.”
- “We’re working toward a climate agreement that includes the meaningful participation of every major economy – and gives none a ‘free ride.’”

German Chancellor Merkel (Japan-Germany Summit on June 1)



- It is important to advance further the agreement reached at the Heiligendamm Summit.

UK Prime Minister Brown (Japan-UK Summit on June 2)



- “We have agreed on the urgency of international action, the need to reduce global emissions.”

French President Sarkozy (Japan-France Summit on June 3)



- It is necessary to create a framework in which all major emitting countries can participate.
- It is essential to agree on halving (global) emissions by 2050.



Japanese Prime Minister Fukuda

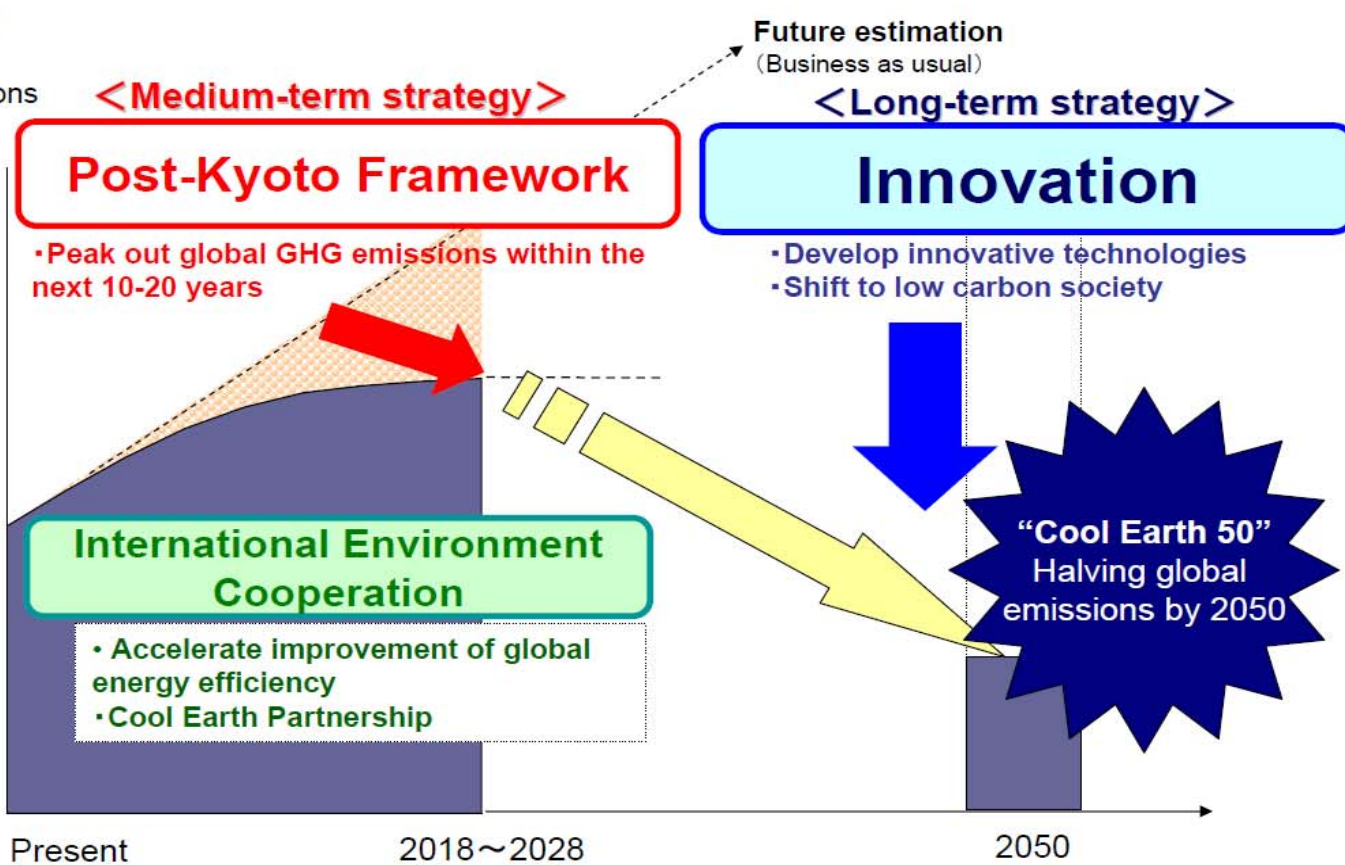
- “It is essential to have a “total participation” framework that includes all the major economies, not just the EU and Japan.”
- “Japan will negotiate tenaciously in order to build international agreement on “fair and equitable rules” which are approved by all.”



Halving Global Emissions by 2050



Global CO₂ emissions



Environment and Climate Change

Climate Change

22. We reconfirm the significance of the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) as providing the most comprehensive assessment of the science and encourage the continuation of the science-based approach that should guide our climate protection efforts. We reaffirm our commitment to take strong leadership in combating climate change and in this respect, welcome decisions taken in Bali as the foundation for reaching a global agreement in the United Nations Framework Convention on Climate Change (UNFCCC) process by 2009. We are committed to its successful conclusion. Enhanced commitments or actions by all major economies are essential for tackling climate change. Therefore, we endorse the positive contribution of the Major Economies Leaders Meeting to the UNFCCC.

We note the opportunity to promote research on complementary technological approaches which may contribute towards maintaining a stable climate.

To respond to the growing demand for Earth observation data, we will accelerate efforts within the Global Earth Observation System of Systems (GEOSS), which builds on the work of UN specialized agencies and programs, in priority areas, inter alia, climate change and water resources management, by strengthening observation, prediction and data sharing. We also support capacity building for developing countries in earth observations and promote interoperability and linkage with other partners.



PRESS RELEASE

Wednesday 22 October 2008, 18.00 (GMT+2)

International Council for Science (ICSU) launches major research programme on natural disasters

With an increase in the frequency of disasters, there is an urgent need to address the knowledge gaps that are preventing the effective application of science to averting disasters

Maputo, Mozambique—in response to the urgent need to reduce the impacts of natural disasters, the International Council for Science (ICSU) has launched a new, 10-year, international research programme designed to address the gaps in the knowledge and methods that are preventing the effective application of science to averting disasters and reducing risk. The programme was announced today at the 29th ICSU General Assembly in Maputo, Mozambique.

Each year hundreds of thousands of people are killed and millions injured, displaced or have their livelihoods destroyed by natural disasters. There has been a dramatic increase in the frequency of disasters—when communities are overwhelmed and need outside assistance—from around 30 per year in the 1950s to more than 470 per year since the beginning of this century.

'Integrated Research on Disaster Risk (IRDR) will provide an enhanced capacity around the world to

ICSU-Project

Mapping GeoUnions to the ICSU Framework for Sustainable Health and Wellbeing: Focus on sub-Saharan African Cities

In collaboration with the
ICSU Regional Office for Africa

Prepared by the ICSU GeoUnions
Joint Science Program Team

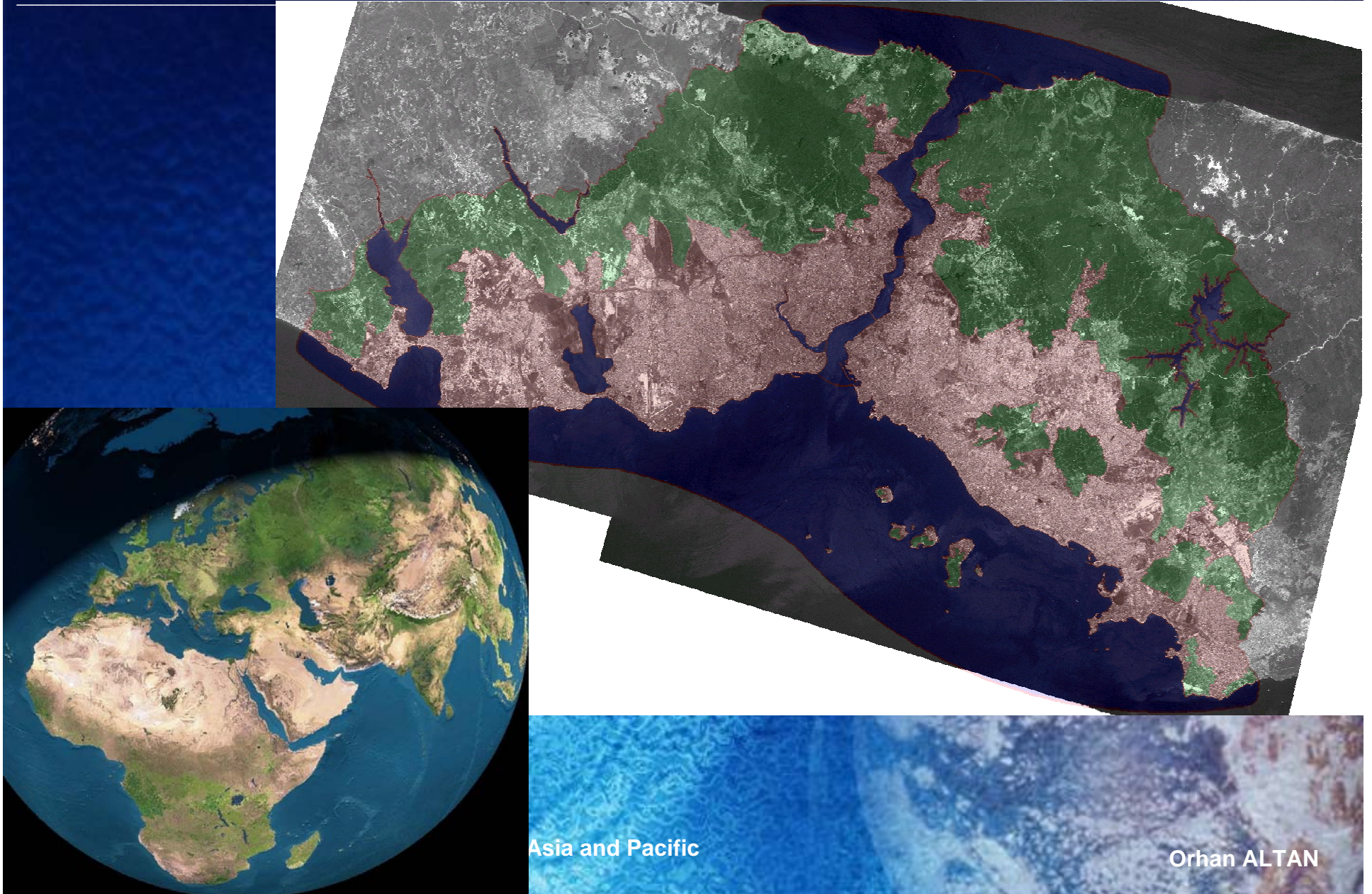
Amelia Budge - ISPRS
Ania Maria Grobicki - IUGG
Mark Rosenberg - IGU & GEC-HH
Olle Selinus - IUGS / IMGA
Eiliv Steinnes - IUSS
Achuo Enow - ICSU / ROA

With special assistance from

Margaret Avery - INQUA
Theo Davies - IUGS
Agnes Kijazi - GEC-HH

Project Coordinator
Stanley Morain - ISPRS

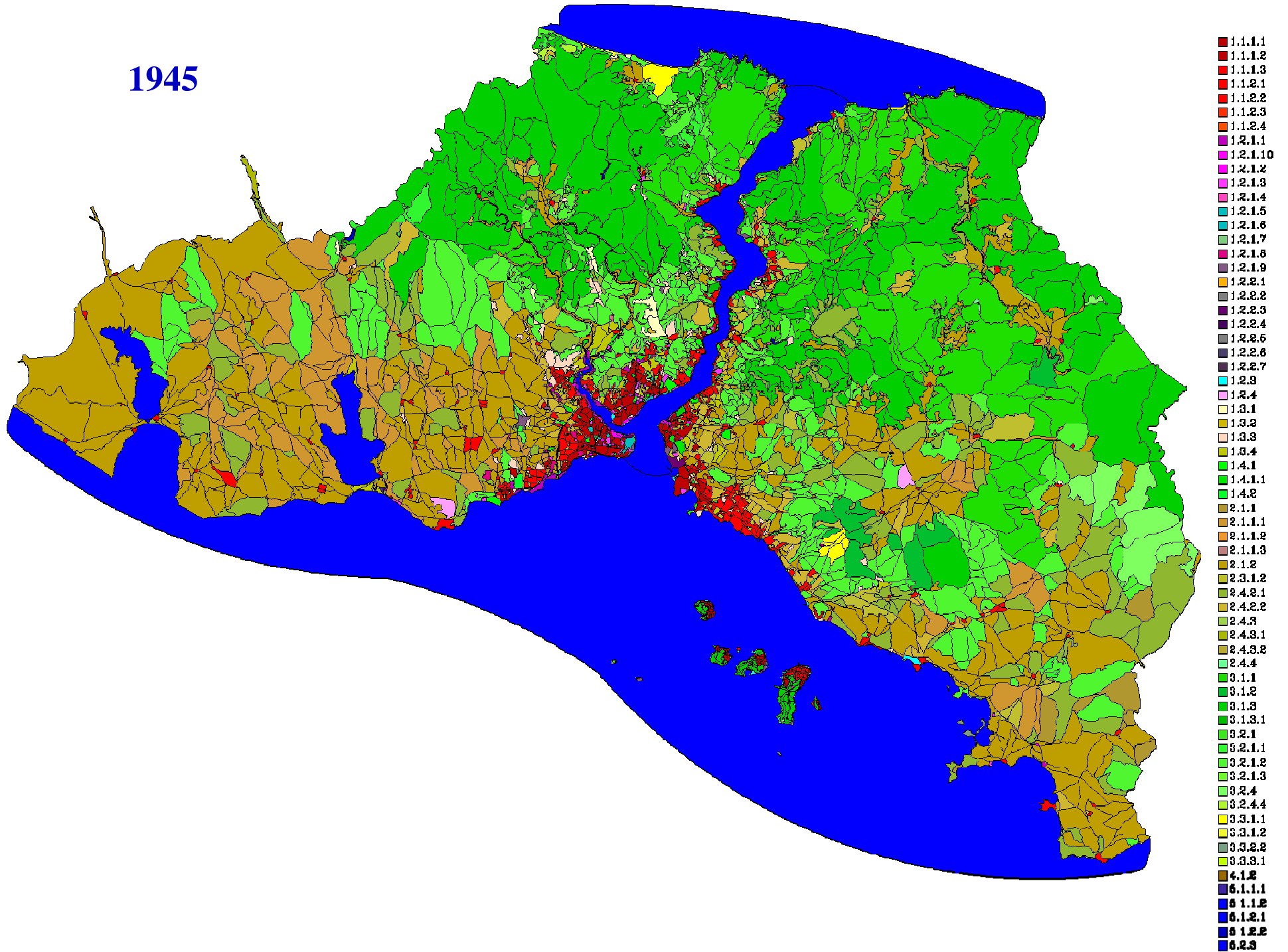
Istanbul (City Development)



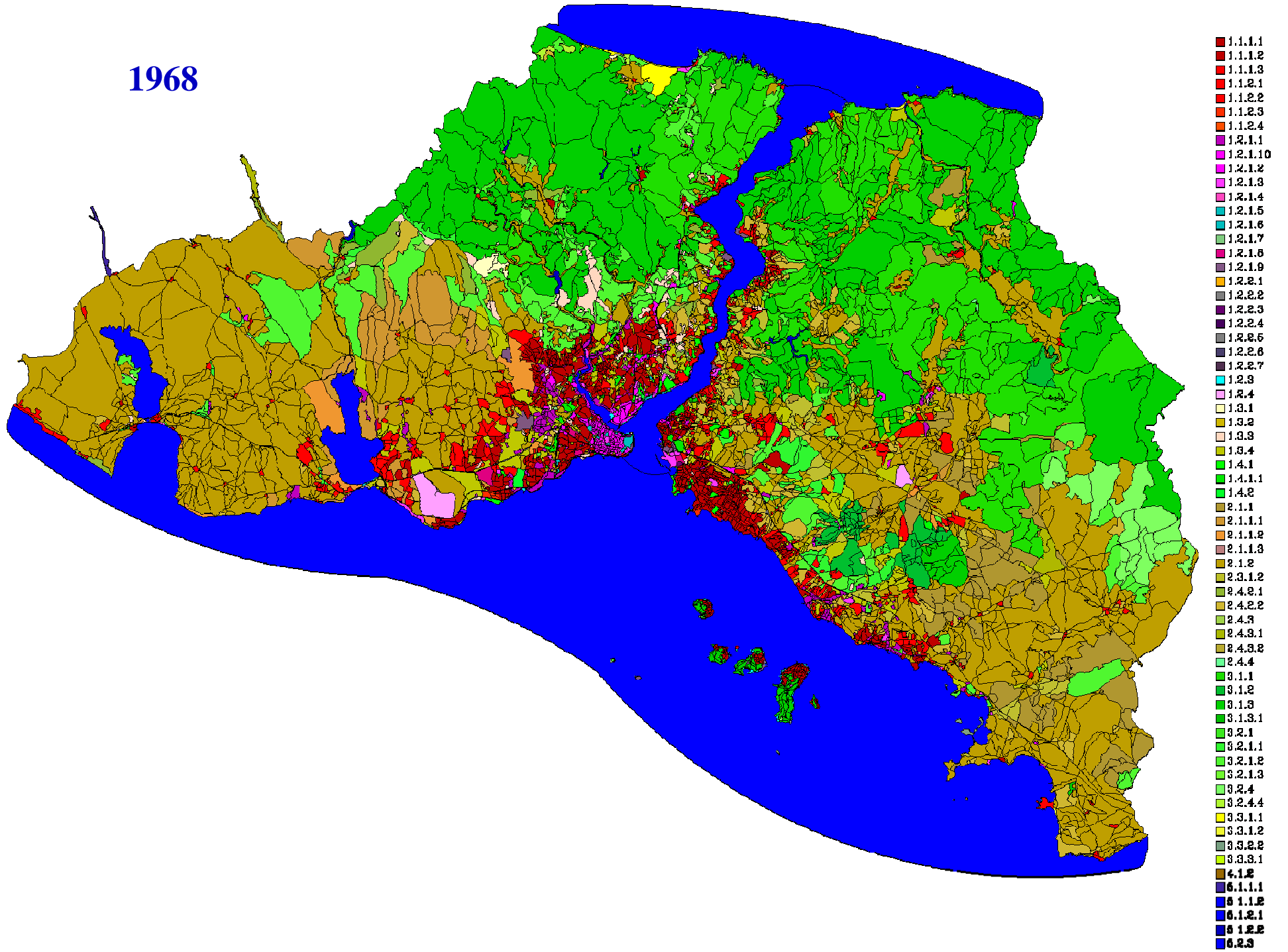
Asia and Pacific

Orhan ALTAN

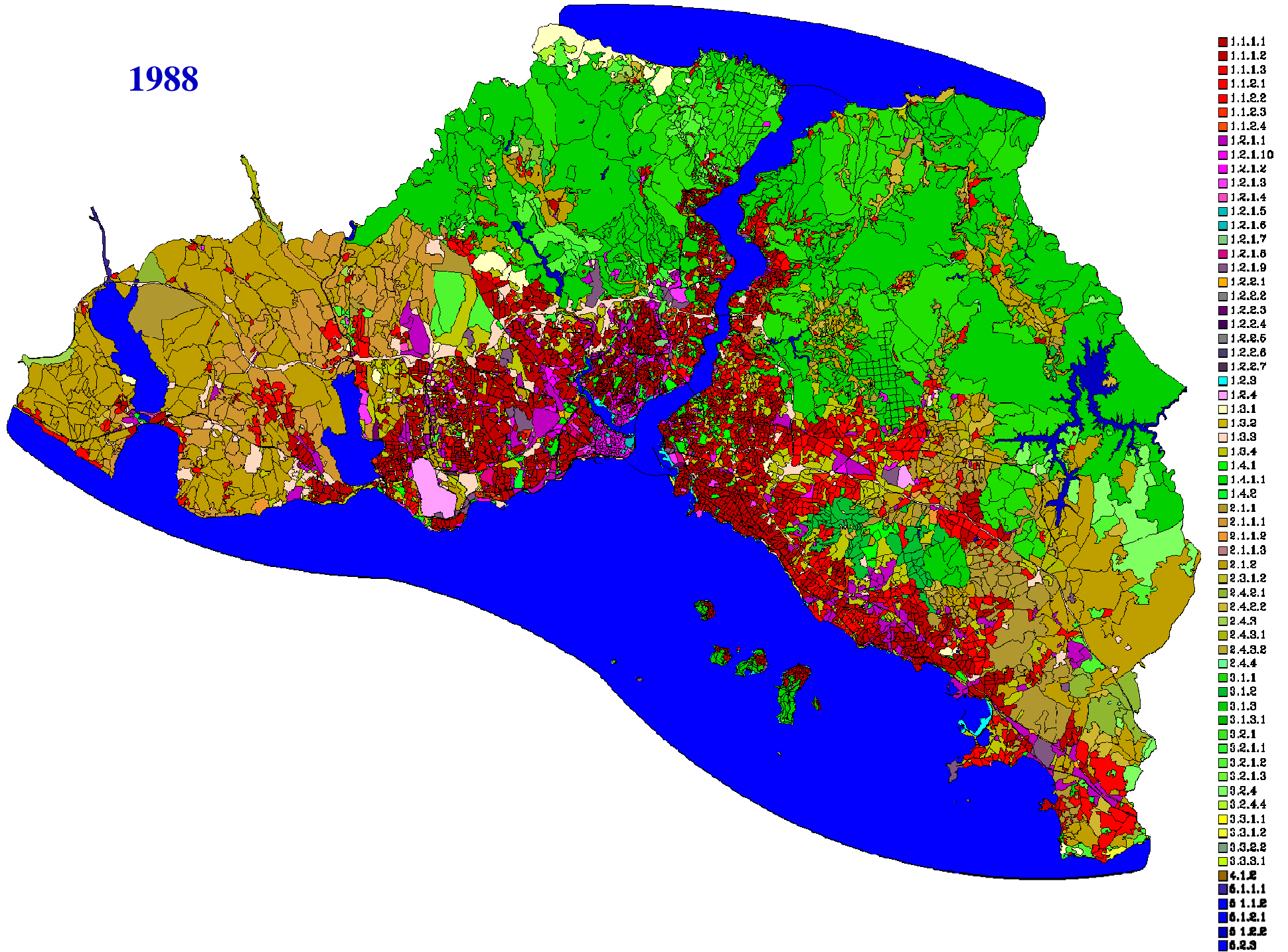
1945



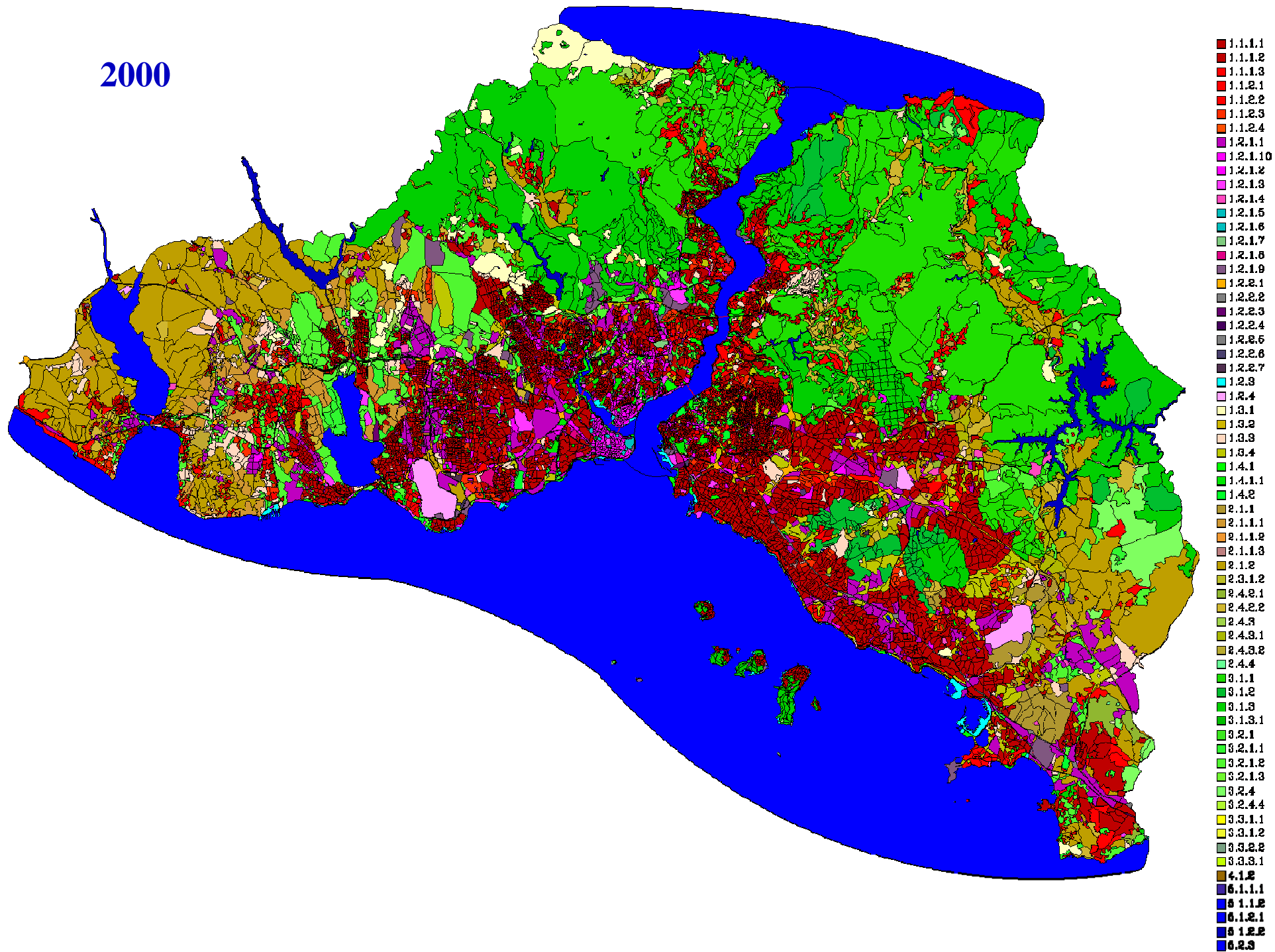
1968



1988



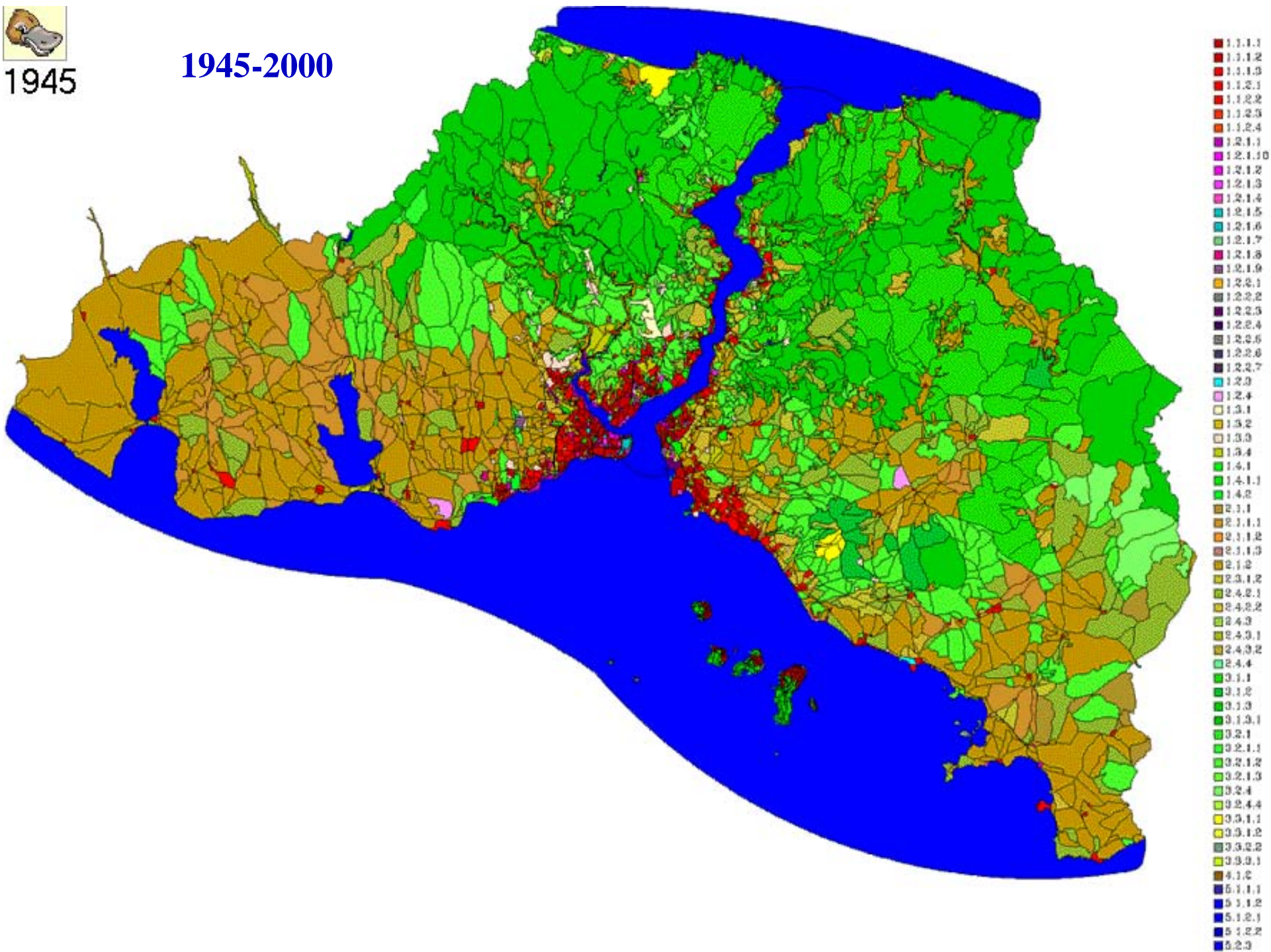
2000





1945

1945-2000



GEO, the Group on Earth Observations

THE GLOBAL EARTH OBSERVATION SYSTEM OF SYSTEMS



Beijing Congress



18th UN Regional Cartographic Conference for Asia and Pacific

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Beijing Declaration

International Society for Photogrammetry and Remote Sensing
 Internationale Gesellschaft für Photogrammetrie und Fernerkundung
 Société Internationale de Photogrammétrie et de Télédétection

Beijing Declaration

A Declaration approved by delegates at the ISPRS Congress calls on international work together and commit adequate resources to promote the peaceful use of geospatial information for the benefit of society and the environment. The document reaffirms the ISPRS commitment to the full potential of information from imagery through research and development, networking, international co-operation, inter-disciplinary integration and education and training. It also sets out a number of ways in which the ISPRS and international communities can work to this end. The Declaration was made by the General Assembly of ISPRS at its XXIst Congress held in Beijing, and was announced at a press conference on July 11th attended by the former minister of Science and Technology of China, Xu Guanhua and some 30 members of the Chinese press.

We, members of The International Society for Photogrammetry and Remote Sensing (ISPRS) and participants of the XXIst ISPRS Congress in Beijing, recognize the importance of imagery to measure and monitor the natural and man-made features on planet Earth and to explore other planets of the solar system, especially after witnessing the important role of photogrammetry, remote sensing and spatial information systems in the rescue operation and damage assessment of the recent devastating natural disasters.

We note scientific developments reported during the technical sessions of the Congress and the great progress made in the use of imagery from many different platforms, with numerous sensors, for a wide variety of applications. We particularly note:

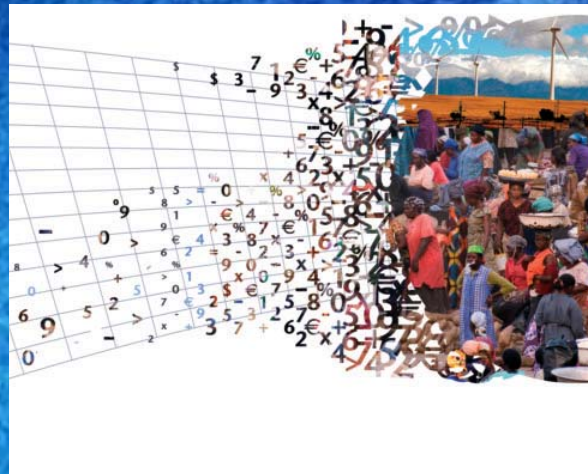
1. Wide applications of Earth observation technologies and tools to the fields of socio-economic sustainable development, natural disaster prediction, mitigation and response, maintenance of biodiversity, cultural heritage conservation, global and environmental climate change monitoring, energy exploration and management, land use and land cover inventory, food security, sustainable use of water resources, and human habitat, environment and health.



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Future

- “Environmental Monitoring”,
- “Climate Change”,
- “Global Warming”.

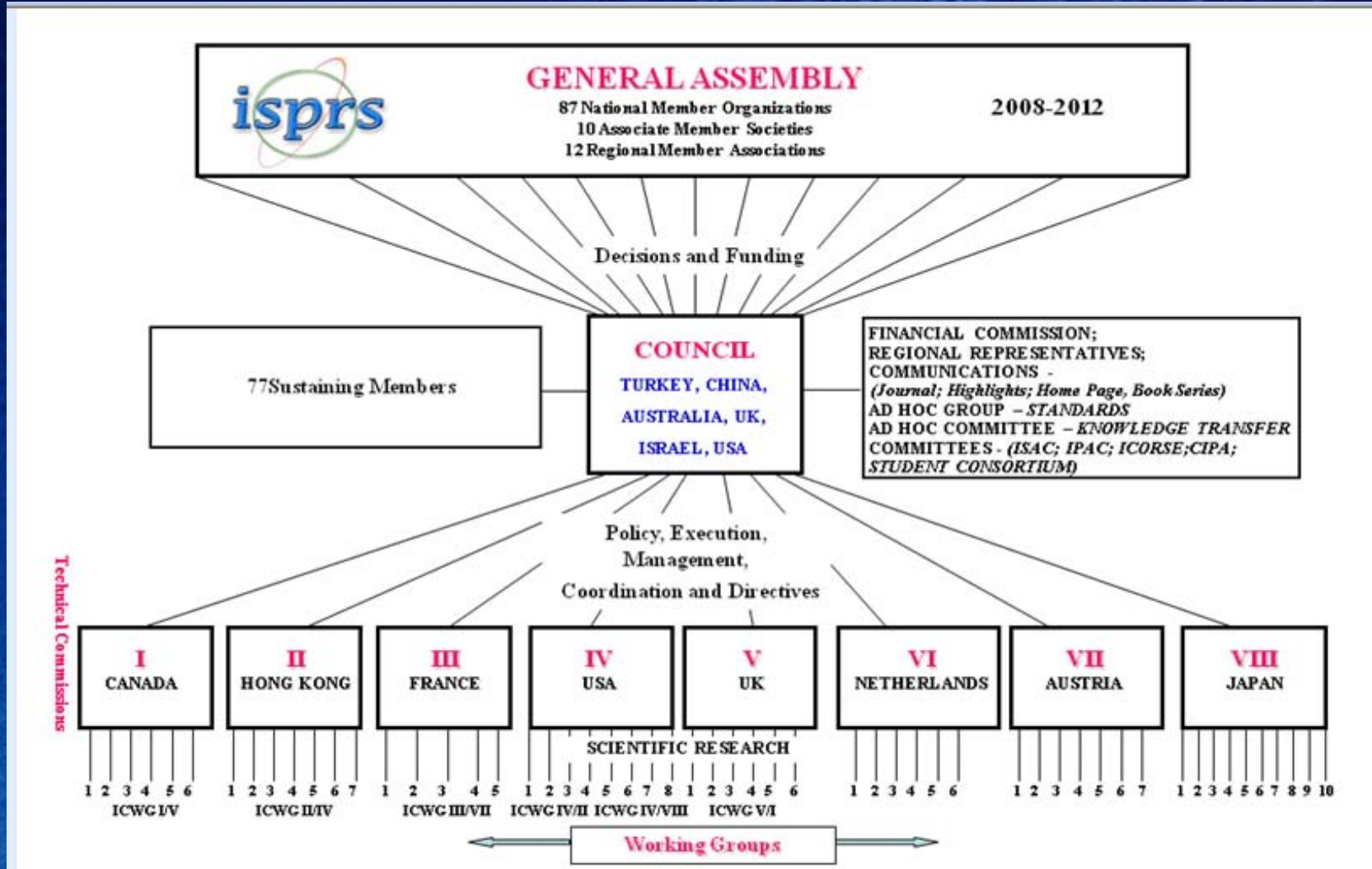


Priorities

- **“Environmental Monitoring and Sustainable Development”,**
- **“Sustainable Indicators”,**
- **“Disaster and Risk Management”,**
- **“Food Security”,**
and through
- **Helping to reach the “Millennium Development Goals”**

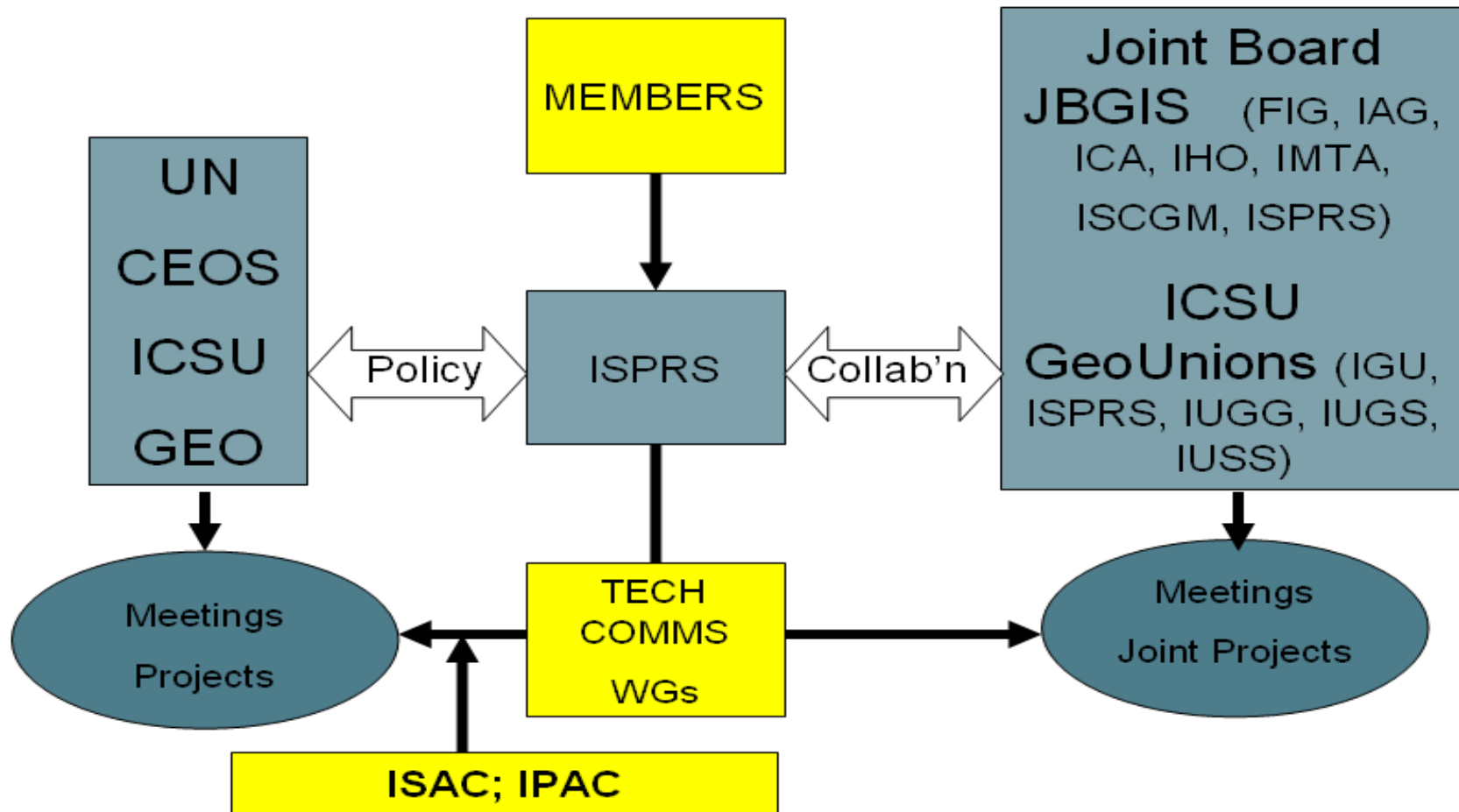
“Powering a Sustainable Future: Contribute to Policies and Measures to make it happen”

ISPRS Structure



“ISPRS is a Society of National Societies and Organizations”

The role of Societies



Developments in ISPRS

- Major change with the introduction of Commission VIII in 2003
- Two Commissions for:
 - Photogrammetry – III and V
 - Remote Sensing – VII and VIII
 - Spatial Information Sciences – II and IV
- Additional Commissions:
 - Data Acquisition – I
 - Education and Outreach – VI

Summary of Observations

Following topics seem to be important for the next years

- **Human Settlement**
- **Disasters**
- **Water**
- **Ecosystems**
- **Health**
- **Climate and Weather**
- **Land and Forest**
- **Energy**

- **Human Settlement** ► **WG VIII/8**
Land (Land Cover, Urban Infrastructure, Arid Land and Degradation)
- Disasters
- Water
- Ecosystems
- Health
- Climate and Weather
- Land and Forest
- Energy

- Human Settlement
- **Disasters ► WG IV/8 3D Spatial Data Integration for Emergency Services**
 - VIII/1 Disaster
- Water
- Ecosystems
- Health
- Climate and Weather
- Land and Forest
- Energy

Related Topics and ISPRS WGs

- Human Settlement
- Disasters
- **Water** ► VIII/4Water (Water, Circulation, Hydrology, Security, etc)
- Ecosystems
- Health
- Climate and Weather
- Land and Forest
- Energy

Related Topics and ISPRS WGs

- Human Settlement
- Disasters
- Water
- **Ecosystems** ► VIII/6 Agriculture Ecosystems and Bio-diversity
- Health
- Climate and Weather
- Land and Forest
- Energy

Related Topics and ISPRS WGs

- Human Settlement
- Disasters
- Water
- Ecosystems
- **Health** ► VIII/2 Health
- Climate and Weather
- Land and Forest
- Energy

- Human Settlement
- Disasters
- Water
- Ecosystems
- Health
- **Climate and Weather** ► VIII/3
Atmosphere, Climate & Weather
- Land and Forest
- Energy

Related Topics and ISPRS WGs

- Human Settlement
- Disasters
- Water
- Ecosystems
- Health
- Climate and Weather
- **Land and Forest** ► VIII/8 Land;
VIII/7 Forest
- Energy

Related Topics and ISPRS WGs

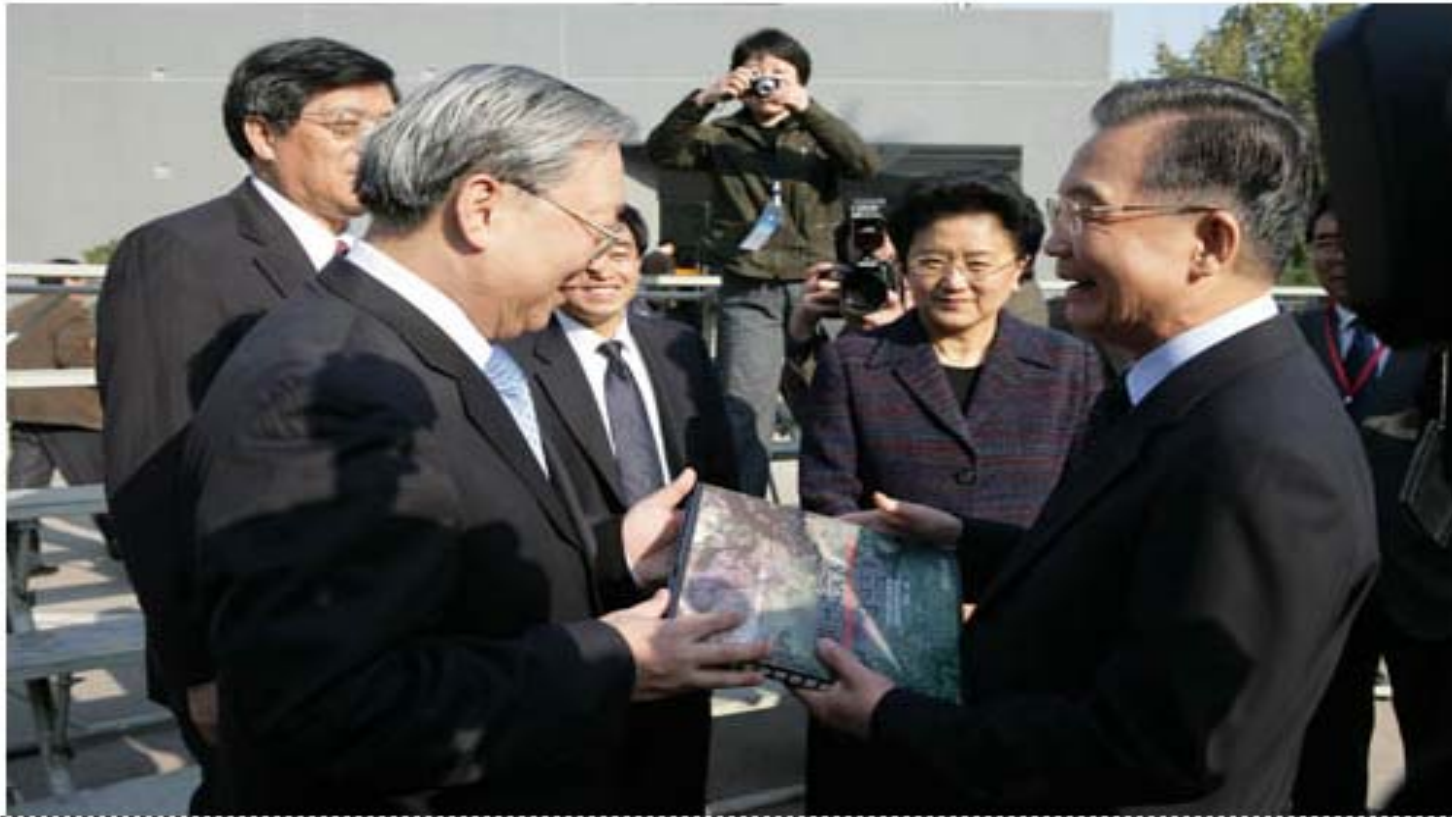
- Human Settlement
- Disasters
- Water
- Ecosystems
- Health
- Climate and Weather
- Land and Forest
- **Energy** ► VIII/5 Energy and Solid Earth (Non-renewable and Renewable Resources, Geology)

Conclusions



Leading government officials (First Deputy Prime Minister Li Zguangge accompanied with the Minister of Agriculture and Natural Resources Xu Sahoishi) spent some time with the Council of ISPRS and leading delegates in order to take their opinions (photo above).

Conclusions



CAS President Presents Chinese Premier "Remote Sensing Atlas of Wenchuan Earthquake";

On November 4, member of the Standing Committee of the Political Bureau of the CPC Central Committee and Chinese Premier Wen Jiabao paid a visit to the Chinese Academy of Sciences (CAS), where upon Vice Chairman of the NPC Standing Committee and CAS President Lu Yongxiang gave a warm welcome to the Premier and presented him the "Remote Sensing Atlas of Wenchuan Earthquake" as a souvenir.

It was recognized that only way;

“The politicians are learning about the importance of geo-information after an event has happened”

Therefore they have to be aware on the importance of use of geo-information especailly in Disaster Management.

So it was proposed Publication of

“Booklet on Best Practices of Geo-information on Risk and Disaster Management”

A joint initiative of JBGIS and UNSPIDER

This booklet will be released by a Press Conference at Vienna in July 2010 at UN OOSA (+)

+(PCGIAP – E/CONF.100/8)

JBGIS AdHoc Committee on Risk and Disaster Management and further - Received ABSTRACTS



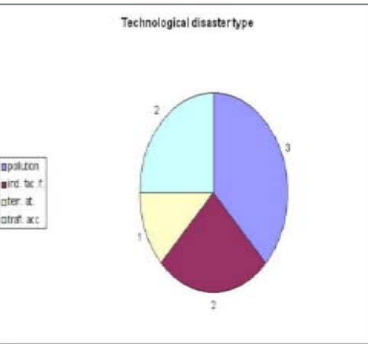
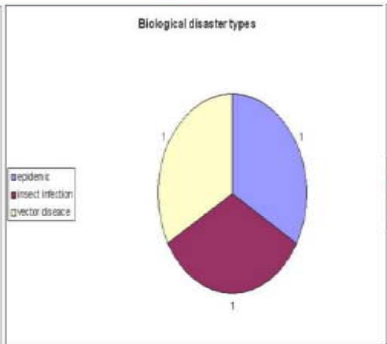
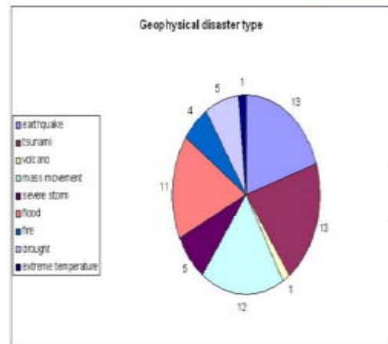
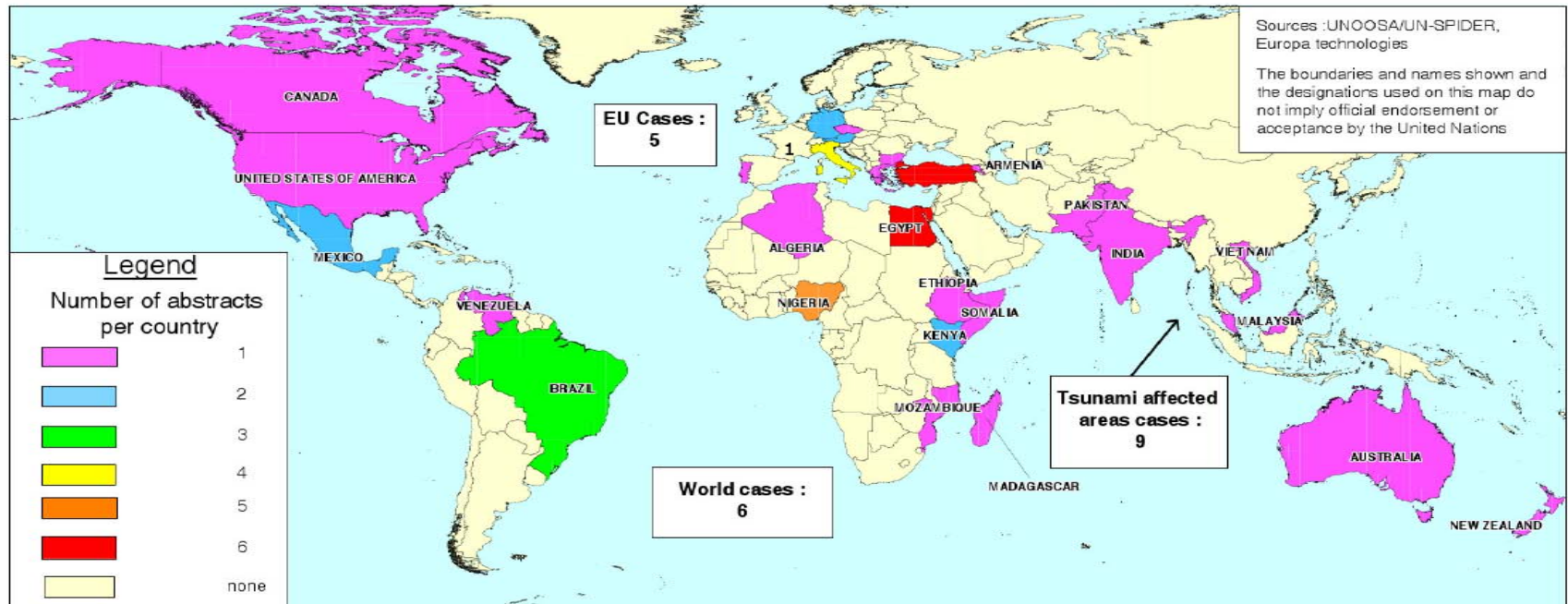
UNITED NATIONS
 Office for Outer Space Affairs /UN-SPIDER

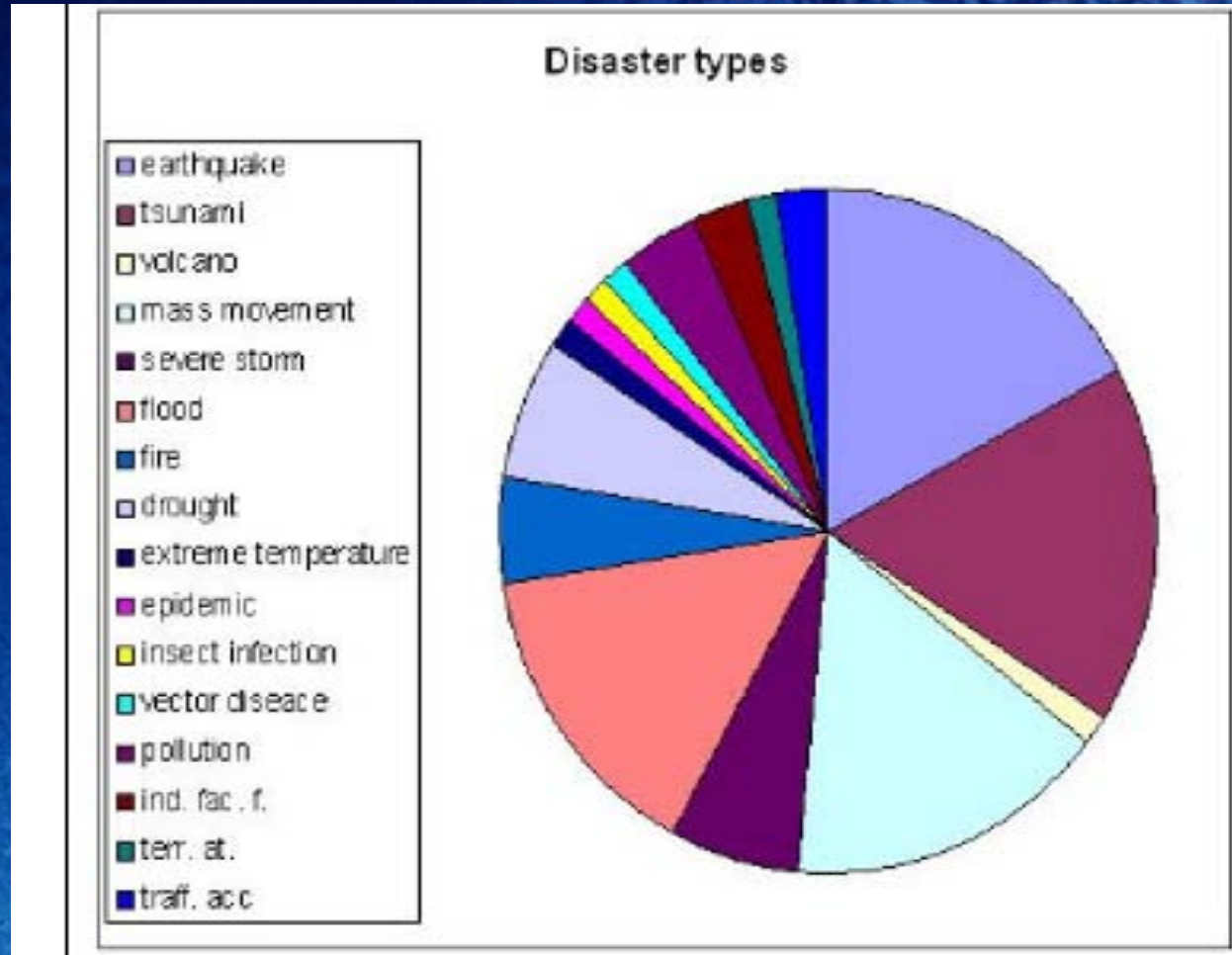
Geographic distribution of cases

Chaveroux Julien
 j.chaveroux@gmail.com

JBGIS Best Practices Booklet on Geo-information for Risk and Disaster Management

Printed : 18/05/2009





Founder of ISPRS



Prof. Dolezal was a Professor for Practical Geometry in Vienna, Austria with a great love for photogrammetry. In 1910 he considered the time was right for worldwide cooperation of photogrammetrists. ISPRS was founded in Vienna on 4th July 1910 [TU Vienna]

ISPRS Centenary



1910 - 2010

CENTENARY CELEBRATION VIENNA

3-Ländertagung

Celebration Day

TC VII Symposium

Sponsors

3-Ländertagung D-A-CH Conference

July 1-3, 2010

- Tagungsthemen
- Zeitplan

[Download Folder](#)



ISPRS Centenary Celebration

July 4, 2010

- Programme
- Schedule

[Download Folder](#)

100 years of



information from imagery

Technical Commission VII Symposium

July 5-7, 2010

- Scope
- Themes
- Important Dates
- Programme

[Download first announcement](#)



ISPRS Centenary



18th UN Regional Cartographic Conference for Asia and Pacific
Room for General Assembly-TU Wien

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ISPRS Centenary

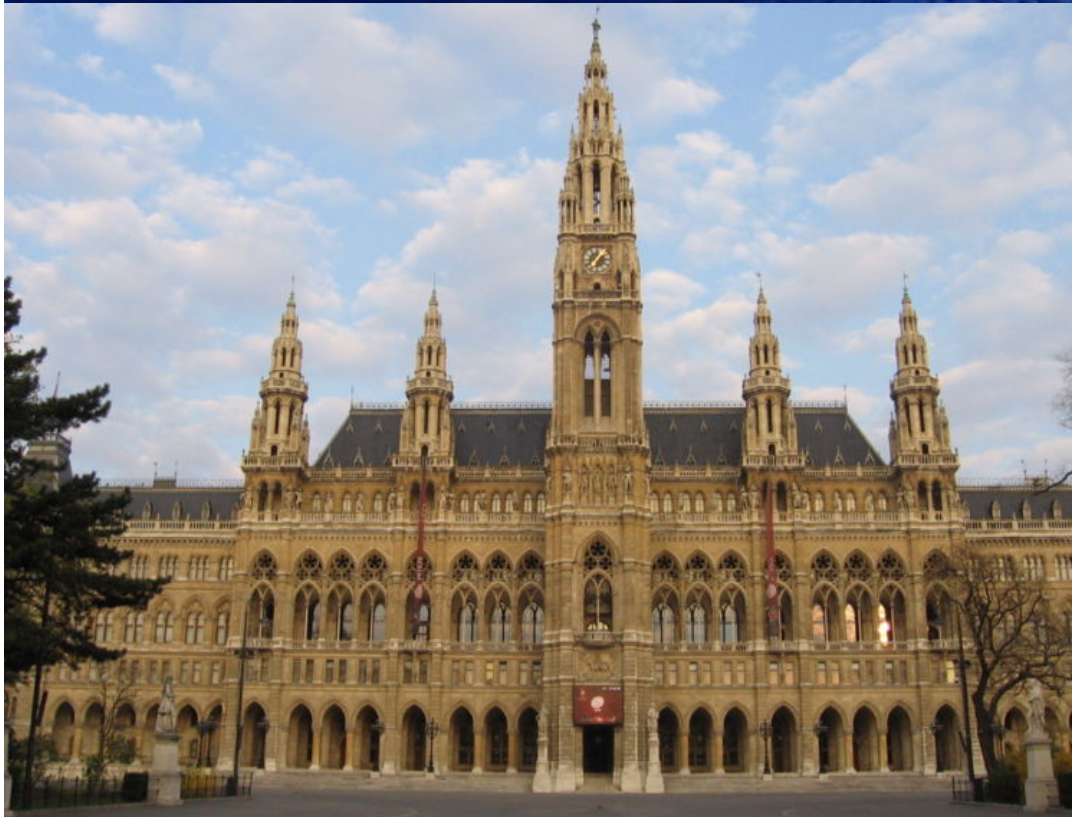


18th UN Regional Cartographic Conference for Asia and Pacific

One of the Rooms for Afternoon Celebration-TU Wien

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ISPRS Centenary



Venue for the
GALA Dinner:
Wiener-rathaus

Room of
the Gala
Dinner

18th UN Regional Cartographic Conference for Asia and Pacific

Introduction

Taking ecological considerations into account is crucial if we are to avoid longer-term environmental problems that can undermine security and development, and lead to further cycles of conflict and displacement

Ban Ki-moon, UN Secretary-General

1910

2010

isprs

a century of information from imagery