

Session C3: Regional scale hydroclimate: from observations to modelling to applications

Thursday may 19

Chairs Jason Evans and Jan Polcher, rapporteur Jason Evans

This session included presentations on studies that covered various aspects of the water cycle using various downscaling methods. These topics included studies of streamflow, precipitation, snow and alpine hydrology, and soil moisture. While the methodologies explored included comparison of multiple methods/models, coupling of advanced hydrological models with regional climate models, and innovative use of observational datasets. Many presentations emphasised the advantage that high resolution regional climate models have in simulating climate over mountainous topography, and how important this aspect is for hydrology and water resources. Future work that improves the simulation of precipitation, snow accumulation and melt, and surface and sub-surface hydrology in mountainous regions is particularly important for fresh water resources, and the models should continue to be evaluated and developed to improve the representation of these processes.