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Key findings of the Networking Event on
Vanishing Glaciers and Coping Communities: Insights from around the world

Joint event of the Climate Change and Environment (CC&E) &
Disaster Risk Reduction (DRR) networks of SDC

10th September 2015

Physical background

Glaciers world-wide have been persistently shrinking over the last decades and are expected to continue to do so, with few exceptions[1]. Most glaciers are out of balance with the current climatic conditions. Their mass loss and sea level contribution will continue with ongoing climate change[2]. The strongest shrinkage is observed inter alia in the Alps and the Low latitudes. Models predict an acceleration of these processes especially in the low latitudes (e.g. Tropical Andes) in the future.

Context matters

- Melting glaciers are affecting societal, political, economic and cultural processes in different ways, sometimes directly, sometimes in a more indirect way. Relevant impacts in various regions are impacts on hydrological cycle, water shortage, extreme events such as GLOFs, mudflows etc. Local communities have to cope both with slow onset and sudden extreme events induced by glacier changes.
- The cultural, societal and political perspectives on glaciers are key to understand human-glacier interactions. Diversity of perspectives, different forms of knowledge and understanding (beside natural science e.g. gender perspective in glaciological knowledge, spiritual perspective on glaciers) have to be taken into account to understand these interactions. The recognition of hidden forces is important but often challenging to understand and to incorporate into policies and measures.
- Local knowledge is a complex issue and different perspectives exist. The context within which it is produced needs to be appropriately acknowledged. Misconceptions continue to prevail. Local knowledge may not always be accessible, among other because people don't want to share knowledge.
- Impacts of climate change and glacier changes are only one of many processes and risks local communities are facing in fragile mountainous areas. Other ongoing processes and risks such as labour migration, environmental degradation, geological risks or conflicting interests between different groups of actors further increase insecurity in mountainous areas and hence create complex situations for local communities.

Approaches, implications for development cooperation and humanitarian aid

- **Development cooperation and humanitarian aid has shown good results in addressing the nexus of glaciers and communities.** Scientific data e.g. from glacier monitoring and early warning systems can provide additional information for decision making and may be integrated as an element in more holistic livelihood/ vulnerability based approaches.
- **Participation of local communities in developing adaptation strategies and measures is key.** Collaboration is easier if instead of single solutions a choice of different options is offered from the implementer's side. The final decision remains with the communities (empowerment), even if their perception is close to fatalistic.
- **Trust and respect are among the major preconditions for successful collaboration between the "different worlds" of local communities, governments**, NGOs, science (and within science between natural and social sciences, the latter of which often receive too little appreciation).
- **Time is an often too scarce resource.** Reflection is an important part of learning and improving.
- **Results cannot easily be transferred from one region to another.** Nevertheless comprehensive approaches combining e.g. early warning, water efficient agricultural practices, environmental protection and restorations and considering the local perspective can be observed in all regions.
- **There is a need to work in a cross-sectoral way to address those multiple challenges.** Exchange among the CCA- and DRR-community as well as exchange with relevant sectors such as water and agriculture is a precondition to develop meaningful solutions.

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[1] E.g. glaciers in Patagonia.

[2] Over the period 1992 to 2011, the Greenland and Antarctic ice sheets have been losing mass (high confidence), likely at a larger rate over 2002 to 2011. Glaciers have continued to shrink almost worldwide (high confidence). Until the end of the century the global glacier volume, excluding glaciers on the periphery of Antarctica (and excluding the Greenland and Antarctic ice sheets), is projected to decrease by 15 to 55% for RCP2.6 (scenario including stringent mitigation measures) and by 35 to 85% for RCP8.5 (scenario with very high GHG emissions) (IPCC, 2014: Climate Change 2014: Synthesis Report).