

CURRICULUM VITAE

Markus Zimmermann



Synopsis of experience

More than thirty-five years of experience in the field of disaster risk reduction, climate change adaptation and resilience building, of which 30 years in the private sector. More than 25 years of experience in teaching risk and disaster-related issues at university and technical levels.

Personal information

Name Markus Zimmermann
Date of birth 6 December 1956
Present position: Independent consultant, owner of NDR Consulting GmbH
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Professional qualifications: 1989: Diploma in Business Administration (BPIH, Bern, Switzerland)
1988: Dr phil.nat. (PhD); Geomorphology; University of Bern, Switzerland
1984: Lic phil.nat. (MSc), Geography and Physics; University of Bern, Switzerland

Languages German (mother tongue); English (C1), French (B2);
Russian and Spanish: minor knowledge (A1)

Membership of professional associations KOHS: Commission for Flood Protection; <http://www.svw.ch/kohs>. Member.
PLANAT: National Platform for Natural Hazards (extra-parliamentary commission) www.planat.ch/en/home/. Member 2012-2019.
SHA: Swiss Humanitarian Aid Unit, member of expert group DRR & Environment www.deza.admin.ch/en/Home/Activities/Humanitarian_Aid/Swiss_Humanitarian_Aid_Unit
FAN: Experts on natural hazards; www.fan-info.ch. Member.

Overseas work experience

Afghanistan, Bangladesh, Bosnia and Herzegovina, China, Georgia, Japan, Jordan, Kazakhstan, Kosovo, Kyrgyzstan, North Macedonia, Nepal, Nicaragua, Pakistan, Philippines, Serbia, Seychelles, Tajikistan, Turkmenistan, Turkey, Ukraine, Uzbekistan

Professional activities (selected assignments)

Research (1984 – 1998; 2011 on-wards)
Research on sediment management (researcher, PhD thesis):
– Sediment budget of a pre-alpine watershed in Central Switzerland: estimation of sediment yield and sediment transfer from source to sink; assessment of human impact on sediment balance; (University of Bern)
Research on debris flow and flood occurrence (senior researcher)
– Post-doc at the Public Works Research Institute, Ministry of Construction, Tsukuba, Japan: Studies on debris flows, mud flows, volcanic hazards and earthquakes. Govt. of Japan.
– Documentation and analysis of debris flow disasters in the Swiss Alps: triggering conditions, climate change issues, hydraulic parameters of debris flows. Swiss Federal Institute of Technology (ETH Zurich).
– Research project on climate change and debris flow activity in the Swiss Alps: a GIS-based approach (NFP31). Swiss National Science Foundation. Principal researcher.
Risk related studies (senior researcher)
– Coupled human-landscape systems, landscape evolution modelling (University of Bern, Switzerland)

Teaching (intermittent since 1992, regular since 2011)
– Lecturer and senior researcher at Bern University (Institute of Geography) for geomorphology, risk management and related fields, (part-time; since 2011) <http://www.geomorphrisk.unibe.ch>
– Lecturer at CERAH (www.cerahgeneve.ch/formations/cas/catastrophescas.html) for the CAS Disaster Risk Management (part-time; 2013/2014).
– Courses and workshops at various universities
– Practical training on DRR within mandates from various organisations

Practical work
(since 2003 NDR
Consulting GmbH;
1991-2003 Geo7
company Bern)

Risk management and resilience building

- 2019, on-going: Management of effects of a large landslide in the Alpine town of Kandersteg. Assessment of lake outburst and debris flow risks using empirical and modelling approaches. Dept of Roads and Rivers, Canton of Bern, Switzerland. Senior consultant.
- 2018-2019: Management of a potential glacial lake outburst. Assessment of hazard and risks in the light of climate change, development of options for prevention, mitigation and preparedness; development of a project to drain the lake. Dept of Roads and Rivers, Canton of Bern, Switzerland. Head of expert team; project Manager.
- 2016-2020: Central Asia Hydro-Meteorological Modernization Project, CAHMP: Strengthening Early Warning of Mountain Hazards in Central Asia. Scoping study, trainings for Hydro-Met services. World Bank Group, GFDRR: consultant.
- 2014-2016: Integrated disaster risk management for the Gannan Mountains, Jiangxi Province, China; Development of a community-based approach and policy development. Asian Development Bank (ADB): Team leader.
- 2008-2009: Support for the DRM programme of ERRA (Earthquake Reconstruction and Rehabilitation Authority, Pakistan). UNDP Pakistan: chief technical advisor.
- 2005-2009: Supporting post-disaster management and subsequent development of protection schemes for flood-affected municipalities in Berner Oberland following the floods of Aug 2005. Dept of Roads and Rivers, Canton of Bern, Switzerland. Head of expert team; project Manager.
- 1993-2020: Risk management projects for several cantons, municipalities, cities and private sector in Switzerland: event documentation and analysis; hazard and risk mapping; climate change issues; development of flood and debris flow risk management strategies and concepts; cost-benefit analysis. Various mandates, project manager.

Mainstreaming DRR and CCA into development planning

- 2016-2017: Integration of risk and resilience into Pamir Energy's planning and operation (Khorog Tajikistan), including Business Impact Assessment (BIA) for main infrastructure components and development of a DRR Road Map. Pamir Energy Company / SECO Switzerland: Team leader and DRR consultant.
- 2016: CEDRIG online tool: Development of modules for individual sectors. Swiss Agency for Development and Cooperation: DRR consultant.
- 2010-2011: Development of the effectiveness report of SDC's DRR commitments (evaluation of DRR effectiveness in 7 countries/regions). Swiss Agency for Development and Cooperation: Team leader and DRR consultant.

Project identification and evaluation

- 2018: Scoping study for an urban resilience project in Khorog (Tajikistan) with emphasis on natural hazards and climate change. SECO, State Secretariat for Economic Affairs; Govt. of Switzerland: team leader, consultant.
- 2012: Feasibility Study and Business Plan for a Centre of Excellence for Earthquake Risk Reduction in Istanbul, Turkey. The World Bank: technical consultant.
- 2007-2008: External evaluation of the "Multi-Input Earthquake Rehabilitation" Programme for selected economic infrastructure, public building sites and settled lands in Chakhama Valley, AJK, Pakistan. Aga Khan Foundation: consultant.
- 2002: Evaluation of UNDP's Emergency Management System following the April 2002 earthquake, Georgia. UNDP Georgia: consultant.

Backstopping

- 2019, on-going. Swiss DRR programme in Bosnia and Herzegovina, implemented by UNDP. Swiss Agency for Development and Cooperation: DRR consultant and backstopper.
- 2017, on-going: Improving Resilience to Floods in the Polog Region (project by SECO and SDC) implemented by UNDP North Macedonia. DRR consultant and backstopper
- 2017-2020: DRR and CCA Programme in KP and FATA, Pakistan. Swiss Agency for Development and Cooperation; DRR consultant and backstopper.
- 2009-2013: ADB Community-based flood management and climate resilience project in Southern Tajikistan. Risk assessments and risk management. ACTED Tajikistan: DRR consultant and backstopper.
- 2006-2009; 2013-2014: Capacity building and overall support (backstopping) for DIPECHO risk mapping and risk management projects in the Northern Areas of Pakistan. Mandated by FOCUS Humanitarian Assistance, Pakistan. DRR consultant and backstopper.
- 2003-2016: Technical support for and backstopping of a disaster reduction programme in Central Asia; targeted DRR, mainstreaming, capacity building of SDC and partner organisations' staff. Swiss Agency for Development and Cooperation: DRR consultant and backstopper.

Practical work

(since 2003 NDR Consulting GmbH; 1991-2003 Geo7 company Bern)

Policy development

- 2016-2018: Development of the strategy "Management of Risks from Natural Hazards. Strategy 2018"; member of the drafting committee of PLANAT. <http://www.planat.ch/en/home/>
- 2013-2016: Member of the Swiss delegation for the negotiations of the Sendai Framework for DRR; including the follow-up negotiations about targets and indicators. Swiss Agency for Development and Cooperation and PLANAT, Govt. of Switzerland. Consultant.
- 2012-2013: Development and editing of the APFM Flood Mapping tool (www.apfm.info/page_id=3206.html). World Meteorological Organisation, Geneva.
- 2006-2007: Development of SDC Guidelines on Disaster Risk Reduction: mainstreaming, targeted DRR, international DRR system. Swiss Agency for Development and Cooperation. Project manager. www.preventionweb.net/english/professional/publications/v.php?id=21328
- 2004-2005: Member of the Swiss delegation for the development of the Hyogo Framework for Action. Swiss Agency for Development and Cooperation. Consultant.

Environmental studies

- 2014-2017: Establishing a watershed and river development concept and plan for the Hasli-Aare and its tributaries. Climate change, sediment management and ecological issues. Canton of Bern. Dpty. project manager (www.gek-hasli.ch).
- 2002-2013: Study of the sediment budget of various river systems in Switzerland (Thur, Töss, Vispa, Simme, Kl. Emme). Mandated by cantonal authorities, project manager; deputy project manager
- 1999: Documentation and evaluation of environmental and other damage following the Balkan war of 1999. FOCUS Assessment Mission to Serbia and Kosovo: team leader.

Selected publications

- Zimmermann, M., Bichsel, M., Kienholz, H., 1986: A prototype mountain hazards map, scale 1:50,000, of the Khumbu Himal, Nepal. In: Mountain Res. & Dev., Vol. 6, No.1, p. 29-40.
- Vuichard, D., Zimmermann, M., 1987: The 1985 catastrophic drainage of a moraine-dammed lake, Khumbu Himal, Nepal: cause and consequences. Mountain Res.& Dev., Vol. 7, No 2, p. 91-110.
- Zimmermann, M., Haeberli, W., 1992: Climatic change and debris flow activity in high-mountain areas. A case study in the Swiss Alps. Catena Suppl. Vol. 22, p. 59-72.
- Zimmermann, M. et al., 1997: Murganggefahr und Klimaänderung - ein GIS-basierter Ansatz. NFP31 Schlussbericht. Vdf Verlag, Zürich.
- Blancher, P., Masagca, E., Zimmermann, M., 1999: Experts et société civile: un dialogue nécessaire, mais difficile. Expérience d'acteurs concernés par l'explosion du volcan Pinatubo (Philippines). Risques naturels en montagne, colloque IDNDR, p. 226-230. CEMAGREF Editions.
- Loat, R., Zimmermann, M., 2004: La gestion des risques en Suisse. In: Veyret, Y., et al. (eds): Risques naturels et aménagement en Europe. Armand Colin, Paris, p. 108-120.
- Zimmermann, M., 2005: UN-Konferenz in Kobe: Von der Gefahrenabwehr zur Risikokultur. In: Zeitschrift Entwicklungspolitik, 5/2005.
- Stössel, F., Zimmermann, M., Zollinger, U., 2007: SDC Guidelines on Disaster Risk Reduction. <http://www.preventionweb.net/english/professional/publications/v.php?id=21328>
- Zimmermann, M., Issa, S., 2009: Risk-conscious Reconstruction in Pakistan-administered Kashmir. A Case Study of the Chakhama Valley: In: Mountain Research and Development, Vol 29, No 3: 202-210 <http://dx.doi.org/doi:10.1659/mrd.1074>
- Zimmermann, M., Stössel, F., 2011: Disaster Risk Reduction in International Cooperation: Switzerland's Contribution to the Protection of Lives and Livelihoods. Published by Swiss Federal Department of Foreign Affairs, SDC. www.preventionweb.net/english/professional/publications/v.php?id=17901
- Zimmermann, M., Keiler, M., 2015: International Frameworks for Disaster Risk Reduction: Useful Guidance for Sustainable Mountain Development? In: Mountain Research and Development, Vol 35, No 2, 195-202. <http://www.bioone.org/doi/abs/10.1659/0276-4741-35.2.102>
- Zimmermann, M., 2016: Local and global facts and perspectives in dealing with risks and disasters. Publication for Interpraevent, 2016. Pages 252-269
- Ramirez, J., Zischg, A., Schürmann, S., Zimmermann, M., Weingartner, R., Coulthard, T., Keiler, M., 2020: Modeling the geomorphic response to early river engineering works using CAESAR-Lisflood. Anthropocene, Volume 32:1-12. <https://www.sciencedirect.com/science/article/abs/pii/S2213305420300321?via%3Dihub>

Thun, 15 January 2021