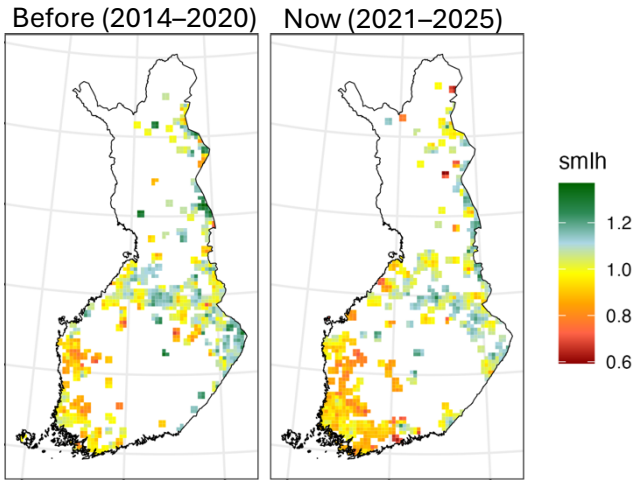
Update on the population genetic status of the Finnish wolf population - is the population still genetically subdivided?

This work builds on the previous national FRV project assessment (2014–2021) where new DNA data from 2021–2025, covering approximately one wolf generation, has been analysed. The sample materials comprise ~6000 tissue and field collected samples corresponding to ~917 individual wolves with 180 overlapping from the earlier period.

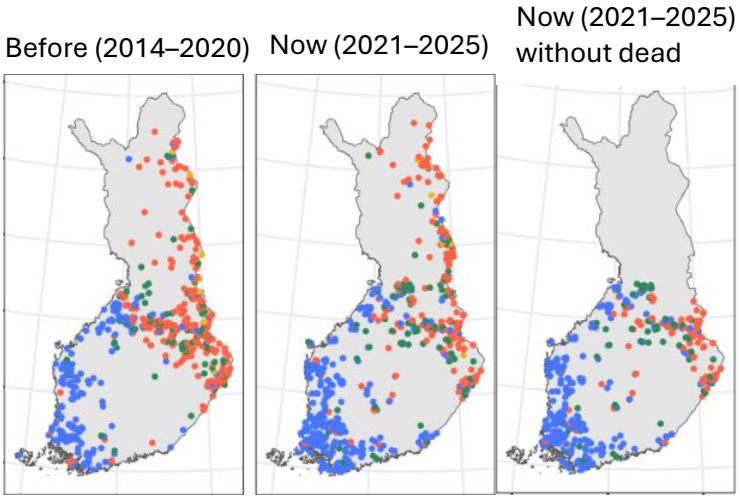
Inbreeding is increasing in the Finnish wolf population



- Blue/green = less inbreeding
- red/orange = more inbreeding

Inbreeding is increasing particularly in southwestern Finland, where young adults tend to establish territories quite close to the territory they were born. Close-kin matings (e.g., sibling or parent–offspring) are rare; however, matings among more distant relatives (such as cousins and beyond) are becoming more common. As a result, the population is losing genetic diversity, because inbreeding populations lose genetic diversity more rapidly than outbreeding populations.

The Finnish wolf population remains genetically subdivided into an eastern and western subpopulation



Blue = western origin
Red = eastern origin
Green = mixed

This is because the western sub-population has grown rapidly in recent years and western wolves are spreading towards eastern Finland. At the same time the eastern sub-population has remained at the same size or even decreased a little, and fewer eastern wolves move west. This means that the genetic exchange between the populations is still not good enough, which contributes to the inbreeding.

One factor is mortality, many wolves are killed in traffic or due to damage-based derogation licenses, and if they die before reproducing they do not contribute to geneflow. This is especially important for dispersing wolves that would connect the regions.

The key result is that the population has been shifting. The Western Finland subpopulation is growing and spreading, while the Eastern Finland subpopulation has been stable or declining. At the same time, genetic health is worsening due to lack of geneflow and rising inbreeding.

This is the current state of the population, but trends can change in the next generation. Luke will continue genetic monitoring of the wolf population, and use genetic data in hunting decisions aiming to preserve genetically valuable territories.