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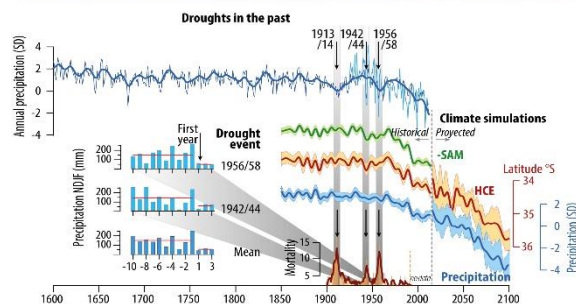
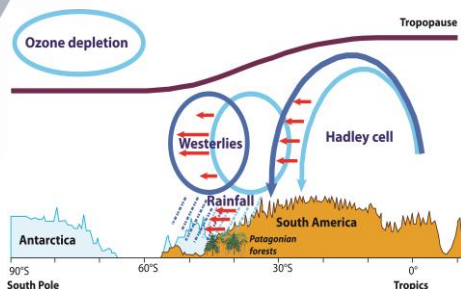
December 16

15H

CET/Paris time  
On line

LIA FORESTIA  
web seminars round  
2022

#9



## EXTREME DROUGHTS, FOREST DECLINE AND MORTALITY IN THE PATAGONIAN ANDES

### ABSTRACT :

Climate and environmental changes are evident throughout the planet and the Patagonian Andes are not an exception. While widespread warming associated with Global Climate Change is the best documented process, other changes in climate, including more severe extreme events such as droughts and heat waves, have been clearly identified. Recently, extensive patches of mortality and forest decline have been observed in centuries-old native forests in the Patagonian Andes, representing a new component of the Andean landscape in response to climatic events of a magnitude rarely documented in the environmental history of the region.

In this context, it is interesting to ask how different in frequency and intensity the current droughts are in relation to those that occurred in the last centuries or millennia in the Patagonian Andes. Are the current extreme climatic events part of the natural climatic variability of the Andean-Patagonian environments, or do they represent unusual events that, not having occurred in the past, introduce irreversible changes in the forest dynamics of the Andes? In this presentation we combine high-resolution paleoclimatic records with climate scenarios to investigate changes in extreme drought regimes and their connections with forest mortality and decay processes in the region. In a perspective longer than 500 years, provided by the combination of dendrochronological records and climate simulations, we analyze the temporal evolution of extreme droughts and their potential impacts on the dynamics of Patagonian forests during the 21st century.



### Short Curriculum Vitae :

CONICET Senior Researcher based at the Argentinean Institute of Snow, Ice and Environmental Sciences (IANIGLA), Mendoza. He is interested in paleoclimatology and the impacts of climate change on natural resources in the Andes. Member of the PAGES Steering Committee (2004-2009) and co-author of the IPCC Fourth Assessment Report (IPCC, 2007). Actively participated in the adoption of Argentina's Glacier Protection Law (2010). Harold C. Fritts Award from the International Tree Ring Society in recognition of "a lifetime" dedicated to the education and study of tree ring science. He currently advises fellows and researchers at national and international scientific institutions.

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