



Vatnafræðileg svörun nokkurra íslenskra vatnasviða við áætluðum loftslagsbreytingum á 21. öld. Philippe Crochet. Sjálfstæður ráðgjafi – desember 2022.

Ágrip skýrsluhöfundar:

This study presents an analysis of the hydrological response of three Icelandic river catchments to projected climate change in the 21st century. The catchments are located in the north and southeast of the country and their current hydrological regimes are influenced by snow seasonality. Daily streamflow series were simulated over the period 1981-2100 with the HYPE hydrological model forced with an ensemble of regional climate projections from CORDEX, under two greenhouse gas emission scenarios. Changes affecting near surface air temperature and precipitation and their impact on mean and extreme streamflow characteristics were analysed. There is a consensus that air temperature will rise in the future, leading to shorter snow seasons and less snow storage. The projected changes in climatic conditions are expected to impact the hydrological characteristics of the three studied catchments but the timing, magnitude and direction of the response vary with the season and catchment.