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)

Users, Government, private sector, research, agriculture, water, health, construction, disaster reduction, environment, tourism, transport, etc

Source:
http://www.wmo.int/gfcs
Project context

GFCS

- 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

Climandes
Project organisation

- Senamhi
  - Schweizerische Eidgenossenschaft
    - Confédération suisse
    - Confederazione Svizzera
    - Confederazione svizra
    - Direktion für Entwicklung und Zusammenarbeit DEZA
  - WMO
  - MeteoSwiss
- Hominem
- Swiss TPH
- ETH Zürich
- Universität Bern
- Metedat GmbH
- HELVETAS
- CIIFEN
- Sauter

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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: ~1’300’000km²; CH: ~42’000km²)

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

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).