

Supporting Information for ”Glacial runoff modulates 21st century basin aridity, but models disagree on the details”

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1. Multi-panel figures S1 and S2

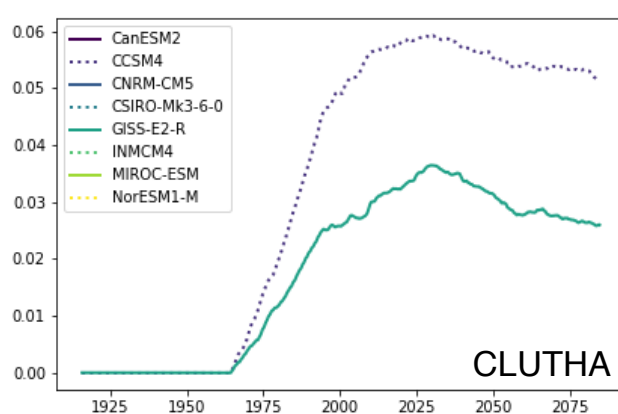
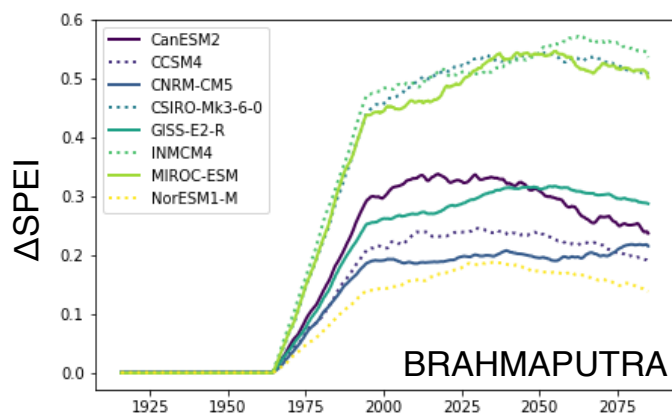
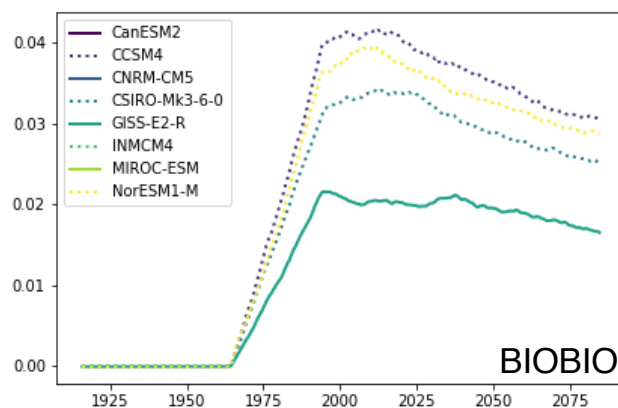
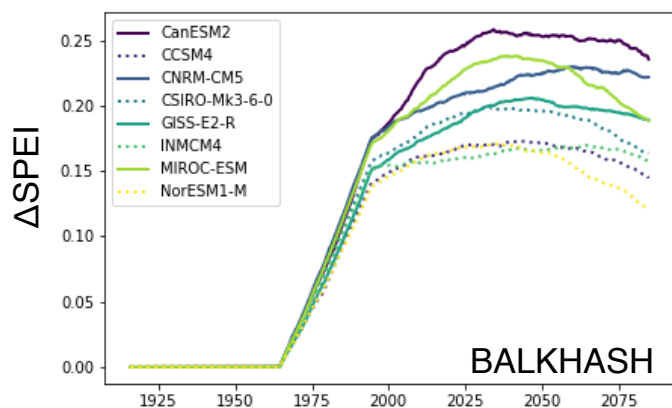
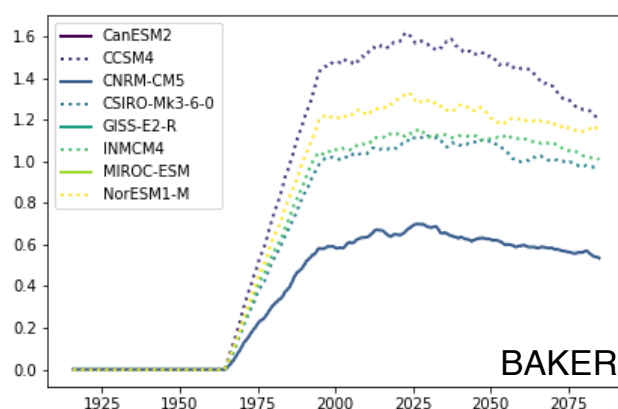
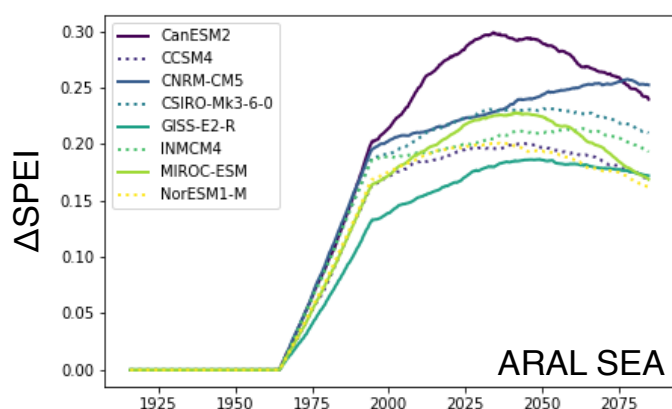
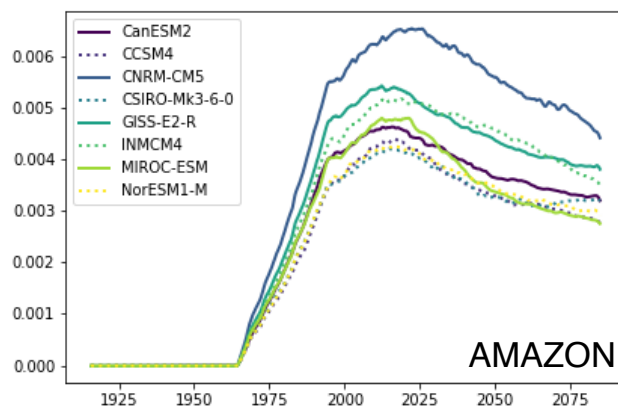
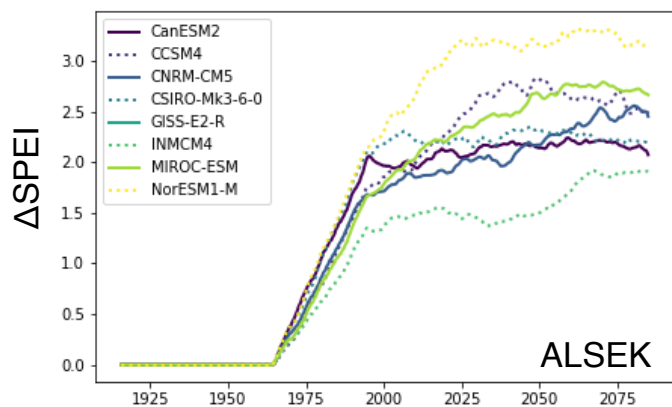
Introduction

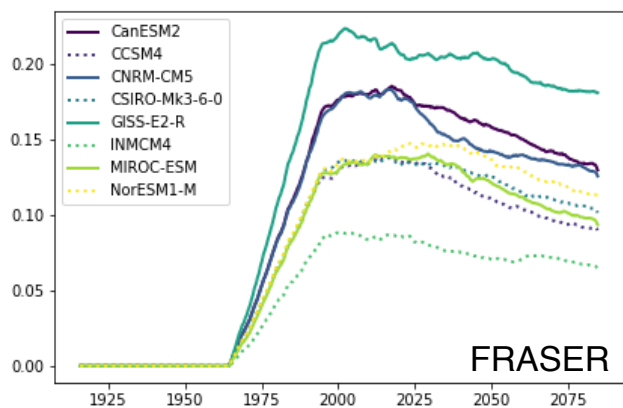
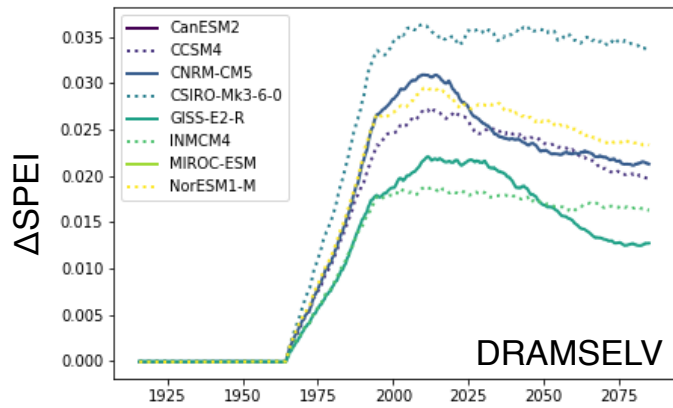
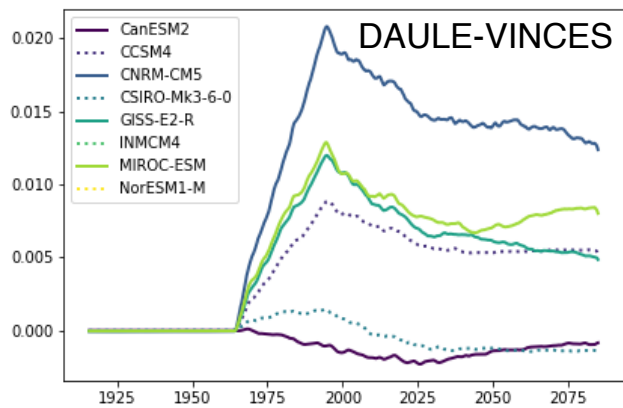
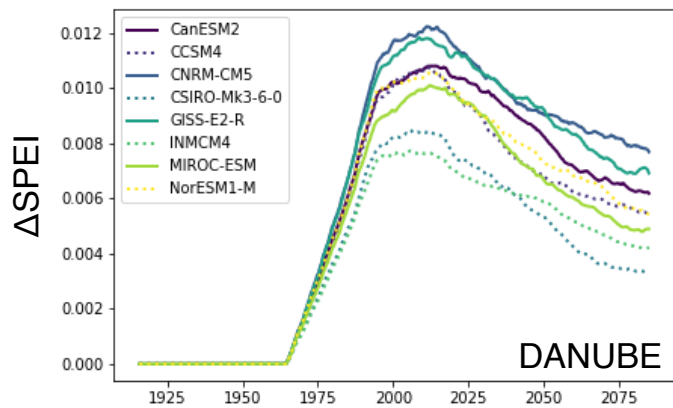
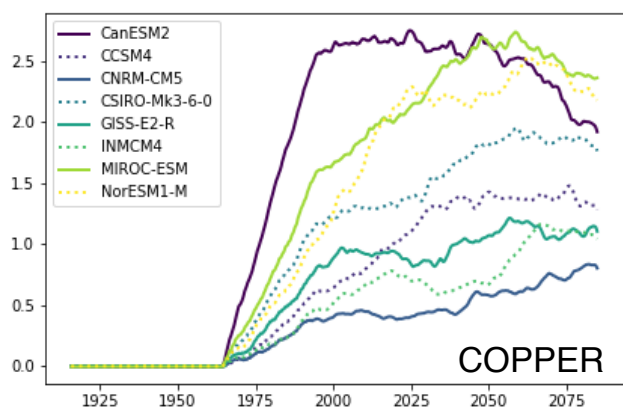
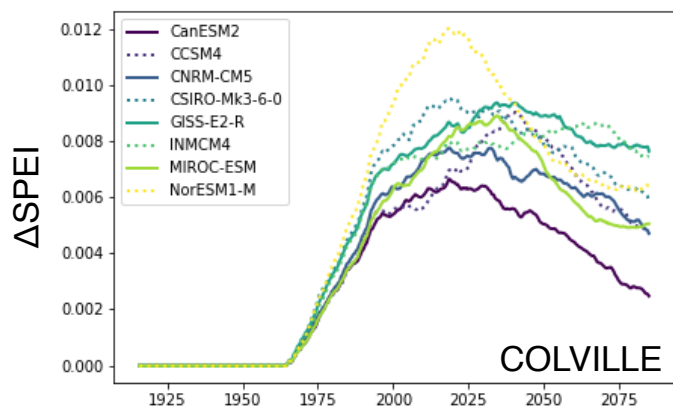
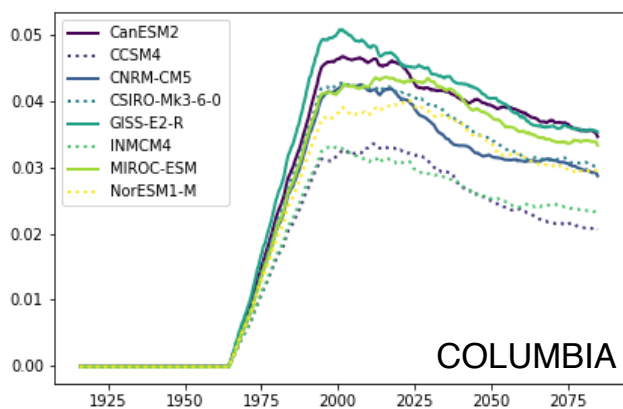
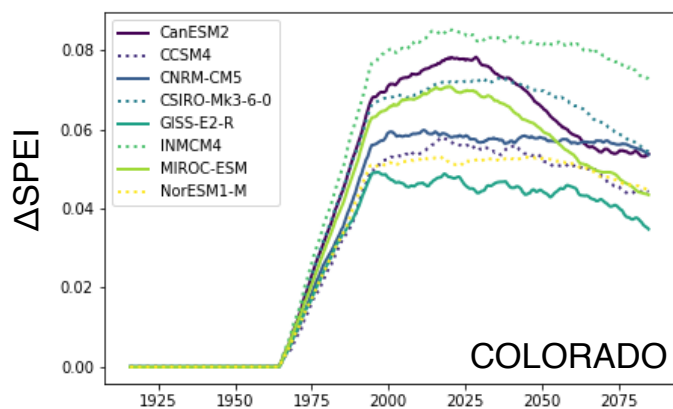
All analysis shown in the main text is reproducible and extensible for any of the 56 glaciated basins using the Jupyter notebook we have provided on GitHub (see link in Acknowledgements). We encourage readers interested in detailed results for a specific basin to work through the material provided there. The public code also allows users to change time scales of analysis—for example, presenting running means over 5-year rather than 30-year windows, calculating SPEI at a 27-month rather than 15-month horizon—and examine SPEI under the RCP 8.5 climate scenario.

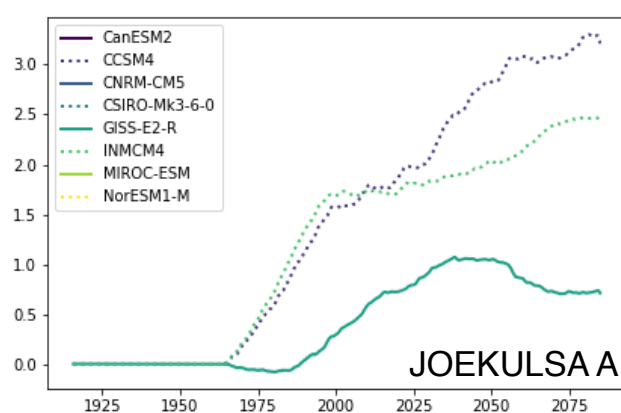
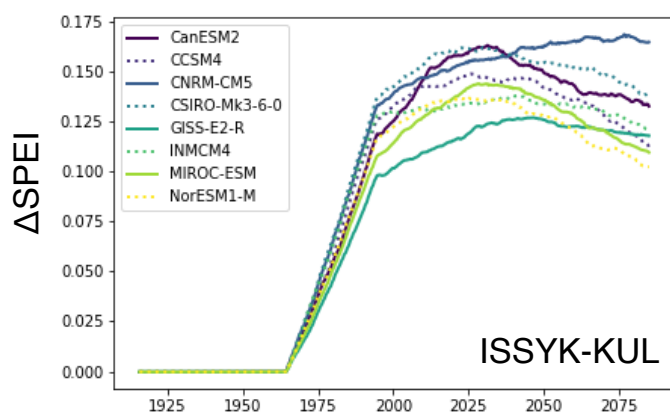
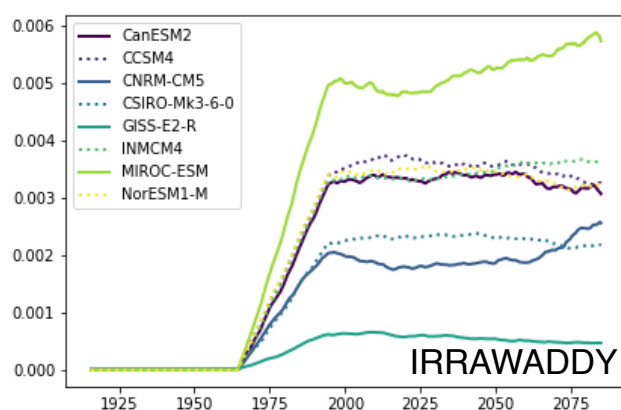
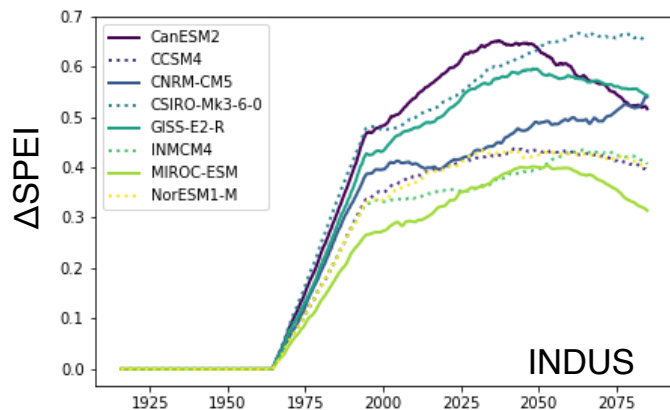
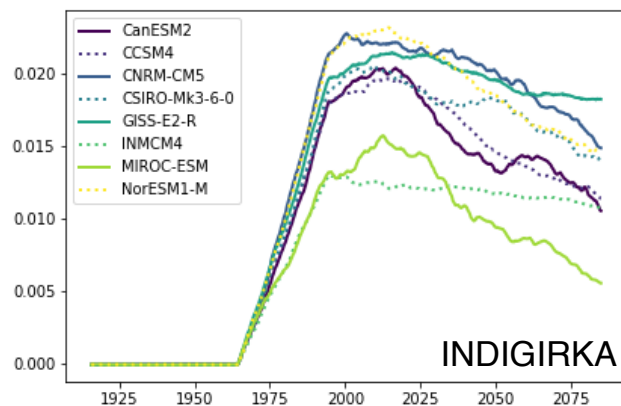
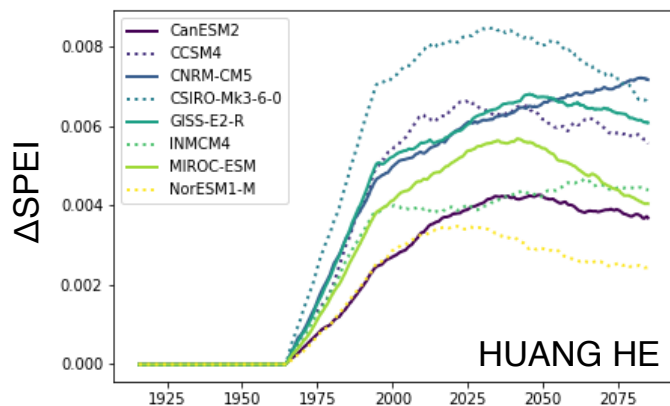
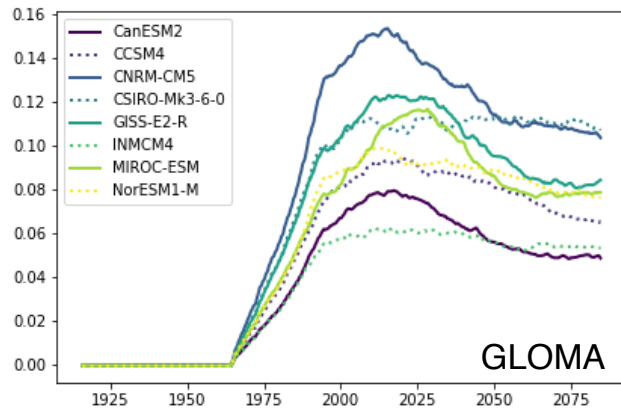
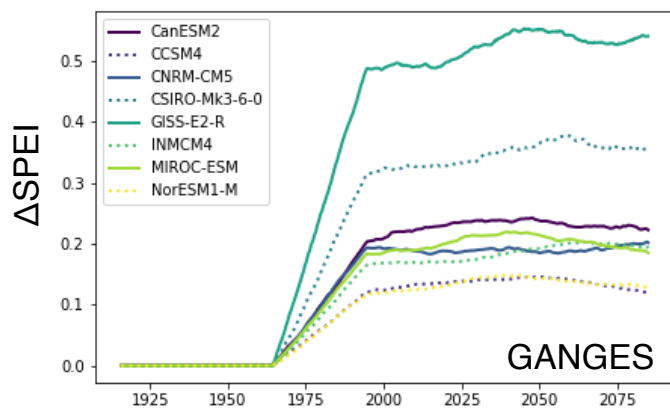
February 14, 2020, 5:15pm

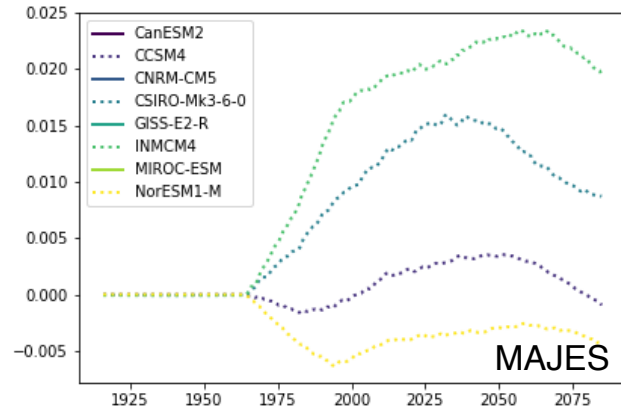
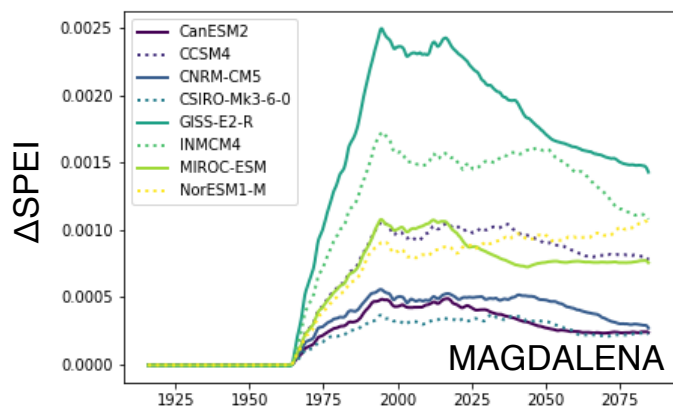
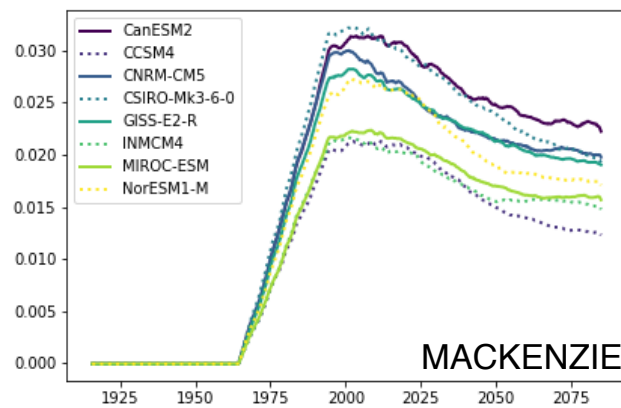
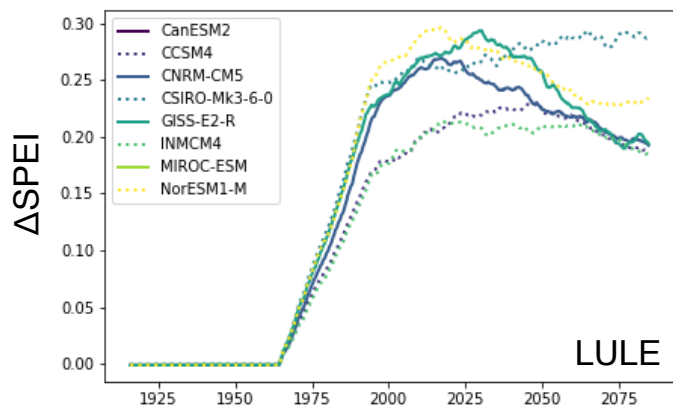
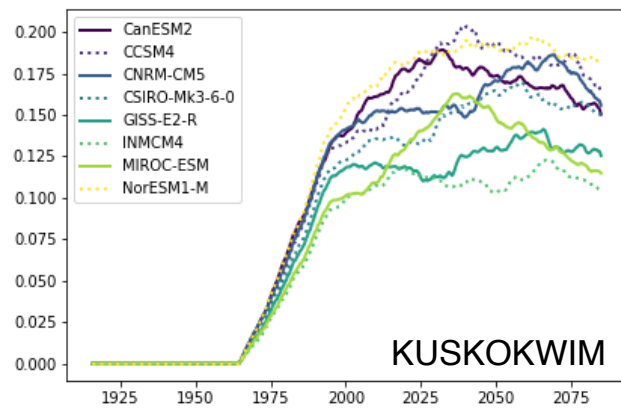
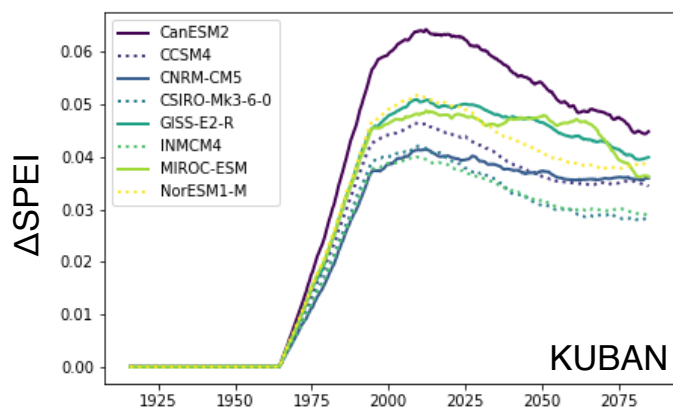
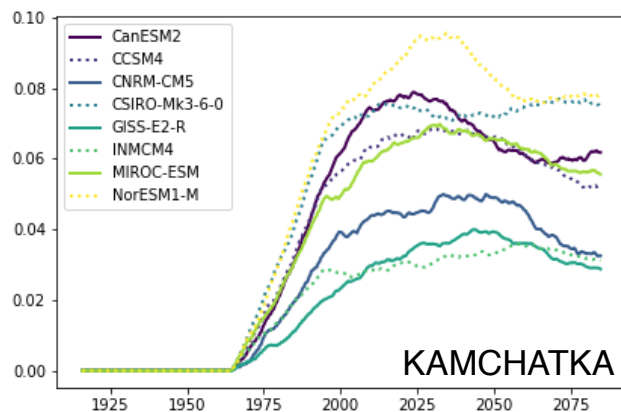
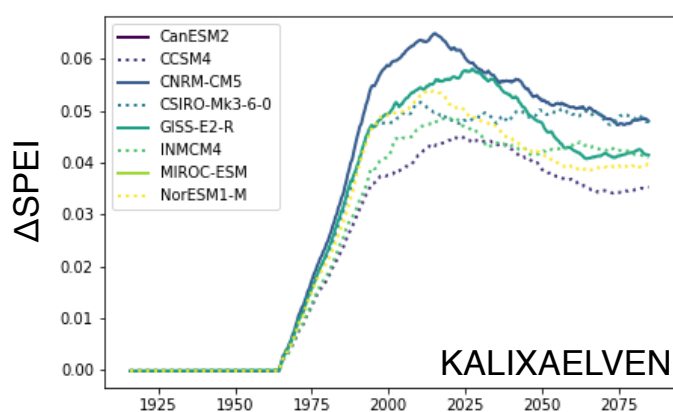
For readers' convenience, we include below extended results for each of the 56 basins we simulated, for the same time scales and climate scenario shown in the main text. The results are presented as multi-page sets of panels that replicate the panels shown in Figures 2 and 3 of the main text, but with all 56 basins rather than the 4 examples shown in the text. Figure S1 shows the effect on mean SPEI of including glacial runoff in each basin. Figure S2 shows the effect on SPEI variance of including glacial runoff in each basin. The panels in both figures were computed with climate scenario RCP 4.5, examining SPEI with a 15-month time horizon, comparing statistics with a 30-year running window.

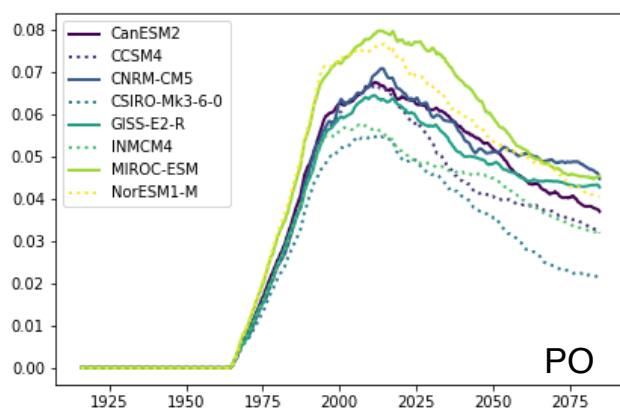
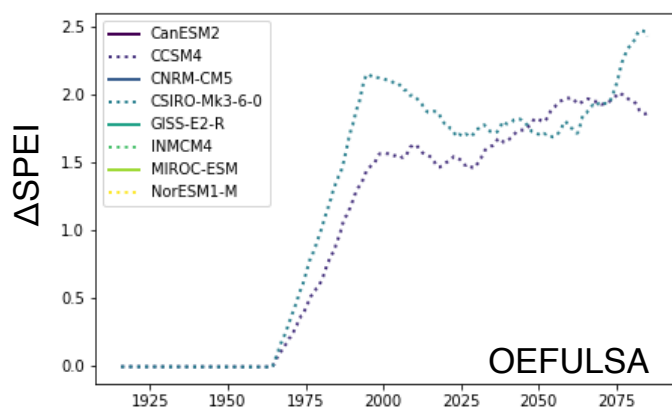
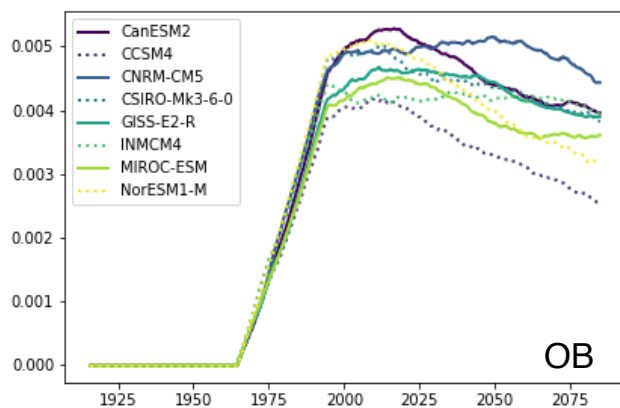
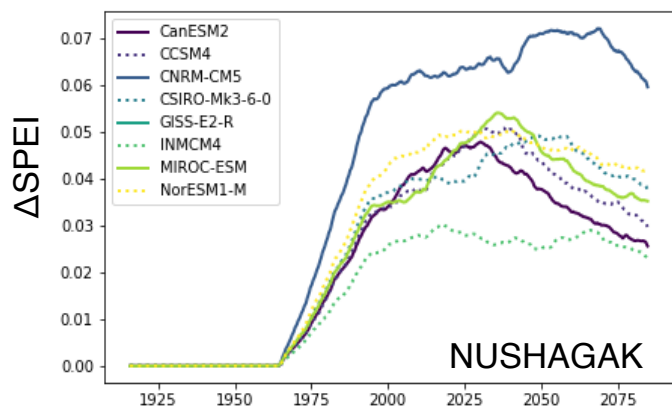
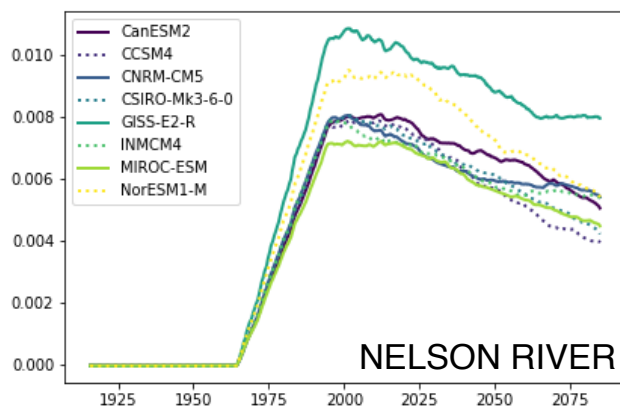
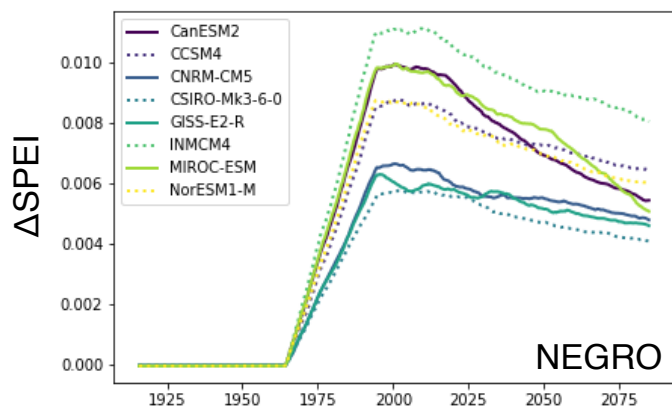
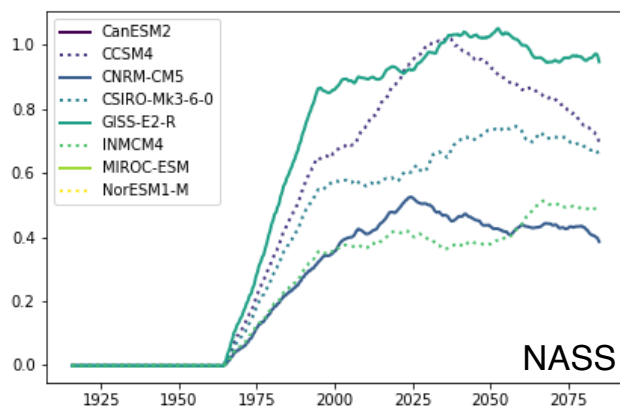
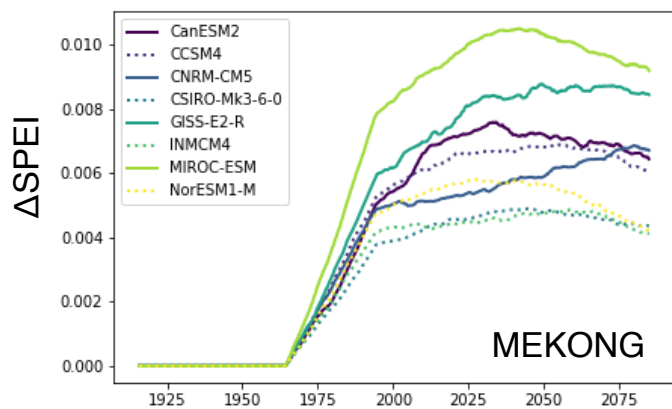
S1. Glacial effect on 30-yr running mean SPEI by basin

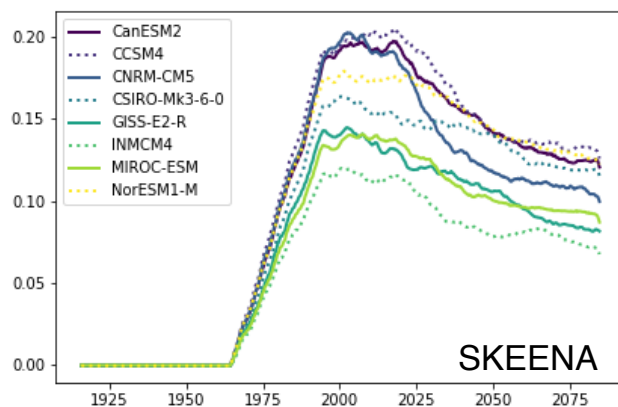
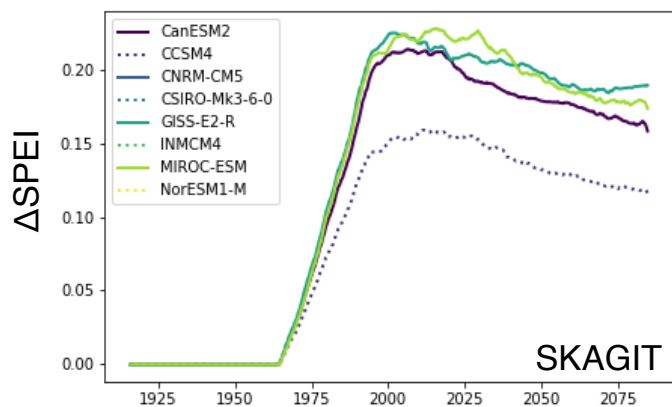
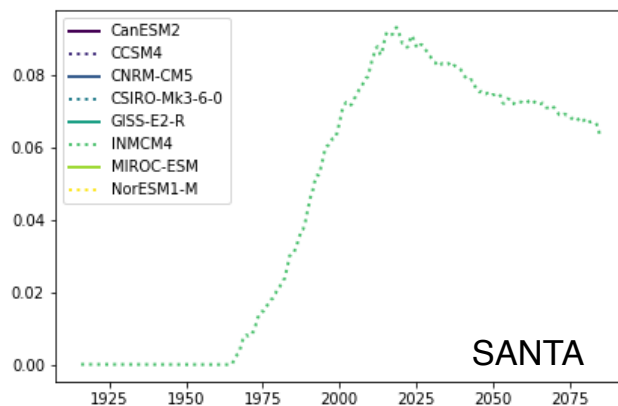
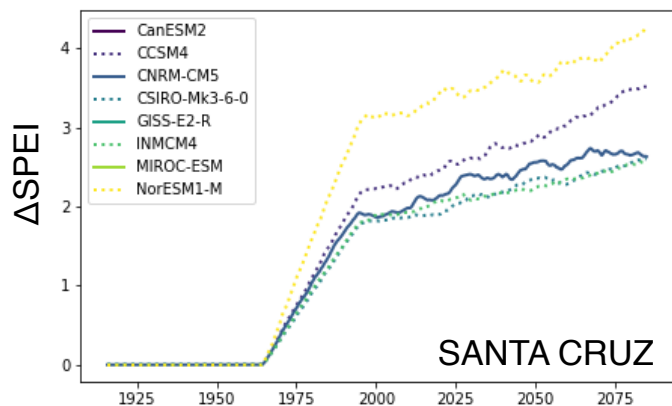
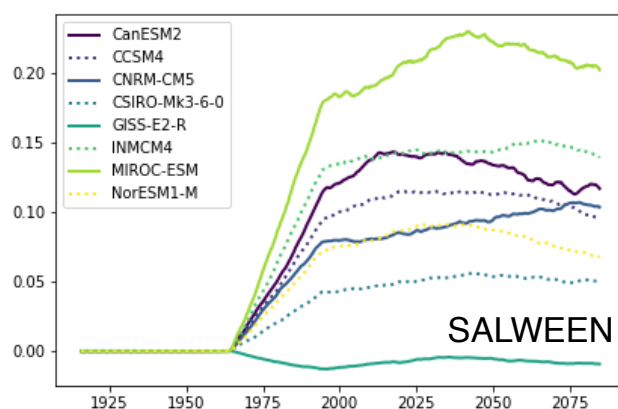
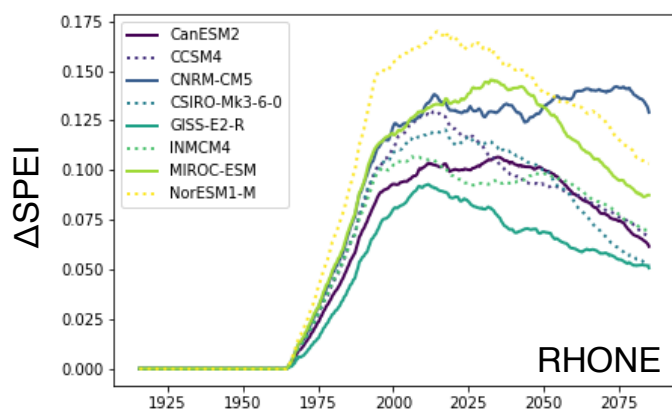
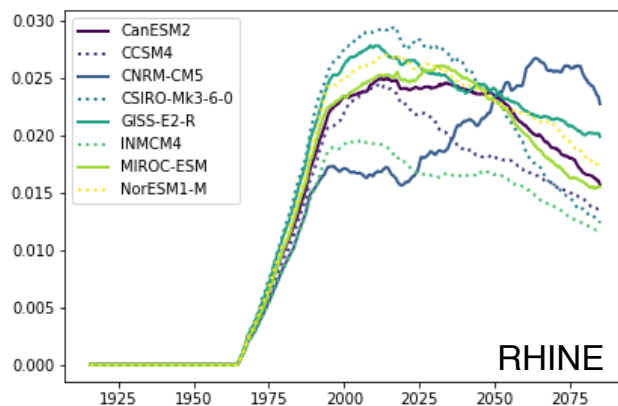
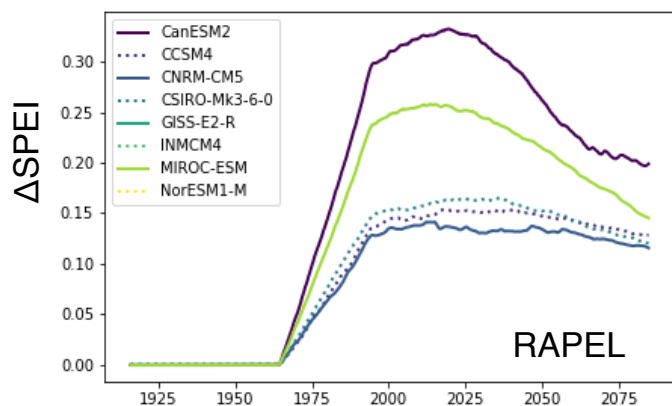


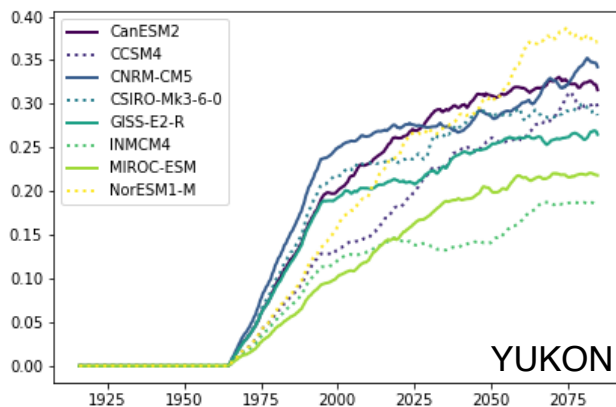
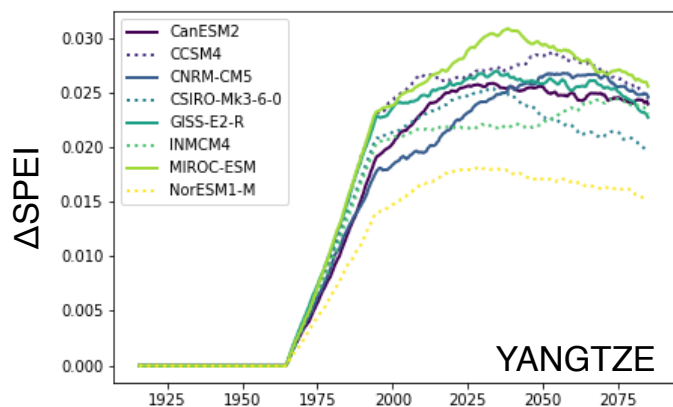
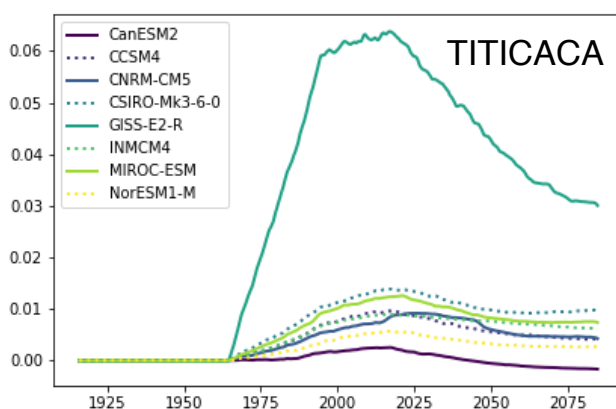
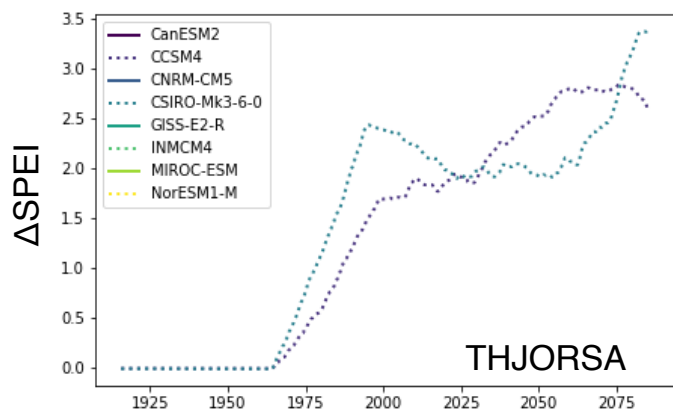
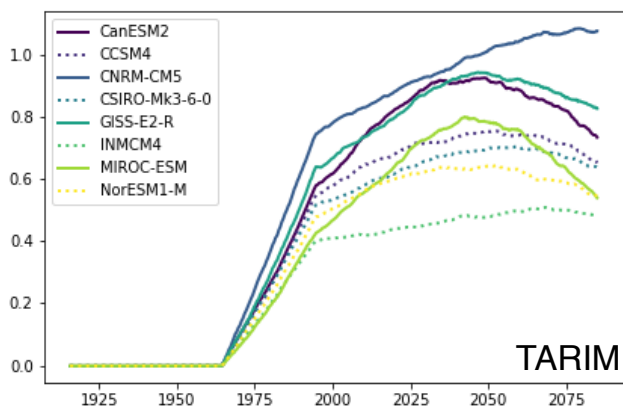
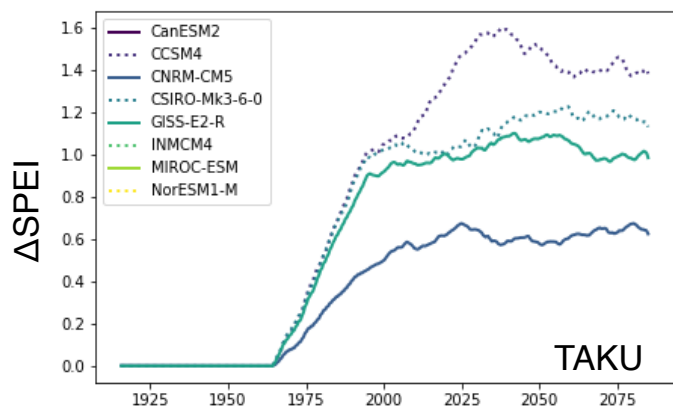
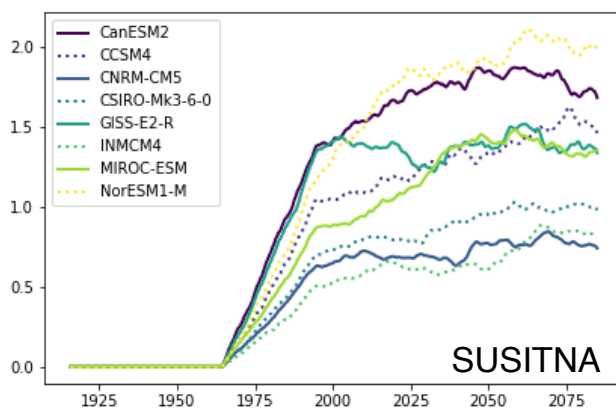
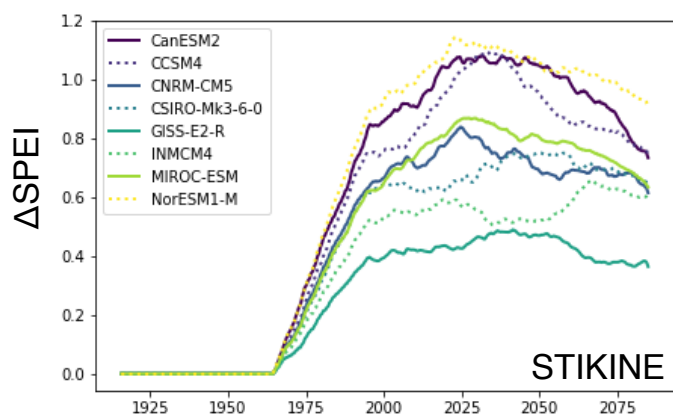












S2. Glacial effect on 30-yr running SPEI variance by basin

