

*Climate change impact on water availability of a subtropical Andean basin*

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**Abstract:**

Fresh water is already a scarce natural resource in many parts of Chile. In addition to the increasing demand -often with conflicting interests- of hydrological resources, the current generation of global climate models consistently project decreasing precipitation and increasing temperature along most of the western slope of the subtropical Andes during the 21st century, associated to anthropogenic climate change. In this context, we evaluate changes in the runoff of two basin that constitute the main drinking water sources for the city of Santiago (5.5 mil. inhabitants) by the means of a regional climate model. Three RCM simulations, 30 year long each, are available at 25km resolution. One simulation corresponds to the period 1960-1990, and two to the end of the XXI century, for the SRES B2 and A2 scenarios. Hydro-meteorological variables are analysed and changes in the mean state and extreme events of these for the corresponding basins are assessed.