PRAGUE
INSPIRE
HACKATHON
2020

2: Agroclimatic map of selected region

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Challenge Description: Agroclimatic map of selected region

This challenge is focused on how the **temperature changes through time** can provide invaluable information for broad number of professionals in agriculture, environmental scientists or historians. The example of such a map is an Agroclimatic Atlas Of Canada, particularly e.g. a map of Fall Freeze Dates: Average Dates of First Fall Freeze.

This challenge is about data processing, data analysis and model-based producing of detailed agroclimatic data of a region based on more coarse data (weather, topography, hydrology, soil type and so on).

Era5-Land

- Copernicus - The Climate Data Store
- Hourly data
- 1979-2019 (last 10 years chosen)
- 7 x 7 km
- https://confluence.ecmwf.int/display/CKB/ERA5%3A+data+documentation

Agroclimatic factors

Last spring frost date

First fall frost date

Frost-free period

Accumulated rainfall per week

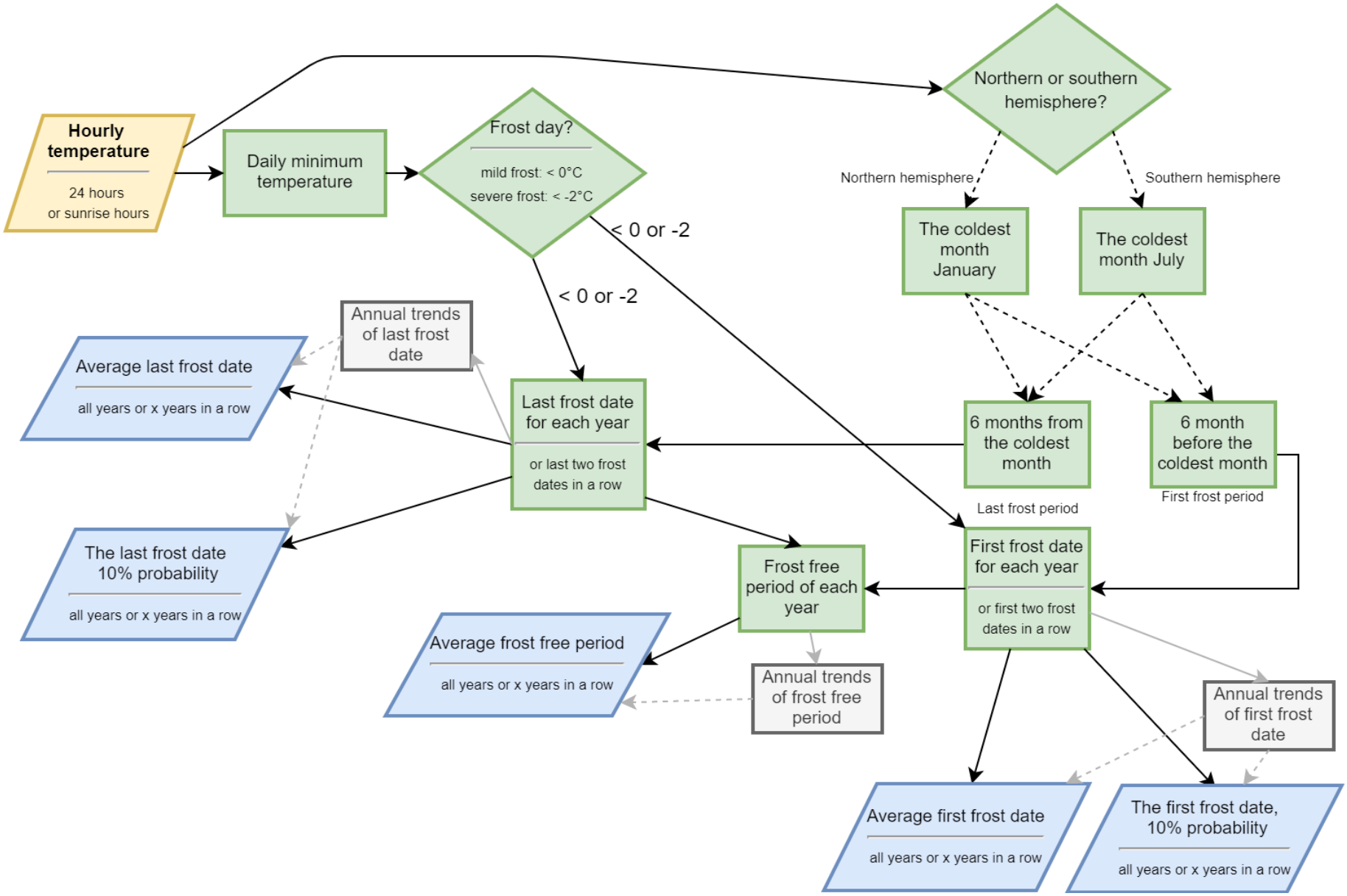
Accumulated solar radiation weekly

Annual/Seasonal Evapotranspiration

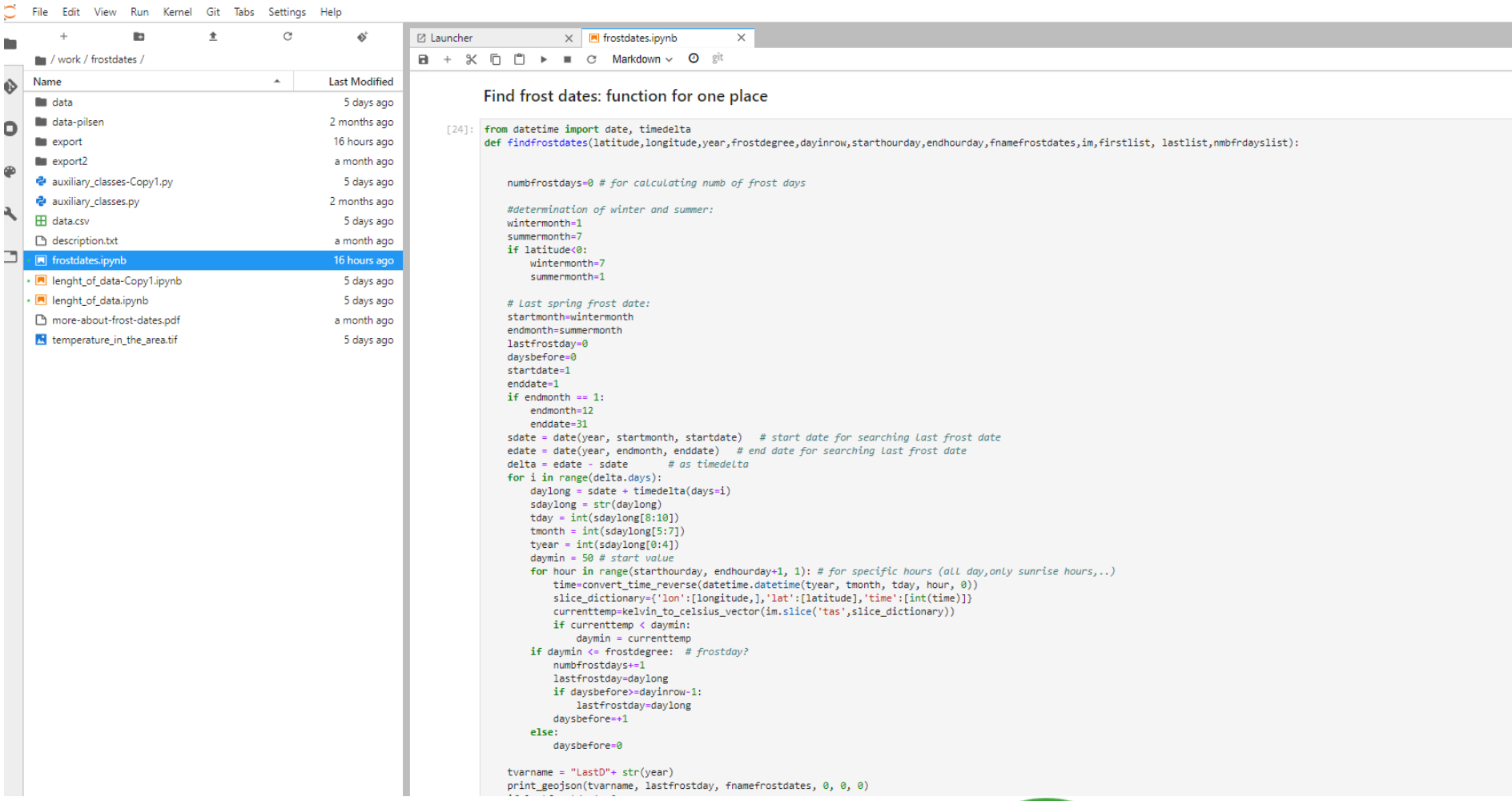
Last fall date with soil temperature above 16/10°C -> application of fertilizers

…

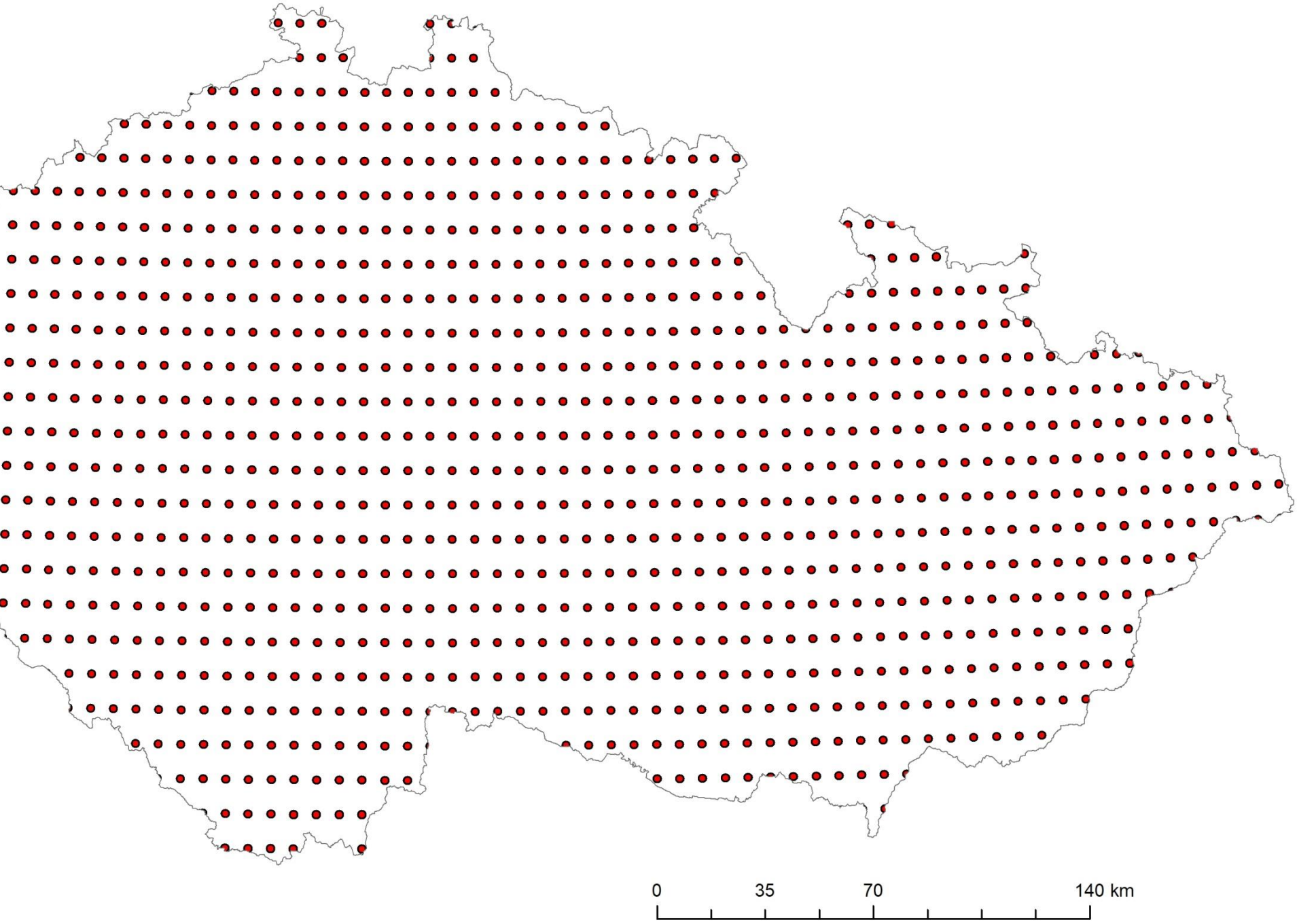
Last spring / First fall frost date



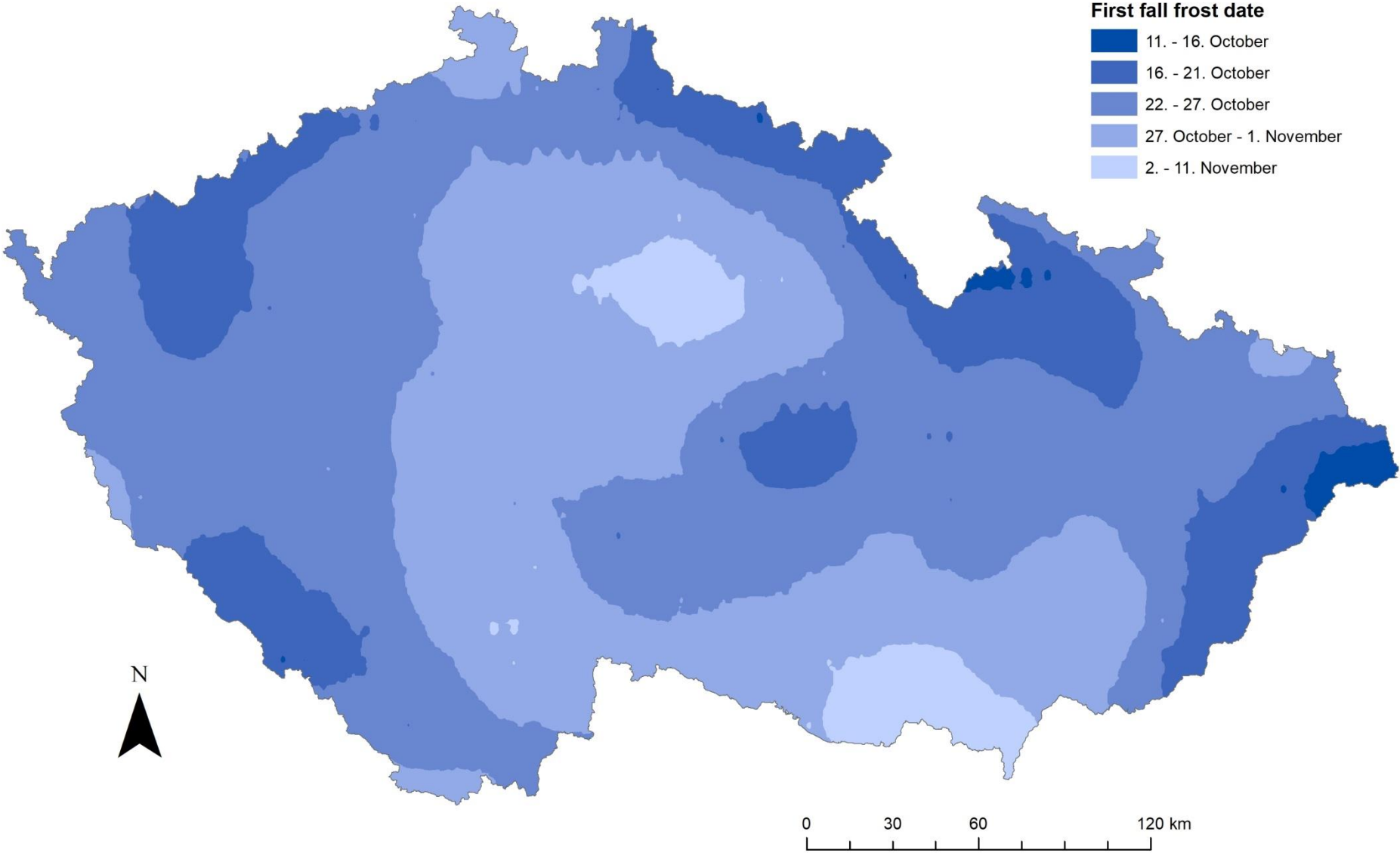
Environment



EUXDAT


0
35
70
140 km

First fall frost dates with 50 probability (2009-2018)



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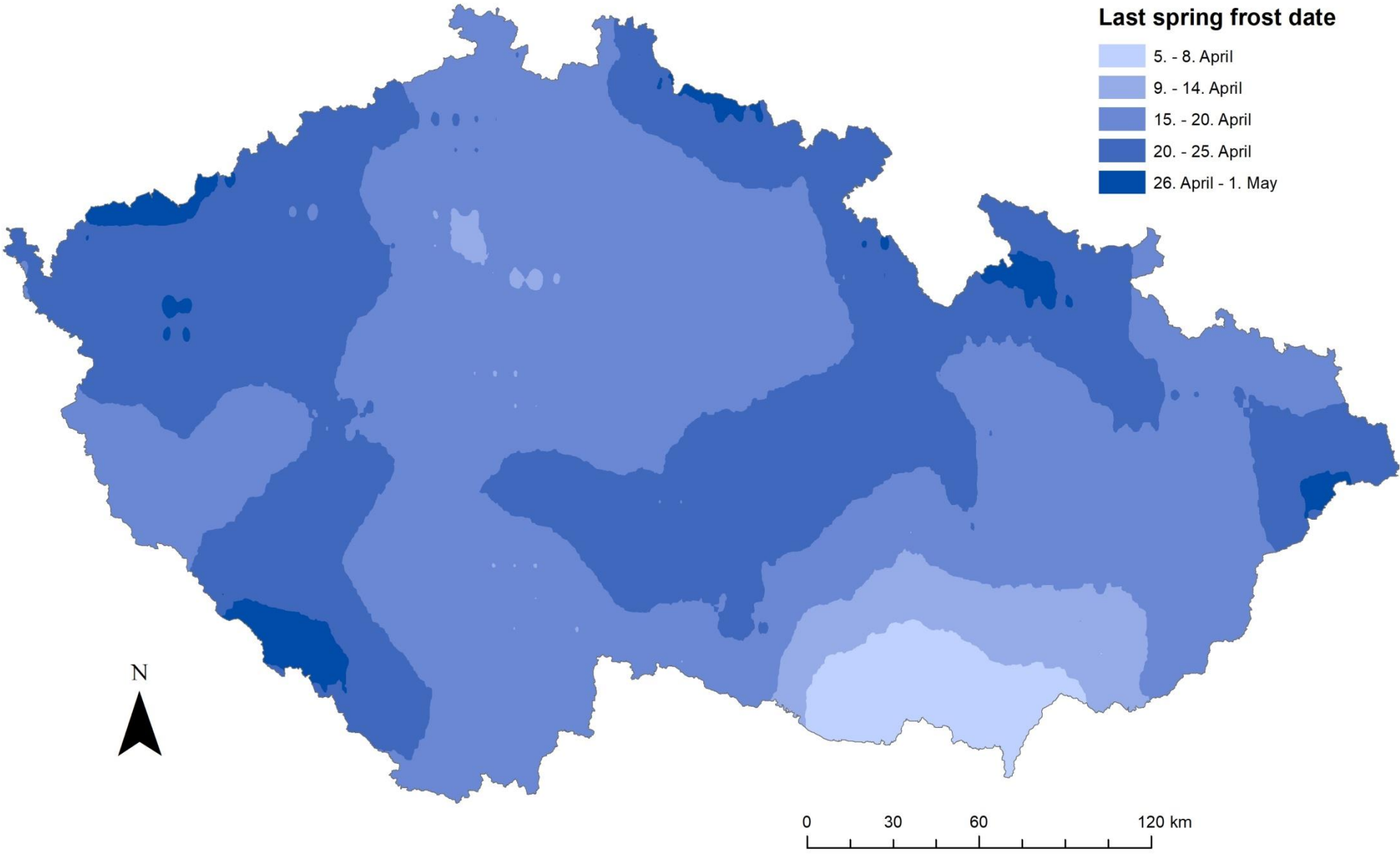
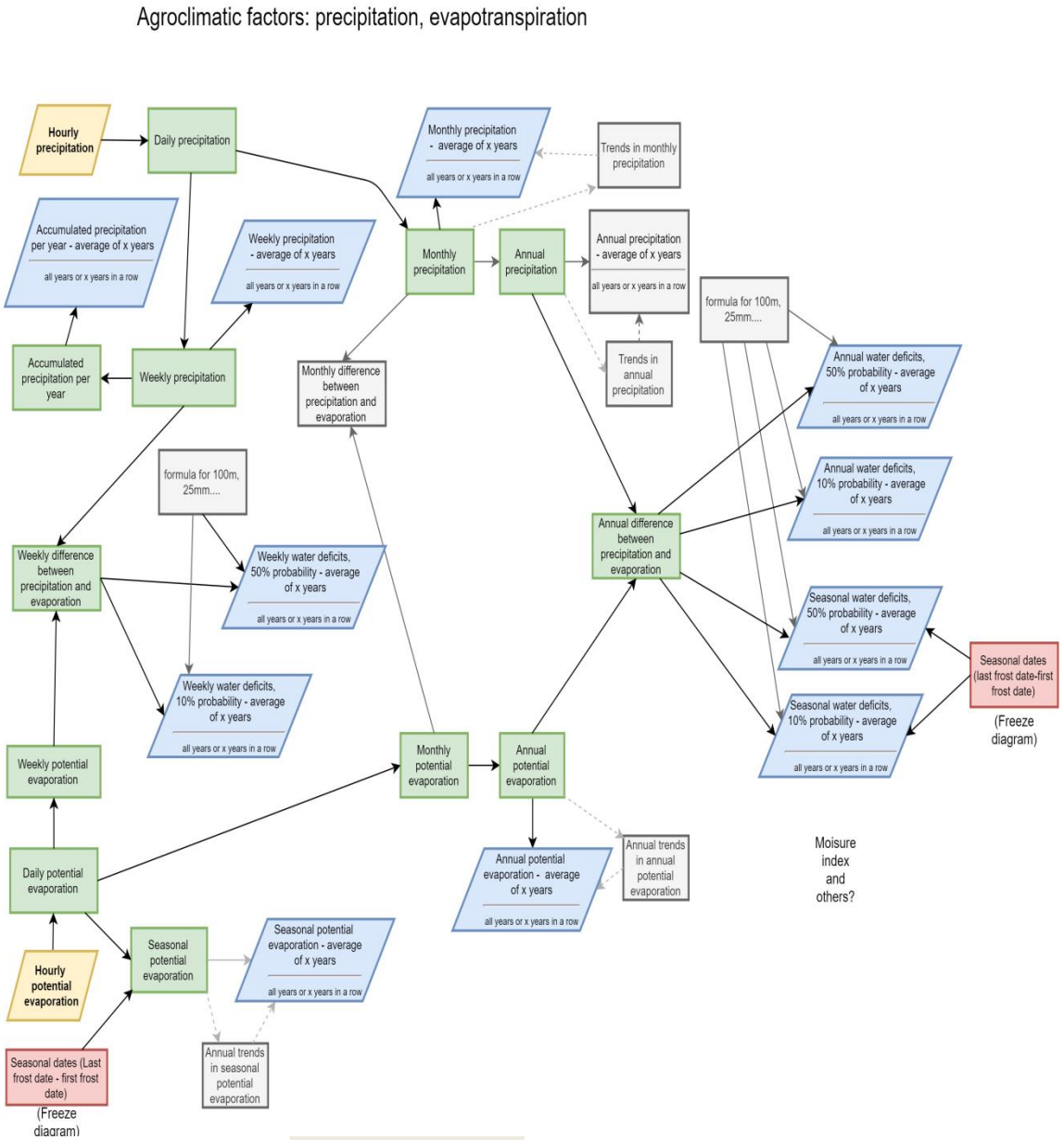
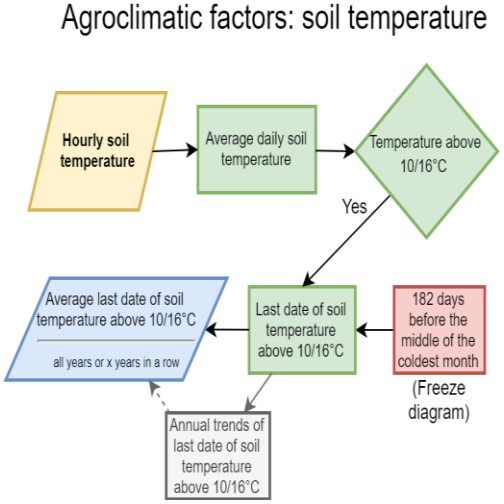
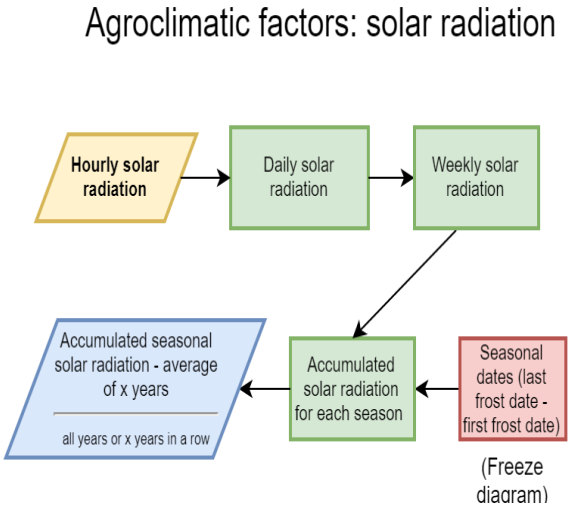
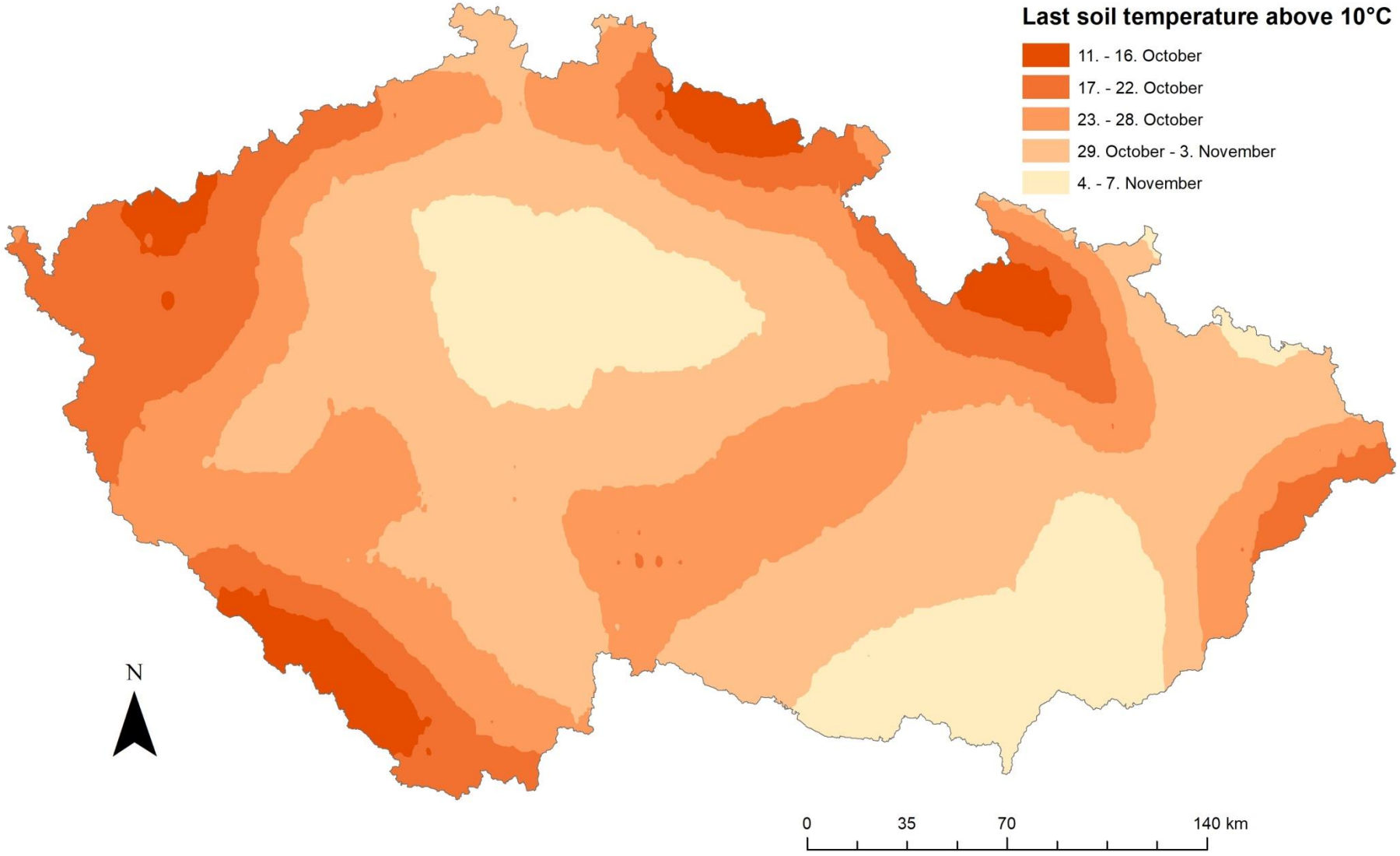


Other diagrams







Last fall soil temperature above 10°C (2009-2018, 50% probability, 100 mm)