





4th INARCH workshop, 24th – 26th October 2018, Santiago and Portillo, Chile

Characterization of snow processes and their implications on runoff generation. **Semi-arid Andes - Central Chile**

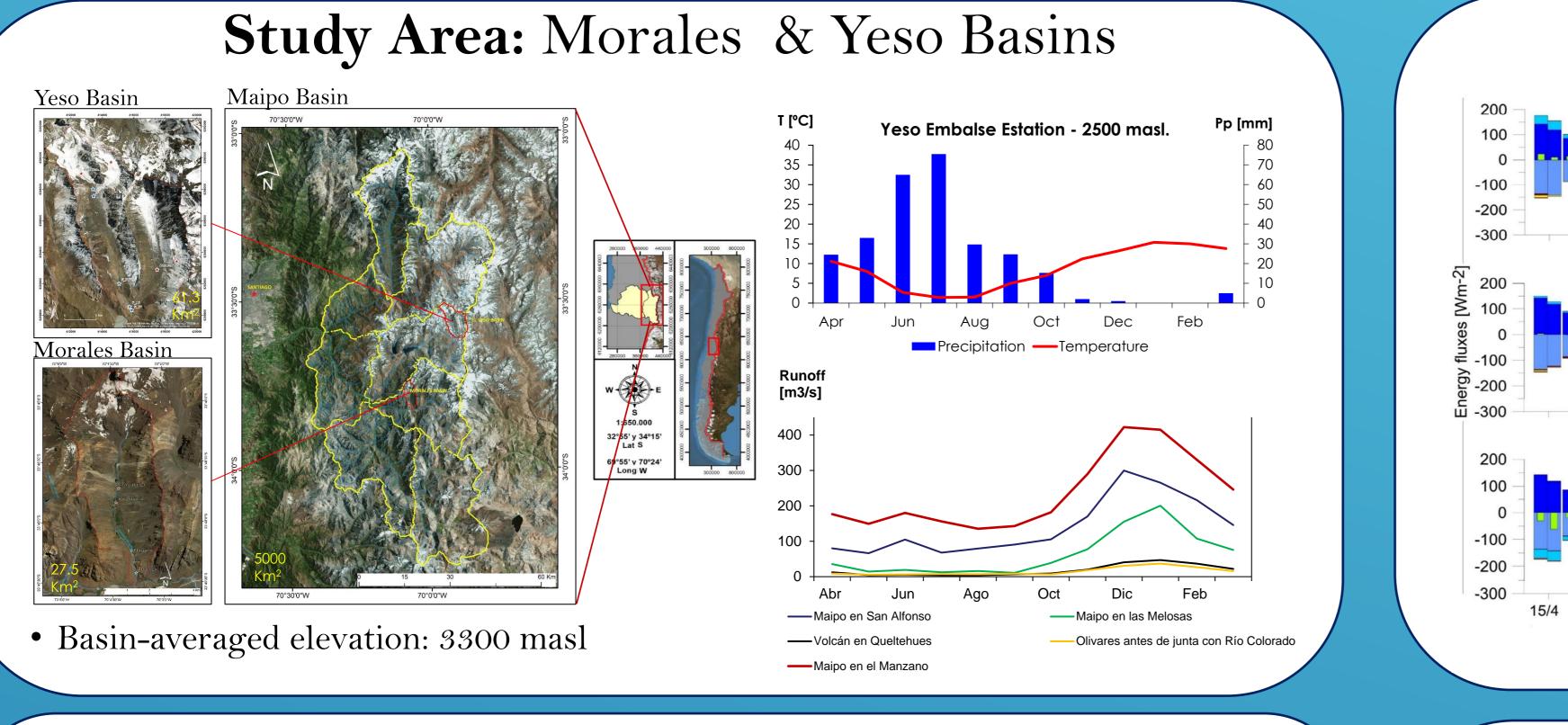
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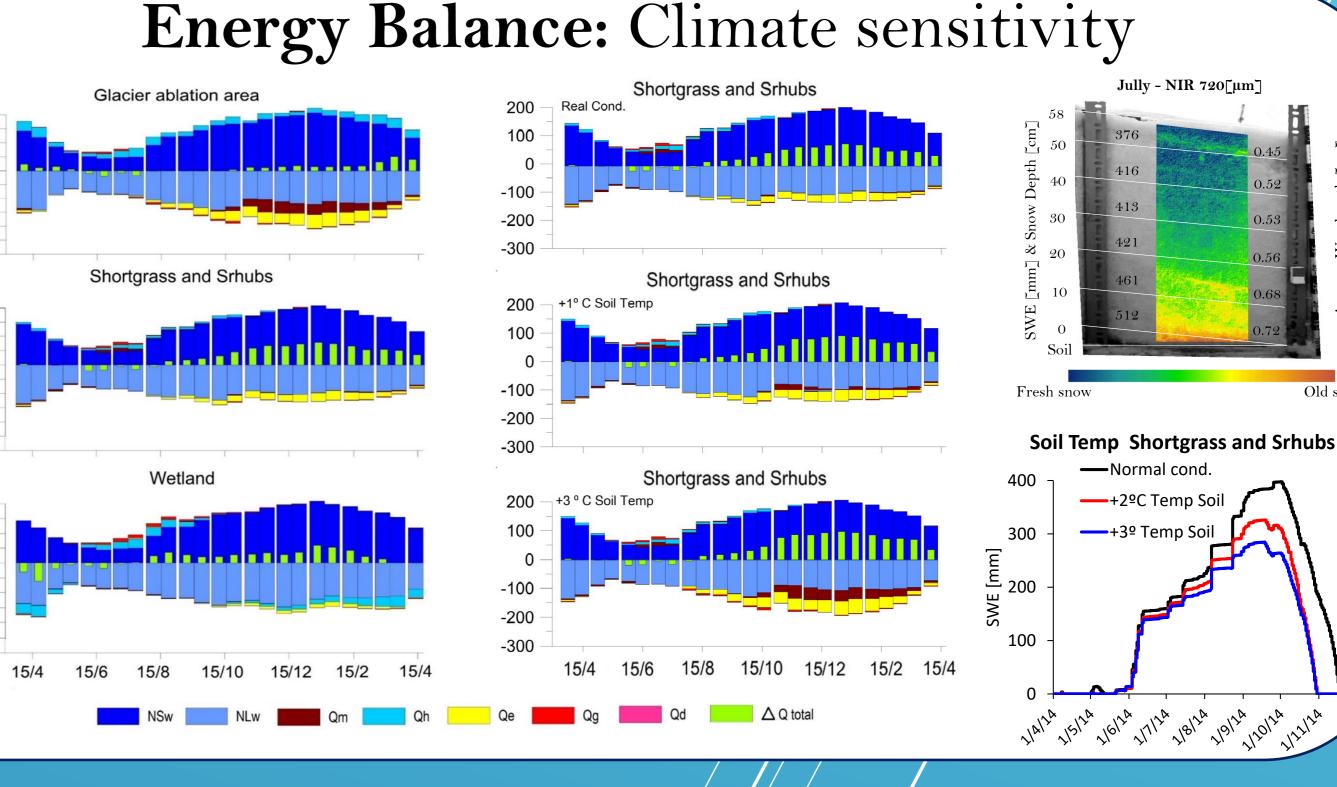
Abstract

Understanding the role of physical processes on the volume and residence time of extratropical Andean snowpack is critical for successful water resources management in Central Chile. The lack of direct, long term observations, motivates the use of hydrological modeling for hypothesis testing and process understanding, with the aim to achieve robust hydrological predictions under global change scenarios. To this end, we force the CRHM model with data from the Era-Interim re-analysis for the 2000-2017.

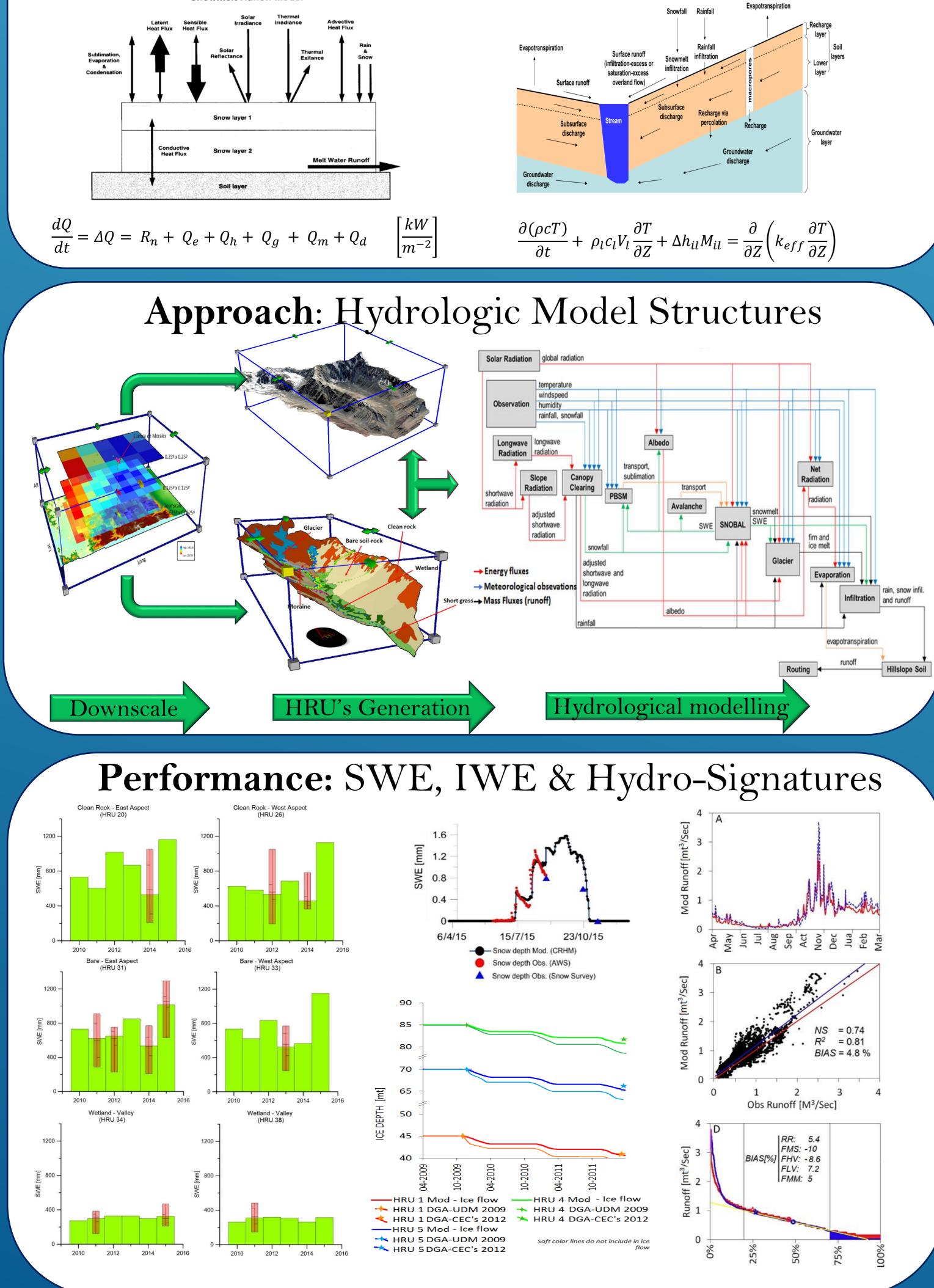
Material and Methods

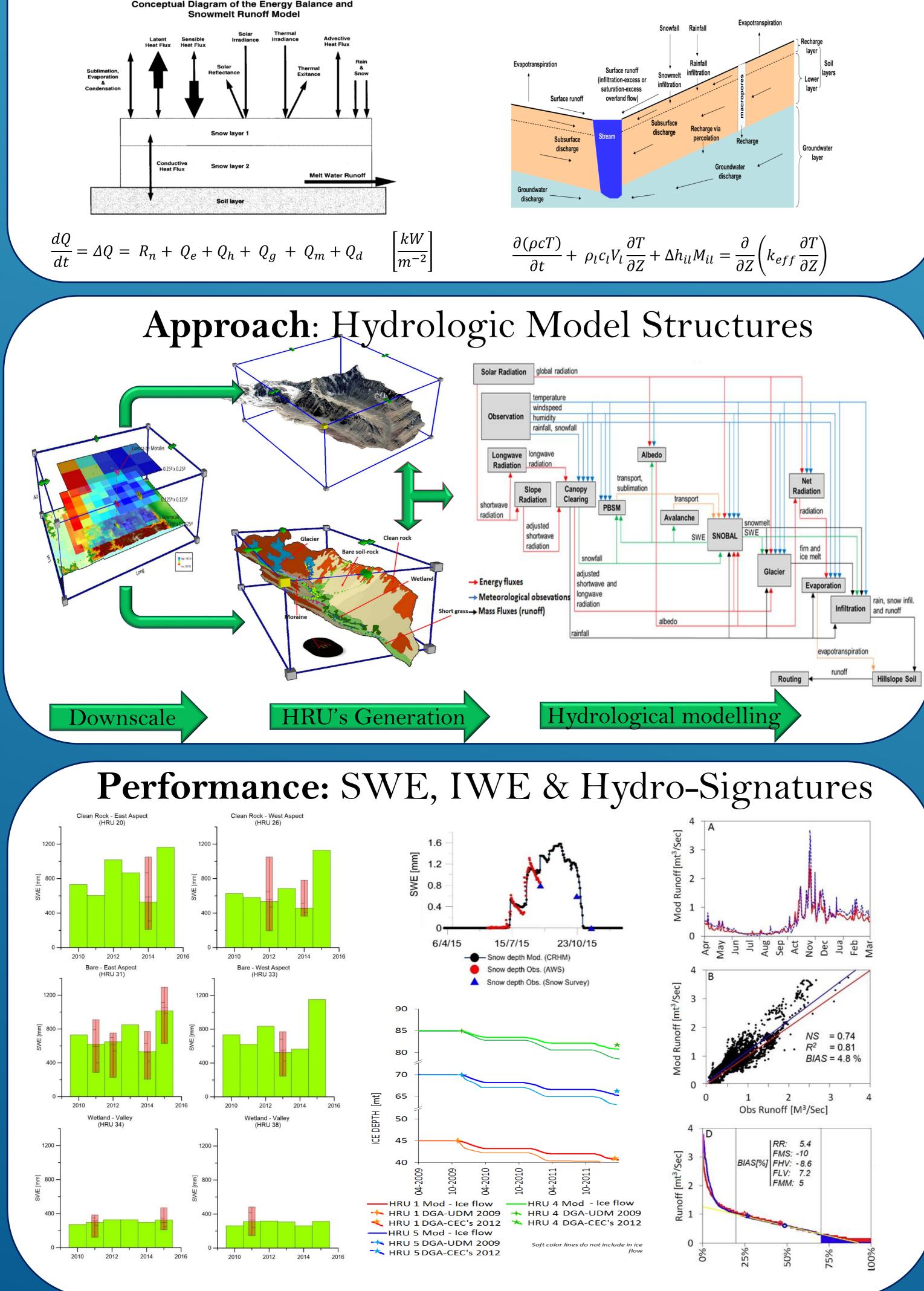
Results

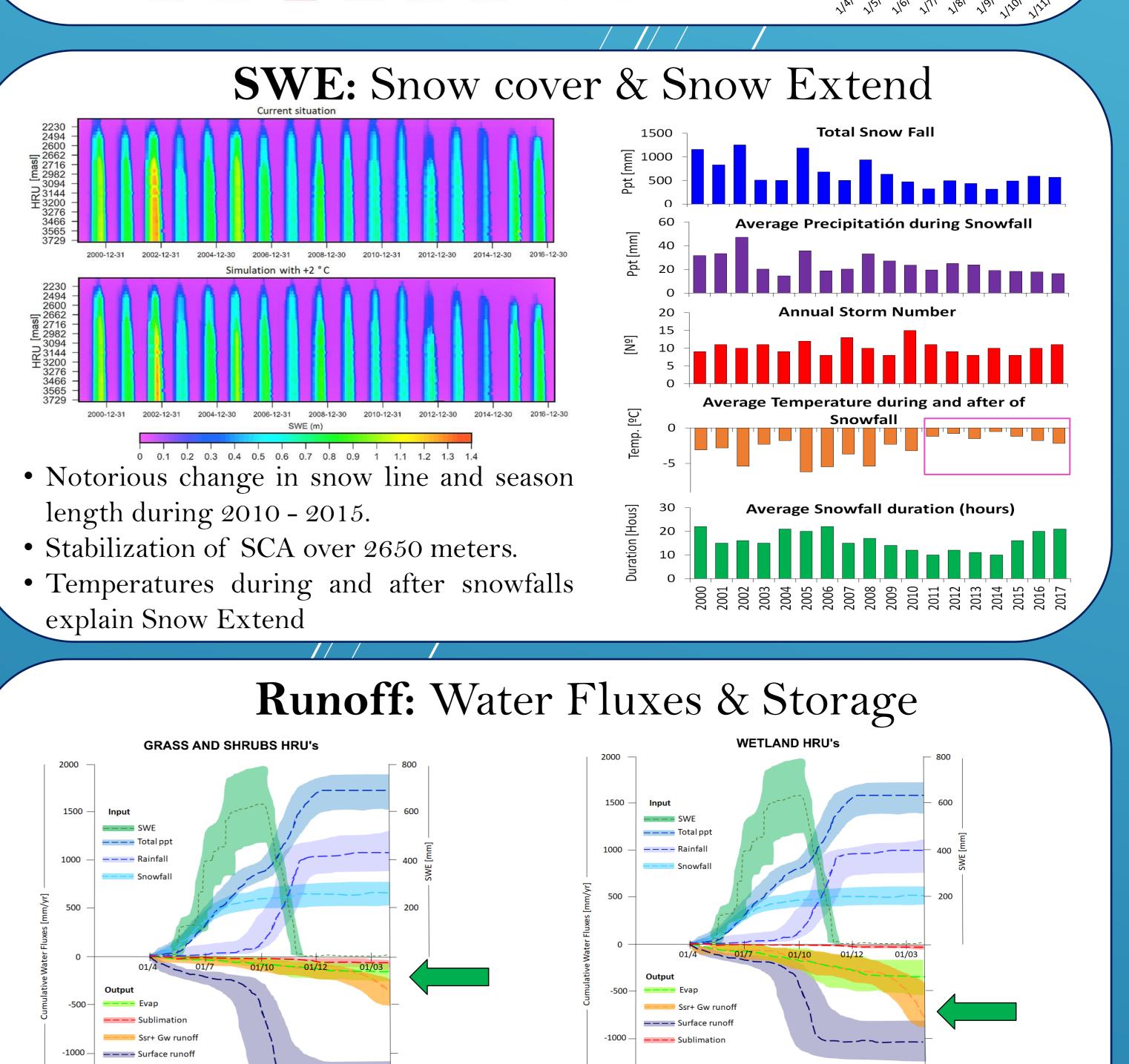




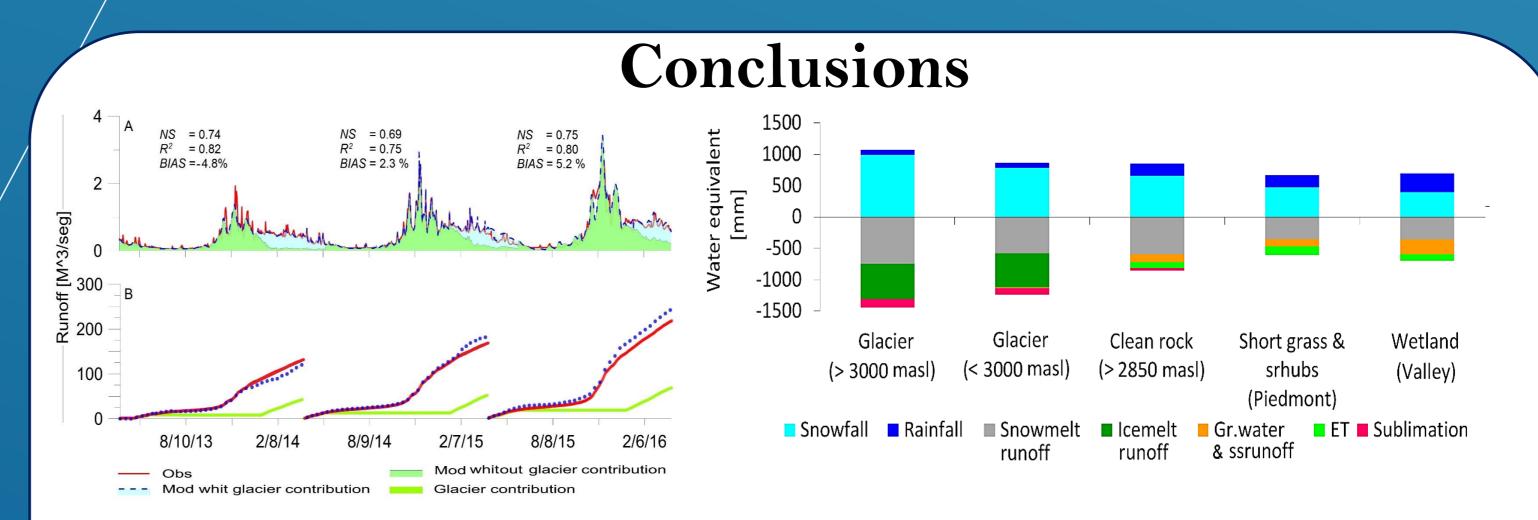








Relevant soil water storage component in narrow valley bottoms



-1500

- 80% of summer runoff (DJF) comes from glacial melting.
- Snow and ice melt contribute to runoff throughout the entire year, dispelling the notion of distinct accumulation and melt seasons.

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