

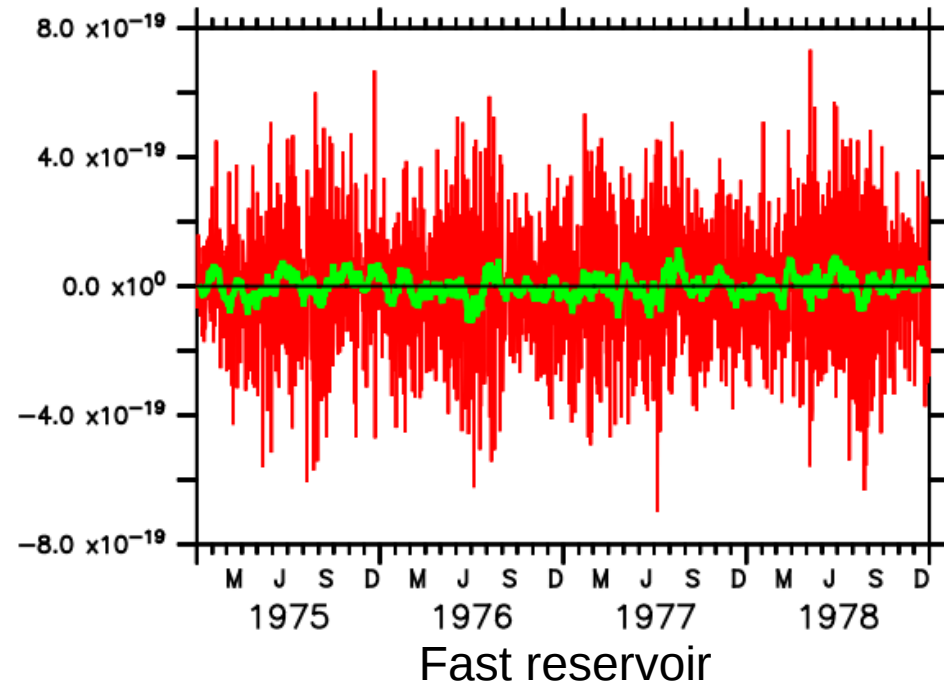
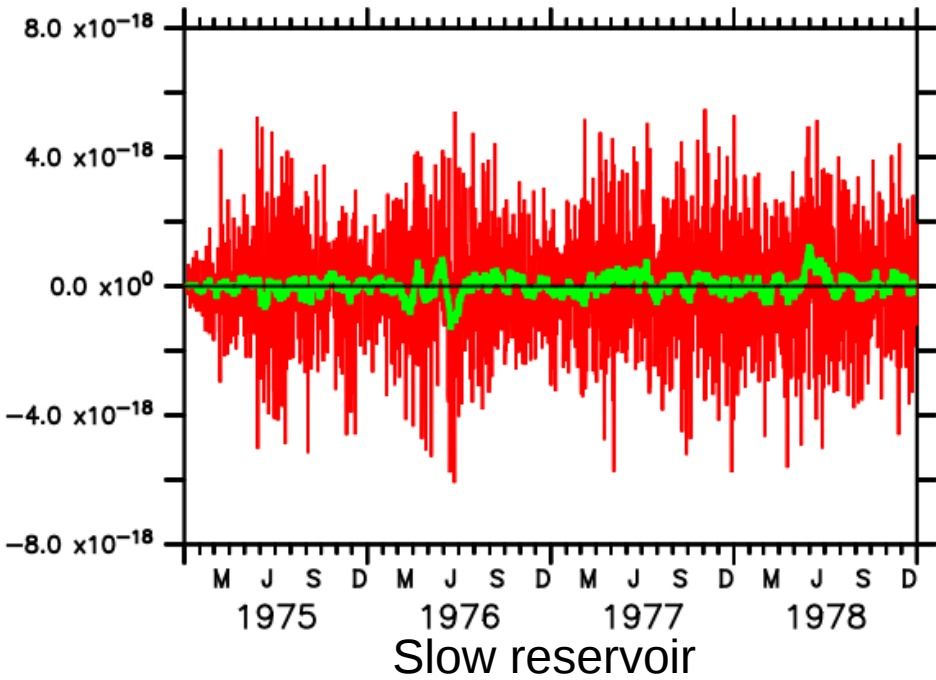
# Water conservation in the routing scheme

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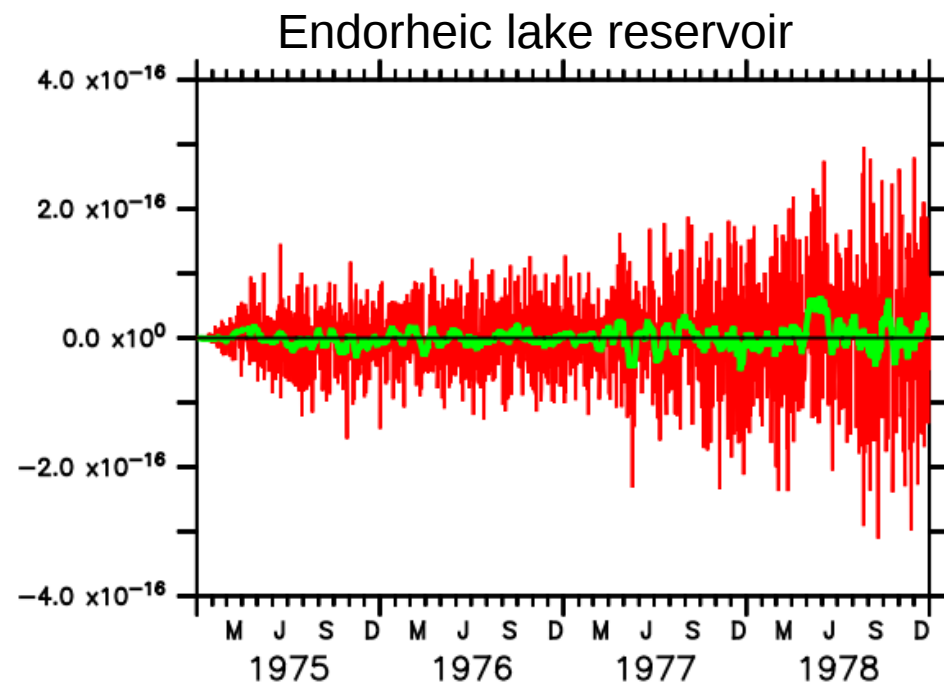
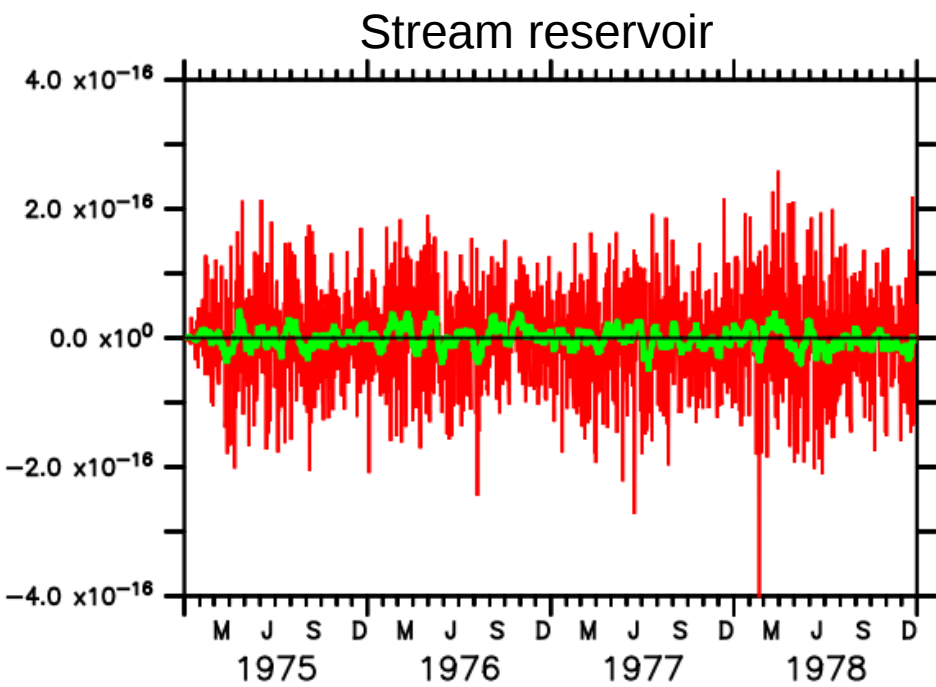
# What has been done ?

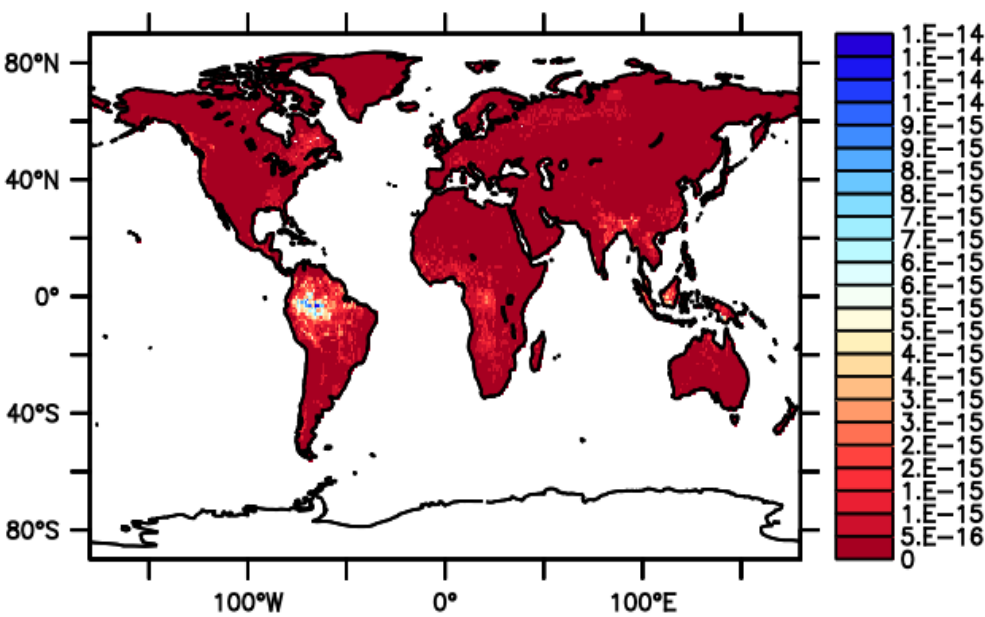
- 1) coding a variable **wbr\_'reservoir'** that checks the closure of the water budget for each reservoir (stream, fast, slow, lake) of each grid cell at each routing time step. wbr\_'reservoir' computes the difference between the delta stocks (variation during the time step) and the fluxes. wbr\_'reservoir' should be small if conservation is ensured. wbr\_'reservoir' is output using XIOS.
- 2) debugging the problem of water budget in the endorheic lakes (when swamps are deactivated)
- 3) testing the water budget closure with a simulation of 4 years (Princeton) at daily time scale
- 4) to be done: the same for the floodplain and pond reservoirs + verification when swamps and irrigation are activated



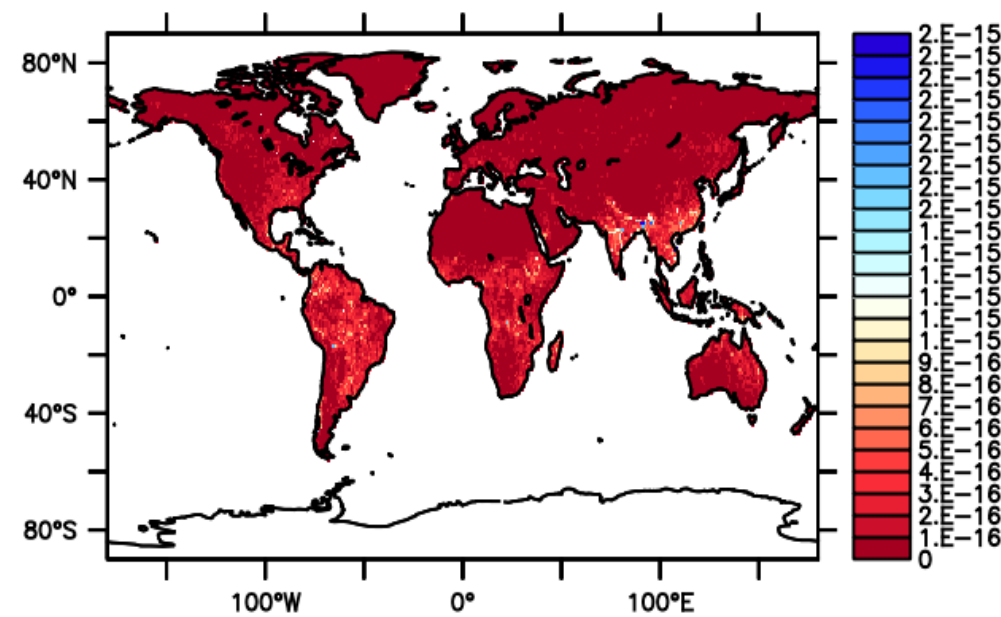
## WBR (Water Budget Residual) (mm/d)

(green line = 15days running average)





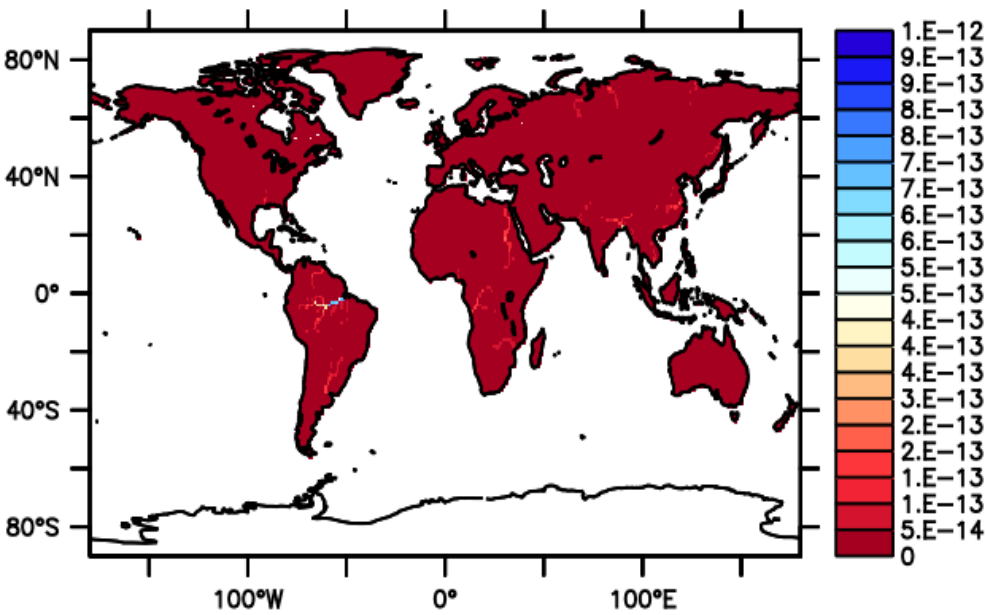
Slow reservoir



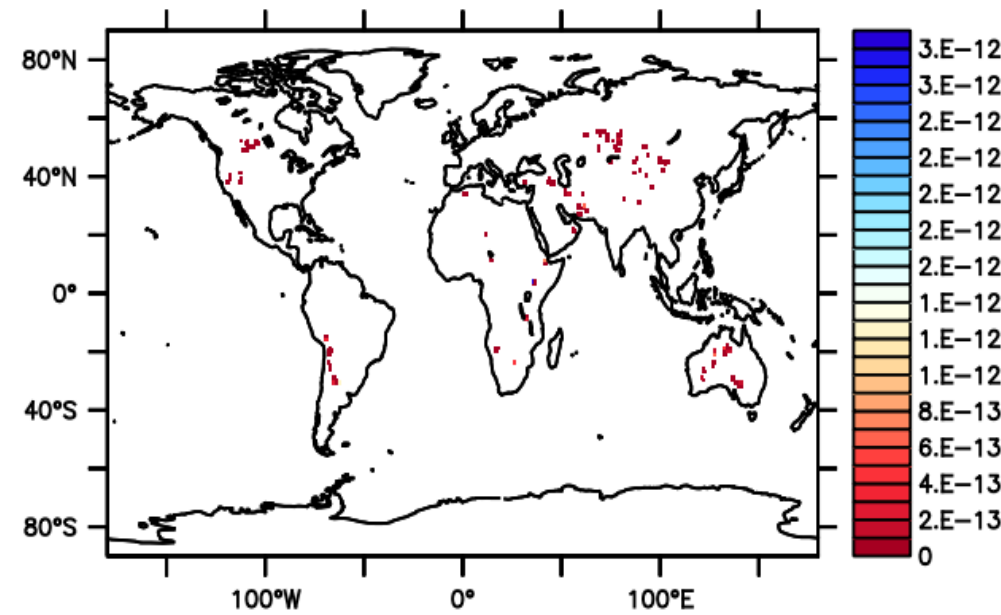
Fast reservoir

## Max value/grid-cell over the period of WBR (mm/d)

Stream reservoir



Endorheic lake reservoir



# Conclusion

- the water is conserved in each reservoir for each pixel
  - for endorheic lakes: wbr is very low but increases with time  
=> we have to check on longer time scale
- to be done: wbr computation for the floodplain and pond reservoirs + verification when swamps and irrigation are activated