Holocene climate in Northern Urals (Komi Republic, Russia): a multiproxy approach based on pollen and brGDGTs

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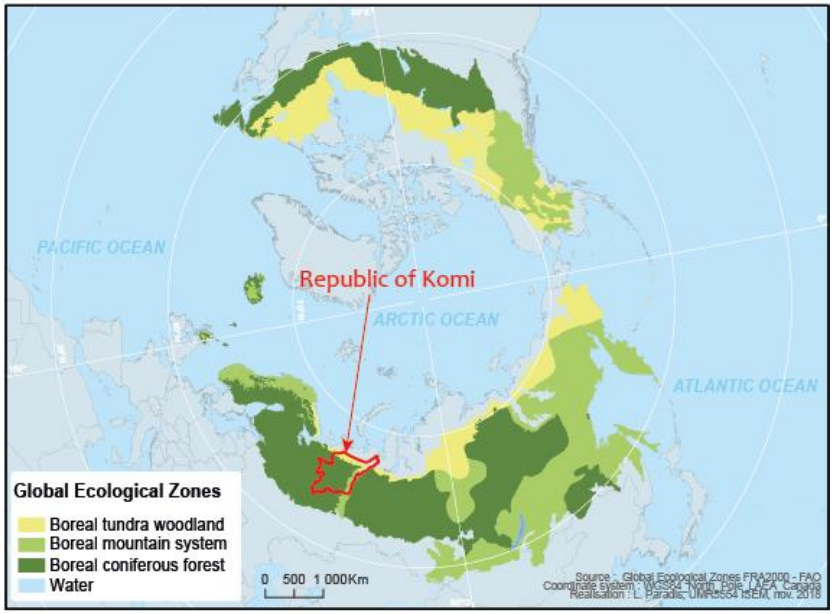
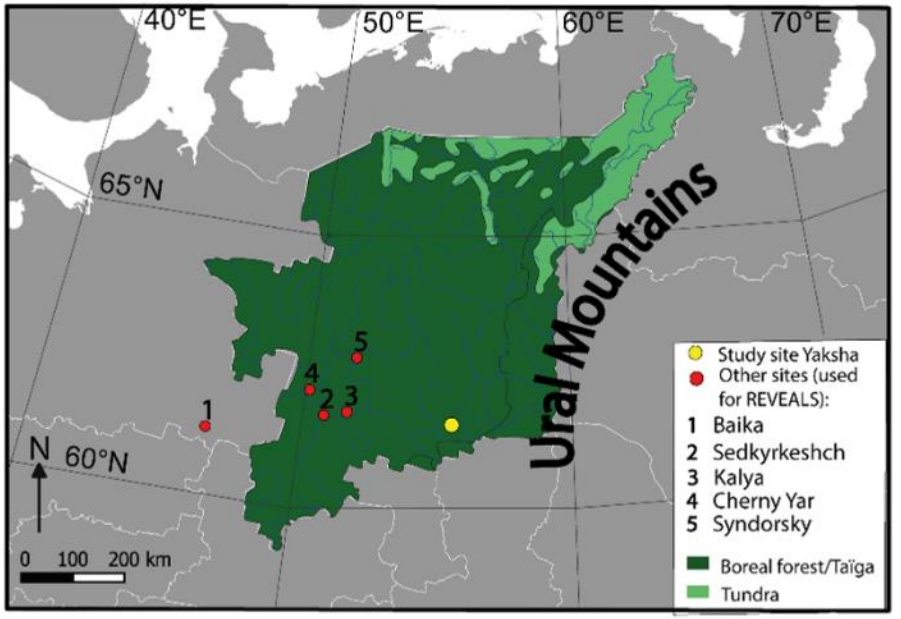
Republic of Komi





Light taiga (*Pinus sylvestris*) and dark taiga (*Picea* spp, *Pinus sibirica*, *Abies sibirica*) following hydrographic network

Pinus sylvestris

Betula spp.

Picea spp.

Pinus sibirica

Abies sibirica

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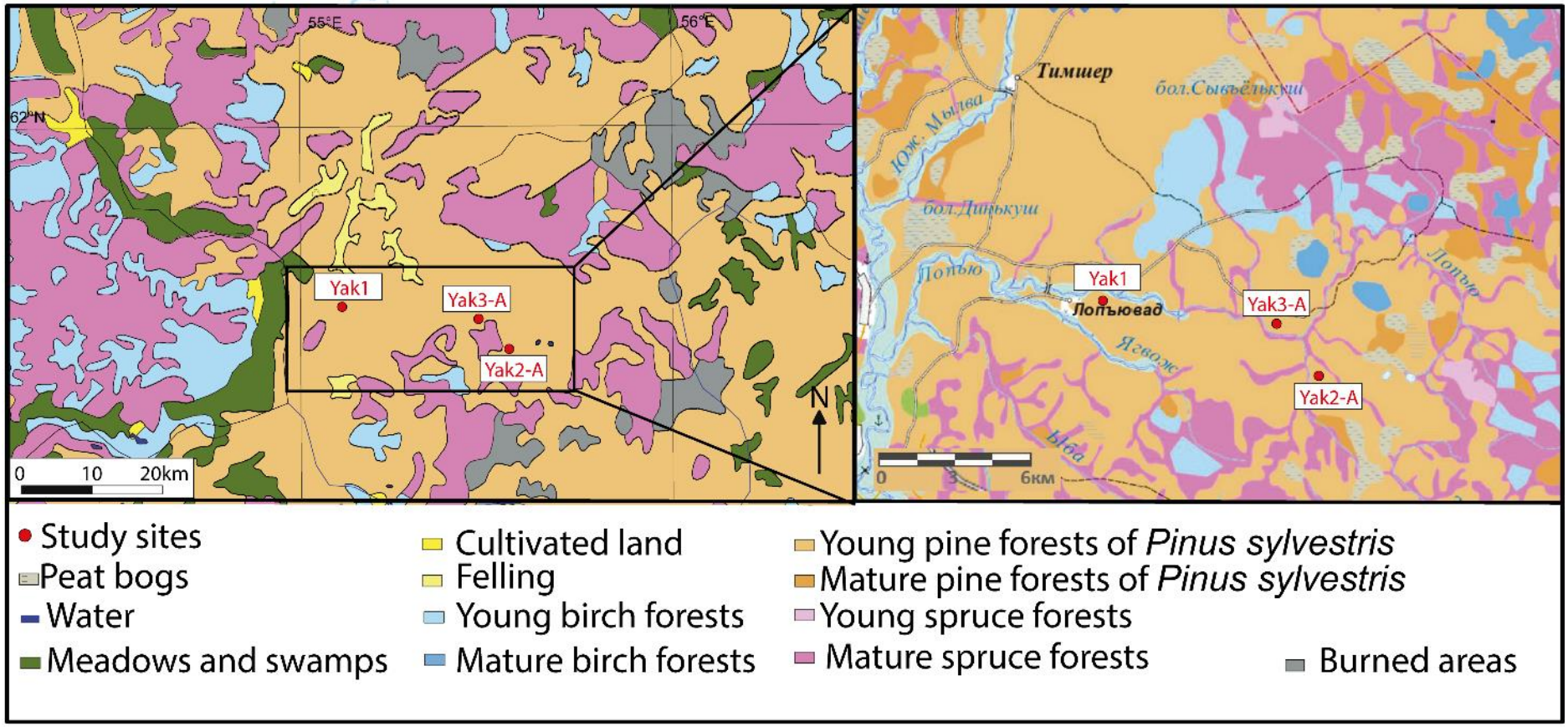
Yaksha study site



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Climate reconstruction

Method

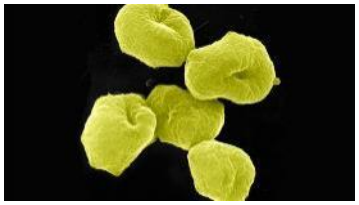
2 proxies

- Pollen grains

- GDGTs (Glyceryl Dialkyl Glyceryl Tetraether)

Molecular biomarkers

Discovery phase



2 methods to reconstruct past climate variability

- MAT &WAPLS *(Guiot, 1990 ; ter Braak and Juggins, 1993)*
- Calibrations de différentes régions *(MAT Peterse et al., 2012 ; MSAT Foster et al., 2016 ; MAATpeat Naafs et al., 2017)*

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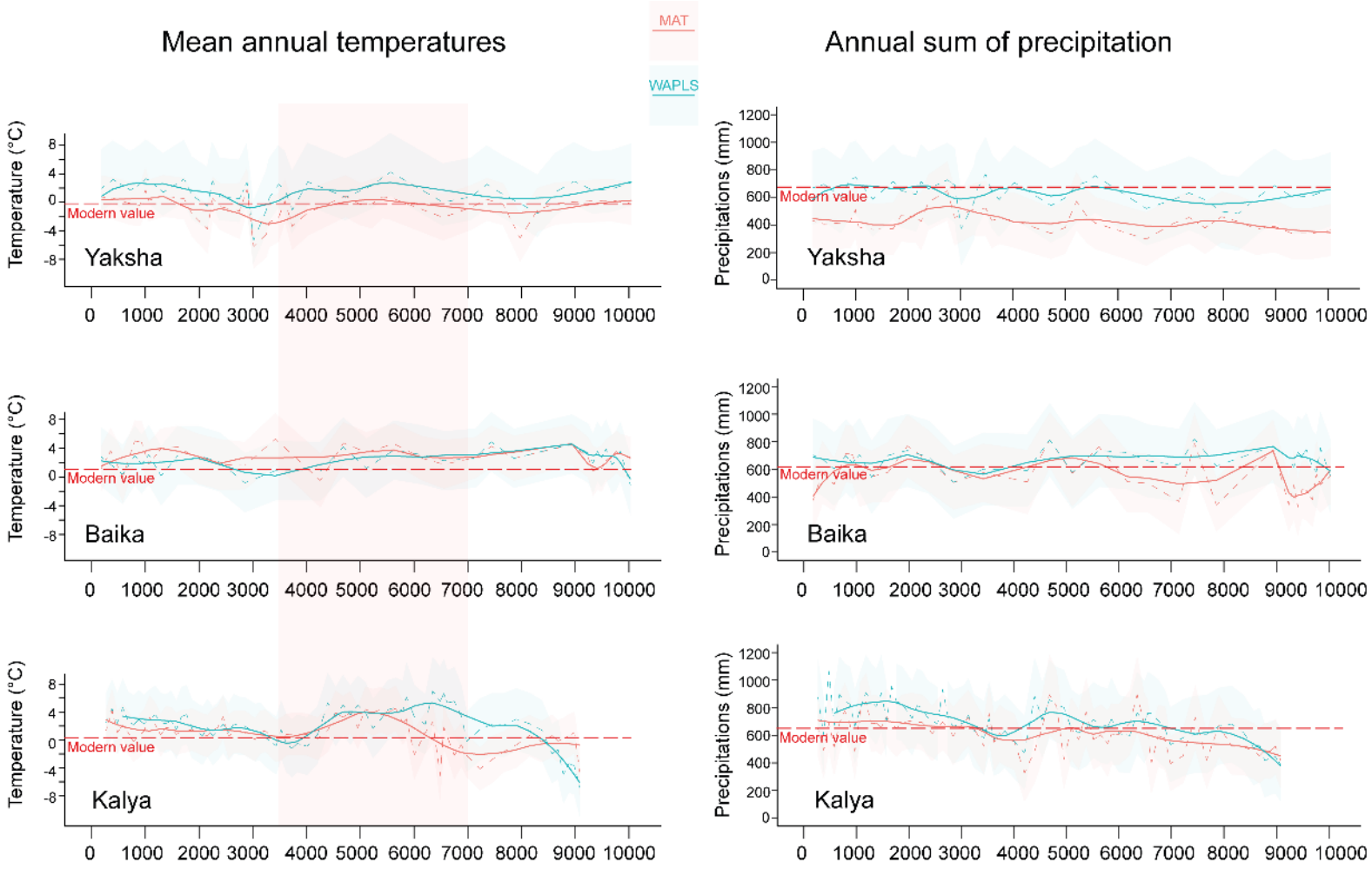
Reconstruction of Holocene climate variability from pollen grain transfer functions



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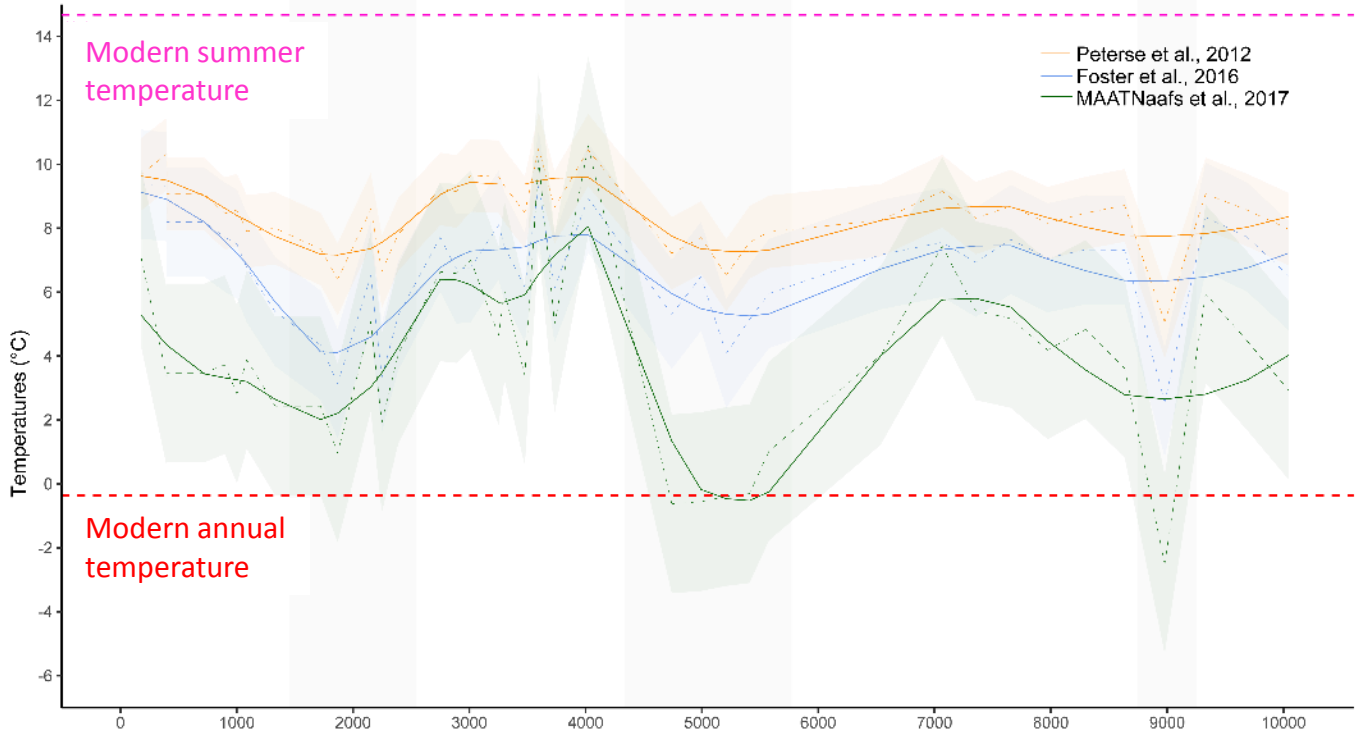
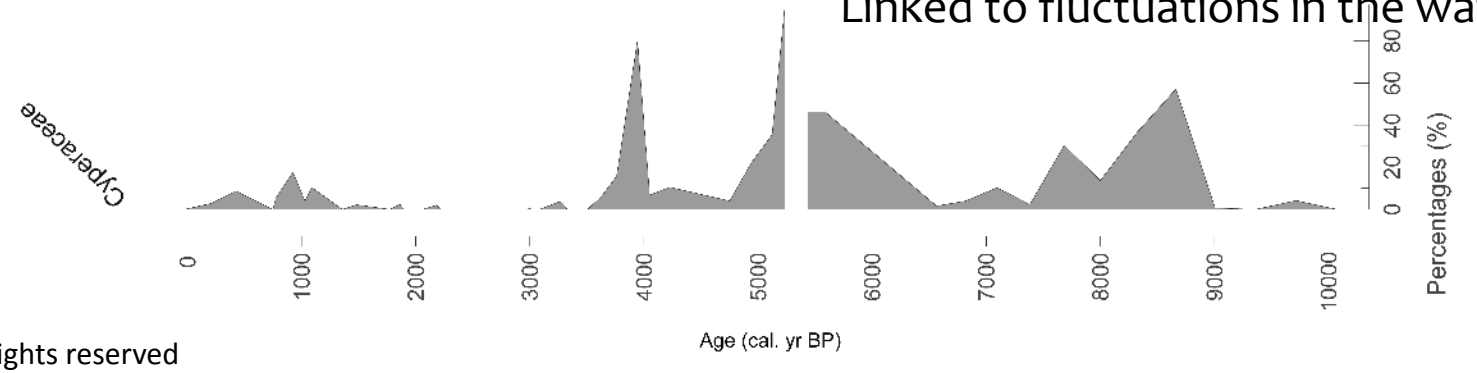
Average annual temperatures by GDGT calibrations

Warning! Preliminary results



Linked to fluctuations in the water table?



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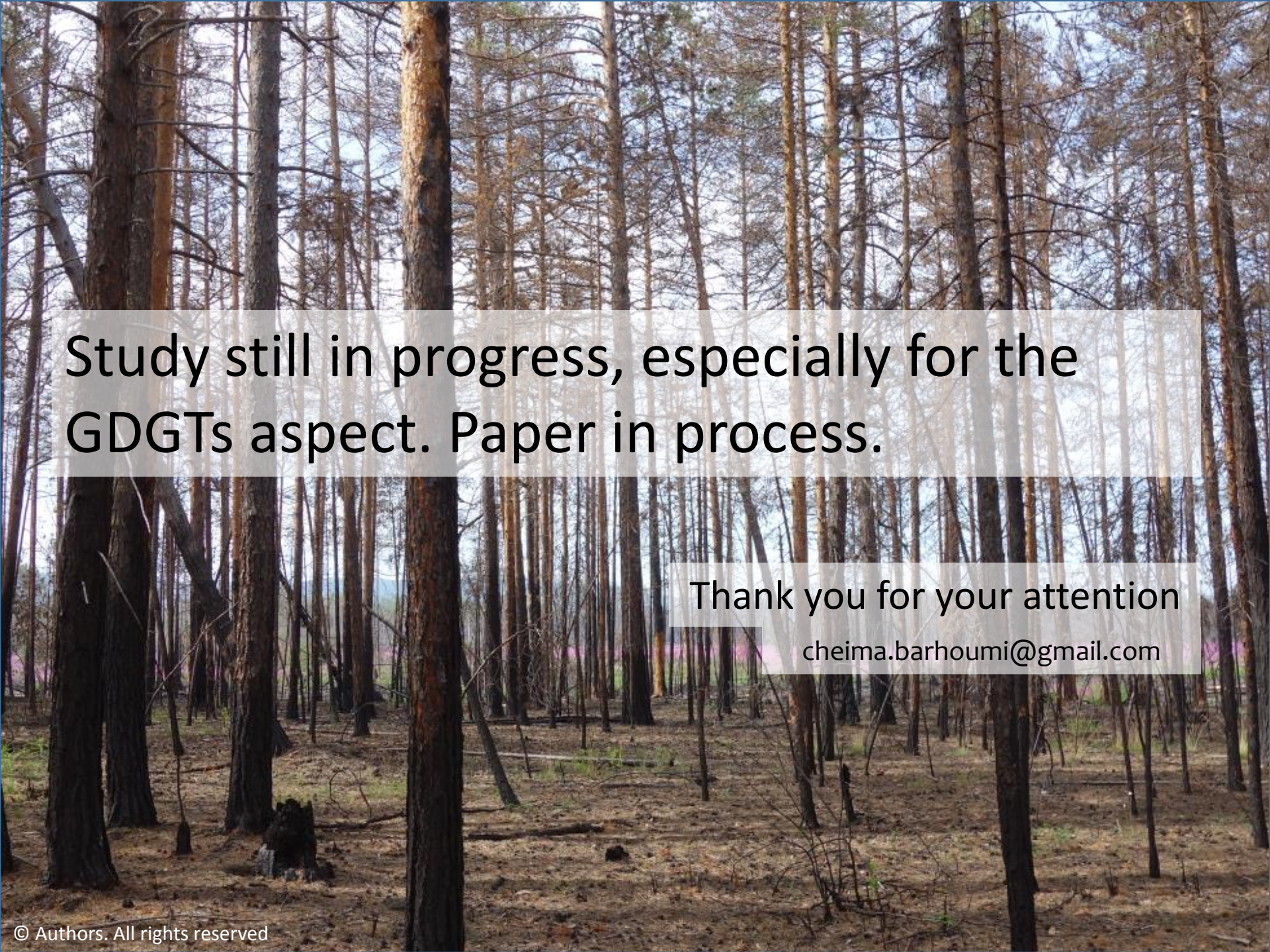

Study still in progress, especially for the GDGTs aspect. Paper in process.

Thank you for your attention

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