



NLS
NATIONAL
LAND SURVEY
OF FINLAND

Climate-smart Land Consolidation

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Why Invest in Land consolidation?

Integrated Environmental and Climate Actions

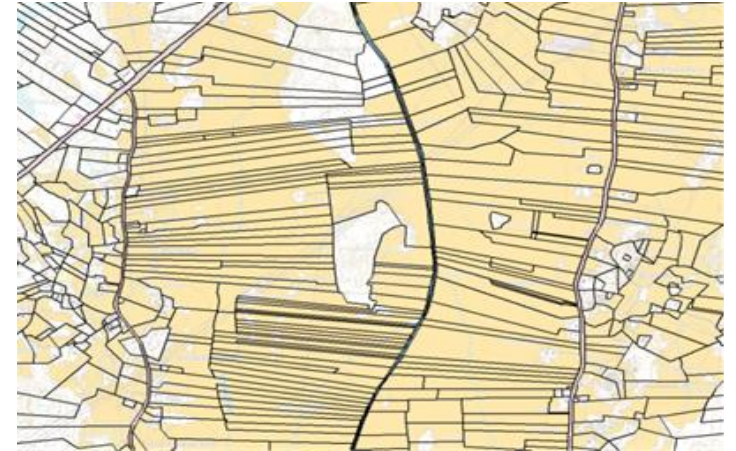
Land consolidation projects not only improve land structure but also include measures that reduce emissions and enhance environmental and climate outcomes.

Supporting Climate Goals

These projects play a key role in implementing the climate plan for the land use sector.

Motivation Through Profitability

When the conditions and profitability of food production improve, it becomes more motivating to implement actions that reduce environmental and climate emissions.



Case Reisjärvi

Climate and Water Management Wetland Project

- Implemented with state funding through ELY
- Executed by private landowners
- State exchange land (MAKERA) allocated to the area
- Farmer's cultivated field area remains unchanged
- Wetland size: 2.7 hectares

Climate Impact Assessment

Climate Benefit: €60,000

- Wetland implementation cost: €25,000
- Land value reduction under wetland: €11,000
- Emission reduction: 47 t CO₂ eq/year
- Price per emission ton: €70/ton

Net Climate Benefit: €24,000



Case Nivala-Karvoskylä

Planned Climate and Water Management Wetland

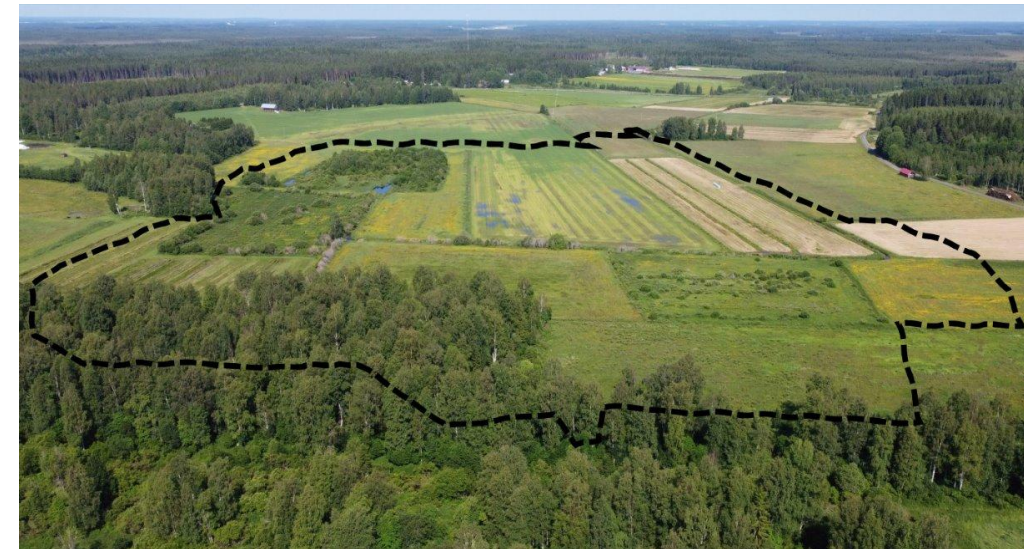
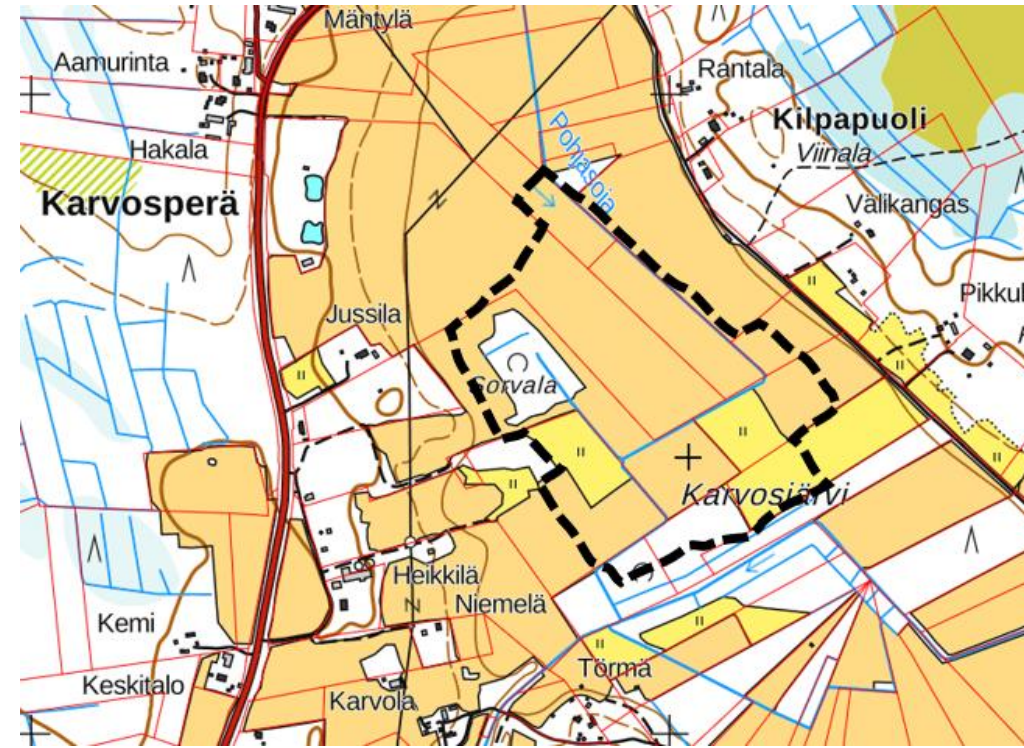
- Implemented by private landowners
- State exchange land (MAKERA) allocated to the area
- Farmers' cultivated field area remains unchanged
- Wetland size: approx. 19 hectares

Estimated Climate Impact

Climate Benefit: €560,000

- Wetland implementation cost: €75,000
- Land value reduction under wetland: €110,000
- Emission reduction: 430 t CO₂ eq/year
- Price per emission ton: €70/ton

Net Climate Benefit: €375,000



Food production on the Road?

Agricultural traffic in Kiuruvesi illustrated as commuting routes between field parcels and farm centers.

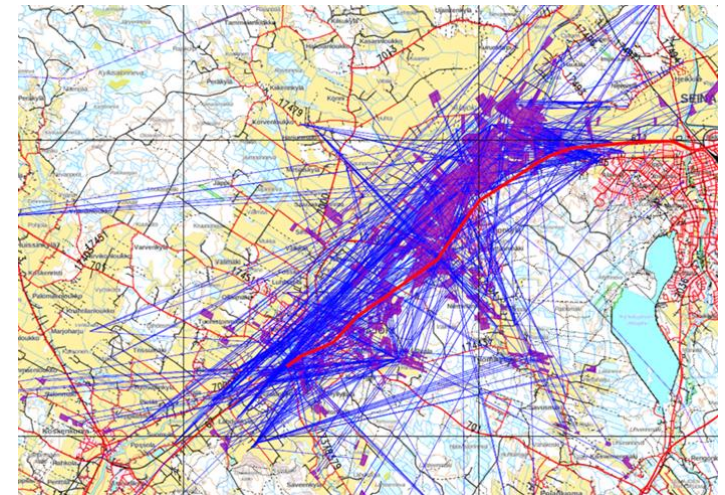
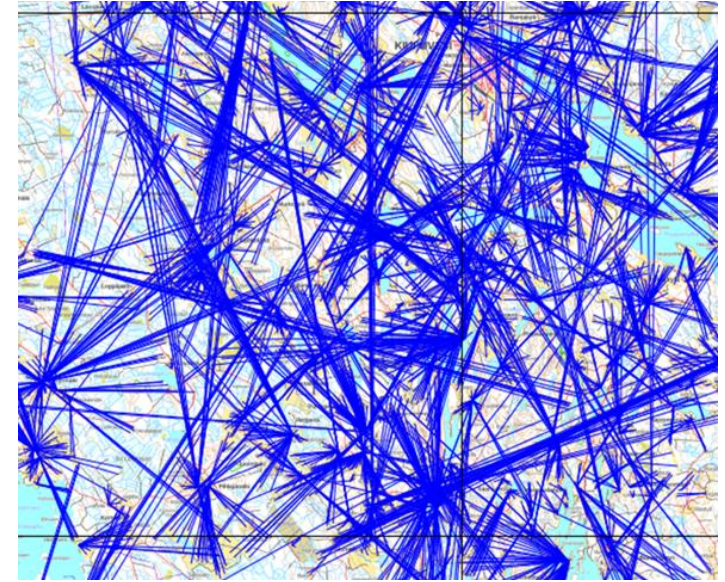
As farm sizes grow, the distance between farm centers and fields increases, and agricultural traffic on main roads rises.

Poor land consolidation causes unnecessary costs and labor time **as well as additional greenhouse gas emissions.**

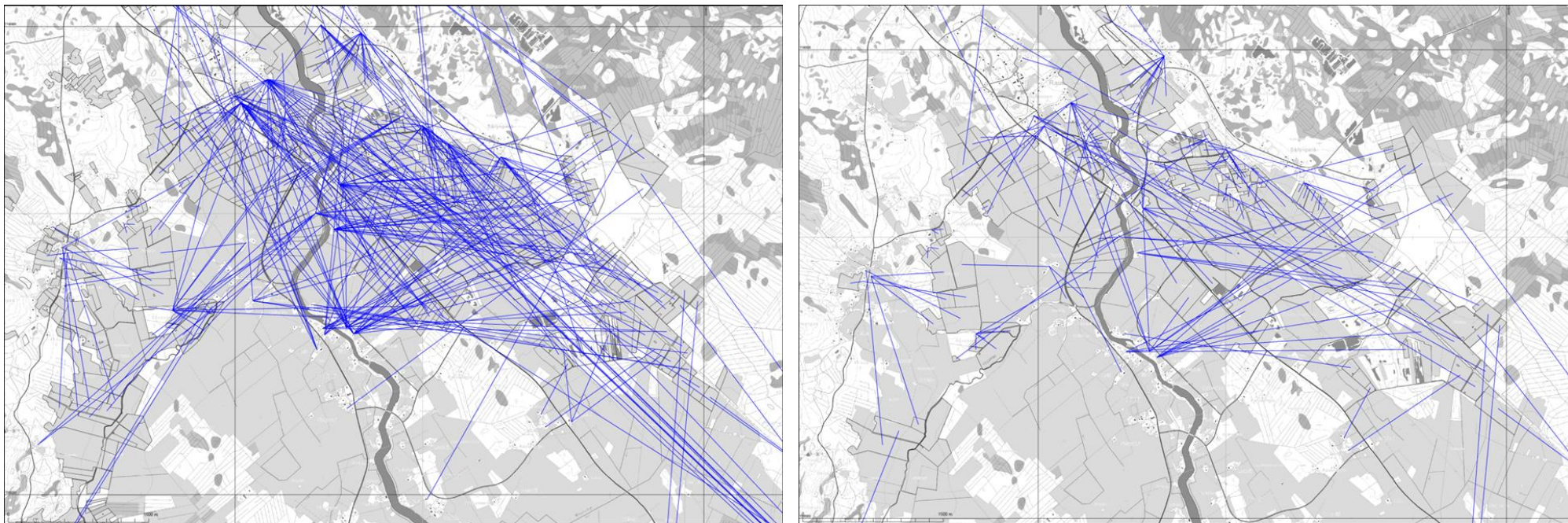
The image shows Highway 67 (Ilmajoki–Seinäjoki) and commuting routes between fields.

Access to parcels often requires using main roads, where average daily traffic exceeds 10,000 vehicles.

Encounters between slow and fast traffic increase risks for farmers and other road users.



Change in Travel demand



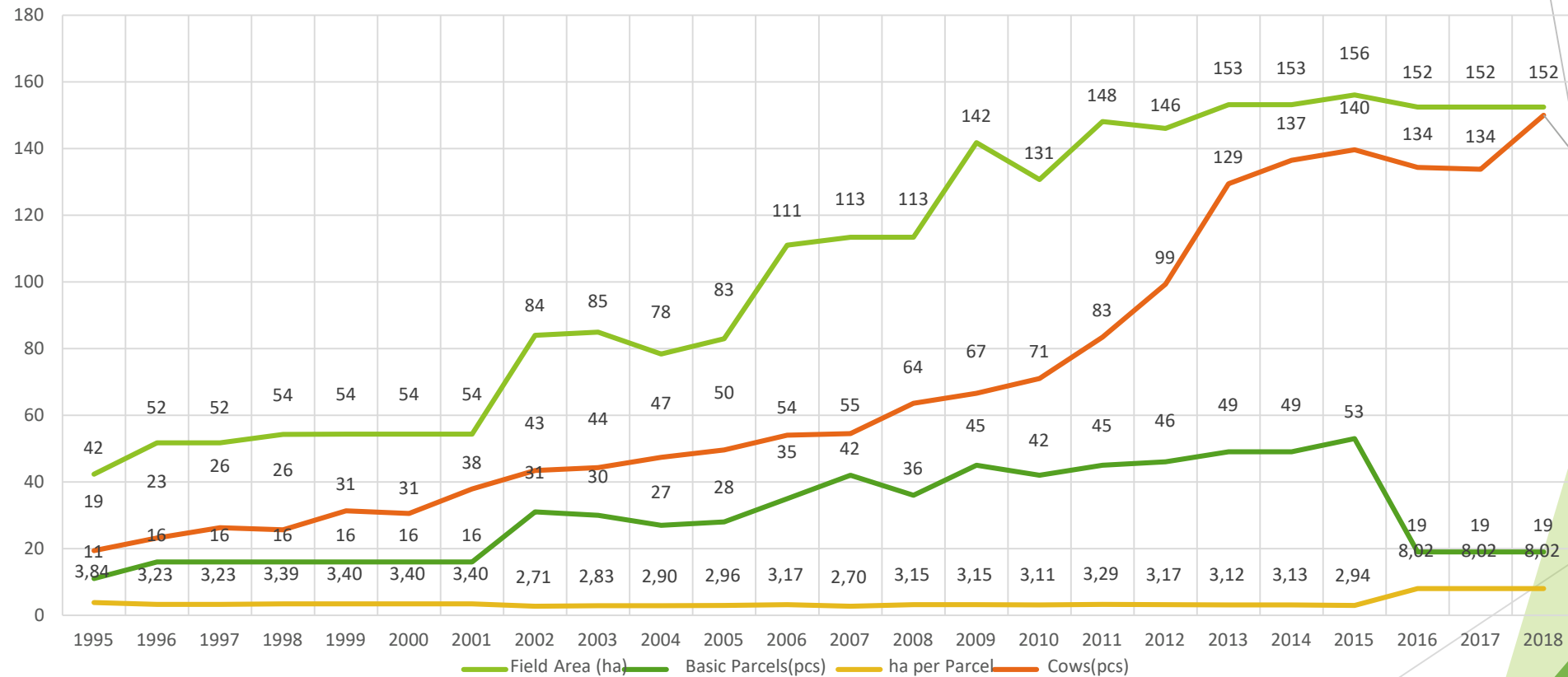
In Raudaskylä, Ylivieska, 406 hectares of fields were exchanged, resulting in 8,406 km and 369 hours less agricultural traffic per year.

More Profitable Farming Through Land Consolidation

Farmer Juho Nivala, Kukkula Farm



Farm Development 1995 - 2018



Analysis of Changes in the Numbers

- Average parcel size increased from 3.21 ha to 10.88 ha
- Number of parcels decreased from 48 to 14
- Total cultivated area remained nearly the same
- **Reduction in road travel: approx. 2,800 km/year**
 - **Equivalent to Sievi–Paris distance: 2,809 km**
- **Annual cost savings: €12,435**



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– we secure the future

