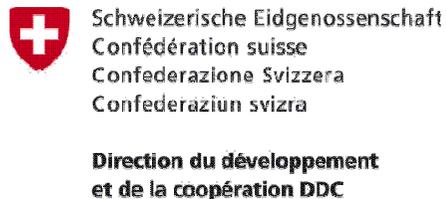


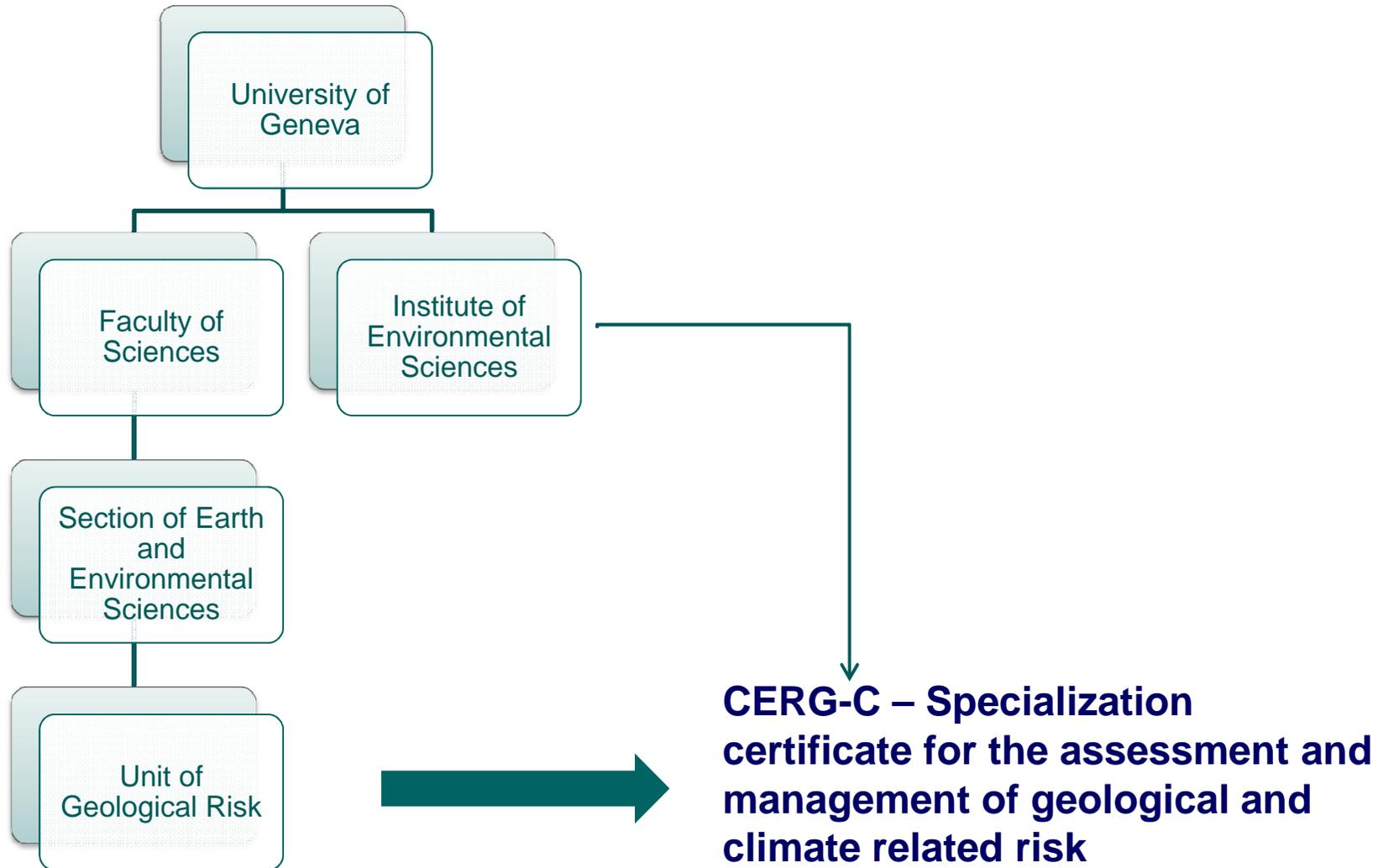
Specialization certificate in geological and climate related risk



in association with:



Framework



The ten most important challenges for optimized risk reduction

Hohenkammer Charter (Worldwide disaster reduction – Awareness is the key - 2005)

Poverty relief → People living in poverty are especially vulnerable

People in the areas at risk

Decision-makers → committed involvement

Dialogue → common understanding of the problems and solutions

Partnerships (Politicians, trade and industry, scientists and those affected)

Development policy

Propagation

Promising approaches in respect of risk-adequate precautions that currently exist at local level must be transmitted and propagated worldwide.

Incentives

Insurance

Risk transfer, such as insurance and solidarity networks, helps reduce the vulnerability of governments and people in risk situations.

Raising risk awareness

Developing awareness is the key to the implementation of adequate measures before disaster strikes

Brief history

- The CERG-C training is focused on the **assessment and management** of geological and climate related risk.
- The CERG-C was launched at the University of Geneva in 1988 and has evolved since then to include additional hazards and risks such as those linked to **climate change**. Training specialists from around the world to reduce the impacts of natural hazards by assessing and managing risks has been the main focus since the beginning of the CERG-C program.
- Since disasters resulting from geological and climate phenomena can only be reduced through a **multidisciplinary approach**, we are merging ideas from disciplines such as the physical and social sciences, engineering, and economics.
- **State-of-the-art strategies for risk reduction and analysis of emerging natural hazards** are continuously integrated in the CERG-C program in order to provide always the best solutions at both local and national level.

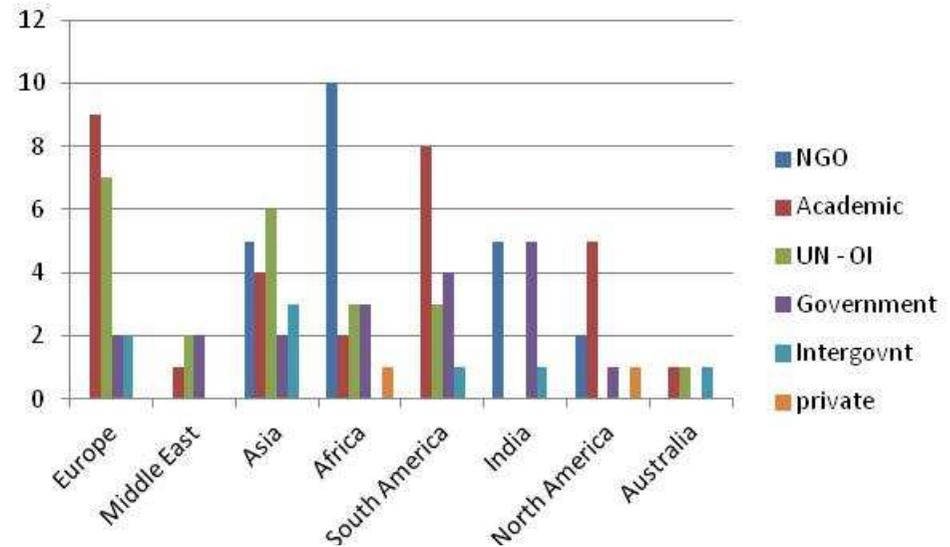
Training context in 2011

Based on the website of the
PreventionWeb

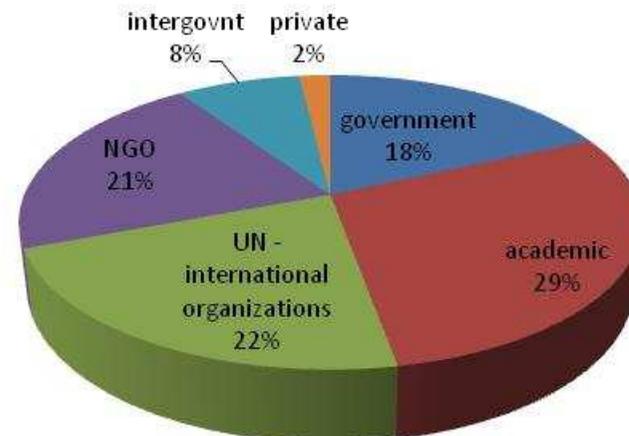
Trainings organized by :

- **NGOs** (e.g. Vanuatu Red Cross Society)
- **Governments** (e.g. Caribbean Disaster Emergency Management Agency, National Institute of Disaster Management)
- **Intergovernmental** (International Centre for Integrated Mountain Development)
- **Universities** (e.g. Gadjah Mada University)
- **United Nations** (e.g. UNOSAT, WHO)
- **International Organizations** (e.g. Asian Disaster Preparedness Center)
- **Private Sector** (e.g. Indepth research services)

Duration : from 1 day to several months
(online course)



Trainings in 2011



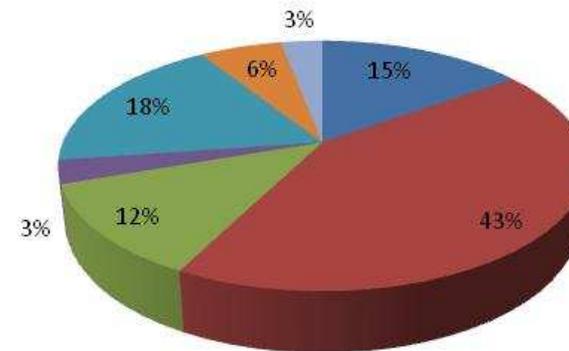
Academic trainings

Based on the website PreventionWeb

- 33 trainings (30 academic and 3 private institutes) dealing with hazards and risk :
 - 9 certificates
 - 8 as being part of a master program
 - 1 specialized (after master) certificate (CERG-C)
 - 2 advanced studies programs (MAS and CAS)
 - 4 diplomas
 - 18 master programs

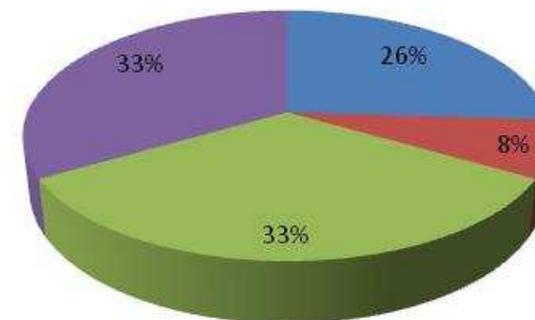
Geographical distribution

■ UK ■ Europe ■ Switzerland ■ Middle East ■ Asia ■ Africa ■ South America



Duration

■ <16 weeks ■ <1 year ■ 1 year ■ >1 year



Goal of the CERG-C: capacity building

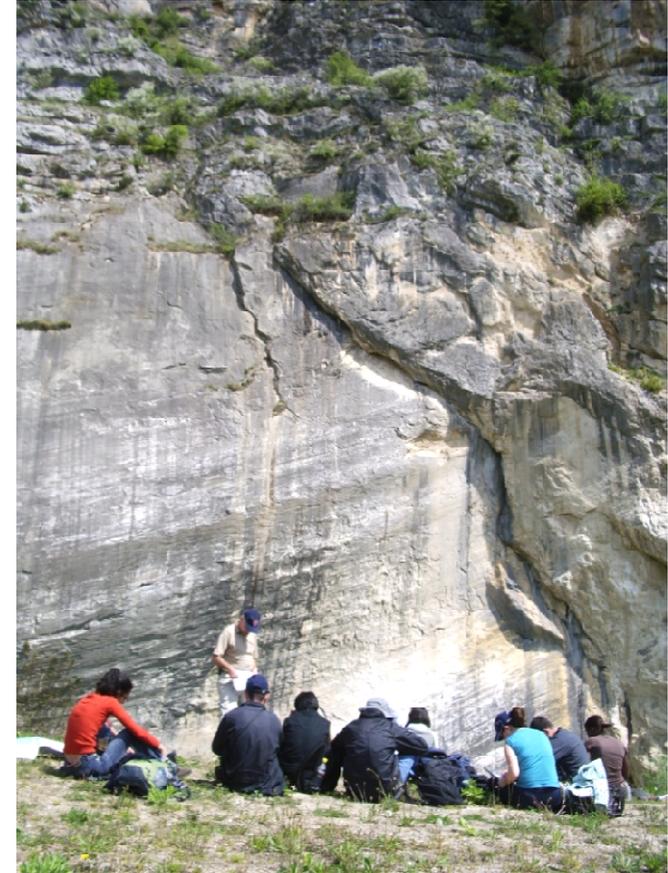
- Provide graduate students and practitioners with **expertise** in the field of **risk assessment and mitigation** as a contribution to sustainable development;
- Develop an **understanding of terminology, strategies and tools** used in the domain of risk reduction;
- Include a **multidisciplinary approach** to the assessment and management of risk;
- Train CERG-C participants **at local to national levels** so they can advise the public, private and government sectors on risk mitigation strategies; and

Contents – 5 modules

- **Module 1 : Risk management**
 - The goal of this key module is to provide participants with tools they can use to assess risk and provide solutions to risk-management issues in their own countries. This module brings together a multidisciplinary team of experts representing fields such as social sciences, geography, law, land-use planning, statistics, media communication and economics.
- **Module 2 : Volcanic Risk**
 - This module focuses on the mechanisms of volcanic eruptions and their associated hazards and risks. It also integrates the process of risk mapping and risk management decisions.
- **Module 3: Seismic Risk**
 - This module introduces the basics of seismicity and investigates the implications of earthquake mechanisms and related secondary phenomena (Tsunamis, Landslides, etc.) on infrastructure vulnerability.
- **Module 4 : Landslide Risk**
 - This module addresses the causes and mechanisms of landslide phenomena, as well as mitigation strategies, such as engineering controls and land-use planning.
- **Module 5 : Flood Risk and Climate Change**
 - This module discusses hydrological processes and the analysis of flood risk assessment. It also integrates climate change issues and their potential impacts on slow (e.g. drought) and rapid onset events (e.g. flash floods).

Field immersion : part I

- Understanding the active tectonics (Vuache fault, F)
- Assessing the seismic vulnerability and understanding the retrofitting (Switzerland)



Field immersion : part II

Risk assessment in a volcanic context (Vulcano, Italy)

- Format : one-week dedicated to hazard and vulnerability assessment and a simulation of crisis management
- Collaboration between University of Geneva, local population and Italian civil protection



Field immersion – part III

Landslide and flood risk assessment in a mountainous context (les Diablerets, Switzerland)

- Format : one-week dedicated to hazard and vulnerability assessment
- Collaboration with communal authorities



Organization

DIRECTION

Costanza BONADONNA, Professor, **Volcanic Risk responsible**, University of Geneva (Switzerland)

COORDINATION

Corine FRISCHKNECHT, PhD, University of Geneva (Switzerland)

SCIENTIFIC BOARD

David CONSUEGRA, PhD, **Flood Risk responsible**, B+C Ingénieurs, Lausanne (Switzerland)

Donat FÄH, Professor, **Seismic Risk responsible**, Swiss seismological Service, Swiss Federal Institute of Technology, Zürich (Switzerland)

Chris GREGG, Associate Professor, **Risk Management responsible**, East Tennessee State University (USA)

Michel JABOYEDOFF, Professor, **Landslide risk responsible**, Institute of Geomatics and Risk Analysis, University of Lausanne (Switzerland)

Olivier LATELTIN, PhD, **Landslide risk responsible**, Association des établissements cantonaux d'assurance incendie, Bern (Switzerland)

Scira MENONI, Professor, **Risk Management responsible**, Politecnico di Milano (Italy)

Franco ROMERIO, MER, **Risk Management responsible**, Institute of environmental sciences, University of Geneva (Switzerland)

Teaching team

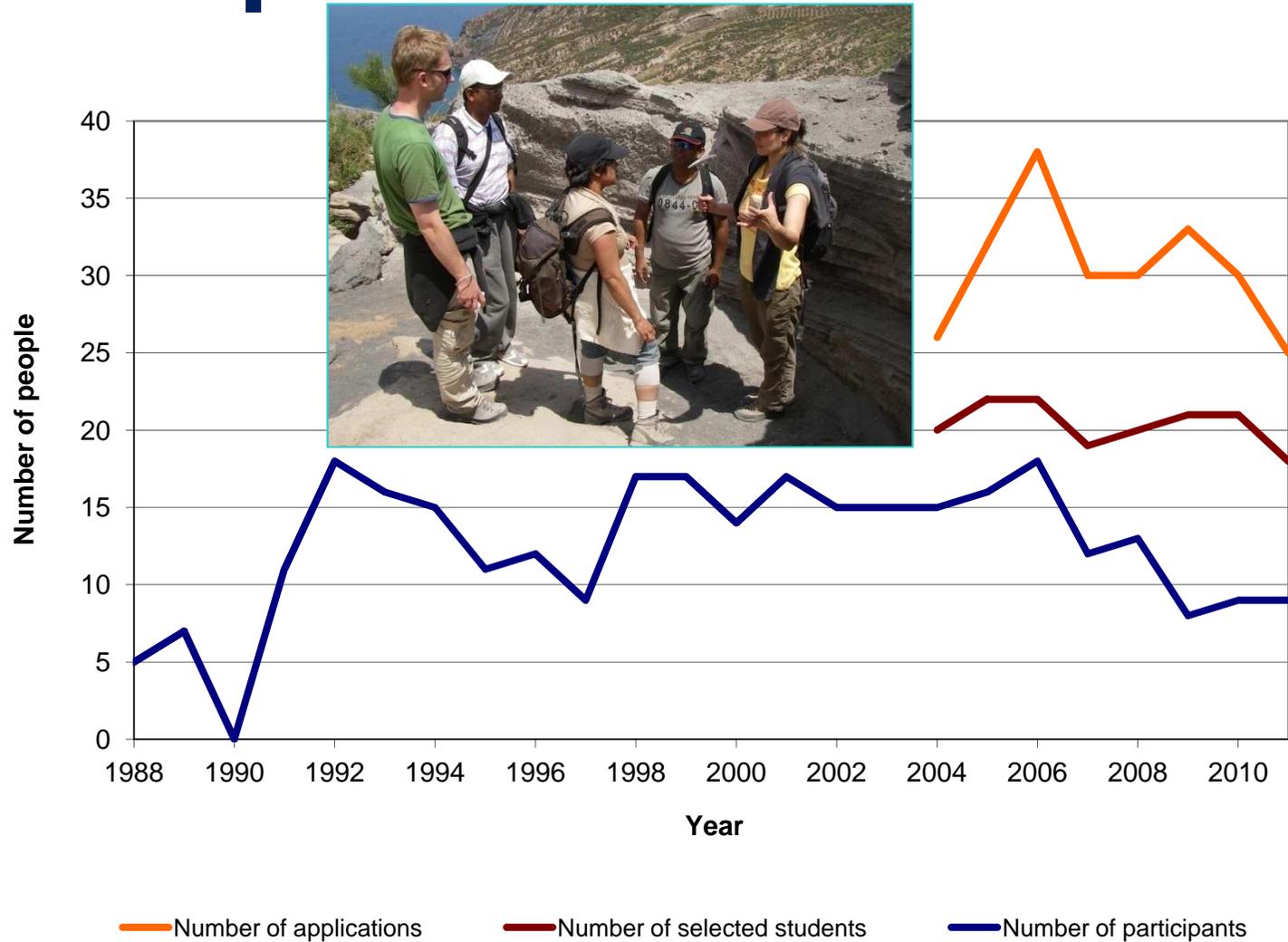
The teaching team comprises some 30 international experts in the field of natural risk coming from various institutions involved in disaster reduction including:

- East Tennessee State University (Dept of Geosciences), USA;
- INGV, Italy;
- Politecnico di Milano;
- Swiss Federal Office for the Environment;
- Swiss National Emergency Operations Centre;
- Swiss Humanitarian Aid;
- Swiss Seismological Service (SED), ETH Zürich
- World Meteorological Organization (WMO), Geneva;
- UN/ISDR, Geneva;
- UNOSAT, Geneva;
- University of Pisa (Dept of Earth Sciences), Italy;
- UNU-ITC School for Disaster Geo-information Management, Netherlands.

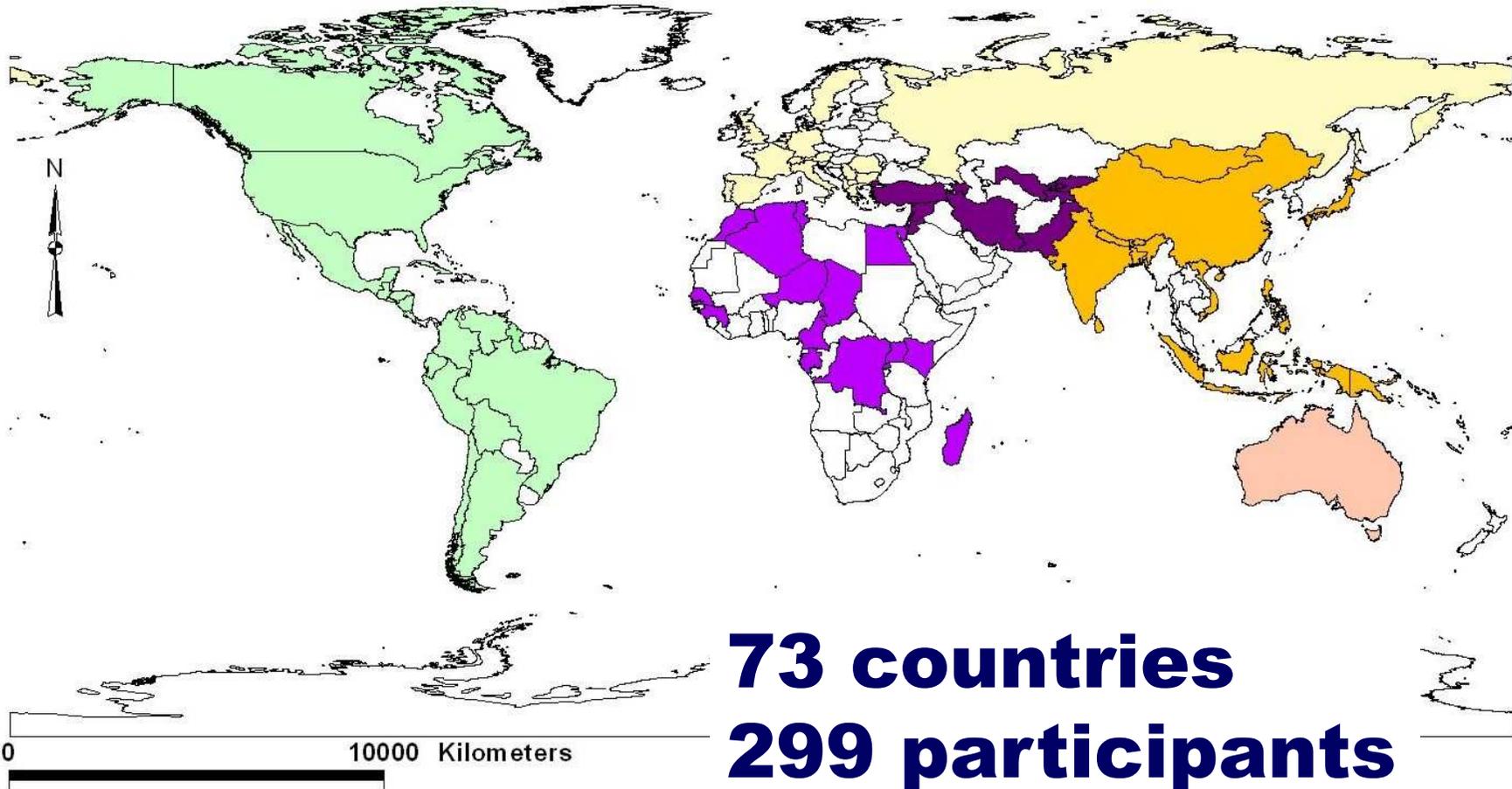
Duration and requirements

- **Admission requirements** : University degree (master or equivalent) and Professional and/or academic experience
- **Duration** : 9 weeks, including 7 weeks of lectures and field work, and 2 weeks of exams.
- **Language** : lectures are given in English
- **Memoire** : following the course work in Geneva, participants conduct a risk-related study in their host country, in collaboration with CERG-C faculty.
- **ECTS credits** : 30

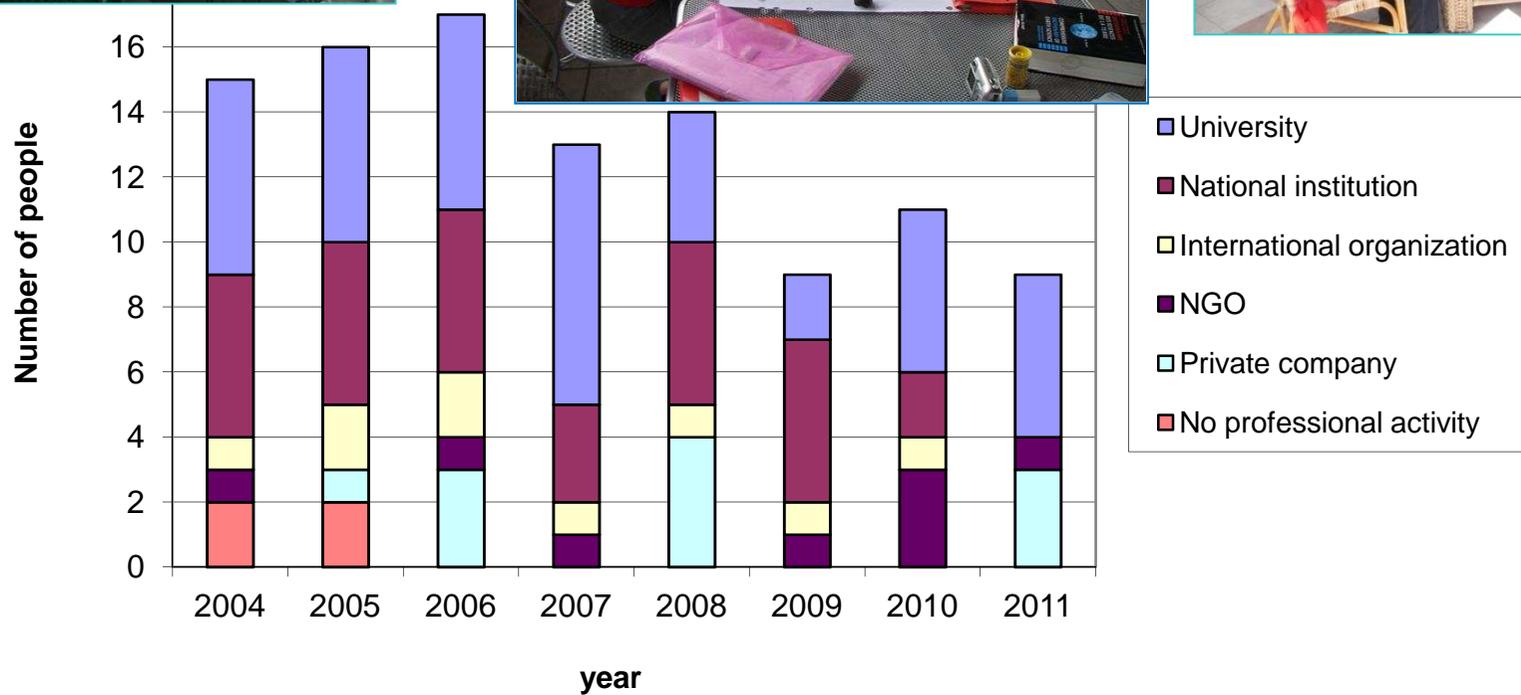
Participation trends



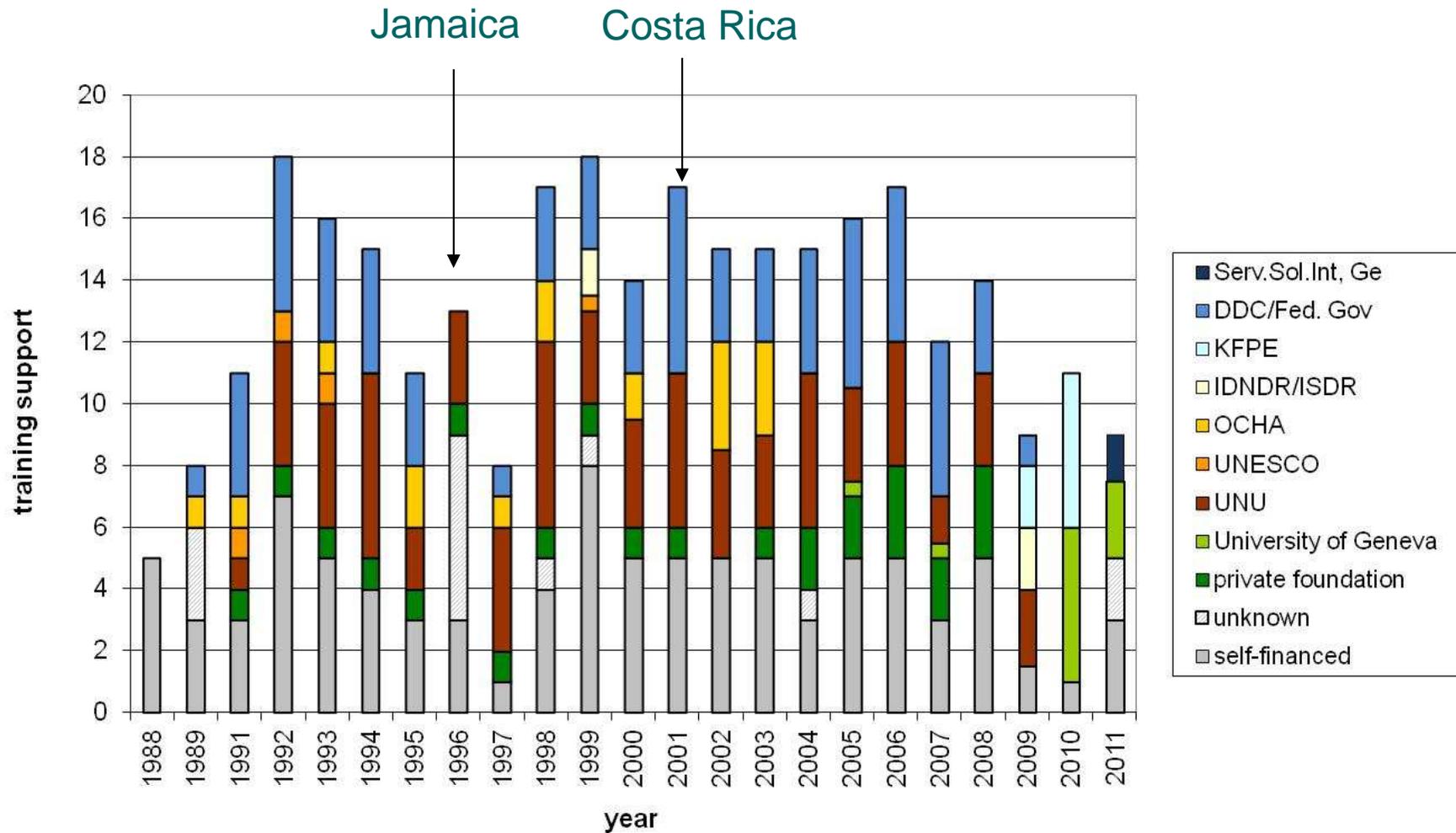
Provenance 1988 - 2011



Affiliation of CERG-C participants



Training support per year



Resulting jobs

- Private companies (e.g. NGOs, geological offices, etc)
- Federal governments / National institutions
- International organizations
- Academy (professor level)

CERG-C RESEARCH PROJECTS – SOME EXAMPLES

- Seismic risk assessment in Uzbekistan and measures for its mitigation – Rustam ABIROV (2004)
- Economic Vulnerability Assessment in Istanbul – Seda KUNDAZ (2005)
- Hazard and Vulnerability assessment of Sherquila Village – Pakistan – Karim EJAZ (2006)
- Hazard and risk perception in a popular tourist destination in Iceland - a pilot investigation – Deanne BIRD (2007)
- Hydrological modeling and flood hazard delineation in Bagmati River, Nepal – Sagar BAJRACHARYA (2008)
- Flood mitigation measures : case study of the western region of Kenya - Juliet Nabayi KHISA (2009)
- Disaster Risk Assessment and Management of Schools (multi-hazard) in Ahmedabad city of Gujarat state of India Vishal PATHAK (2010)



Friday 4 November 2011
University of Geneva
(site Battelle)



CERG-C WORKSHOP:

Risk Management:
which Strategies in a
World of increasing
complexity?

PROGRAM

- 8h Registration
- 8h30 **WELCOME AND INTRODUCTION**
Prof. Jean-Marc TRISCONI, Dean of the Faculty of Sciences
Prof. Costanza BONADONNA, CERG-C Director
- 9h **Opening conference:**
Current and future challenges in the field of disaster risk reduction
Margareta WALHSTRÖM, Special Representative of the Secretary-General
for Disaster Risk Reduction, UNISDR Geneva
- 9h45 Coffee Break
- 10h15 Josef HESS, Executive director, steering committee intervention
against Natural Hazards (LAINAT), Swiss Federal Office for the Environment
- 10h40 Frank STÖSSEL, Focal Point Disaster Risk Reduction, Swiss Humanitarian Aid
- 11h05 Franco BARBERI, Vice president Commissione Grandi Rischi, Italian Civil Protection
- 11h30 Surya PARKASH, Associate Professor, National Institute of Disaster
Management, India
- 11h55 **Thematic Discussion:**
**Key strategies and targets of training and research in the field
of disaster risk reduction**
- 13h Lunch Break
- 14h15 John HARDING, Head, Policy and Practice Unit, UNISDR
- 14h40 Francesco PISANO, UNOSAT Manager, UNITAR
- 15h05 Gari MAYBERRY, Geoscience Advisor, USAID and USGS
- 15h30 Coffee break
- 16h Carlos MUÑOZ, West Africa Regional Disaster Risk Reduction Advisor, OXFAM
- 16h25 Katalin DEMETER, Senior Disaster Management Specialist, Global Facility
for Disaster Reduction and Recovery (GFDRR), the World Bank
- 16h50 Olivier LATELTIN, former Director of the Foundation of Prevention,
Public Insurance Company for Building, Switzerland
- 17h15 **Thematic discussion:**
International training network and training support
- 18h Conclusion
- 18h30 Apéro

CERG-C WORKSHOP OBJECTIVES

- **exploring** the needs and benefits of specialized training for professionals and scientists in the field of risk reduction;
- **identifying** common key objectives for training and research in the field of risk reduction;
- **reinforcing networking** within and outside of the CERG-C and coordinating disaster risk reduction efforts in the natural hazard community;
- **establishing stronger links** between scientists and practitioners, such as decision-makers, disaster managers, insurers, donors and training organizations.

Morning session

- **Opening conference : current and future challenges in the field of disaster risk reduction**, by Margareta WALHSTRÖM, Special Representative of the Secretary-General for Disaster Risk Reduction, UNISDR Geneva
- ***OWARNA: Preparedness and response as effective and flexible answer on complex risks***, by Josef HESS, Executive director, steering committee intervention against Natural Hazards
- ***Disaster Risk Reduction in SDC***, by Franz STÖSSEL, Focal Point Disaster Risk Reduction, Swiss Humanitarian Aid
- ***Some crucial problems in Vesuvius emergency management***, by Franco BARBERI, Vice president Commissione Grandi Rischi, Italian Civil Protection
- ***Training on risk management : a case study at Vulcano Island, Italy*** by Chris GREGG, Associate Professor, East Tennessee State University
- Thematic Discussion : **key strategies and targets of training and research in the field of disaster risk reduction** (moderator : Costanza Bonadonna)

Afternoon session

- John HARDING, Head Policy and Practice Unit – UNISDR
- ***Technology, geospatial information and capacity development for DRR***, by Francesco PISANO, UNOSAT manager - UNITAR/UNOSAT
- Gari MAYBERRY, Geoscience Advisor – USAID and USGS
- ***DRR role in a slow onset context – the case of West Africa Region***, by Carlos MUÑOZ, West Africa Regional Disaster Risk Reduction Advisor - OXFAM
- ***Increasing resilience – a World Bank perspective***, by Katalin DEMETER, Senior Disaster Management Specialist – GFDRR, the World Bank
- ***Public insurance for buildings in Switzerland - a long term social contract***, by Olivier LATELTIN, former Director of the Foundation of Prevention of PIBC
- Thematic discussion : **international training network and training support** (moderator : Chris Gregg)