Developing and providing high quality climate information for the agricultural sector

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Climandes, a twinning project between two weather services (Peru and Switzerland), aims at developing climate services for the agricultural sector in the Peruvian Andes. The target of the technical activities is to develop high quality climate information relevant for the users and ensure the sustainability of these products beyond the project timeline.

CHALLENGES

The largest challenge for the provision of reliable climate services in the Andean region is the quality of observational datasets:
- Low station density:
  - Peru: 1 station per ~5,000 km²
  - CH: 1 station per ~500 km²
- Data quality of station data
- Re-analysis datasets show problems in complex topography
- No gridded observational datasets are available at start of project

This affects climatological analysis as well as verification of seasonal forecasts. Another issue is the low skill of seasonal forecast especially for precipitation.

DISSEMINATION

“Data Management for Climate Services” Workshop at SENAMHI with sessions on metadata, homogenization, gridded datasets and climate services

Publication of results:
- Gubler, S. et al. (2017): The influence of station density to climate data homogenization using HOMER. Int. J. Climatol. 37(10), 3092–3101
- Reiser, G. et al. (2016): Towards implementing climate services in Peru – The project CLIMANDES. Climate Services

CONCLUSIONS

While data quality and availability issues still remain an issue in the study region, through the Climandes project, the data basis of observational records has been largely improved. Based on this data, new prototype products have been developed for monitoring past and current climate and seasonal prediction. Tools for automation have been provided and results have been published or are being prepared for publication to ensure the sustainability of the project results.