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Analysis of the surface wetness changes in mires in the south of West Siberia during the Little Ice Age (550 – 50 cal yr BP)

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Little Ice Age (LIA) (550 – 50 cal yr BP)



It was cold everywhere during the LIA



Dry?

However what about the climate humidity ?!

Wet?

Goal:

 to compare the variations in surface wetness of mires during the Little Ice Age (LIA) in the area of the south of Western Siberia and to contrast with published palaeoclimatic reconstructions.

Study area



Applied palaeoecological proxies:

 Water table depth (DWT) reconstruction (based on testate amoebae analysis)

 Annual precipitation reconstruction (based on pollen analysis)

• Peat humification (Ih) analysis

Surface wetness changes in mires



- Water table depth
- Annual precipitation
- Peat humification

Southern taiga



600-400 cal yr BP – wet conditions 300-200 cal yr BP - drying Consistent with: Lamentowicz et al., 2015 Willis et al., 2015

Forest-steppe



500-400 cal yr BP – drier conditions 400-300 cal yr BP – wetter conditions 300 cal yr BP – short-term drying

Consistent with: Zakh et al., 2010

Mountains (forest belt)



500-400 cal yr BP – wet conditions 300-200 cal yr BP - drying

Study area



Conclusions:

- Heterogeneous surface wetness in mires during the LIA
- Spotty trends in wetness dynamics from different zones
- Required more objects and higher timeresolution of reconstructions

Thank you for attention !!!