

Addressing Water Security: Climate Impacts and Adaptation responses in Africa, Asia and LAC

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Water Security: key challenges of the 21st Century

Some key facts

- 85% of the human population live in arid areas. By 2030, half of the population will be living in areas of high water stress.
- 6-8 million human beings are killed each year from water-related disasters and diseases.
- 750 million people lack access to safe water, while nearly 2.5 billion people lack access to adequate sanitation.

OBSERVATIONS (AT GLOBAL LEVEL) AR5 IPCC (2014)

- Changing precipitation or melting snow and ice are altering hydrological systems, affecting water resources in terms of quantity and quality.
- Glaciers continue to shrink almost worldwide affecting runoff and water resources downstream.
- For some regions local changes in temperature and rainfall have altered the distribution of some waterborne illnesses and disease vectors.
- There has been increased heat-related mortality and decreased cold-related mortality.

COP21 Water related issues

- ✓ Inclusion on Article 8 of the Paris Agreement of the importance of minimizing the loss and damage associated with climate change effects, including extreme weather.
- ✓ The reference to the post-2015 Sustainable Development Framework, in which water is a specific goal in Global Goal 6.
- ✓ The reference to human rights in the preamble; the right to water and sanitation has been recognised as a fundamental right in 2010.
- ✓ Importance given to adaptation, where water is a central issue, and it's financing.
- ✓ The emphasis on the Intended Nationally Determined Contributions, in which water is the first priority for adaptation.

The SDGs: Water and Climate Change



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- 1- Vulnerability assessment, mapping and implementation of adaptation strategies
- 2- Raise awareness on potential impacts of climate change on mountain glaciers and downstream water supply
- 3- Development of a global knowledge forum

I Vulnerability Assessment

P1:

- Assessment of future water demand
- 3 regional workshops Asia, Africa and LAC
- Vulnerability of multi-purpose water resources

P2:

- Development of a Climatic Risk Monitoring and early Warning System
- 3 Training activities of stakeholders (Asia, Africa and LAC)

Regional case Studies (LAC)

P3

- Agricultural Water Resources Management In Highland Communities

P4

- Water Augmentation Techniques For Increased Climatic Resilience

P5

- Adaptive Water And Soil Conservation Measures

II Raise awareness

P6

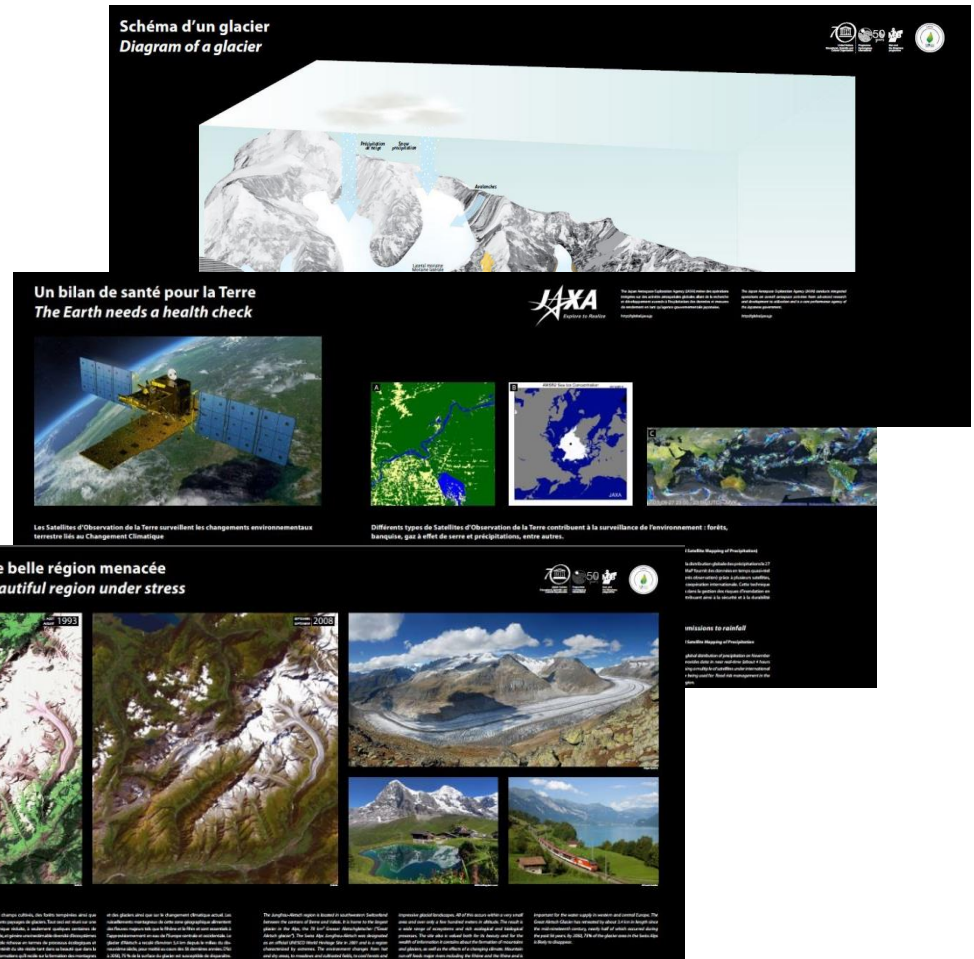
- 3 regional High-level policy meetings in Asia, Africa and LAC

III Development of a global Knowledge Forum

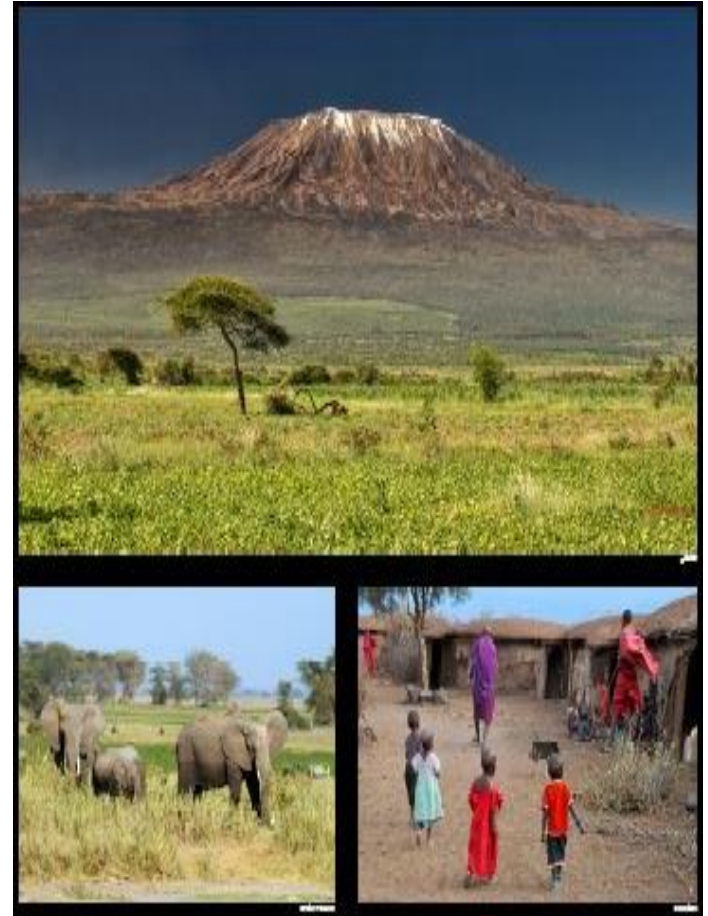
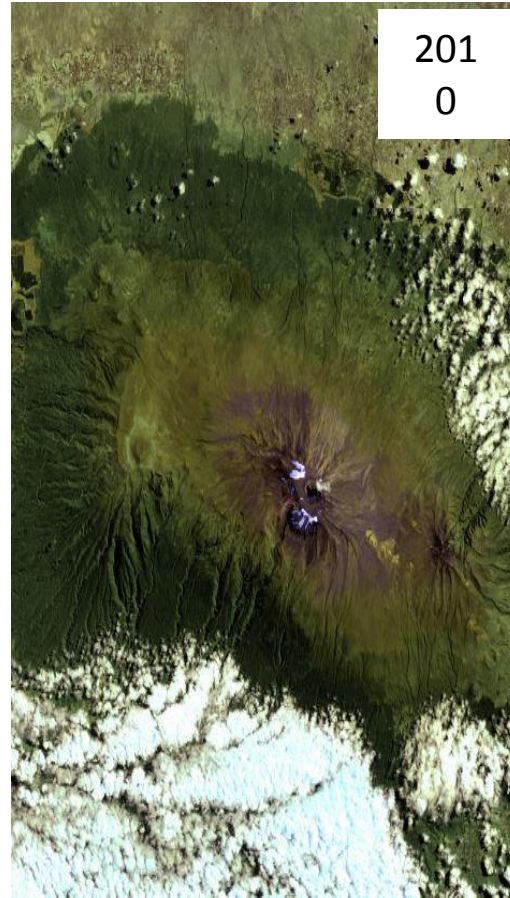
P7:

- Long term oriented dialogue
- Repository of data and knowledge
- Communication and Dissemination
- Global Knowledge Forum

- Among the raising awareness activities a new exhibition showcasing satellite images aerial and ground pictures was presented during COP21 in Paris last November.



Mount Kilimanjaro: Peoples' lives and cultures are being affected

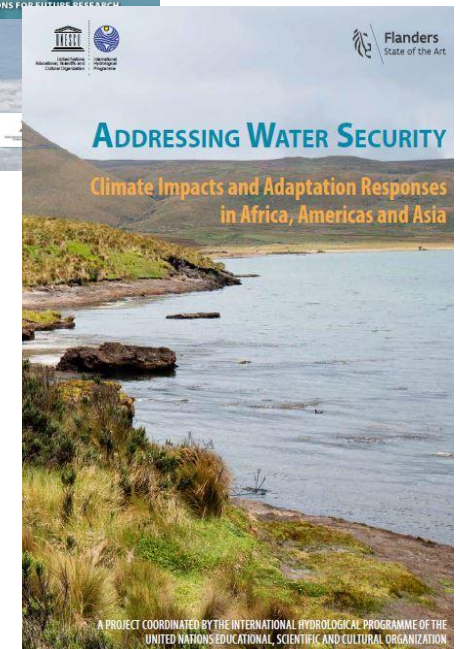
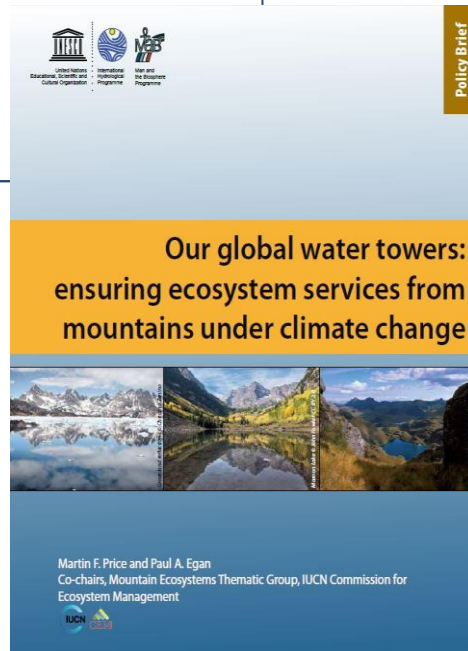
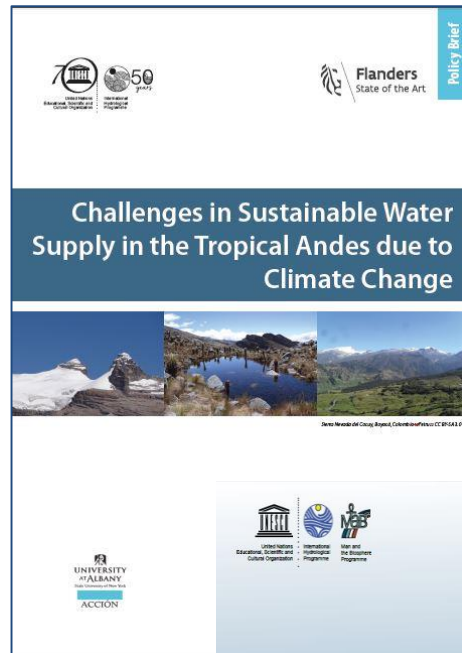


- Over the last 100 years about 85% of the Kilimanjaro's ice cover has disappeared.
- In addition to the melting icecap, a 30% reduction in rainfall over the last century along with increased temperatures has affected peoples' livelihoods on the slopes and forests of Kilimanjaro.

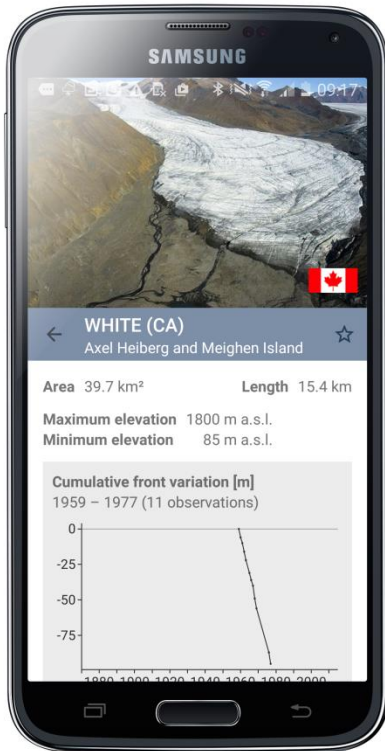
Exhibition Partners



Publications



World Glacier Monitoring Service: new 'Glacier App' (WGMS)



wgms
+ + + +

<http://wgms.ch/glacierapp/>



International Network for Alpine Research Catchment Hydrology INARCH-GEWEX

- ❄️ INARCH: to better understand alpine cold regions hydrological processes, improve their prediction and find consistent measurement strategies.
- ❄️ To achieve this objective it is necessary to develop transferable and validated hydrological model schemes of different complexity that can support research in data sparse mountain areas dominated by elements of snow, permafrost and glacier cover.
- ❄️ INARCH was accepted by The Global Energy and Water Cycle Exchanges Project (GEWEX))

