Geophysical Research Abstracts,
Vol. 10, EGU2008-A-11196, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-11196
EGU General Assembly 2008

The last 2000-yr in Patagonia, an assessment of climatic and environmental change in Southern Chile: introducing the research project Fondecyt 1070508

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Several authors have indicated the importance of climate reconstruction in order to get a better understanding of natural climate variability and hence improve predictions of future climate. Especially important in terms of climate reconstruction are the last 2000 years because by studying the climate variability and forcing mechanisms in the recent past, it is possible to establish how the climate system varied under “natural” conditions, before anthropogenic forcing became significant. Paleoclimatic studies in the Southern Hemisphere are much less developed than those of the Northern Hemisphere, even more in the case of Holocene reconstructions of South America, which are especially scarce. This limited knowledge of past climate variability reduces in turn, the capacity to understand and predict future climate changes, because the Southern Hemisphere has a crucial role in global climatic fluctuations. Among past climate changes during the Holocene, the Medieval Warm Period (MWP) and the Little Ice Age (LIA) have been among the most broadly recognized events in the Northern Hemisphere. One common aspect of both events is that all the researchers agree that the timing and duration is highly variable among different regions and its synchronicity as global phenomena is still in debate. In South America, and particu-

larly in Chile, there are few records of MWP and LIA occurrences, being the former less obvious and still debated. Luckman and Villalba (2001) indicated that despite the occurrence of LIA glacial deposits throughout the Andes Mountain range, chronological control is missing and there are few historical data available. Most of the evidence is coming from dendrochronological, geomorphological and marine-lacustrine sediments. Hence the principal aim of this research project is to evaluate the occurrence of decadal-centennial scale climate events in Northern Patagonia during the Late Holocene, especially during the last two millennia. For this purpose, several biological (diatoms, chironomids, pollen) and sedimentological proxies will be analyzed in short sediment cores from Patagonian lakes. The multiproxy approach will be complemented by the oldest historical data available to obtain a more robust inference of past climate events. Research funding by Fondecyt 1070508 and CGRI Wallonie-Chile cooperation project.