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A multiproxy comparison of Scots pine wood in western Norway

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With the onset of anthropogenic climate change, the ClimateCultures project aims to tackle the question “What happened the last time we encountered rapid climate change?” using evidence from tree rings and historical records to paint a picture of the natural impacts and societal responses in Norway during the Little Ice Age. More specifically, we aim to investigate short-lived extreme cold events in the 1700’s. This calls for a more regional scale to account for complex climate drivers over a mountainous country with regional climatic differences and local communities’ responses. Here we present a case study of Scots pine wood collected in western Norway, a region known for mild temperatures and high precipitation (relative to average Norwegian climate), and compare various tree ring proxies including ring width, Blue Intensity and stable oxygen isotopes. While this record does not extend to the 1700’s, we can consider the merits and limitations of each proxy when compared to the instrumental records. This study will provide a basis for climate reconstructions, particularly focusing on hydroclimate signals in Norwegian chronologies.