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Geography of fire hazard in Swedish Lapland and three reindeer herding communities (Gaba, Jaahkaagaska tjellde, Sirges)

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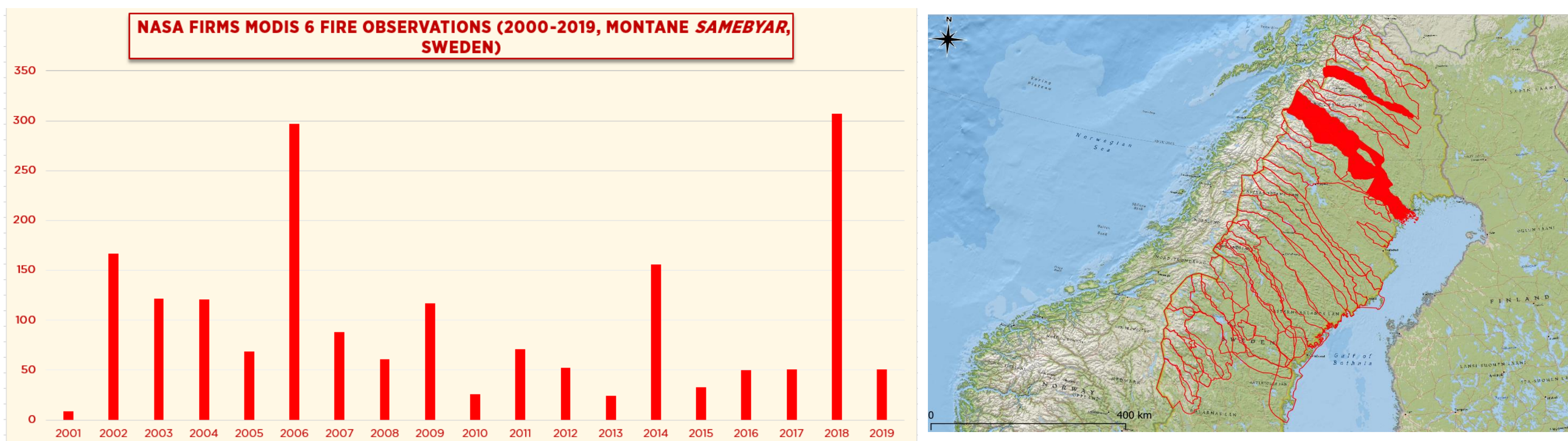
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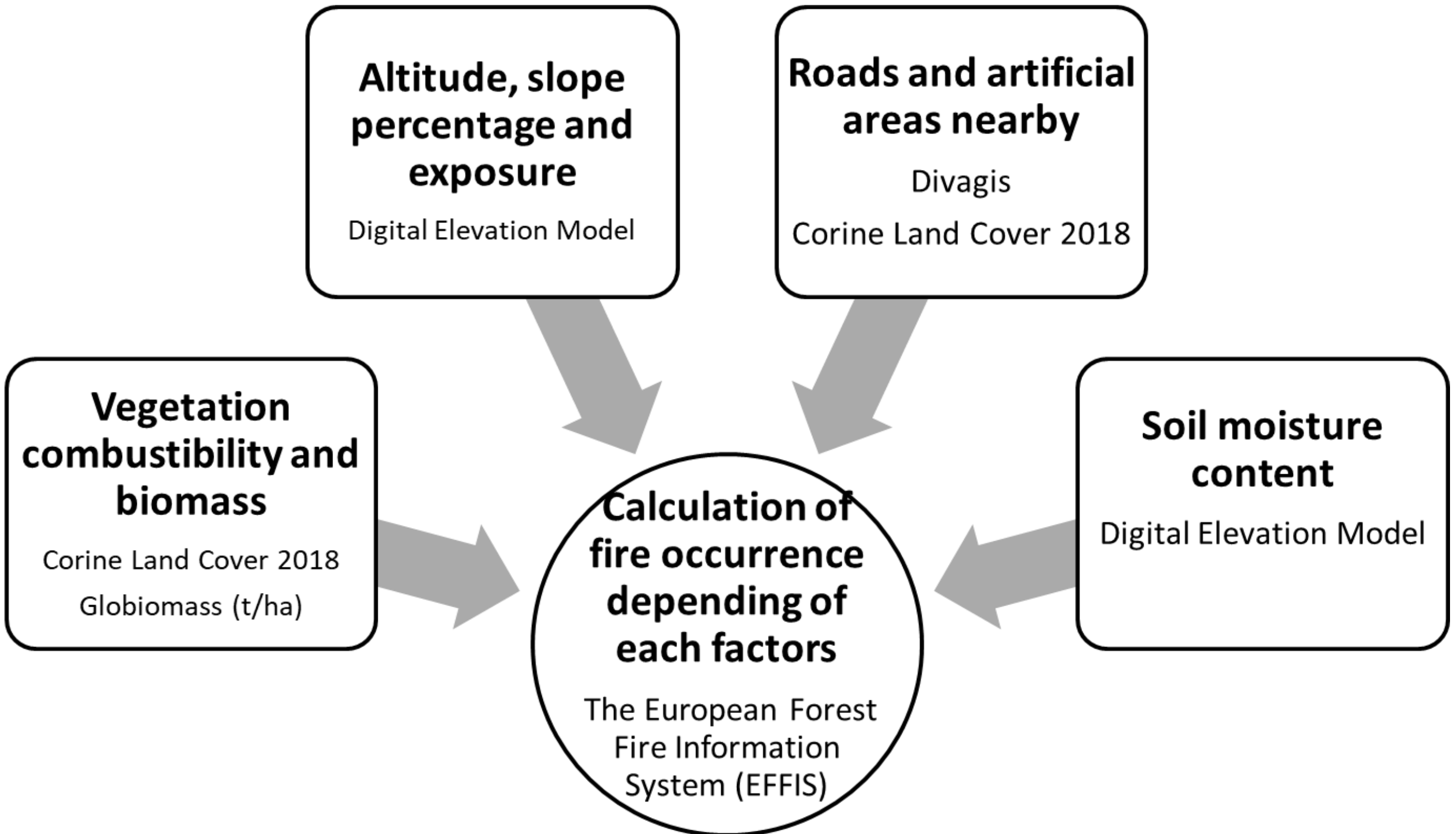
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1 Fire risk as a supplementary issue reindeer herders have to deal with ?

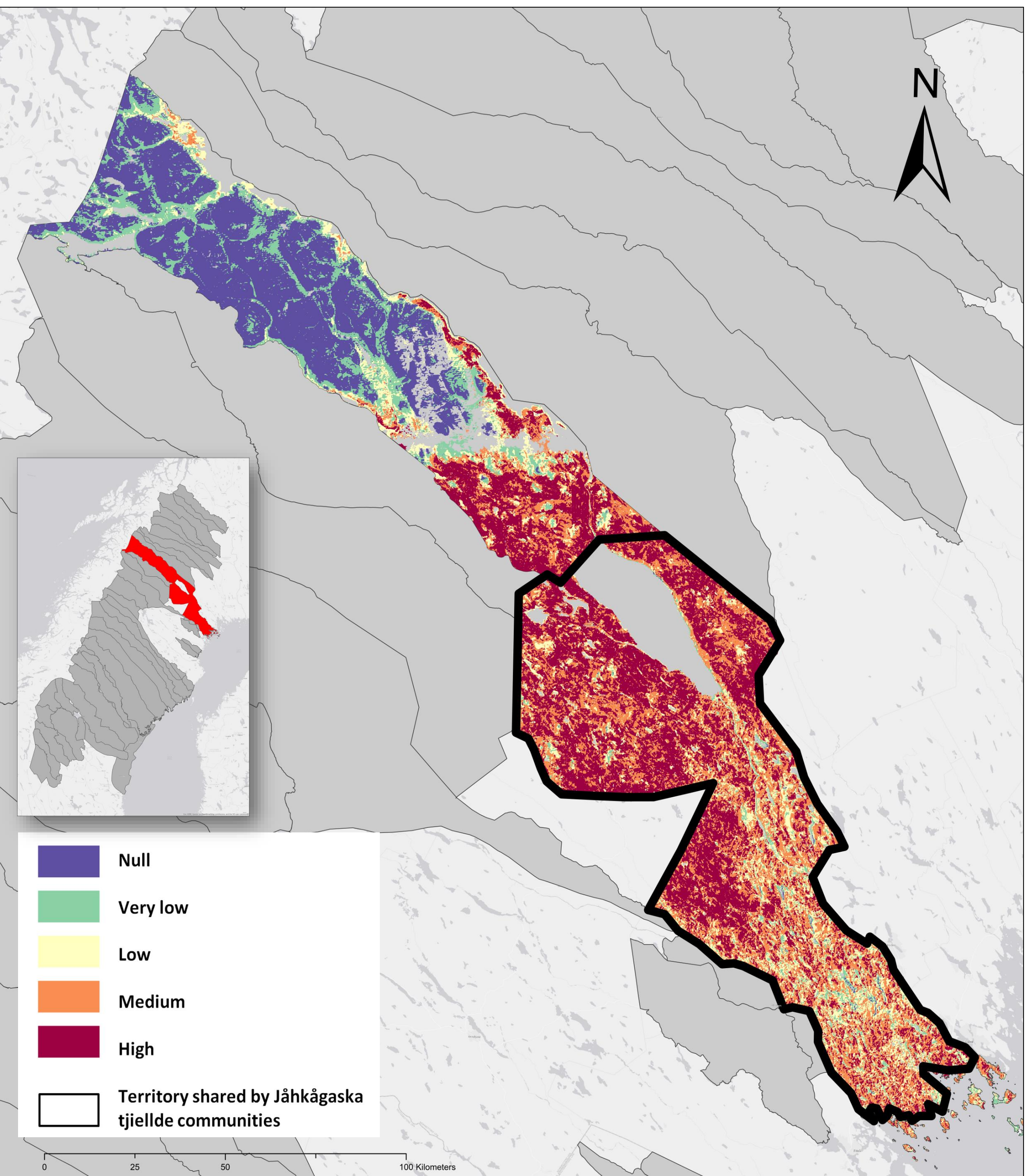


- During summer in Sweden, forest fires constitutes a frequent issue (figure 1)
- How saami reindeer herding communities (=samebyar), already challenged by landscape fragmentation and effects of increasing temperatures (AICA, 2004; Tyler, Turi et al., 2007) are geographically affected by fire risk?
- What are differences in fire risk between samebyar?

2 Data acquisition and fire factorization



5 Focus on Sirges and Jåhkågaska tjiellde lands

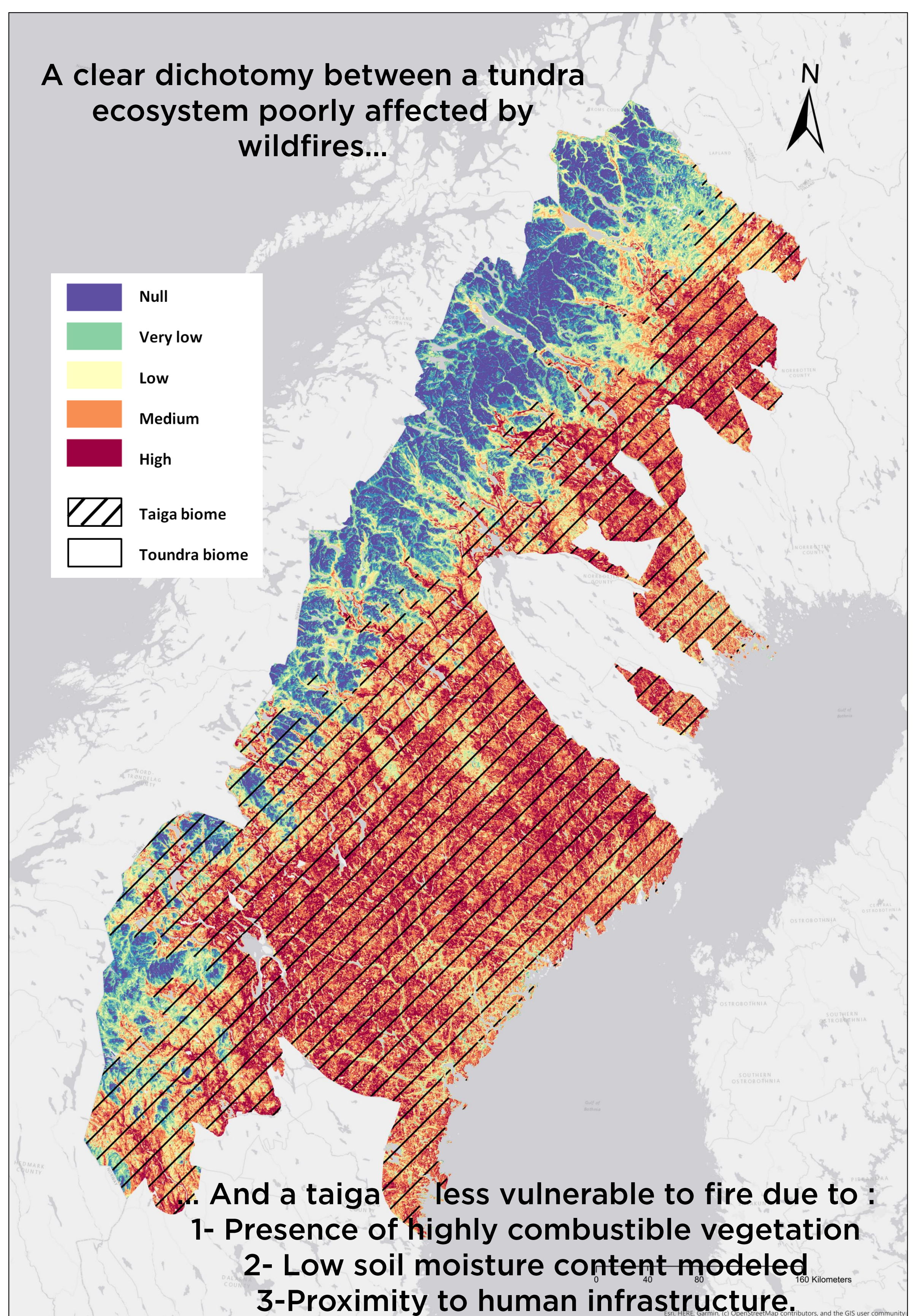


- 2/3 of Sirges sameby lands are impacted by risks of wildfires
- Common winter pastures shared with Jåhkågaska tjiellde sameby are likely to be affected by wildfires...
- ...Unlike summer pastures protected by the presence of low biomass, low fuel vegetation and topomorphological conditions that are not suitable for the spread of fire (steep slopes, high altitude).

3 Building the fire risk models

- Construction of intermediate indices: combustibility index, human occupancy index, topographic index and humidity index based on identified risk factors (Dagorne, 1994).
- Overlay of intermediate indices to obtain the final fire risk index.

4 Mapping the fire risk model at the regional scale



6 Discussion and ways of improving

- 38% of the fires located by the VIIRS satellite programme were detected in high fire risk areas: inconclusive results.
- The fire risk index used in this study was initially created for Mediterranean regions (Dagorne, 1994), it is important to establish risk factors specific to boreal regions (e. g. distinction between wetlands, drylands and arid areas and Abies spruce and pine forests)
- Studying links between forest management, human presence and wildfire risk
- Drafting a report for the Swedish Saami Parliament

Sources and contact

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