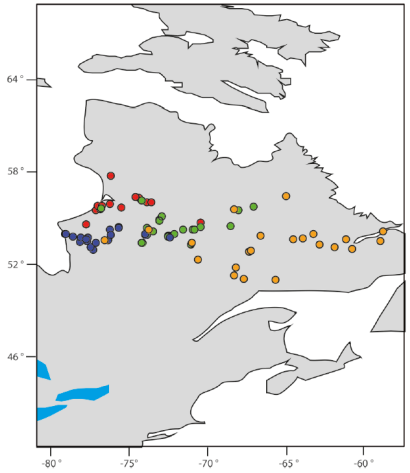
ECL7202 – DENDROECOLOGY

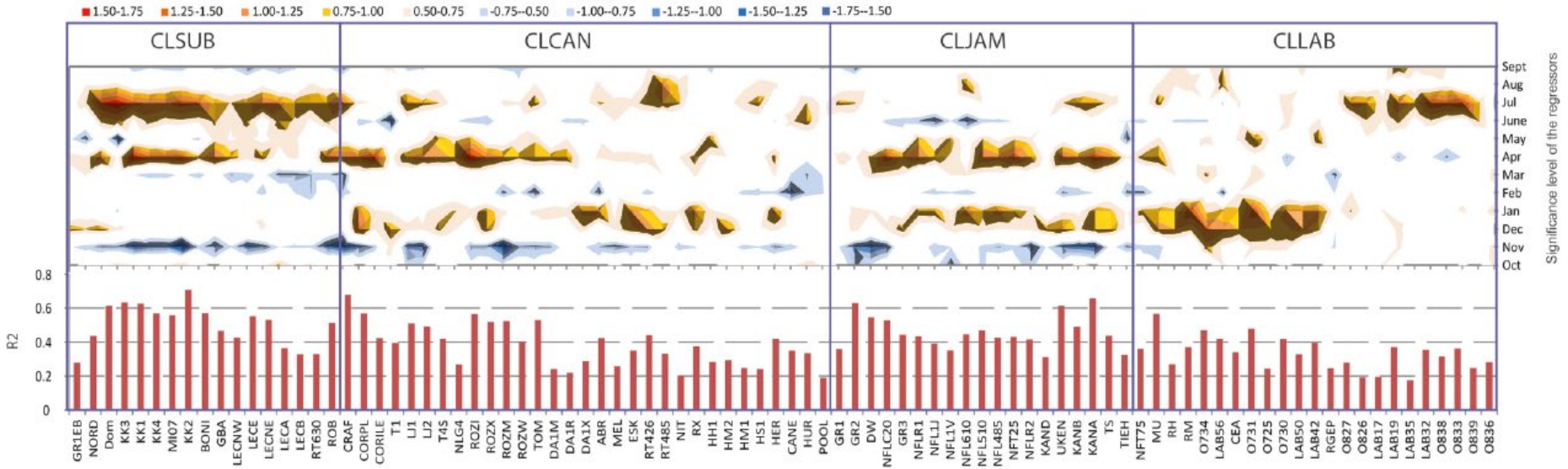
2.3 – Response functions and transfer functions

Response functions

Functions to identify climatic variables that determine growth



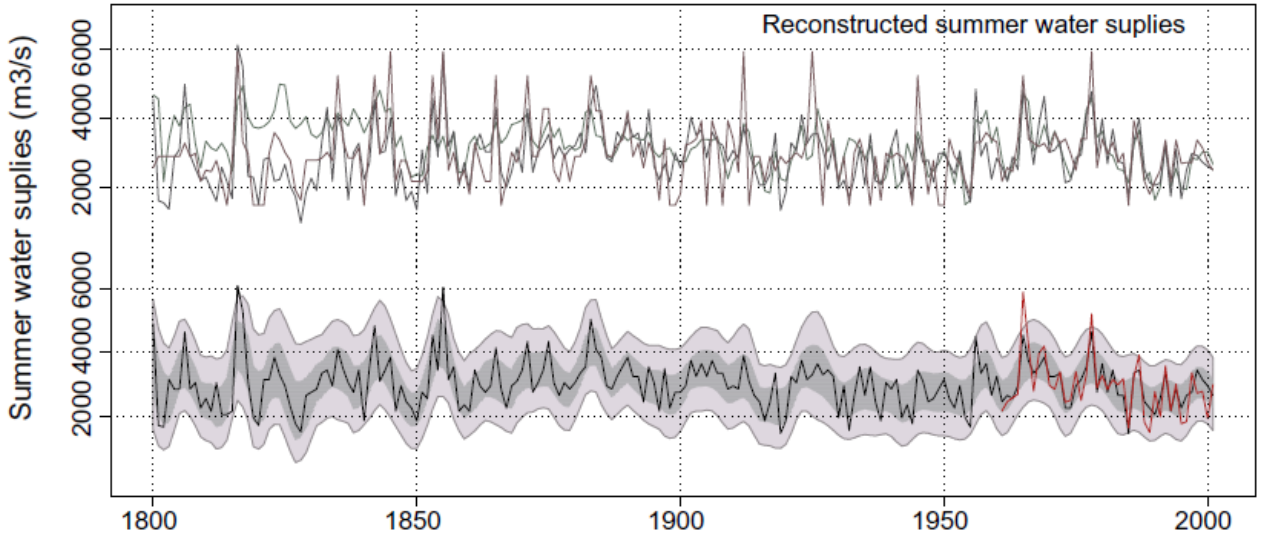
Nicault, A., Boucher, E., Tapsoba, D., Arseneault, D., Berninger, F., Bégin, C., … Bégin, Y. (2014). Spatial analysis of the black spruce (Picea mariana [MILL] B.S.P.) radial growth response to climate in northern Québec, Canada. *Canadian Journal of Forest Research*, *45*(3), 343–352. doi: 10.1139/cjfr-2014-0080

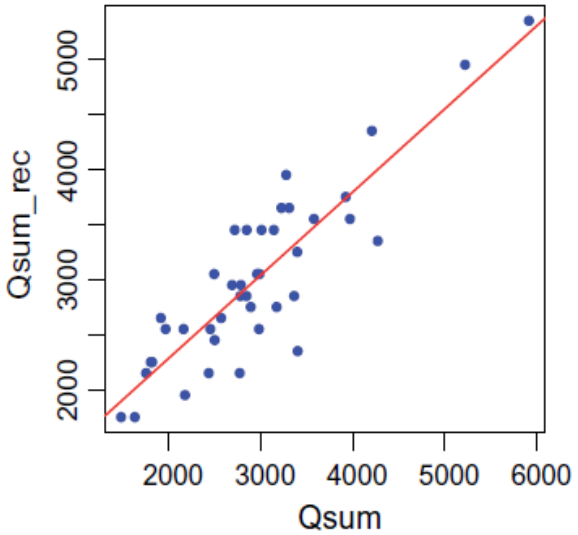


Transfer functions

Functions to reconstruct a climatic variable using tree-ring proxies

Nicault, A., Boucher, E., Bégin, C., Guiot, J., Marion, J., Perreault, L., … Bégin, Y. (2014). Hydrological reconstruction from tree-ring multi-proxies over the last two centuries at the Caniapiscau Reservoir, northern Québec, Canada. *Journal of Hydrology*, *513*, 435–445.

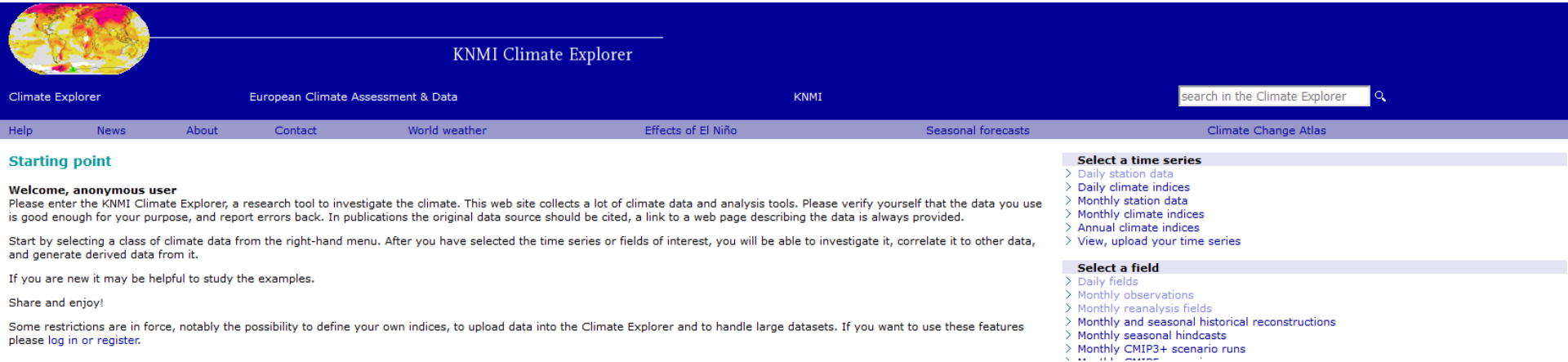




Practical excersise

1. Download climate data in Climate Explorer

Go to Climate Explorer
Monthly Observation
1901-2019: CRU TS 4.04 (land)
ave_region :: lon= -73.000 -69.000, lat= 54.000 55.000
Dowload raw data



Practical excersise

1. **Download climate data in Climate Explorer**
2. **Response and transfer functions with the package <treeclim>**

Open : <dendroecology-response_transfer_f-2020>