
IRDR ICoE in Spatial Decision Support for DRR

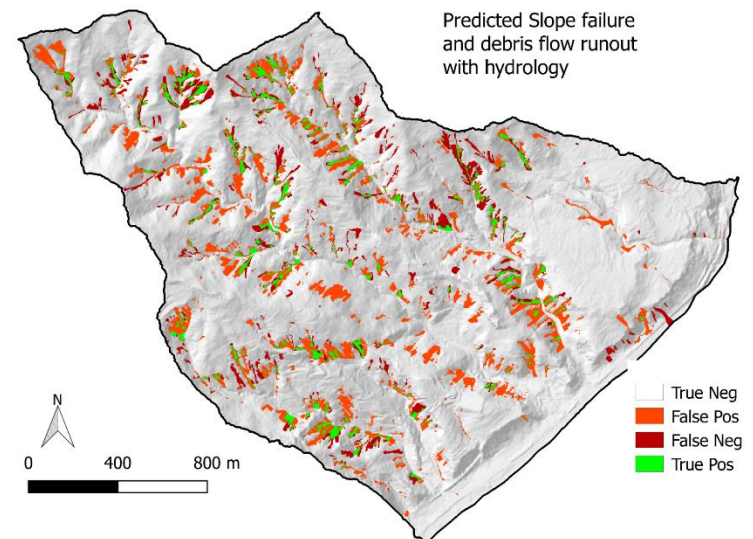
Victor Jetten
Richard Sliuzas

IRDR meeting Beijing – 15/16 April 2018

ITC DRM Research: timely and actionable information

Hazards (ongoing development):

- A holistic approach to hazard analysis, a model that integrates multiple hazards (*Jetten, van den Bout (phd), Emthehani (phd)*):
 - runoff, flashfloods, erosion, landslides, debris and mudflows, sediment in floods, earthquake triggering of landslides, GLOFS and dam breaks. High-res in time and space. Opensource freeware **openLISEM**.
 - Link to weather modelling and extreme events, and extreme event statistics & design storms, early warning (activity in CREWS)
- Earthquake - Landslide specific research with CDUT (Chengdu) following the Wenchuan earthquake 2008 (*van Westen, Xuanmei Fan, Tang (PhD), Tanyas (PhD)*)

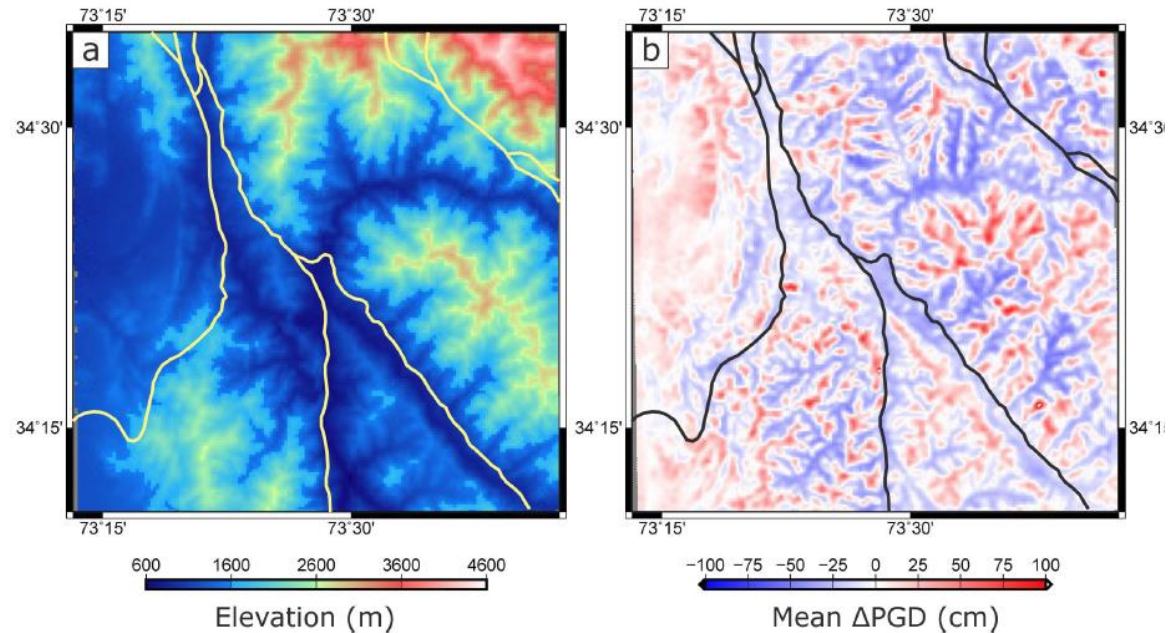


Earthquake related

Earthquake Wave propagation patterns modelling and building damage
(Pakistan and Nepal, vd Meijde, Saad Khan, various MSCs)

Peak Ground Displacement Muzzafarabad, Pakistan with multiple earthquake scenarios, understanding building damage patterns

Composite of 25 earthquake scenarios along fault lines



Research - current activities (2)

Risk:

- Spatial Risk decision support system (project **Risk Changes**), physical risk with various scenarios (climate change, different mitigation scenarios) - discussing with AIT Bangkok for further operationalization

Post Disaster (H2020 projects, *Kerle, PhDs*)

- Disaster Damage assessment (drone based)
- Post-disaster recovery with remote sensing, crowd sourcing and macro-economic agent-based modelling (Tacloban, Phillipines).

Decision Support (H2020):

- H2020: partner in PANOPTIS: “development of a decision support system for increasing the resilience of transportation infrastructure “



ITC disaster education and capacity development

- **MSc GEO** with a specialization in Natural Hazards and Disaster Risk Reduction
- **MSc Spatial Engineering** – project based multidisciplinary study dealing with disasters and resilience and food and water security
→ **NEW, starting in sep 2018**
- **Short courses** (annual, 3 or 6 weeks):
 - DRM and Environmental Impact Assessment for Spatial Planning
 - Spatial Data for DRM
 - Spatial Modelling for integrated Watershed Management
 - Participatory mapping and the use of local spatial knowledge
- **E-learning**
 - Multihazard Risk Assessment
- MoU with **NASA SERVIR** hub in Bangkok for MSc research and internships on disaster and food and water security in the region

Tailor Made training in 2017

- **Myanmar:** Next generation regional satellites and modelling techniques for integrated water management, Mandalay Technical University (Nuffic, Gistda)



- **Indonesia:** Integrating Operation of Landslide Modules within Early Warning System Platform with Forecast Data for Staff in Balai Litbang SABO (STUNED)
- **Cape Verde:** Geospatial data & tools for Disaster Risk Reduction (UNDP)
- Bangkok **annual ADPC training** on Geoinformation Science and Risk



ITC IRDR-ICoE strategic activities 2017/18

- Attended IRDR and UNISDR meeting in Cancun Mexico
- In 2017 we focused on forging partnerships in the Netherlands:
 - Royal Netherlands Meteorological Institute – parttime chair at ITC on climate and climate change and DRR

Chair in Climate driven DRR (ITC/KNMI)



Koninklijk Nederlands
Meteorologisch Instituut
Ministerie van Infrastructuur en Waterstaat

- Red Cross Princess Margriet Fund (RCPMF), focus on disaster prevention (ITC is a member of the advisory board)

Chair in Spatial Resilience (ITC/RC)



- ITC is a developing partner in 510 global on the “missingmaps” organizing mapathons and helping in developing the technology for error checking



AN INITIATIVE OF
THE NETHERLANDS
RED CROSS



UNIVERSITY OF TWENTE.

ITC FACULTY OF GEO-INFORMATION SCIENCE AND EARTH OBSERVATION

Plans 2018

- 22 November 2018, Richard Sliuzas has his inaugural speech at the Twente University, for his chair in “Urban Planning for Disaster Risk Reduction”.
 - Resilience and Risks Management Strategies thematic group of the Association of European Schools of Planning (AESOP)
 - Member Global Human Settlement working group
- Organize an IRDR meeting/symposium/workshop at ITC
- Participate in actively in WGs:
 - Disaster loss data, post disaster reconstruction research → (CO-)DATA
 - Hazard and risk modelling → AIRDR
 - Participate in the New WG on the link between Sendai and SDGs
 - ITC alumni and young scientists programme?
- Very interested to “use” IRDR network for MSc research and internships.
- ITC has a project in Ethiopia (EENSAT, until 2021) with Ethiopian Ministry of Education, Nuffic and The African Centre for Disaster Risk Management of Addis Ababa University, Bahir Dar University and Mekelle University.
May be we can be of assistance in an Ethiopian ICoE?