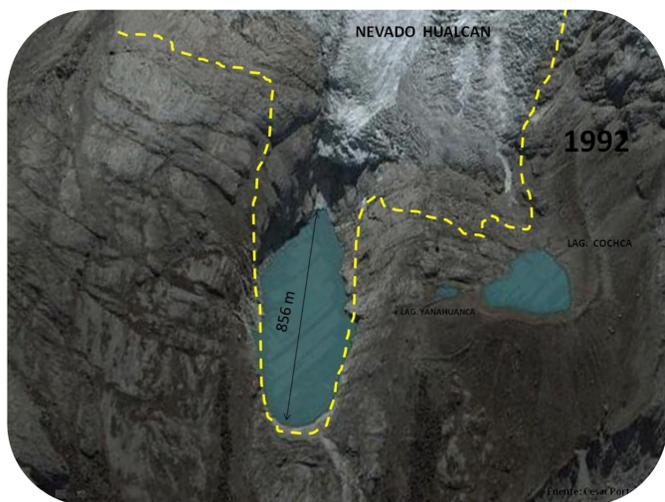




# GLACIER PROJECT

Community based adaptation and risk reduction in the Cordillera Blanca – Peru

## INTRODUCTION



Peru hosts 70% of the tropical glaciers in the world. However, these glaciers have been melting at an unprecedented rate in recent years, losing 40% of its glacier area in the last 40 years. In April 2010, an ice avalanche from Hualcan impacted a glacier lake (Laguna 513) in the Cordillera Blanca, Peru. It triggered a flood wave that caused damage in downstream population centers, including the city of Carhuaz. Here we present the process of implementing Early Warning System (EWS), which includes not only a scientific approach, but also a social one.



## RESULTS

- An Early Warning System designed, installed and operating, based on communities' perceptions and concerns, with the scientific information support.
- The population and local authorities are aware of risks, and are ready to have an effective response to a new event.
- Components of EWS: i) knowledge of the risks faced ii) monitoring and warning service iii) dissemination and communication and iv) response capability
- Elements of EWS: (i) technical: partnership with University of Zurich and Glaciology Unit – National Water Authority(ii) institutional: integration with formal planning processes and (iii) social level: building social capacity.

## METHODOLOGY

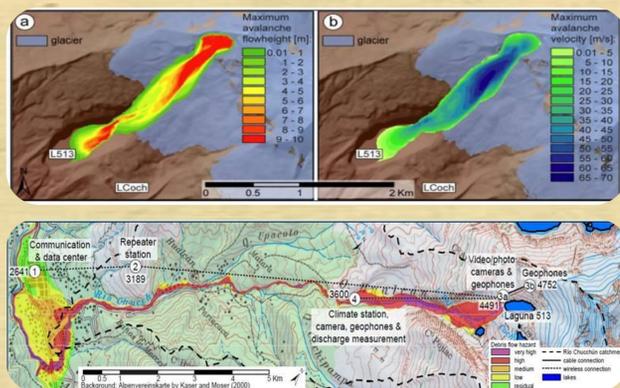
**Identifying vulnerability and capacity:** a diagnosis was made to collect the social perception of threats, using the **Climate Vulnerability and Capacity Analysis** tool. In these workshops the population identified four climate threats of major importance, the most important being the alluvium.

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**Scientific information:** technical and scientific studies were held to corroborate the social perception, including: biophysical and socioeconomic characterization of sub basin Chuchun as water balance, characterization of the flora, hazard characterization glacial, climatic characterization, identification of climate change scenarios .



**Building resilience:** All information was integrated in a risk analysis, in which the threat was identified as the impacts of climate change and vulnerability, biophysical and socio-economic conditions of the population. The adaptation measures aim to reduce vulnerability.



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