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Federal Office of Meteorology and Climatology MeteoSwiss

**Climandes**
Servicios Climáticos para el Desarrollo



MeteoSwiss

User-tailored seasonal forecasts for agriculture

Creating socio-economic benefit through climate services in the Andes

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Outline

- Background
- Approach
- Challenges and lessons learnt



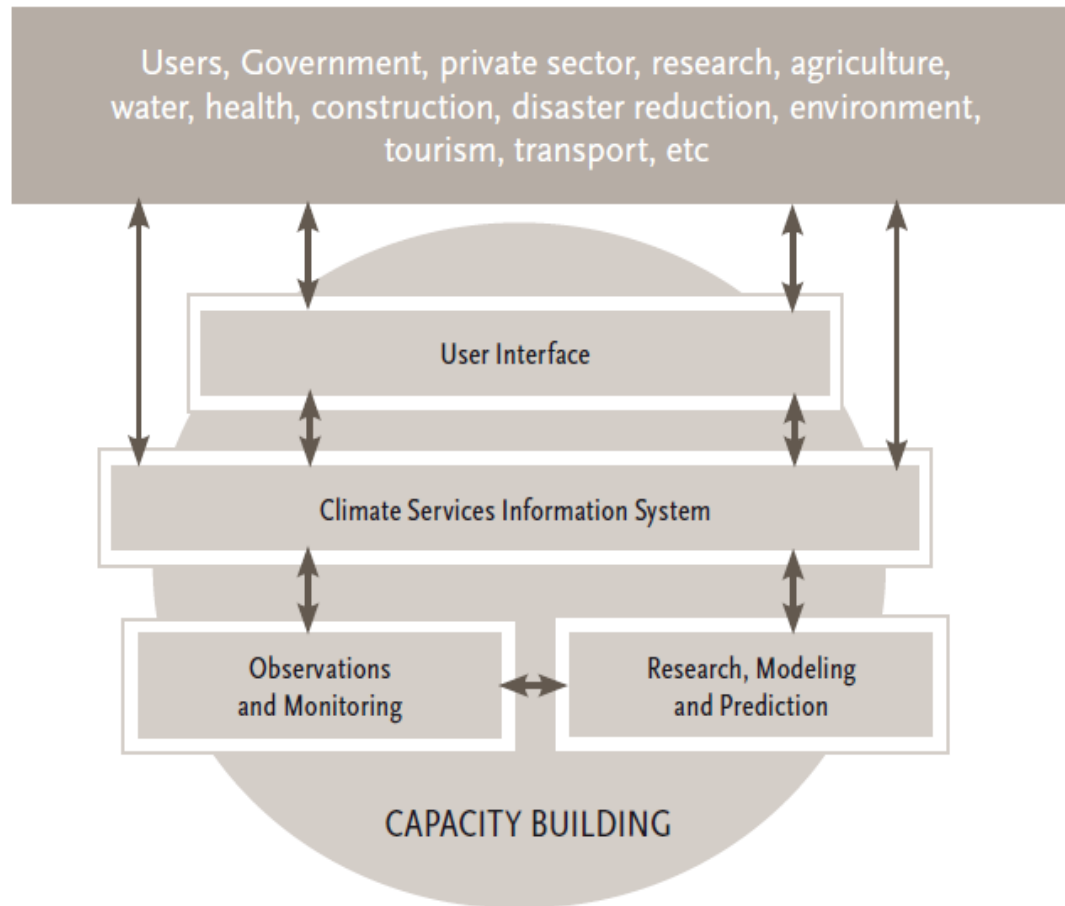
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Project context

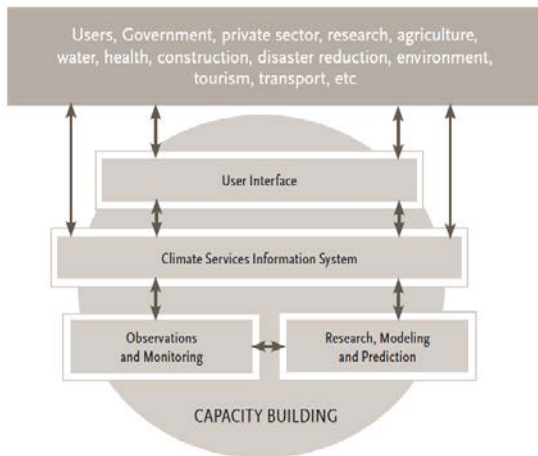
Global Framework for Climate Services (GFCS)



Source:
<http://www.wmo.int/gfcs>

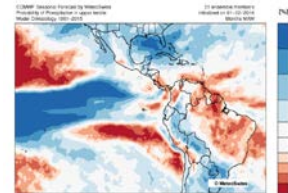
Project context

GFCS




Climandes

- Building an **interface** between users and providers & evaluating socio-economic **benefits**
- Producing user-tailored **climate information** for the **agricultural sector** in the Andean region
- Strengthening **training** in meteorology and climatology in Peru & the Andean region



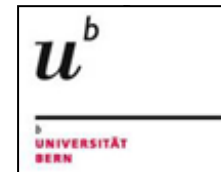
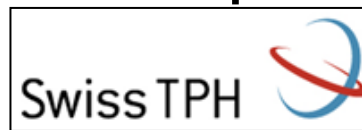
Project organisation

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Direktion für Entwicklung
und Zusammenarbeit DEZA



MeteoSwiss





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Twinning - Approach

Close collaboration between equal partners, e.g.,:

- SENAMHI Peru and MeteoSwiss
- University La Molina & University of Berne

- Scientific visits
- On-the-job training
- Courses

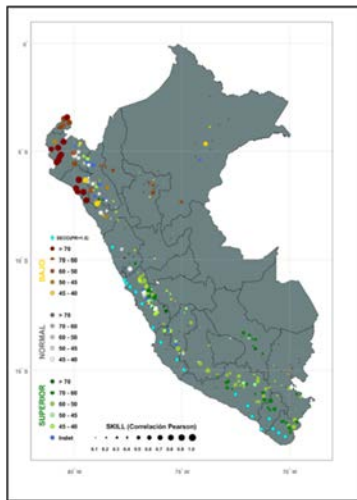
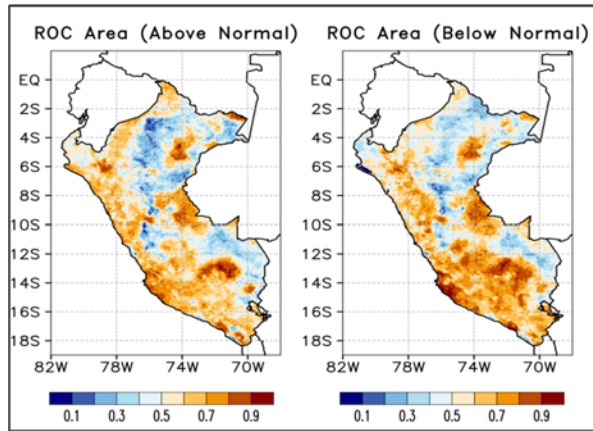




Examples of twinning achievements

Improving climate information

- Conduction of a blended course on verification for RA III
- Verification of CPT forecasts
- Development of prototype forecast products including skill information



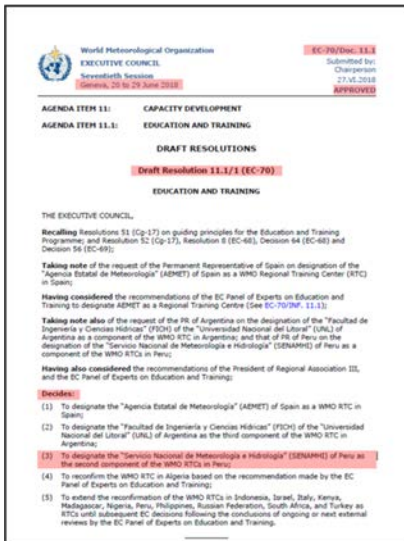
- SENAMHI plays an active role in RA III, e.g.:
 - Collaboration with the Argentinean weather service on verification
 - Leading monthly briefings for seasonal forecasts



Examples of twinning achievements

Capacity development

- Elaboration of an e-learning strategy
- Implementation of a Moodle platform at SENAMHI
- Conduction of blended courses at regional scale



- SENAMHI has taken ownership for training activities
- In June 2018, SENAMHI was officially designated as the second component of the WMO Regional Training Center in Peru



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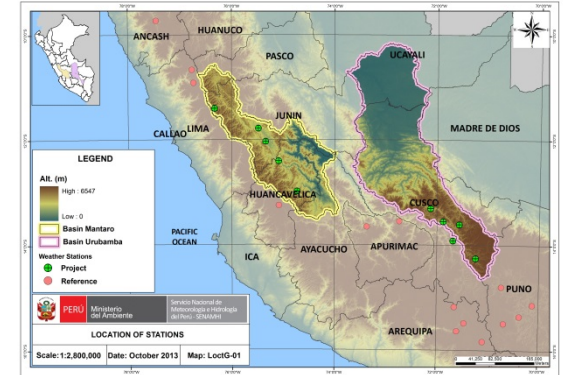
Challenges

Institutional

- Missing intermediary institutions in project set-up
- Discontinuity of employed staff
- Few human resources at NMHSs, e.g.:
 - SENAMHI Peru employs roughly the same number of people as MeteoSwiss (Peru: $\sim 1'300'000\text{km}^2$; CH: $\sim 42'000\text{km}^2$)
 - Implementation of project goals additional to daily work
 - Little time available for training

Technical

- Low station density & low quality of meteorological data
- Low quality of global datasets in the Peruvian Andes, e.g.:
 - Precipitation shift in Re-Analysis datasets
 - Low skill of seasonal precipitation forecasts





Challenges

Cultural

- Language
- Differing working cultures
- Missing trust in governmental institutions
- Few experience with online training





Lessons learnt

Institutional

- Active and early involvement of stakeholders
- Involvement of intermediary institutions
- Inclusion of regional offices are key to reach user groups
- Institutional capacity building (to avoid loss of knowledge)



Technical

- Users may require information that cannot be provided
 - Communicating the limitations of climate information
- Low data quality / low model skill may hinder the production of climate information
 - Adapting project goals if required



Lessons learnt

Collaboration

- Twinning approach as a recipe to success
 - Combination of technical exchange and capacity building fosters sustainability of project results
- Success is largely a consequence of experience, trust, and contacts established in the first project phase
- Importance of knowing other initiatives / projects with similar focus
 - Organization of session at EMS

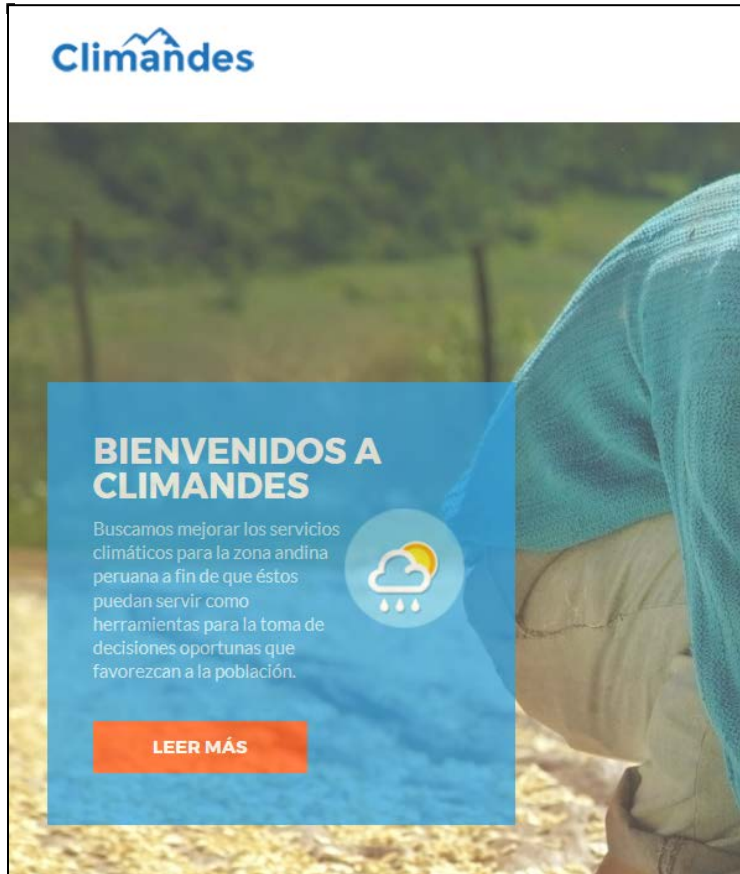




Further information and contact

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- climandes@senamhi.gob.pe


- www.meteoswiss.ch/climandes
- climandes@meteoswiss.ch



Climandes

BIENVENIDOS A CLIMANDES

Buscamos mejorar los servicios climáticos para la zona andina peruana a fin de que éstos puedan servir como herramientas para la toma de decisiones oportunas que favorezcan a la población.



LEER MÁS

The project CLIMANDES-2 builds upon the first phase of the project (CLIMANDES-1) and aims to develop climate services for decision-makers in Peru and to improve the training of meteorologists in the Andean region. User-tailored weather forecasts can help the rural population in managing the impacts of climate change. The cooperation between MeteoSwiss and the Peruvian weather service is financed by the Swiss Agency for Development and Cooperation (SDC) and coordinated by the World Meteorological Organization (WMO).

