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Swiss Confederation

Federal Department of Home Affairs FDHA Federal Office of Meteorology and Climatology MeteoSwiss

Creating socio-economic benefit through climate services in the Andes – tailored seasonal forecasts for agriculture

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Context of the CLIMANDES project

• Global Framework for Climate Services (GFCS)

Strengthening capacities in the generation of climate products and services in the National Meteorological and Hydrological Services (NMHSs)

 Mandate from WMO to establish a Regional Training Centre (RTC) in WMO Region III







Goals of CLIMANDES (Phase 2)

(1) User-tailored climate services for the agricultural sector in the Andean region

(2)

Strengthening education in meteorology and climatology in Peru

(3)

Building the interface between users and providers of climate information to increase the socio-economic benefit of CS.

Seasonal forecasts

Probability of OND 2m temperature in upper tercile [%]



Skill of seasonal forecasts for SA

Mean Temperature (DJF)



Precipitation sum (DJF)







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Seasonal forecasts

Probability of OND 2m temperature in upper tercile [%]





optimal temperature range: e.g. 15°C < Tavg < 25°C

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User-tailored seasonal forecasts for agriculture

- Example forecast (ECMWF)
- Days within optimum temperature range for potatoes





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Temperature indices

- Observed % of days within optimal temperature range (flowering phase),
- 1981-2013



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0 Temperature indices

How good are the forecasts?



Skill of seasonal forecasts for SA

Mean Temperature (DJF)



Precipitation sum (DJF)







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November 1981-2013



Summary and Outlook

- + forecast of agricultural indices is promising
- Still many open questions

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- How to deal with precipitation error?
- Quality/Availability of observational data for verification
- Assessment of user needs with regard to indices

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User friendly presentation of forecasts





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User-tailored seasonal forecasts for agriculture

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- Cuality/Availability of
- Dasyesrvaithoin ad potiataum
- temperature range for Model performance potatoes



