Institute of Remote Sensing and Digital Earth
Chinese Academy of Sciences

CAS-TWAS Centre of Excellence on Space Technology for Disaster Mitigation —— SDIM's Initiatives

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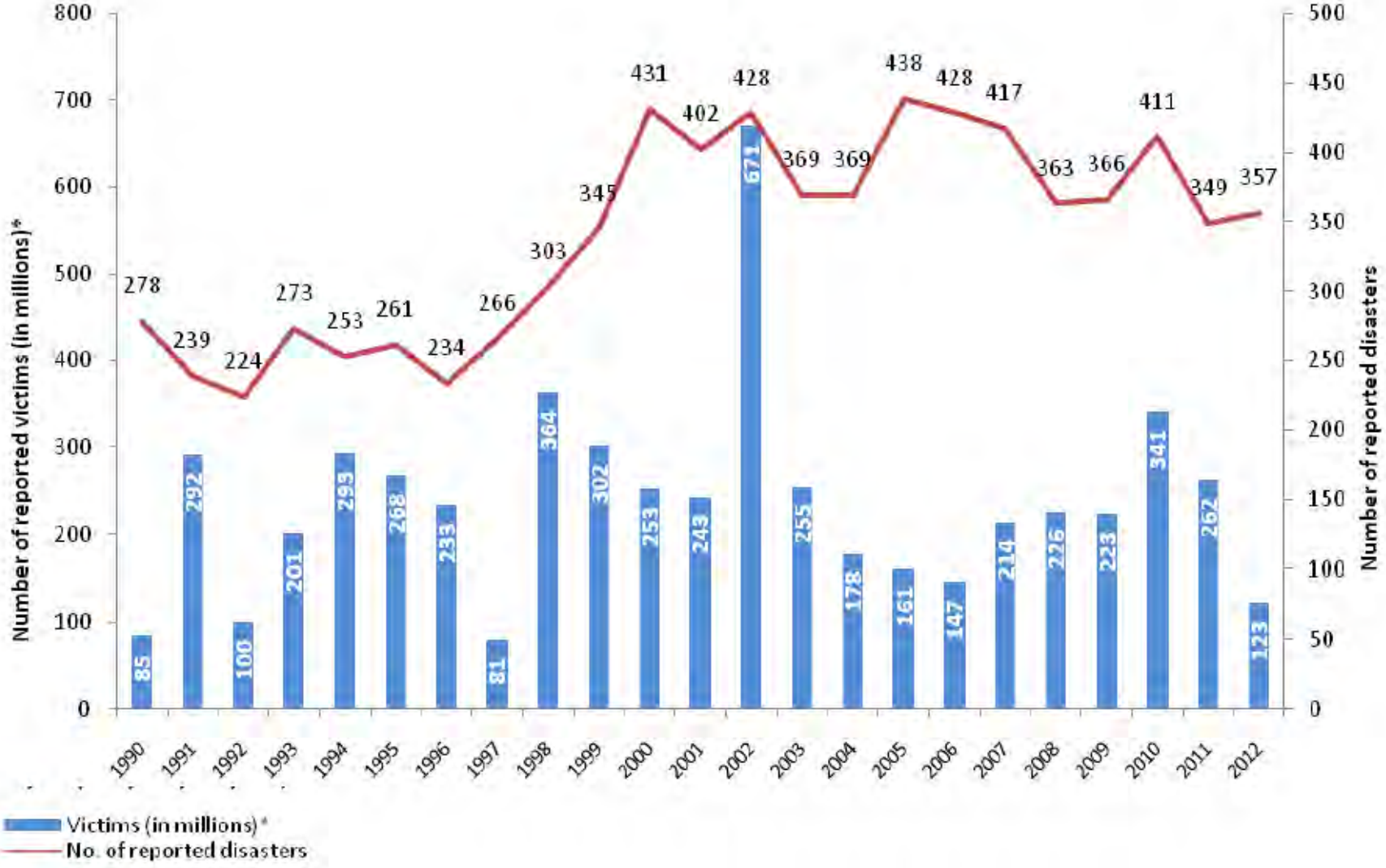
October 24, 2013 Beijing

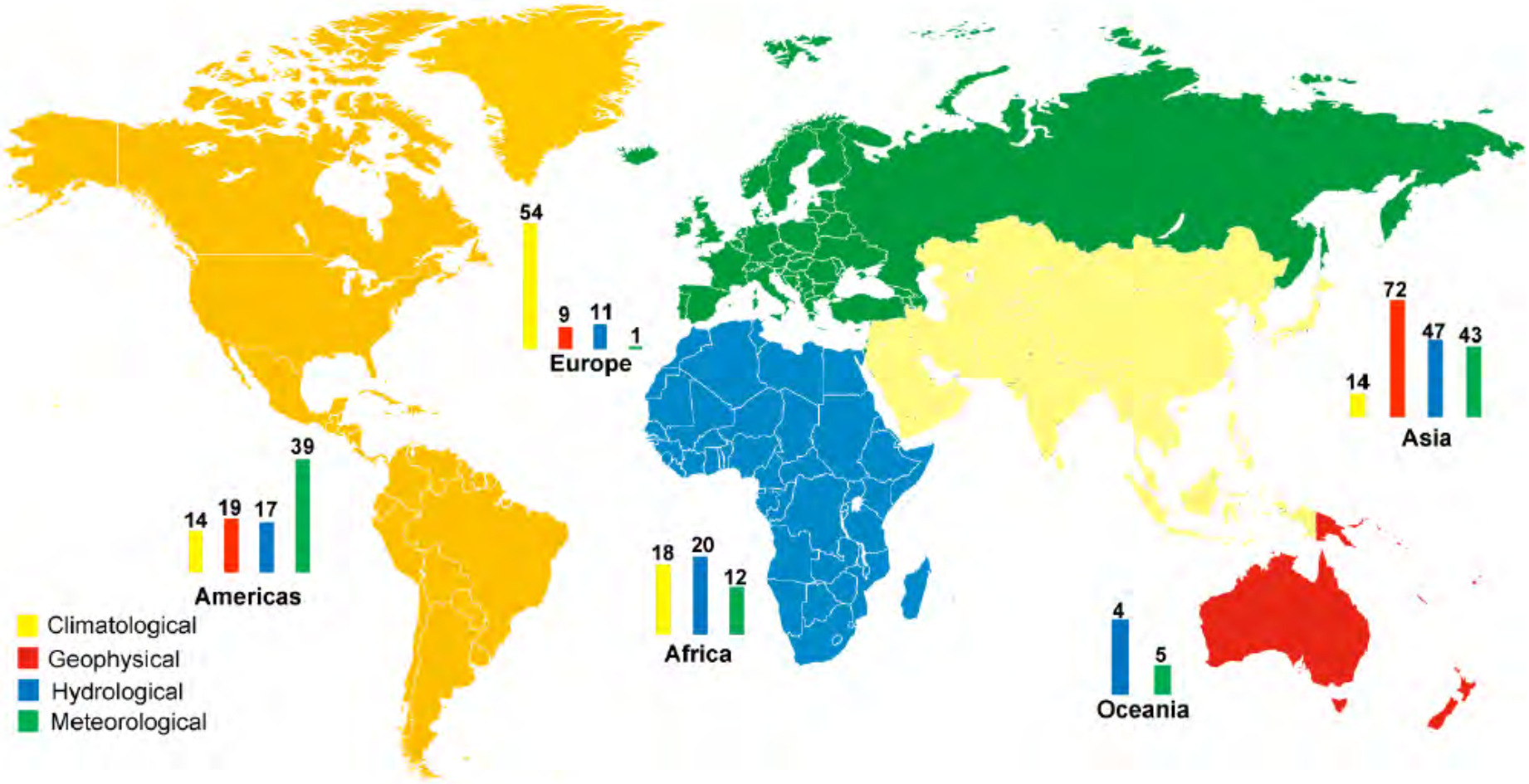
Natural Hazards Trends in Occurrence and Victims



Source: Annual Disaster Statistical Review 2012, CRED, IRSS, Université catholique de Louvain – Brussels, Belgium

Natural Hazards in 2012

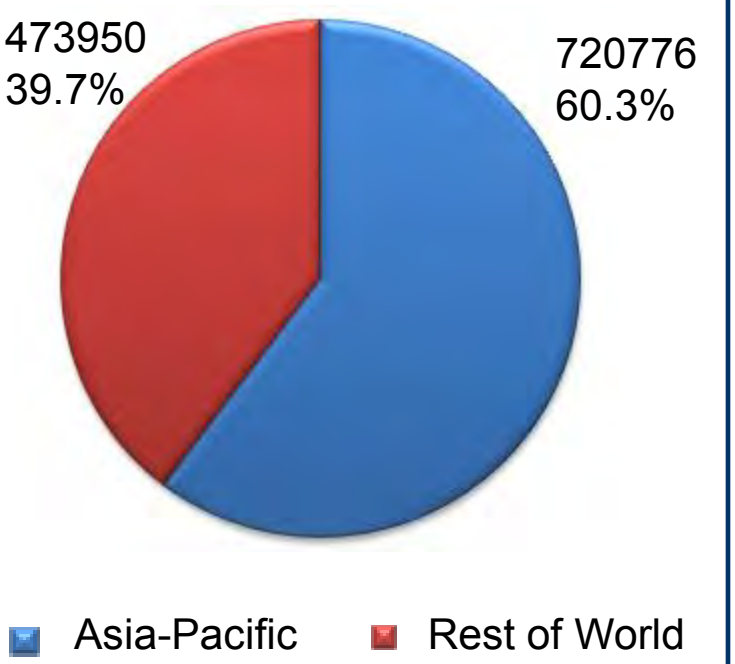
Percent share of reported occurrence by continent in 2012

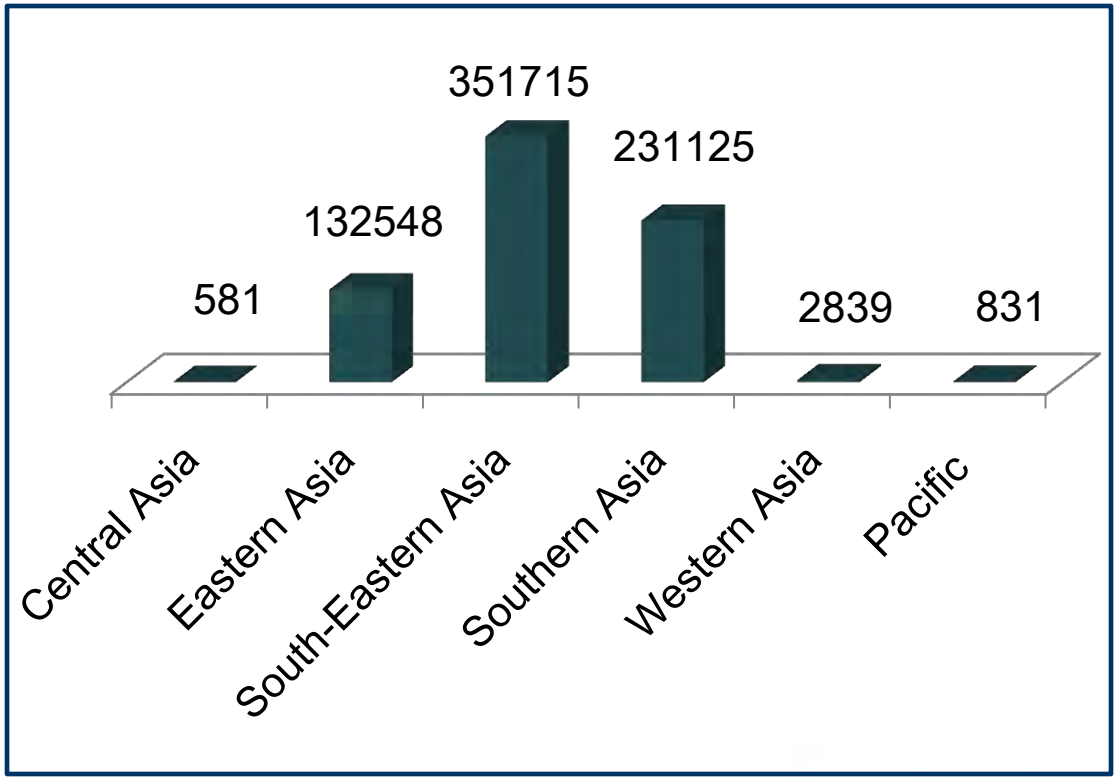


Source: Annual Disaster Statistical Review 2012, CRED, IRSS, Université catholique de Louvain – Brussels, Belgium

Impacts of Natural Disasters in Asia-Pacific (2000-2012)

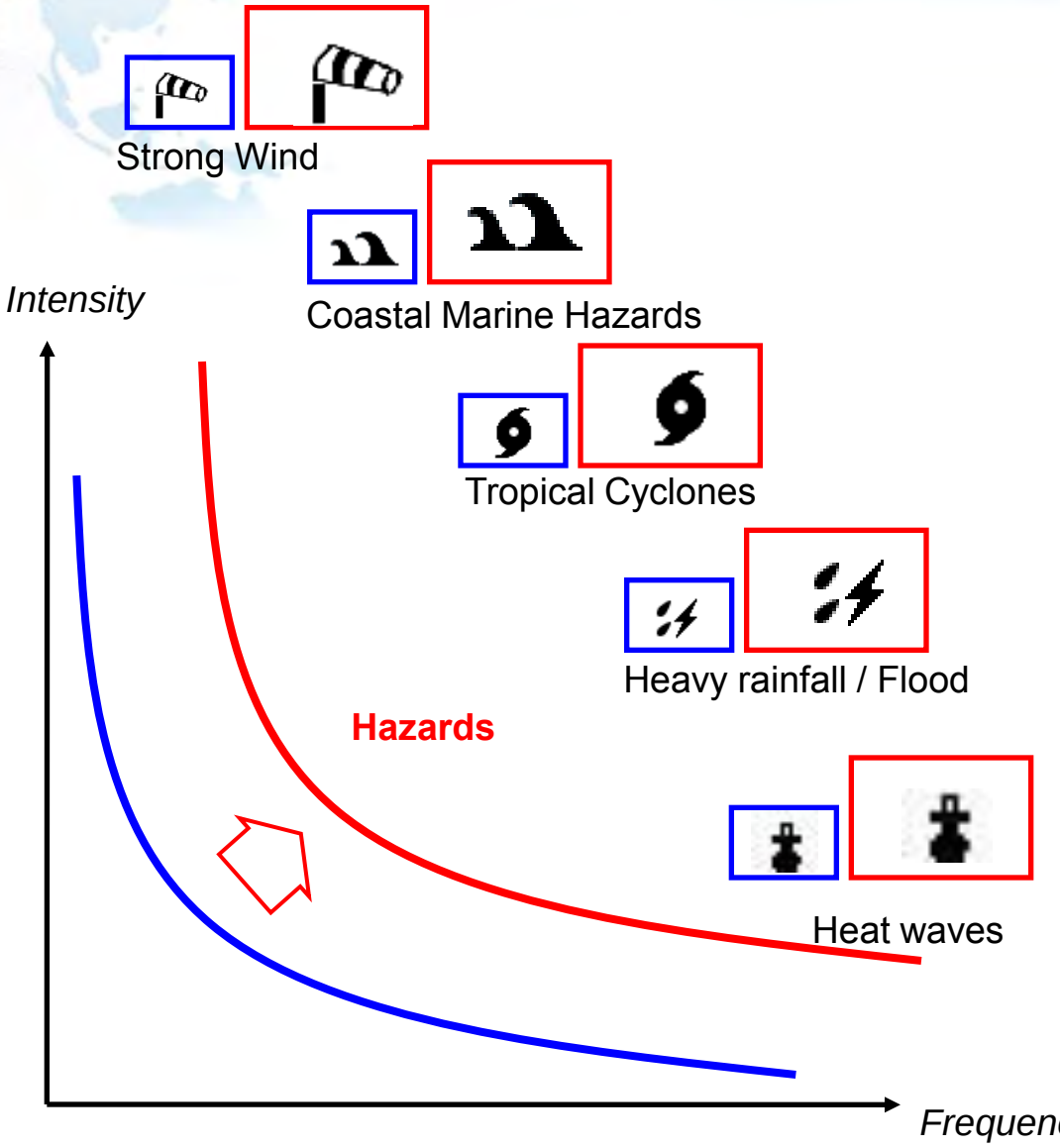
No. of people killed in the Asia-Pacific



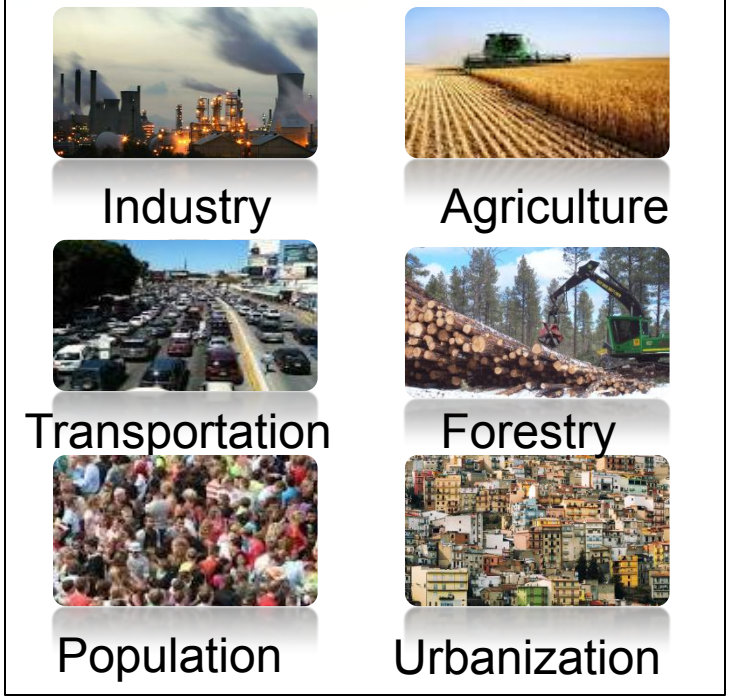


Source: analysis based on data from the Centre for Research on the Epidemiology of Disasters, EM-DAT

Increased Risk of Natural Hazards



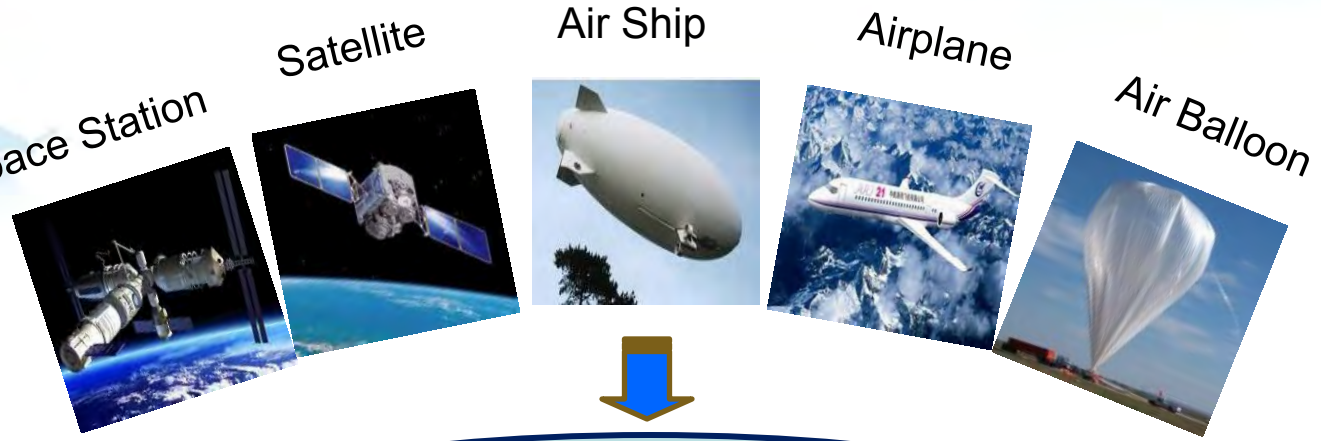
Human Impacts



Exposure is increasing !

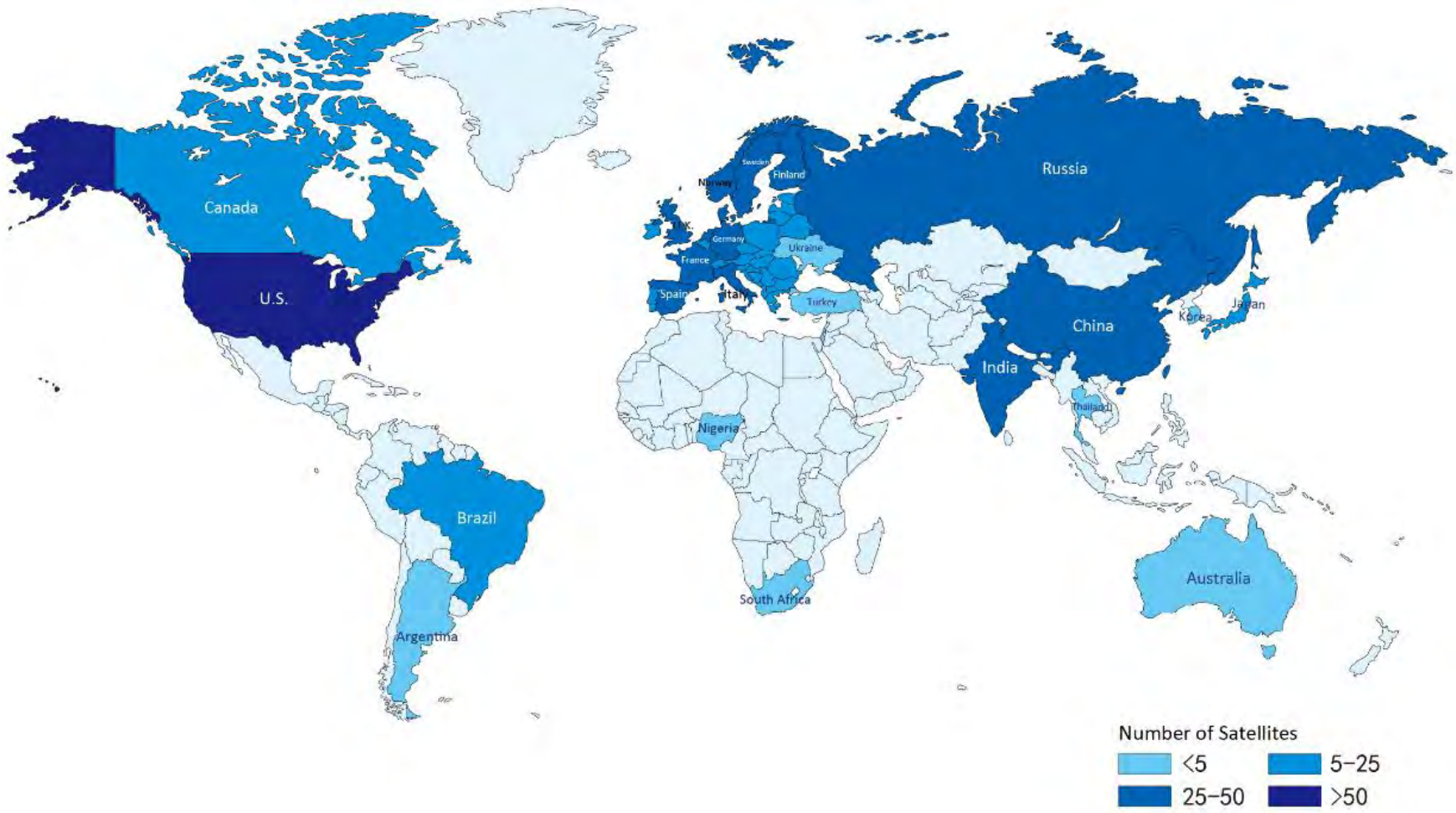
Needs for Prevention and Mitigation

EO for Disaster Mitigation



Earth Observation Systems

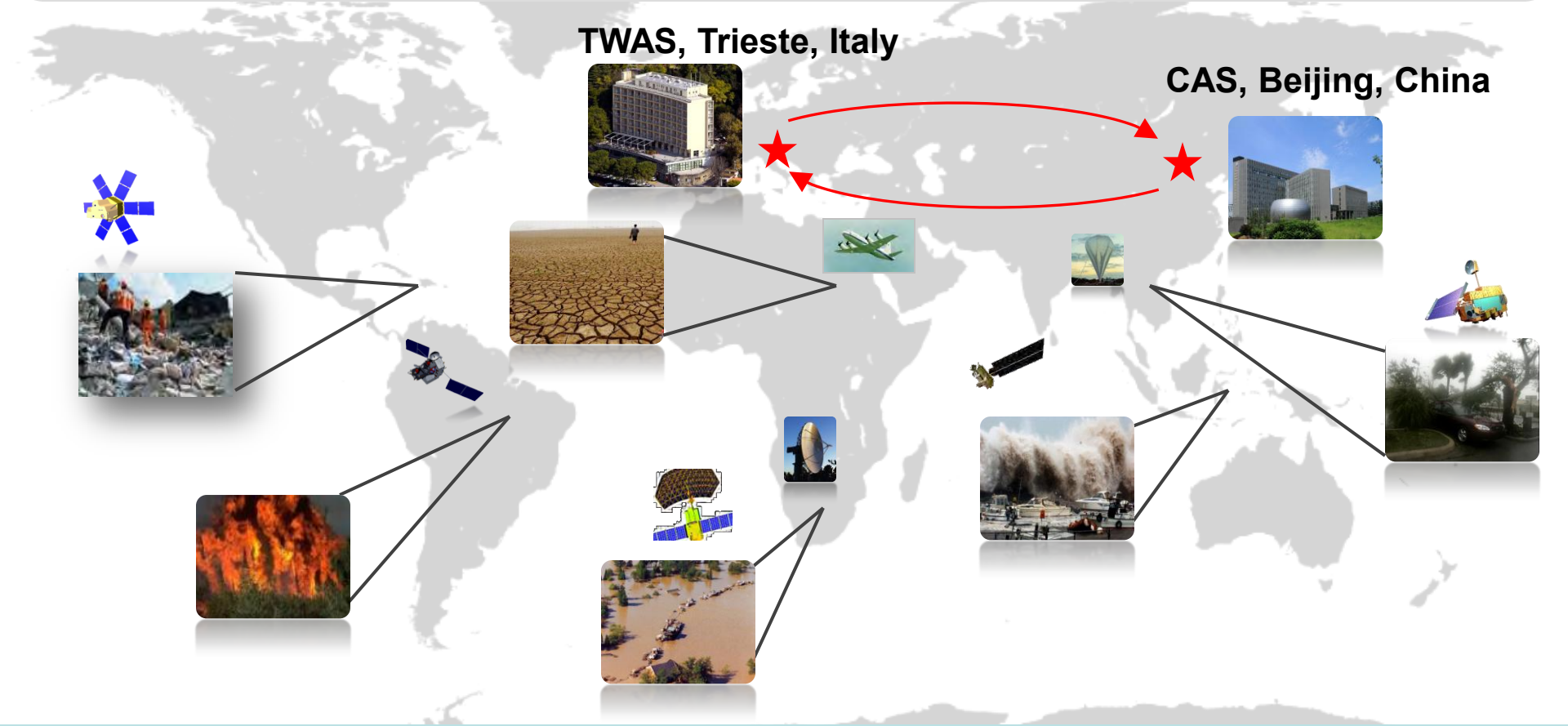
Earth Observation Missions
(1962-2012)



Data from CEOS EO HANDBOOK 2012

CAS-TWAS Centre of Excellence on Space Technology for Disaster Mitigation

Vision: *To enhance scientific and research capacities for* ***disaster mitigation in developing countries*** *through the use of the most advanced* ***space technologies.***



Joint Research Program ***Education*** ***Training Workshop*** ***Conference and Seminar***

Host Institute

Institute of Remote Sensing and Digital Earth (RADI)

CAS-TWAS Centre of Excellence on Space Technology for Disaster Mitigation

Main Areas of Focus

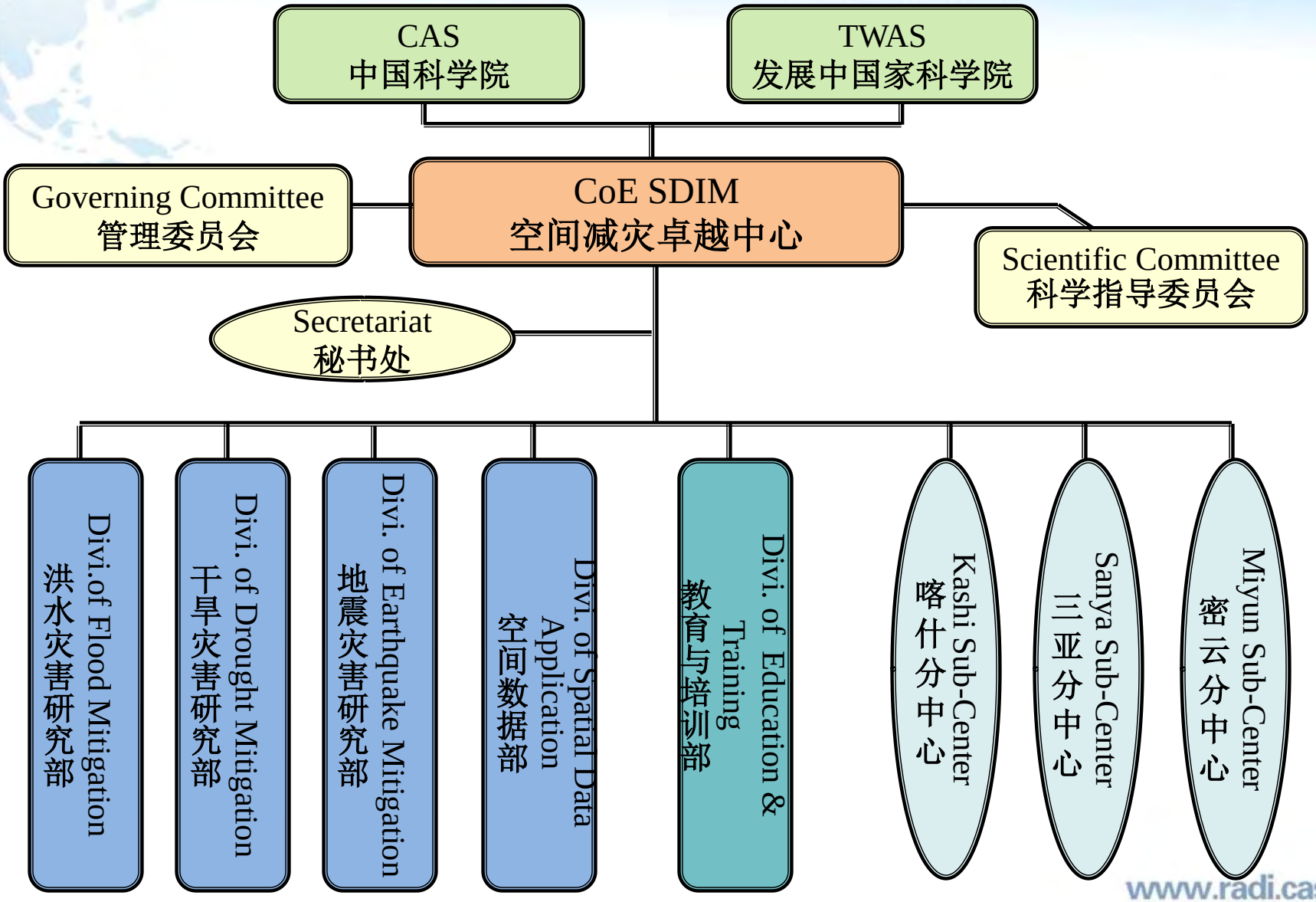
Earthquakes



Droughts


Floods


Organizational Structure



Highlight Activities

Joint Research Program

To lead collaborative research in developing countries that seek to increase the knowledge and capacity to use Earth observation technology for disasters early warning, preparedness, management, mitigation, and recovery.

Training Workshop

Each training course stretches over a 2-week period, covering both theoretical and practical aspects on the use of space technologies for disaster mitigation.

Education

The SDIM graduate student fellowship, and the SDIM visiting scholars and postdoctoral fellowships will be provided to students and the early/mid career scientists from developing countries, enhance their academic capabilities.

Conference and Seminar

The conference facilitates the broad discussion of capacity development for disaster risk reduction, innovative Earth observation products and tools for disaster management , and spatial technology and integrated disaster research.

Joint Research Program in Asia

International Students and Scholars(2013)

9 students at SDIM:

5 from Pakistan, 2 from Thailand, 1 from Egypt, and 1 from India

- President's Fellowship Programme for PhD Candidates from Developing Countries
- SDIM Postdoctoral Fellowship
- SDIM Visiting Scholars Fellowship

Meetings and Seminars

www.radi.cas.cn

High-level Meeting on Space Technology for Disaster Risk Reduction in developing countries

Borneo Convention Centre Kuching, Malaysia
August 27, 2013

Participating organizations:

CAS-TWAS Centre of Excellence on Space Technology for Disaster Mitigation (SDIM)

Committee on Earth Observation Satellites (CEOS)

Group on Earth Observations (GEO)

Integrated Research on Disaster Risk (IRDR)

International Society for Digital Earth (ISDE)

International Institute for Geo-Information Science and Earth Observation (ITC),etc.

1st High-level Meeting

Guo Huadong
Director General
SDIM

Barbara Ryan
Secretariat Director
GEO

John Richards
President
ISDE

Mazlan Hashim
Director,
UTM-IGST
Malaysia

Peou Hang
Deputy Director General
APSARA
Cambodia

Luciano Parodi
Minister-Counselor
MFA
Chile

Over 20 experts and scholars from international organizations and developing countries

1st High-level Meeting

Consensus of HLM:

(1) Set up **a Joint Working Group (JWG)** to address the challenges of improving scientific capacity in space technology for disaster mitigation in developing countries.

(2) As the lead organization of the JWG, the SDIM will work with other partners to complete a **Strategic Report** on Development of Space Technology for Disaster Mitigation in Developing Countries.

CAS-TWAS/GEO Joint Special Session

SDIM

GEO GROUP ON EARTH OBSERVATIONS

8th ISDE 2013

The 8th International Symposium On Digital Earth 2013

Borneo Convention Center Kuching, Sarawak 26 – 29 August 2013

Transforming Knowledge into Sustainable Practice

All accepted papers will be published online in IOP Conference Series: Earth and Environmental Science with high visibility and indexed in Scopus, EI Compendex and Inspec.

Selected papers will be invited for review for special issue in International Journal Digital Earth, Indexed in SCI – Expanded, with impact factor 1.083 (2011)

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Special Sessions

Joint CAS-TWAS/GEO Special Session on Digital Earth for Disaster Mitigation

Call for Abstracts for a Special Session on Disasters at ISDE 8

The Special Session will be held in conjunction with the 8th International Symposium on Digital Earth 2013 (ISDE8), Kuching, Sarawak, Malaysia 26-29 August 2013 (http://isde2013kuching.com/).

Over the past decade, countries across the world - both rich and poor - have witnessed thousands of natural disasters. While developed countries have the technologies and the resources needed to respond and to recover from a major event, the effects of disasters on the environment and the society of less developed countries could be devastating and long lasting. High population densities in risk prone areas, poor infrastructure, and unstable landforms and exposure to severe weather events make developing countries particularly vulnerable to natural hazard.

The scientific community is struggling to better understand the causative processes at the basis of disasters, narrowing down the uncertainty in hazard and risk assessment, while stakeholders and practitioners are working to enhance coordination and to advance technologies able to mitigate the effects of disasters on communities at risk.

In this framework, Earth observation and Digital Earth technology can make a difference to reduce costs and technical efforts required to achieve these challenging goals. Satellite imagery, combined with all available in-situ data, makes it possible to dramatically improve the management of risk in all phases of a disaster (before, during and after).

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Managing risk in developing countries

– filed under: space technology, disaster mitigation, earth sciences, Malaysia, Deadline, 2013

5 July. Earth and space science researchers from developing countries are invited to Malaysia for a special session on advanced technologies for disaster-risk management, co-organized by the CAS-TWAS Centre of Excellence on Space Technology for Disaster Mitigation and the Group on Earth Observations. The deadline for abstract submission is 26 July.

The session aims to bring together experts in the natural disaster field to exchange new ideas. It will be held in Kuching, Malaysia, from 26 to 29 August, in concert with the 8th International Symposium on Digital Earth 2013.

While developed countries have the technological resources needed to respond and recover from major disasters, the effect natural disasters can have on the environment and society of less developed countries can be devastating and long-lasting. High population density in risk-prone areas, poor infrastructure and unstable landforms make developing countries especially vulnerable to natural disasters. Earth observation and

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ISDE8 joint CAS-TWAS/GEO special session on digital Earth for disaster risk mitigation

Type: Meeting or Conference
Organizer: Academy of Sciences for the Developing World, the, Center of Excellence on Space Technology for Disaster Mitigation (CoE STDM)) (TWAS); Group on Earth Observations, Disasters SBA) (GEO)
Date: 26-29 Aug 2013
Location: Malaysia (Kuching, Sarawak)
Venue: Borneo Convention Center

The special session is co-organized by the CAS-TWAS Center of Excellence on Space Technology for Disaster Mitigation (CoE STDM) and the Group on Earth Observations (GEO).

The session focuses on advanced technologies (e.g., Earth observation and Digital Earth) for Disaster Risk Management in developing countries. The aim of this special session is to bring together experts in this field and to foster exchange of new ideas.

Papers on any of the following and related topics can be submitted to the special session:

- Earth observations and digital Earth as tools for disaster management;
- Information systems for hydro-meteorological extremes (including floods and droughts);
- Geohazards monitoring, alert, and risk assessment;
- Wildfire risk assessment and forecasting;
- Desertification and land degradation;
- Agricultural disaster;
- Tsunami and typhoon monitoring and early warning systems;

Visit website

Event fee

What we do - we coordinate.

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Latest Documents

Asia Pacific synthesis report: consultations on the post-2015 framework for disaster risk reduction (HFA2)

This paper synthesizes consultations held at the regional, national and

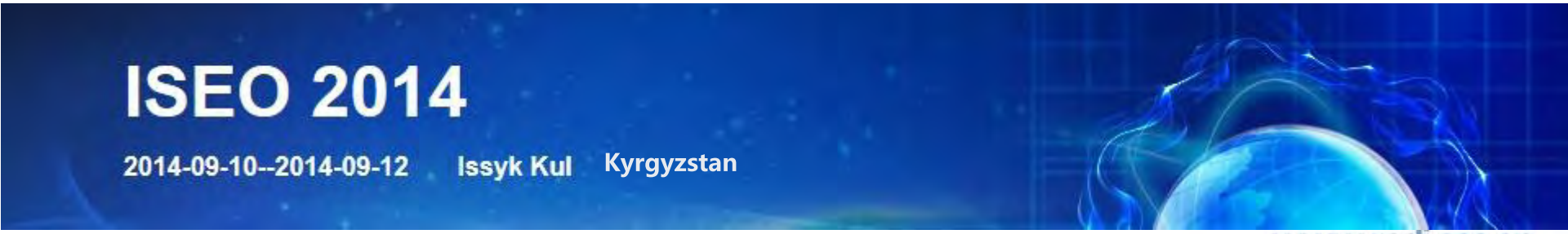
View all publications →

Meetings and Seminars in 2014

Side Meetings &

Special Sessions

International Symposium on Earth Observation for Arid and Semi-Arid Environments (ISEO2014)



Training Workshop on Space Technology for Disaster Mitigation

Sanya, China 11-22 November, 2013

Overall Objective: to make the participants aware of the potential of space technology for various phases of disaster risk management, and to enhance the capacity building for developing countries to tackle disaster issues using advanced space technologies.

Participants: early- and mid-career scientists from developing countries in Africa, Asia and Latin America.

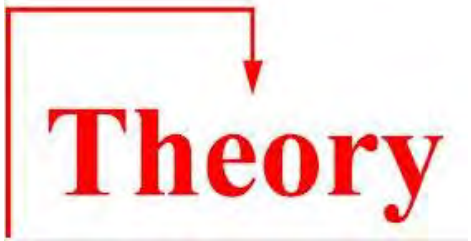
Financial Assistance: round-trip international airfares, lodging, field tour, local transportation, etc.

More information: SDIM@ceode.ac.cn

Main Training Courses

Theory, Method and Application of Space Technology for Disaster Mitigation

- Introduction on the Current Status of International Space Technology for Disaster Mitigation
- Spatial Data Receiving and Processing
- Disaster Data Management
- Flood Evaluation and Assessment
- Meteorological Disaster Assessment
- Drought Assessment
- Wildfire Monitoring and Assessment
- Management of Agricultural Disaster



News for Workshop

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CAS-TWAS international training workshop on space technology for disaster mitigation

Type: Training Course
Organizer: Academy of Sciences for the Developing World, the, Center of Excellence on Space Technology for Disaster Mitigation (CoE STDM)) (TWAS)
Other organizer: Chinese Academy of Sciences, Institute of Remote Sensing and Digital Earth (RADI)) (CAS); United Nations Educational, Scientific and Cultural Organization, International Centre on Space Technologies for Natural and Cultural Heritage (HIST)) (UNESCO)
Date: 11-22 Nov 2013
Location: Chi
Venue: Sanya

Background

In response to
Excellence on
on Space Tech
a training work
using advance

13 October
A NOT SO OBVIOUS CONVERSATION
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CAS-TWAS international training workshop on space technology for disaster mitigation

Type: Training Course
Date: 11-22 Nov 2013
Location: China (Sanya, Hainan)
Venue: Sanya Research Centre, RADI of CAS

Submit or revise training or events

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Main organizer
- Academy of Sciences for the Developing World, the, Center of Excellence on Space Technology for Disaster Mitigation (CoE STDM) (TWAS)

Other organizer
- Chinese Academy of Sciences, Institute of Remote Sensing and Digital Earth (RADI) (CAS)
- United Nations Educational, Scientific and Cultural Organization, International Centre on Space Technologies for Natural and Cultural Heritage (HIST) (UNESCO)

Description

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United Nations Platform for Space-based Information for Disaster Management and Emergency Response

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Training Workshop on Space Technology for Disaster Mitigation

Time and Duration

Registration Deadline: Tue, 10/09/2013
Venue City: Sanya (Hainan)

Basic Information

Date: 11/11/2013 - 22/11/2013
Venue Country: China P. Rep.
Event Organisers:

Centre of Excellence on Space Technology for Disaster Mitigation (STDM)
International Centre on Space Technologies for Natural and Cultural Heritage (HIST)

Co-organisers:

UNESCO
Chinese Academy of Sciences (CAS)
Academy of Sciences for the Developing World (TWAS)

More Information Link:
Institute of Remote Sensing and Digital Earth Chinese Academy of Sciences
Language of event: English

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Workshop on space tech and disaster mitigation

filed under: space technology, disaster mitigation, CAS, Deadline, 2013

Early- to mid-career scientists, policymakers and managers from developing countries are invited to apply for a November training workshop in China planned by the CAS-TWAS Centre of Excellence on Space Technology for Disaster Mitigation. The deadline to apply is 10 September.

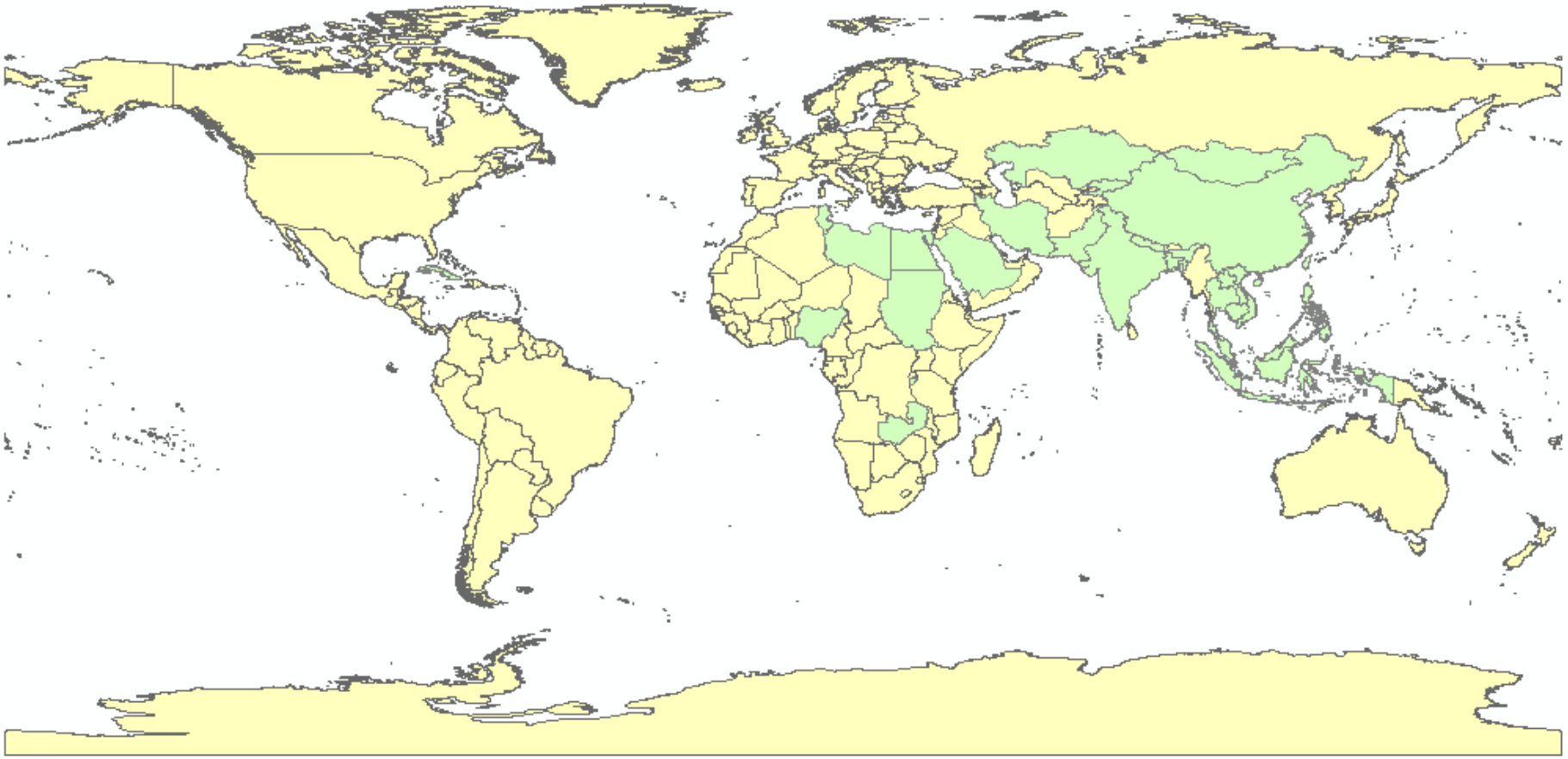
Experts from international institutions across the globe will share their experiences working in this increasingly critical field. The centre is jointly sponsored by the Chinese Academy of Sciences (CAS) and TWAS, and hosted at the CAS Institute of Remote Sensing and Digital Earth. The workshop will take place 11-22 November 2013 in Sanya, Hainan Province, China.

Participation is limited to 20 people, and female applicants will be given priority. Selected applicants will be provided with round-trip airfares between their home countries and Sanya, as well as local expenses during the workshops.

Get more details and see the application form.

Workshop Participants

97 applicants and SDIM supports **25** participants from **17** developing countries



Workshop Lecturers

David Johnston
Professor
Massey University, New Zealand

Anthony Oliver Smith
Professor
University of Florida

Shuaib Lwasa
Lecturer
Makerere University,Uganda

Sisi Zlatanova
Associate professor
Delft University of Technology

John van Genderen
Professor
University of Twente/RADI

Natarajan Ishwaran
Professor
RADI

Bing Zhang
Professor
RADI

Wanchang Zhang
Professor
RADI

CAS, TWAS open ambitious centres of excellence

— filed under: space technology, climate, capacity building, centre of excellence, CAS, fellowships, science-based development, China, Regional Office Beijing, science centres, 2013, disaster mitigation

16 May 2013. The Chinese Academy of Sciences (CAS) is making a significant new investment in five CAS-TWAS Centres of Excellence to build scientific strength and drive innovation in the developing world.

The centres will focus on five areas: climate, water, space technology for disaster mitigation, green technology and biotechnology. Each centre will offer a range educational and training opportunities for scientists and engineers from the developing world, with the goal of advancing research, exchanging knowledge and building global networks.

"I believe that CAS-TWAS Centres of Excellence would be in a key position in conducting training, joint research cooperation and policy studies and will function as a powerful arm of TWAS in achieving its missions", said Bai Chunli, president of both CAS and TWAS. "The success of those centres will rely on the active involvement and contributions of TWAS members, its young affiliates and the five TWAS regional offices.

"TWAS will continue its endeavours to revitalize and strengthen the TWAS Centres of Excellence to promote the strategic studies in key areas with significant importance to the developing countries," Bai added. "In doing so, it will continue to build research cooperation among developing countries as well as South-North cooperation."

TWAS executive director Romain Murenzi welcomed the new initiative as an "extraordinary opportunity" for addressing regional and global challenges. He said the new investment reflects China's growing contributions to science capacity in the developing world.

Thanks!



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