



ITC
Enschede
The Netherlands
www.itc.nl



What's ITC all about?

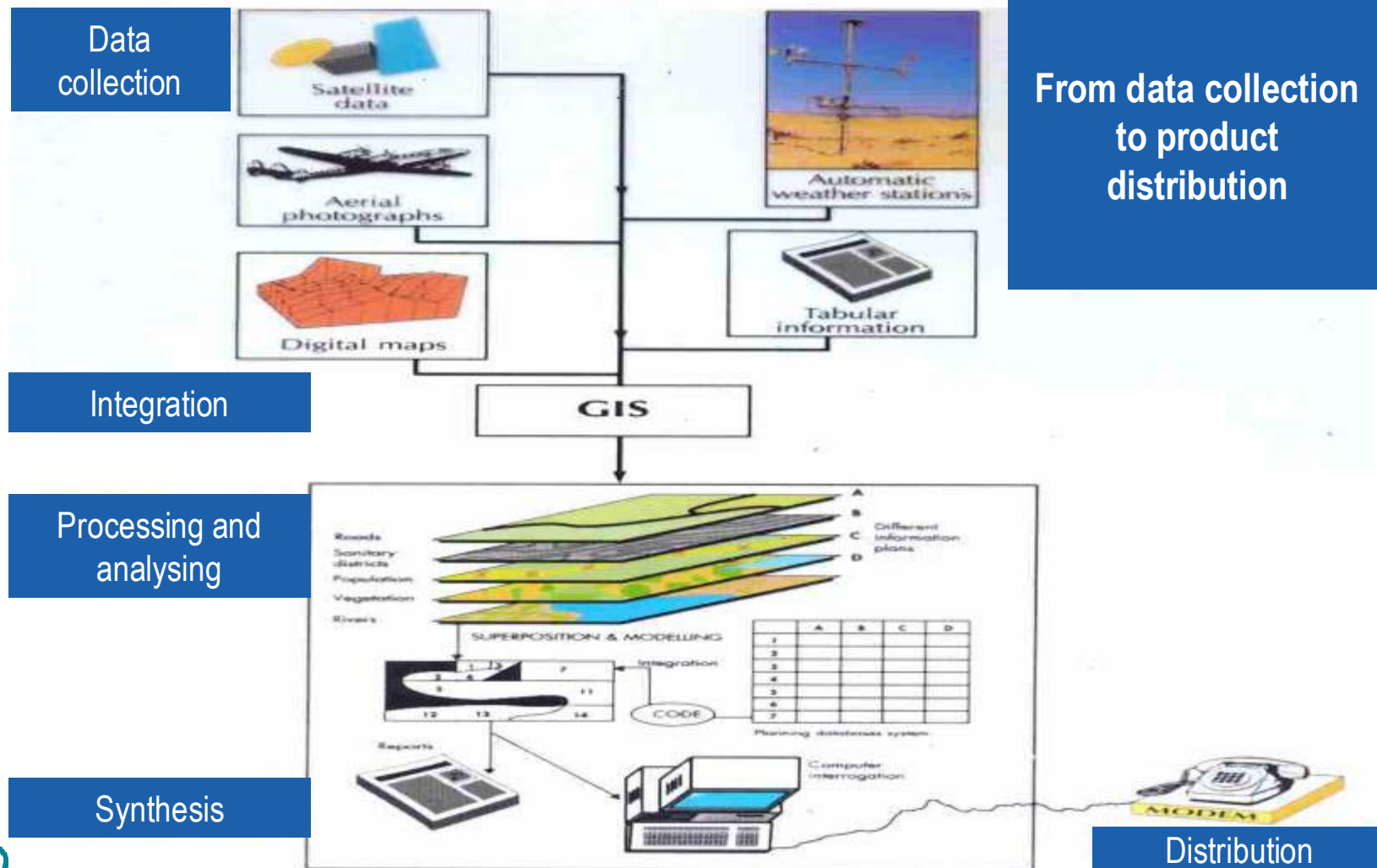


- **Established:** 1950 - Appeal by UN in framework ODA
- **Aim:** Build capacity for economic development in developing world
- **Main instrument:** Postgraduate education and training, research, project services
- **Achievements**
Education and training:
17 000 mid-career professionals
7 000 from 42 Asian countries

Founding father
Prof. Schermerhorn



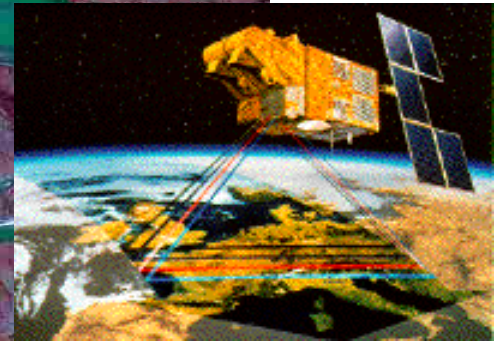
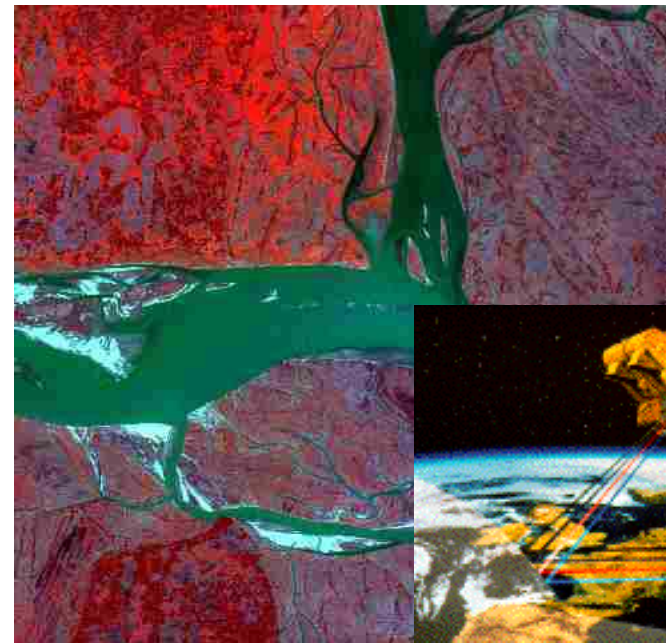
Knowledge field: geo-information science and earth observation



Earth observation



- Collect data about the earth's surface and subsurface
- Based on aerospace survey techniques
 - Remote sensing, Aerial photography, Radar, Airborne electronic-scanning devices, Satellites



Geo-information science and earth observation



- Combination of tools and methods for the
 - collection
 - storage and
 - processingof geo-spatial data and for the dissemination and use of these data and of services based on these data

ITC in key figures



Scientific departments

Earth Observation Science (EOS)

Geo-information Processing (GIP)

Urban and Regional Planning
and Geo-Information Management (PGM)

Natural Resources (NRS)

Water Resources (WRS)

Earth Systems Analysis (ESA)

Education programmes

Geoinformatics (GFM)

Geo-information Management (GIM)

Urban Planning
and land administration (UPLA)

Natural Resources Management (NRM)

Water Resources and environment (WRM)

Applied earth sciences (AES)

- Geo-hazards
- Geo-engineering
- Earth Resource Exploration
- Earth Science Data Provision

Staff

Core staff 140 fte
support to core 45 fte
support staff 55 fte
28 nationalities
PhD researchers 50
Students 600 p/year
Alumni
• 16,000 mid-career professionals
• >160 countries

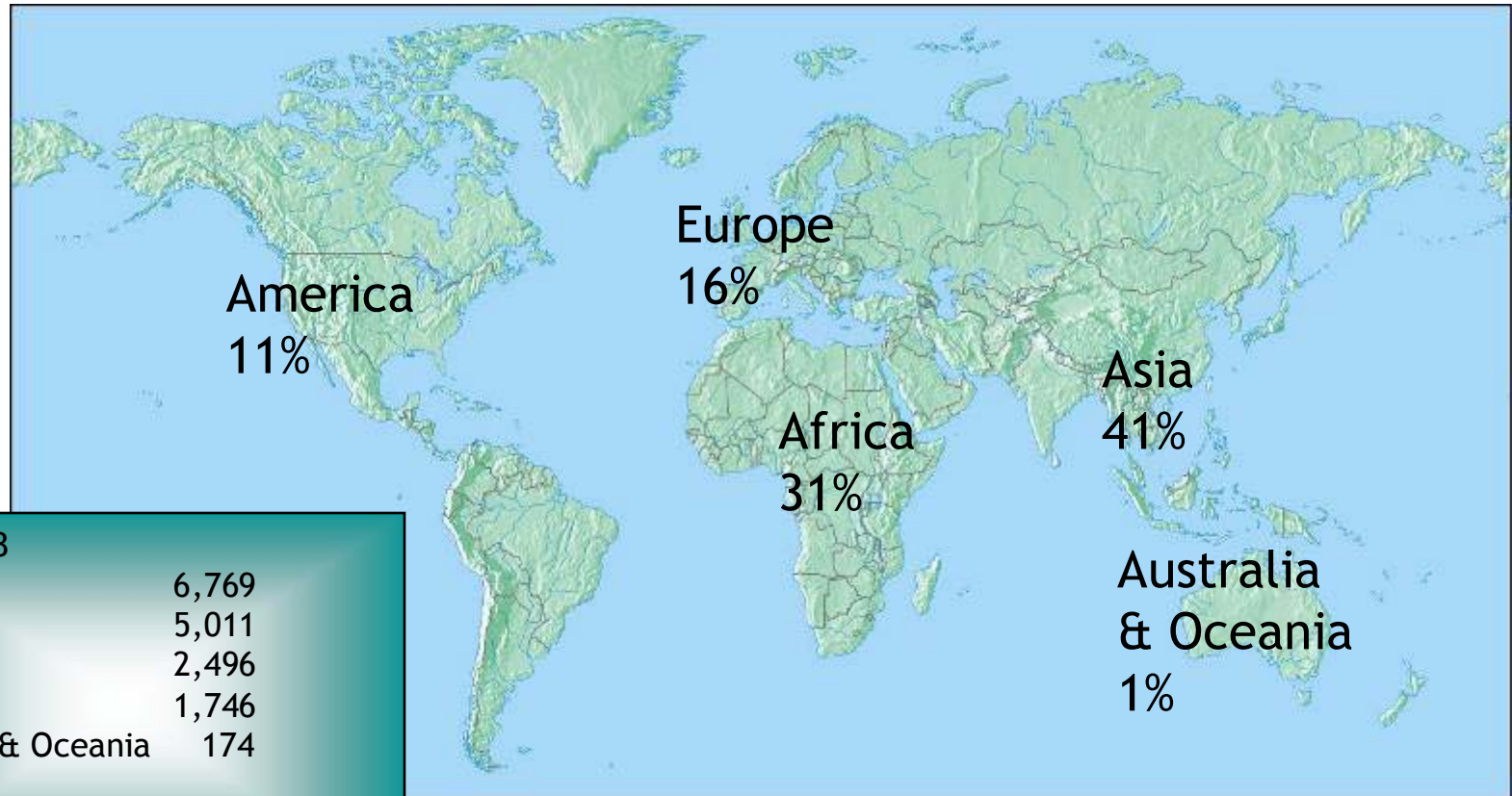
Target group

- Primarily mid-career professionals and scientists from developing countries.
- Increasingly professionals from industrialised countries.

Mode

- PM + MSc programmes
- Short and tailor-made education
- Partnerships

Origin of ITC students by continent 1950-2003



1950-2003

Asia	6,769
Africa	5,011
Europe	2,496
America	1,746
Australia & Oceania	174

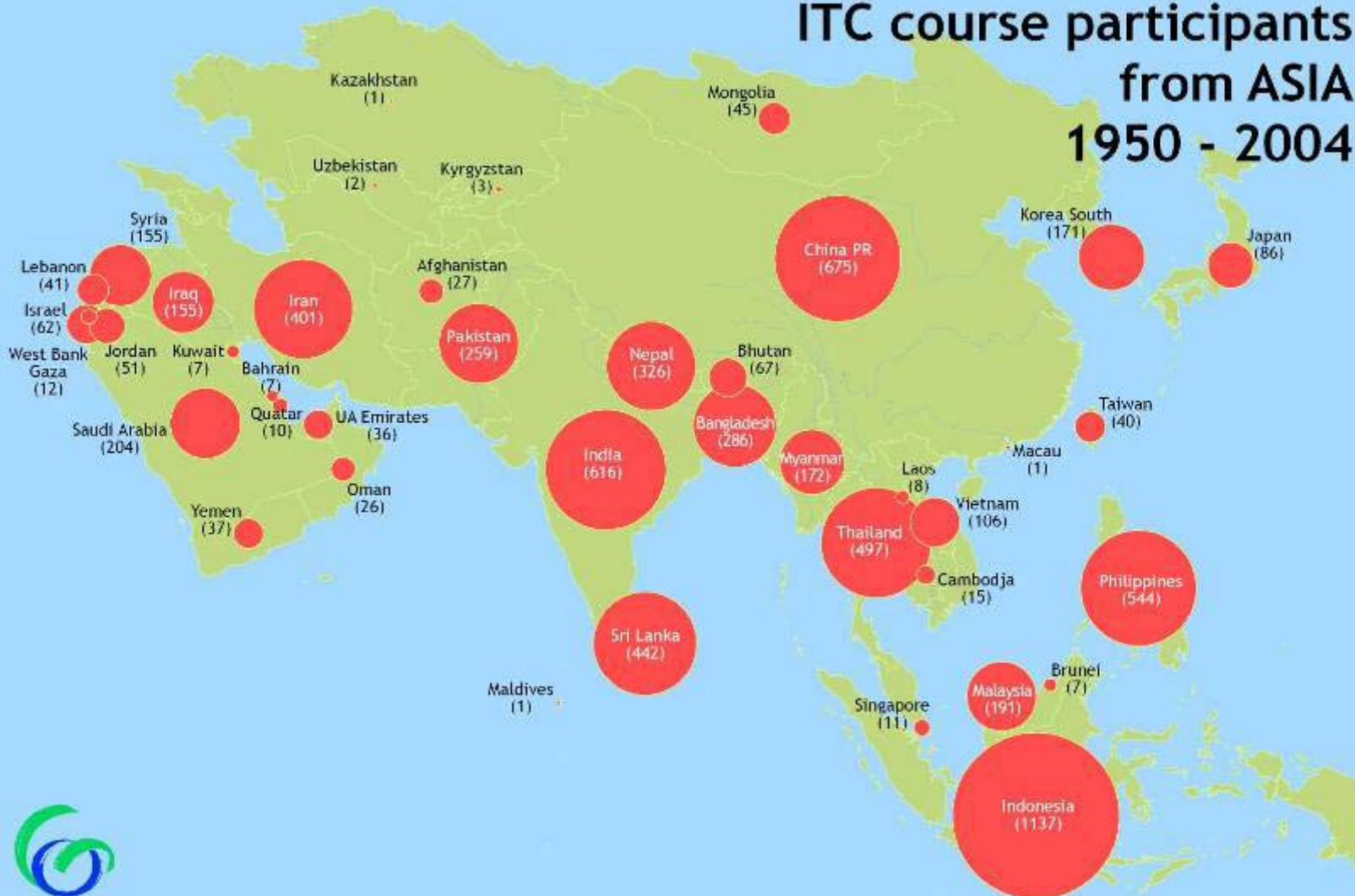
Total Students 1950-2003: 16,703

Total Countries 1950-2003: 168

Countries of origin ITC alumni Asia



Number of
ITC course participants
from ASIA
1950 - 2004



Changing instruments



- 1. Initially: individuals**
- 2. Subsequently: organization requirements**
- 3. Building in-country education/training capacity**

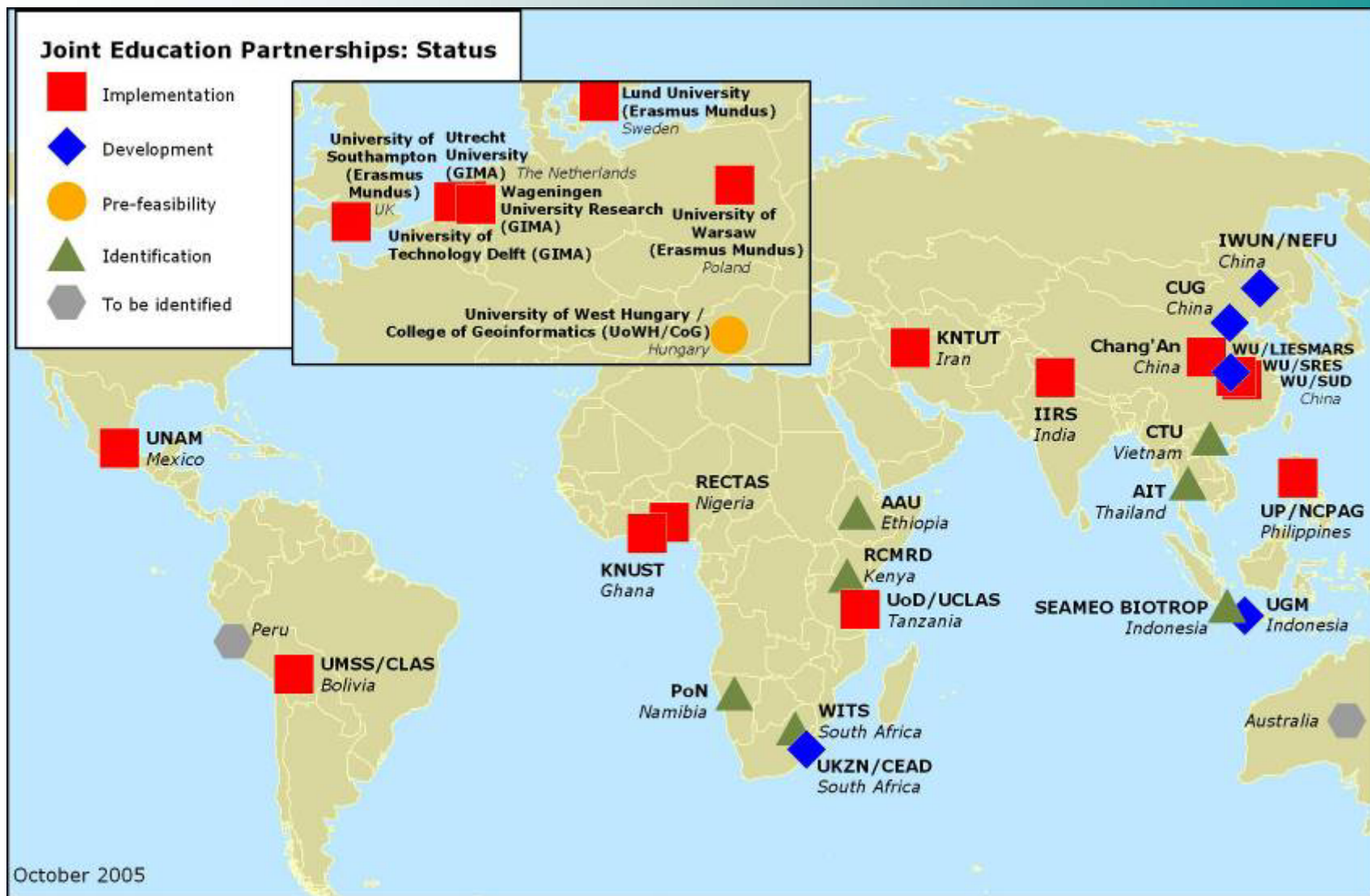
Example: Indian Institute of Remote Sensing (IPI/IIRS)

Others: Indonesia (PPFK/ITB) and China (WTUSM/WU)

- 4. Adjustment products and services:**

Research and advisory services

Status of educational partnerships



Mission statement

The Earth Science Department strives at providing and applying relevant geo-information for understanding earth surface and geological processes, for the sustainable use of georesources, and for the use of geo-science in the mitigation of natural or man-made damage to our eco-system.

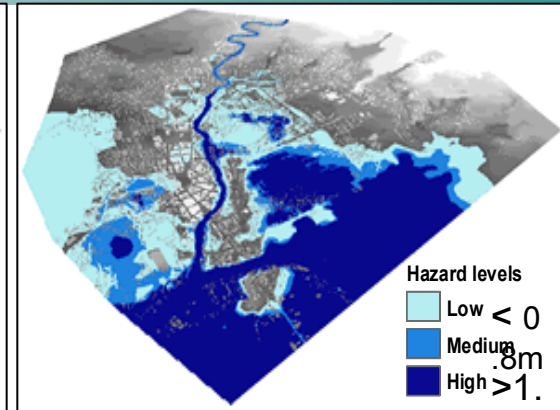
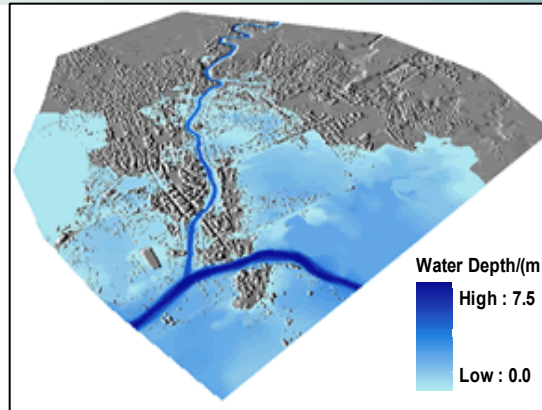
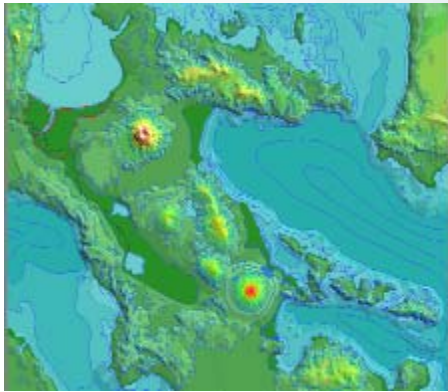
- Natural hazards
- Geologic data infrastructures and mobile mapping/GIS
- Earth resource exploration and environment

26 staff
15 PhD researchers



Module:	Dates:	Applied Earth Sciences 2005 - 2007 Master of Science Degree Course, PGD course and short courses	
	19-09-05		
1	03-10-05	Short course 1 (PGD and MSc) “Principles and Applications of Remote Sensing and GIS for Applied Earth Sciences”	
2	24-10-05		
3	14-11-05		
4	05-12-05		
		Christmas break	
5	03-01-06	Short course 2 (PGD and MSc) “Advanced Geo-information and Earth Observation for problem solving in Applied Earth Sciences”	
6	23-01-06		
7	13-02-06		
8	06-03-06		
9	27-03-06	PGD: Postgraduate Diploma Final Project	Short course 3 (MSc): “Concepts and Skills in Applied Earth Sciences Research: Development of a Personal Academic Attitude”
10	24-04-06		
11	15-05-06		
12	06-06-06		
	< 19-06-06	<i>PGD graduation</i>	
13	26-06-06	Individual research phase (MSc): (incl. proposal, optional fieldwork, selected subjects, mid-term presentation, thesis writing and MSc exam)	
14	17-07-06		
15	07-08-06		
16	04-09-06		
17-23	25-09-07		
	< 02-03-07	<i>MSc graduation</i>	

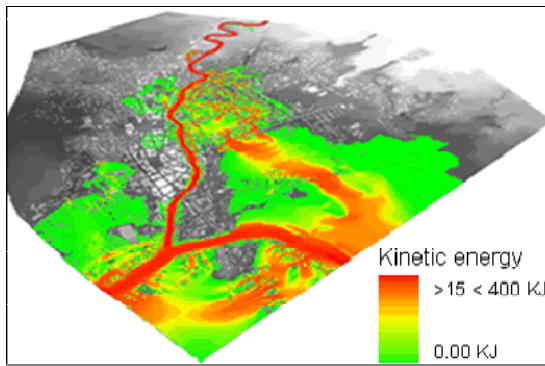
Natural hazards: floods



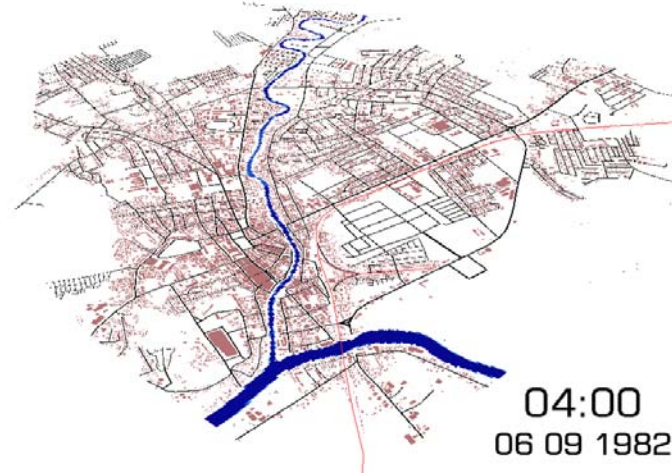
Inundation depth variation

Hazard classes

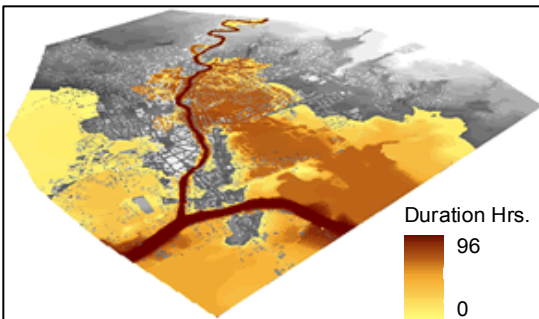
2m



Maximum kinetic energy



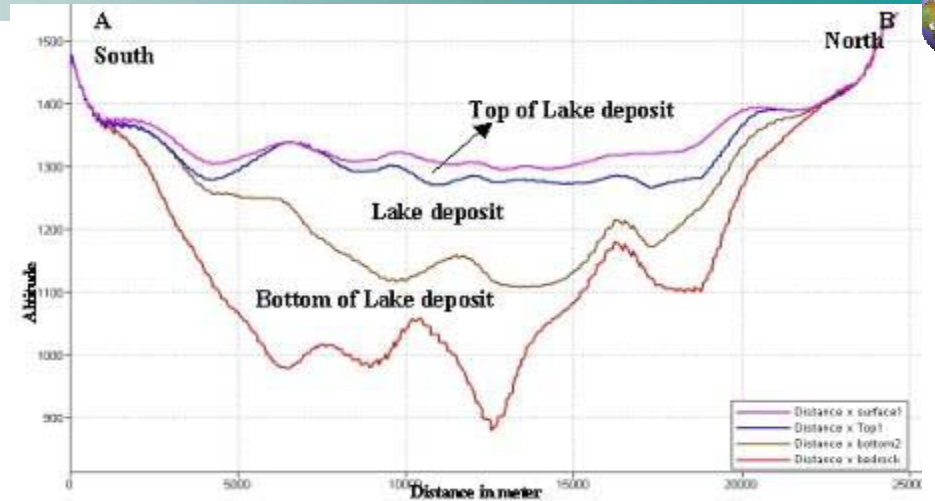
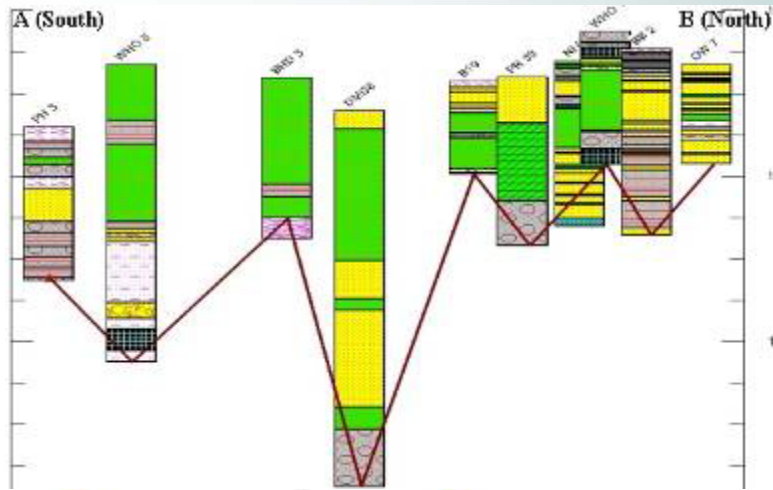
Naga (Philippines)



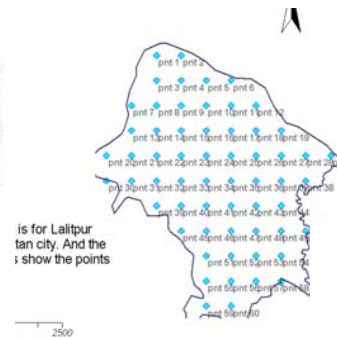
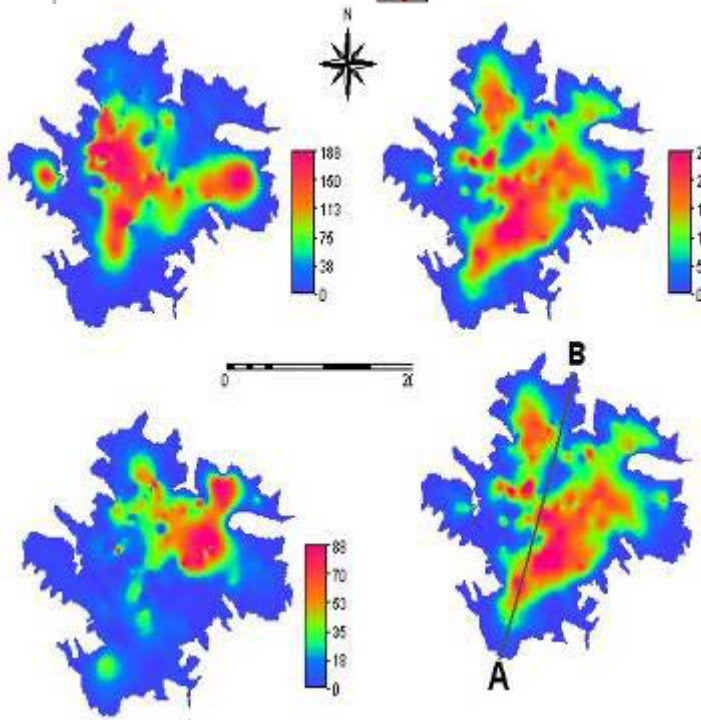
Inundated duration

- Work done on flood modelling
- More work needs to be done on flood vulnerability assessment.

Natural hazards: Seismic hazards

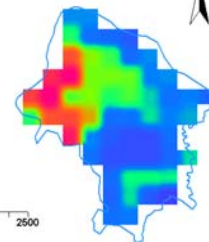
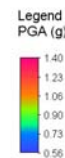


Dehradun, India

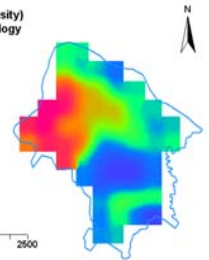
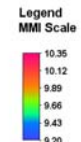


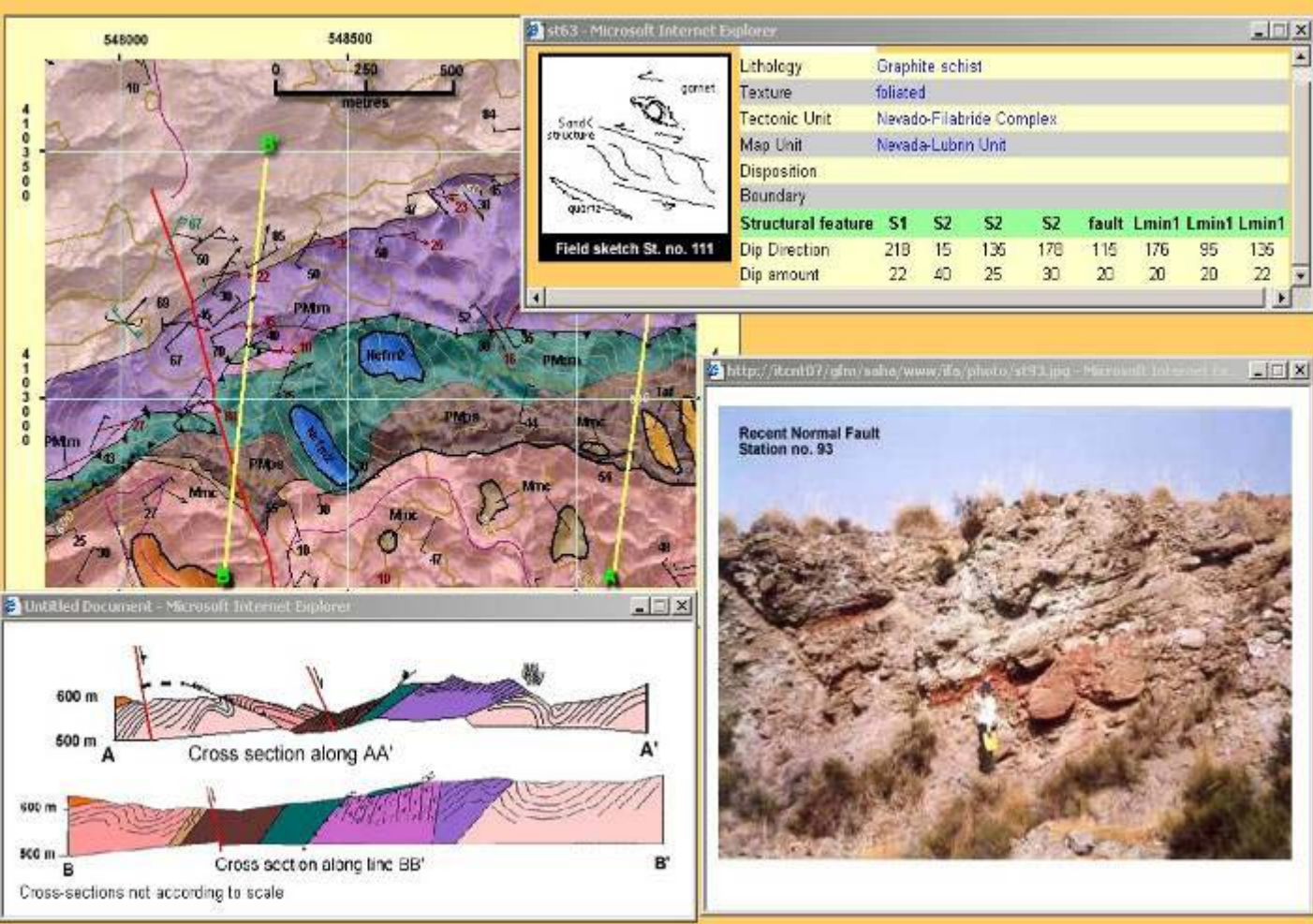
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i show the points

PGA Map of the Generalized Profile.

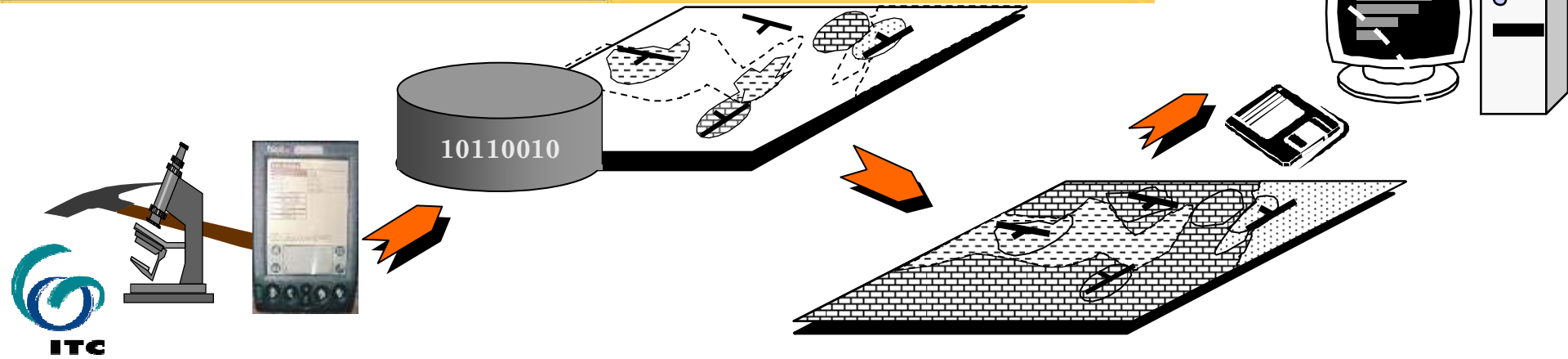


MMI (Modified Mercalli Intensity) Map of the Generalized Geology for Lalitpur.





Geologic data infrastructures and mobile mapping/GIS





The end
Thank you !