Strengthening drought management and resilience from regional science-policy dialogues in southern South America

Juan Rivera^{1,3}, Juan Caragunis², Carla Gulizia^{2,3}, Carolina Lauro¹, Sebastian Otta¹, Ezequiel Toum¹, Maximiliano Viale¹

¹Argentine Institute for Snow Research, Glaciology and Environmental Sciences, Mendoza, Argentina ²Research Center for the Sea and the Atmosphere, Buenos Aires, Argentina ³Institut Franco-Argentin d'Études sur le Climat et ses Impacts, Buenos Aires, Argentina

Summary

The collaborative effort between scientists and decision-makers from the water management and agricultural sectors of central-western Argentina aims to build a drought-resilient region. Following the development and evaluation of regionally-tailored hydrological drought indices, after a capacity development process the irrigation authorities adopted in 2021 a drought monitoring system based on streamflow records and water levels from reservoirs. A calibrated hydrological model considering the complex topography and the impact of cryosphere on streamflow was developed and applied for future hydrological projections, allowing the quantification of a mid-century water availability scenario for longterm adaptation planning. Finally, the impact of water management on the severity and duration of hydrological droughts was quantified using several upstream-downstream approaches to illustrate transboundary water conflicts and wetland degradation exacerbated by human activities.

The regional drought process +10



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