R&D – A MULTITOOL FOR BALANCING HIGH EXPECTATIONS IN STATE FOREST

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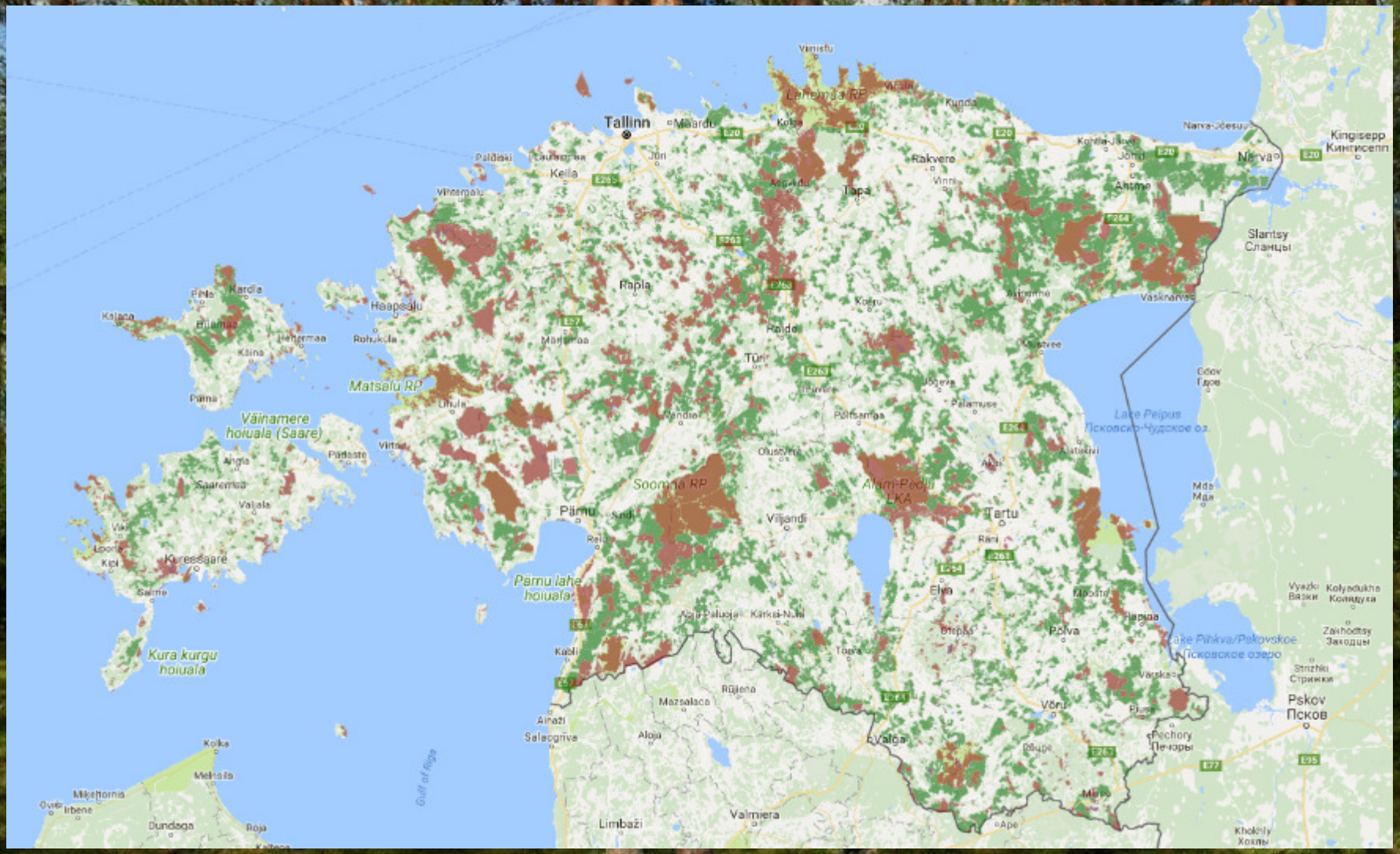
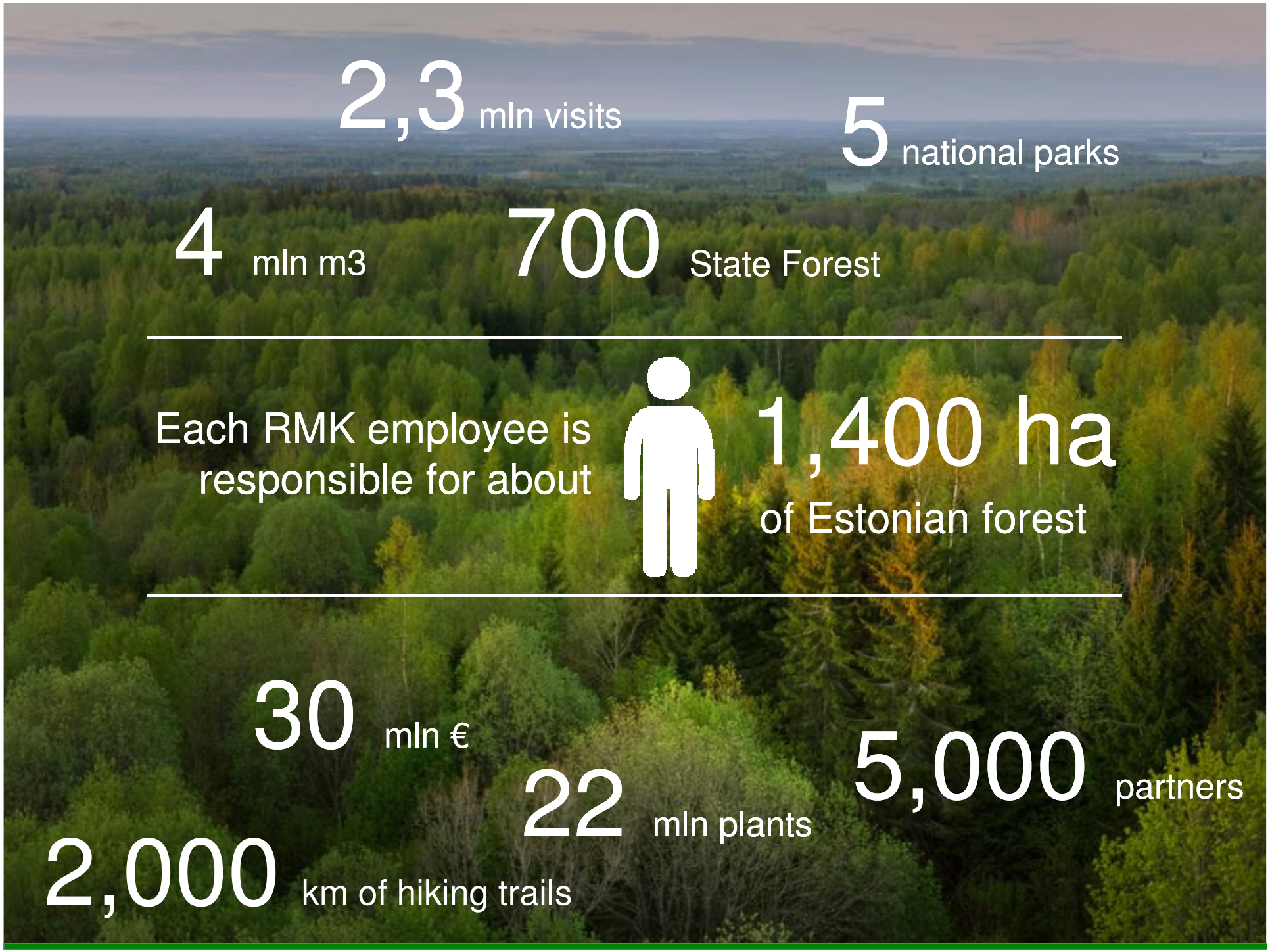
Innovation in the forest-based sector: from idea to practice

24.10.2017


More than a half of Estonia is forest,
of which the state owns a little more than a half

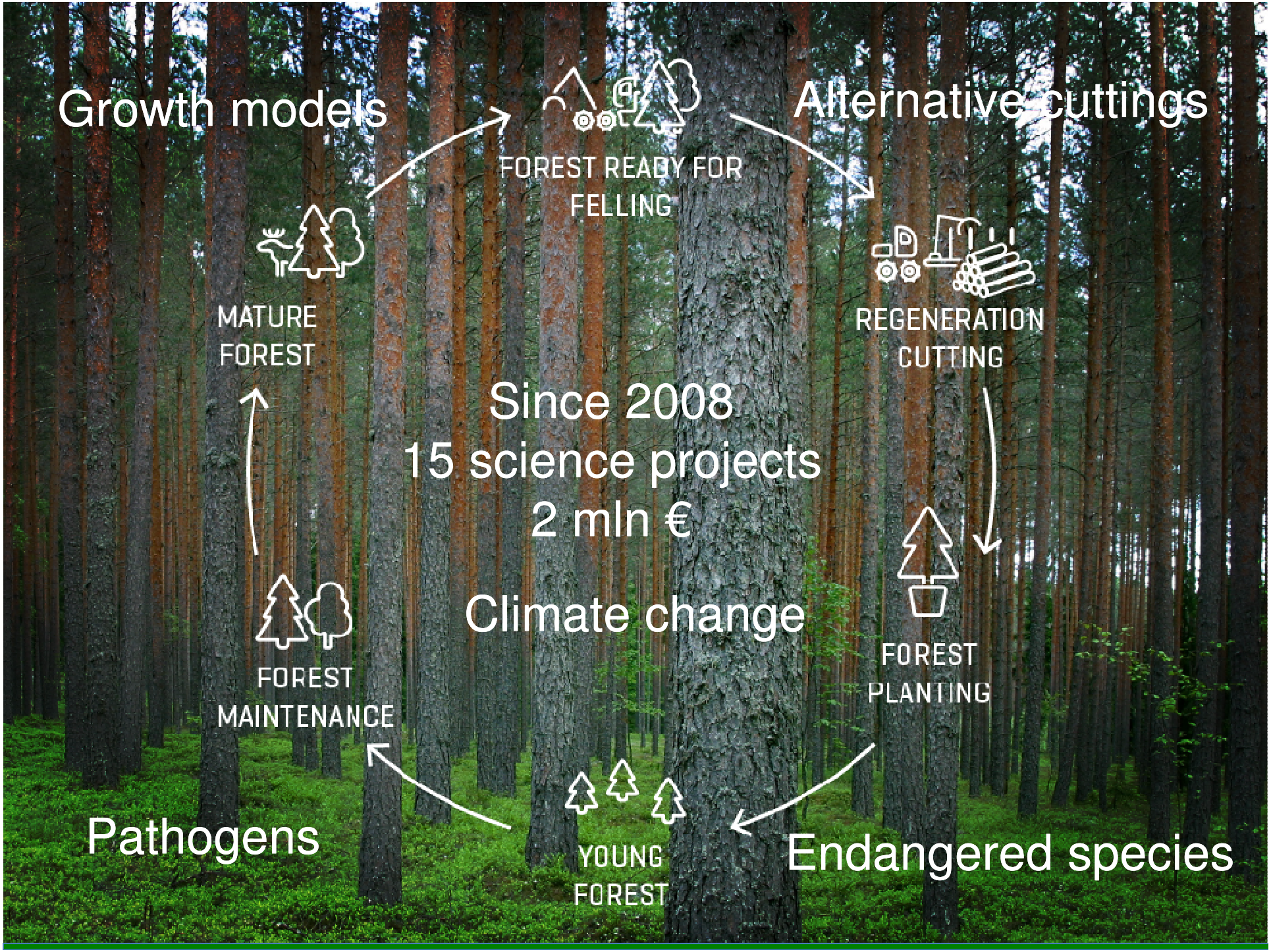


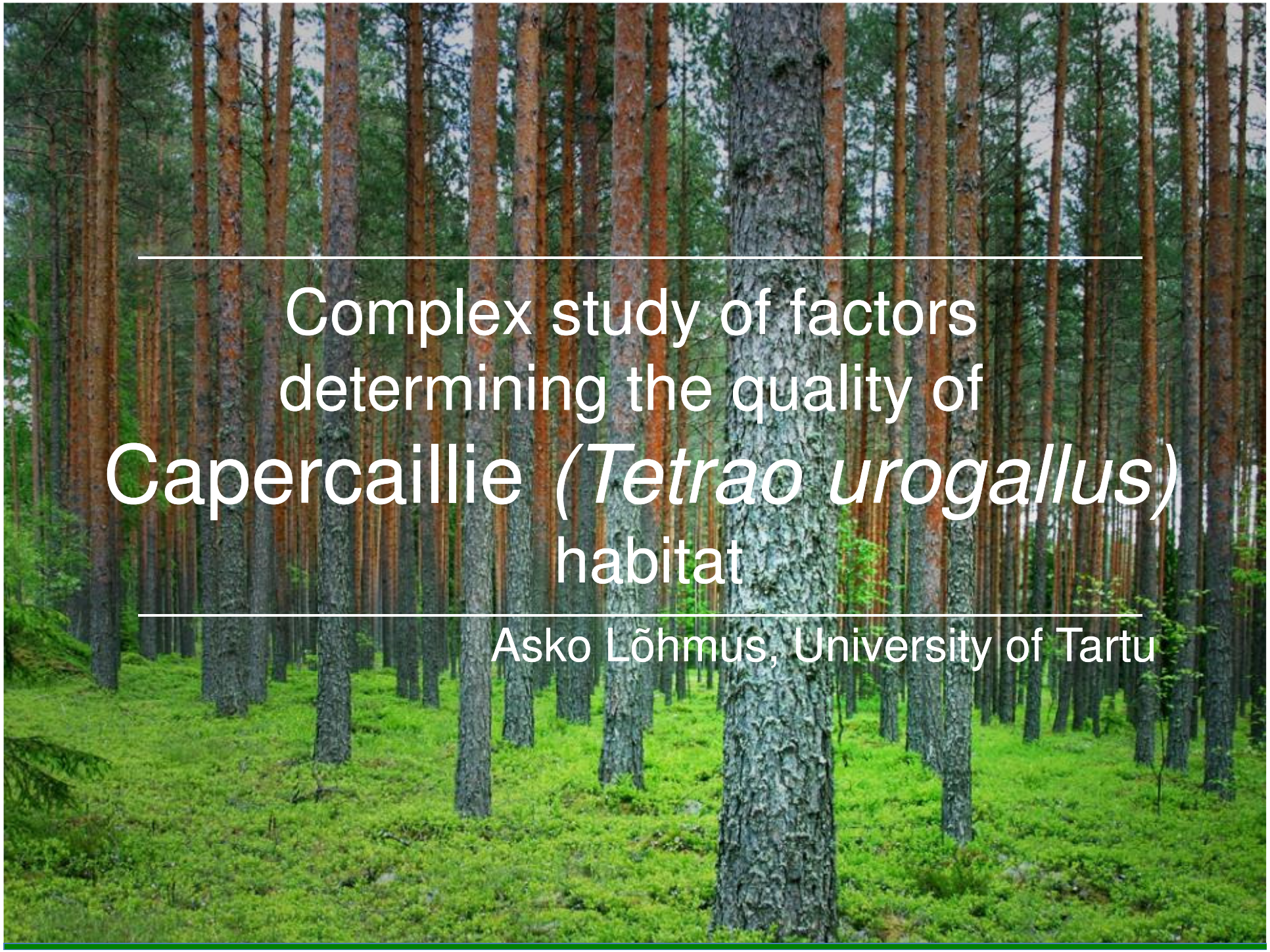
25% of Estonian forest and
40% of State forest is protected (marked red on the map)


2,3 mln visits
5 national parks
4 mln m3
700 State Forest
Each RMK employee is responsible for about
1,400 ha
of Estonian forest
30 mln €
22 mln plants
5,000 partners
2,000 km of hiking trails


RMK fulfils its goals through 7 areas
NATURE CONSERVATION
LAND USE MANAGEMENT
TIMBER MARKETING
FOREST MANAGEMENT
VISITOR MANAGAMENT AND NATURE EDUCATION
SEED AND PLANT MANAGEMENT
FOREST SURVEY


Responsibility
Interest
Expectations


Growth models
FOREST READY FOR FELLING
Alternative cuttings
MATURE FOREST
REGENERATION CUTTING
Since 2008
15 science projects
2 mln €
Climate change
FOREST MAINTENANCE
FOREST PLANTING
Pathogens
YOUNG FOREST
Endangered species



Complex study of factors determining the quality of Capercaillie *(Tetrao urogallus)* habitat

Asko Lõhmus, University of Tartu

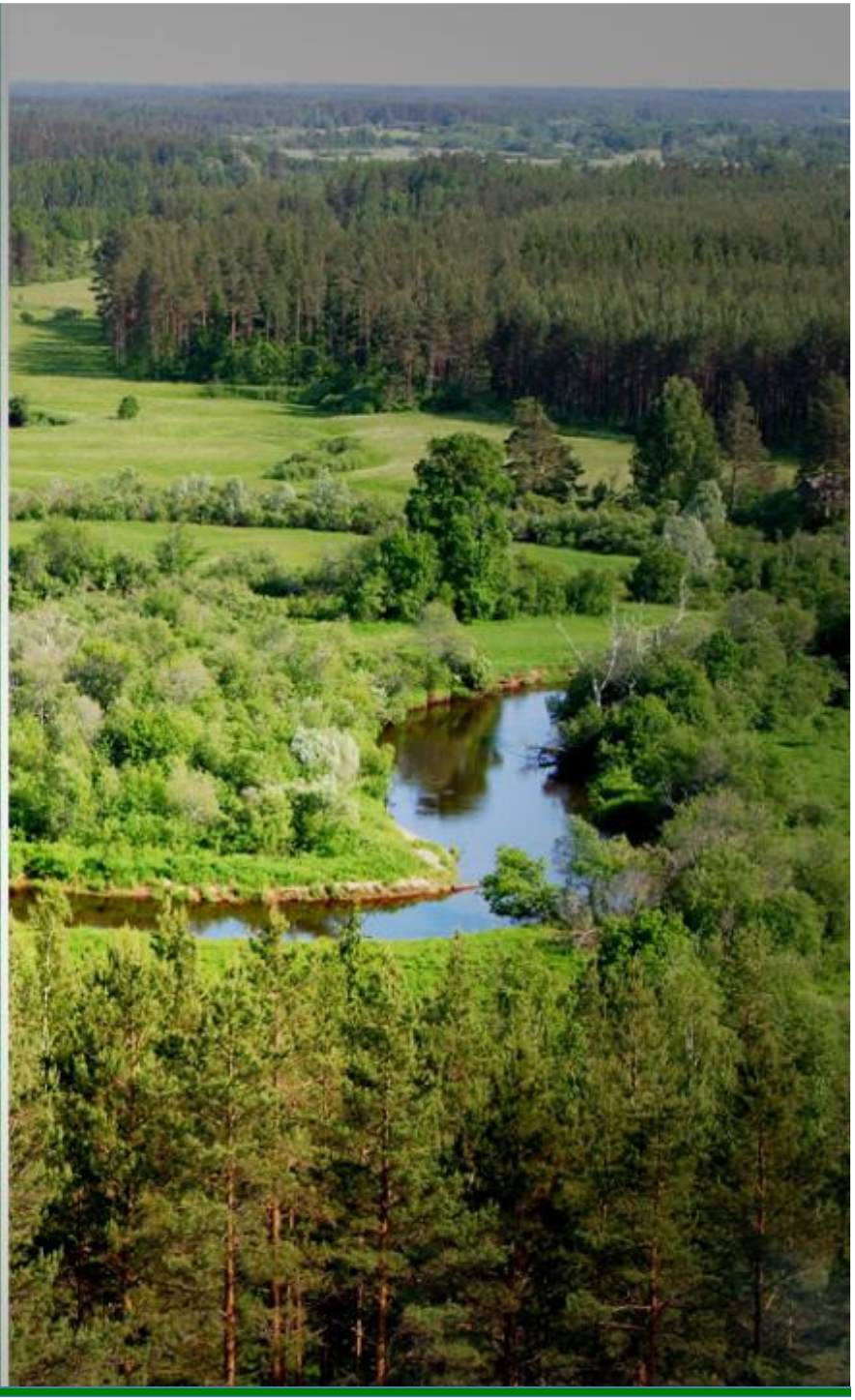
Reasearch components

1) How big is the area used?
2) Predators
3) Effect of cuttings and ditching

Results & follow up

1) Low breeding success
2) Eggs are eaten
3) Higher risk near protected „playgrounds“

→ **Predators, combined effect**

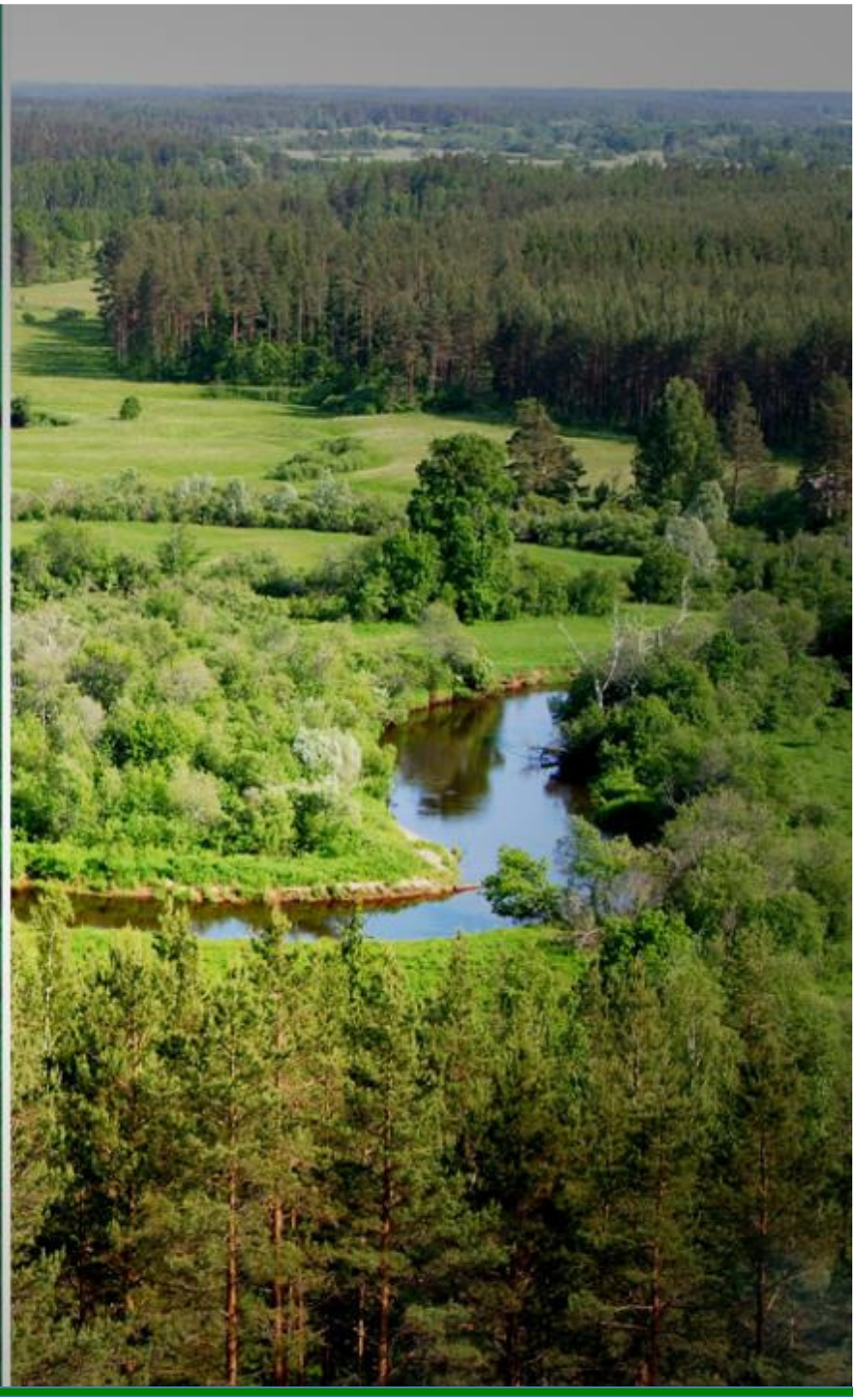


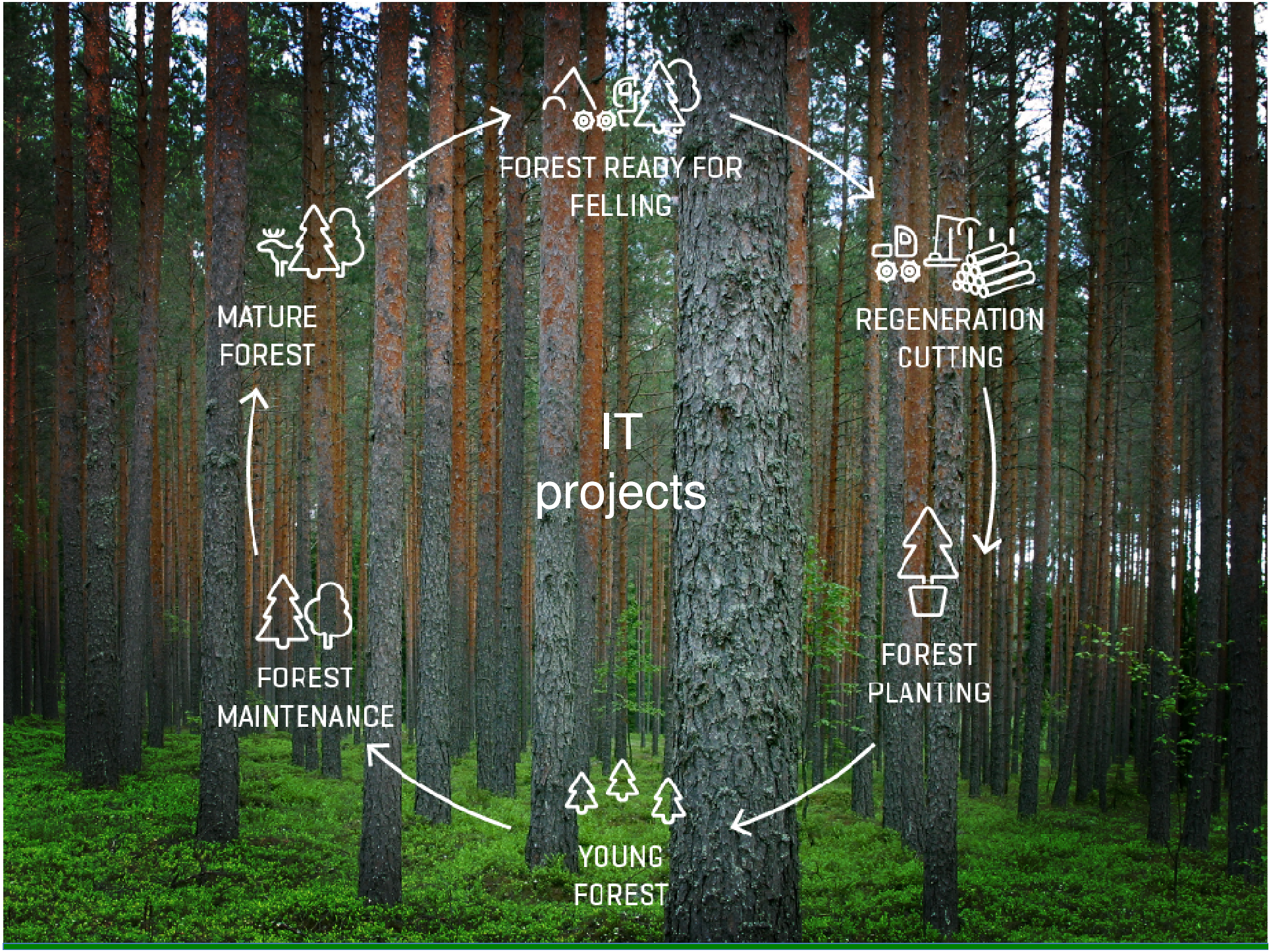
Conversion of hardwood into high value chemicals

Lauri Vares, University of Tartu

Reasearch

- Studies new technologies to produce **highly valued chemicals** which could replace fossil oil based solutions currently used
- Could be used in material, chemistry industry, in pharmacy
- e.g. breast cancer cure, plant protection, cosmetics




FOREST READY FOR FELLING
REGENERATION CUTTING
FOREST PLANTING
YOUNG FOREST
FOREST MAINTENANCE
MATURE FOREST
IT projects

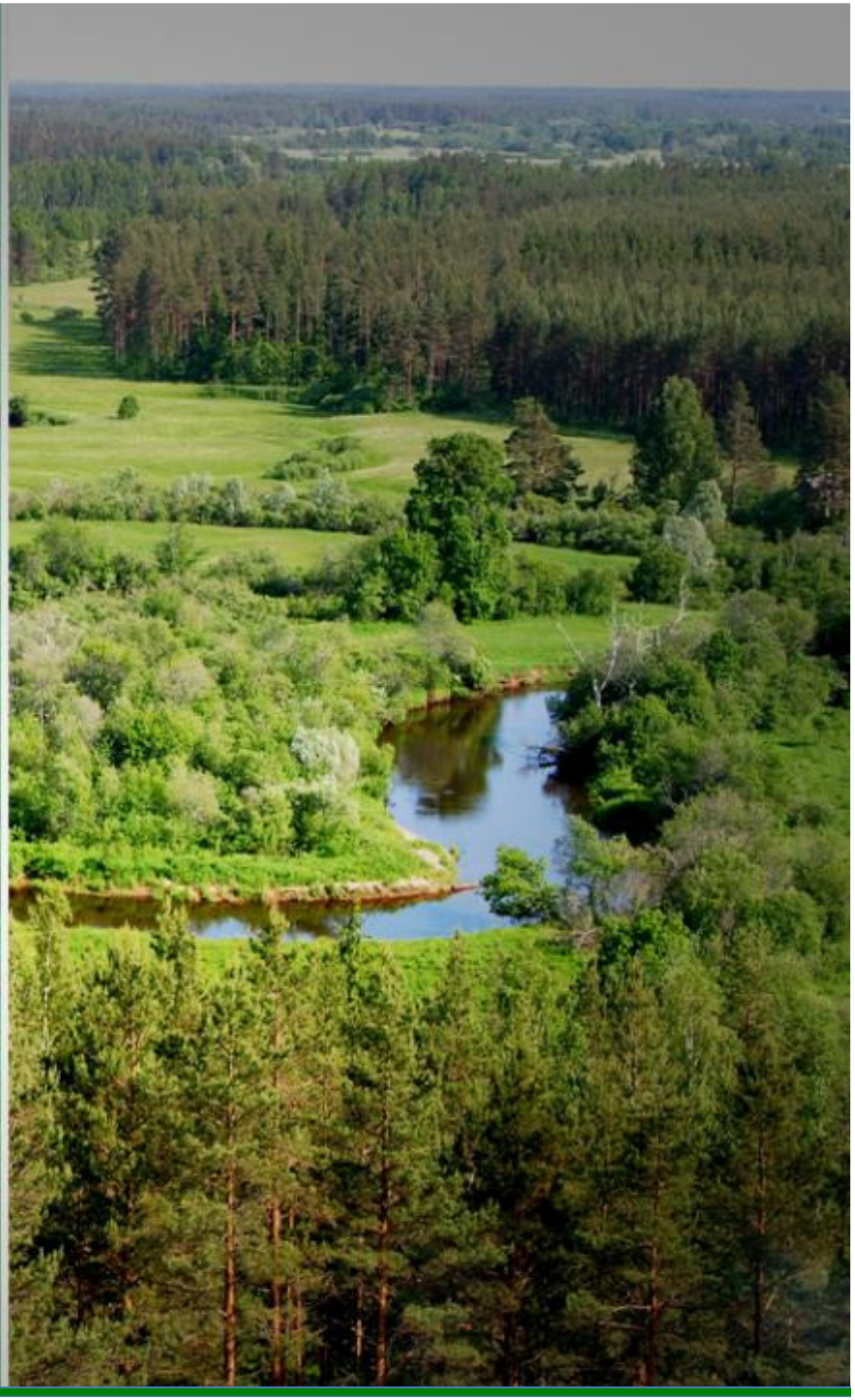

Smart investments in
wood logistics
road network

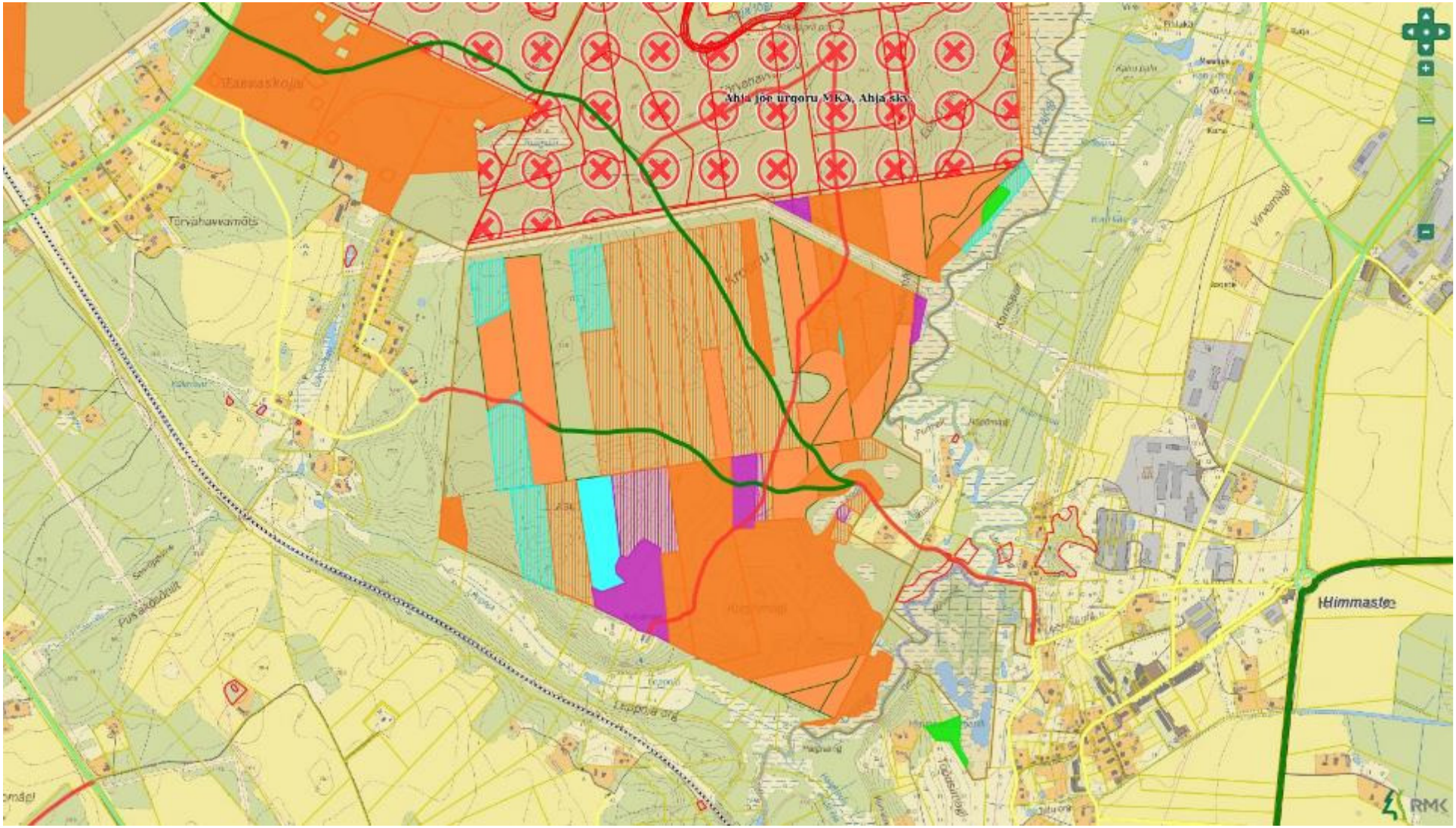
Inventory

1) Is it passable for wood transport?
2) Where are future cuts?
3) Is it accessable from other roads?

Results & follow up

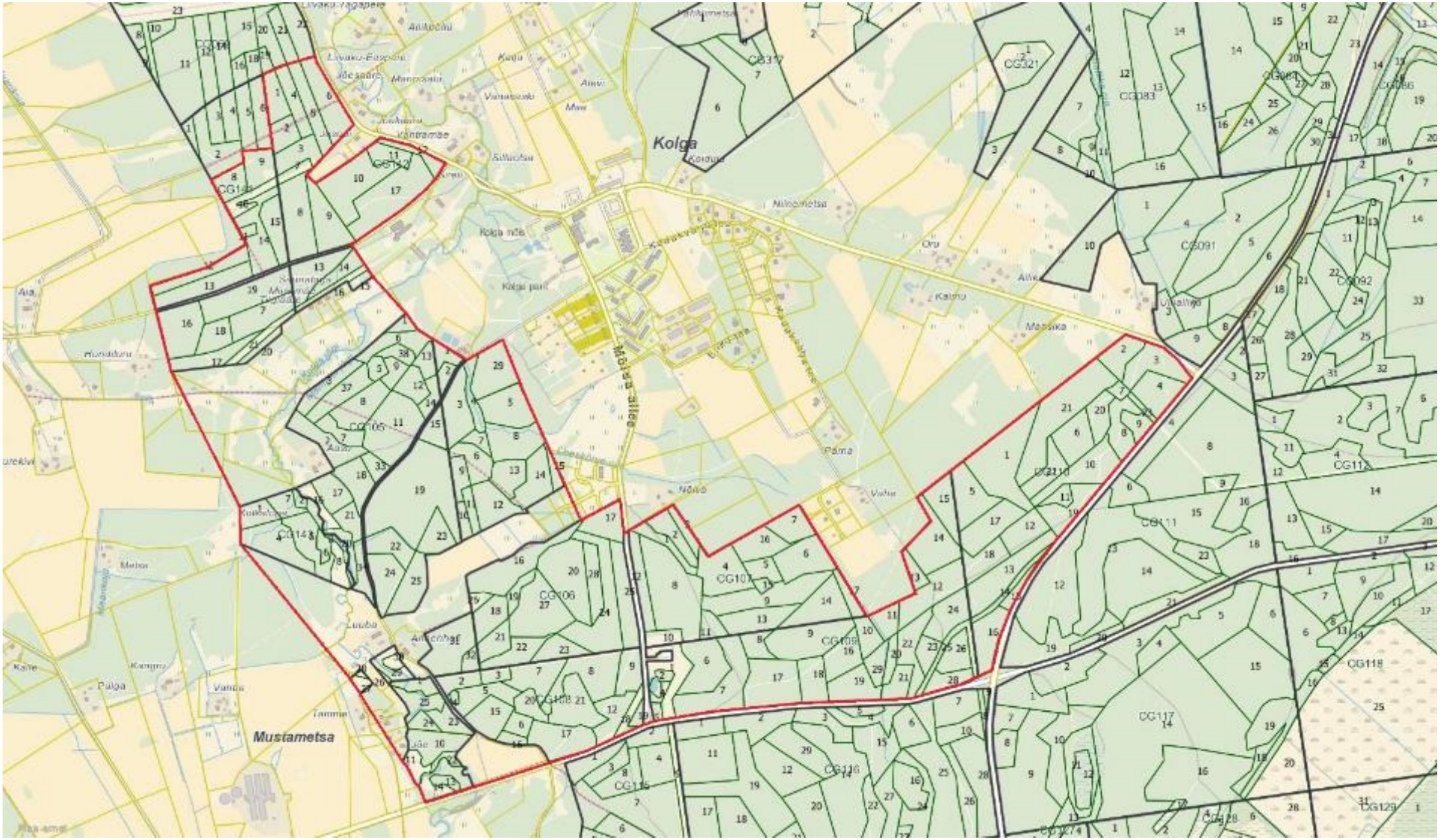
1) Optimising costs
2) Optimising logistics





Information needed for planning road investments is marked on the map: compartments, protected areas, cutting fond etc. Green roads are the ones suitable for transport, yellow and red roads are not used.

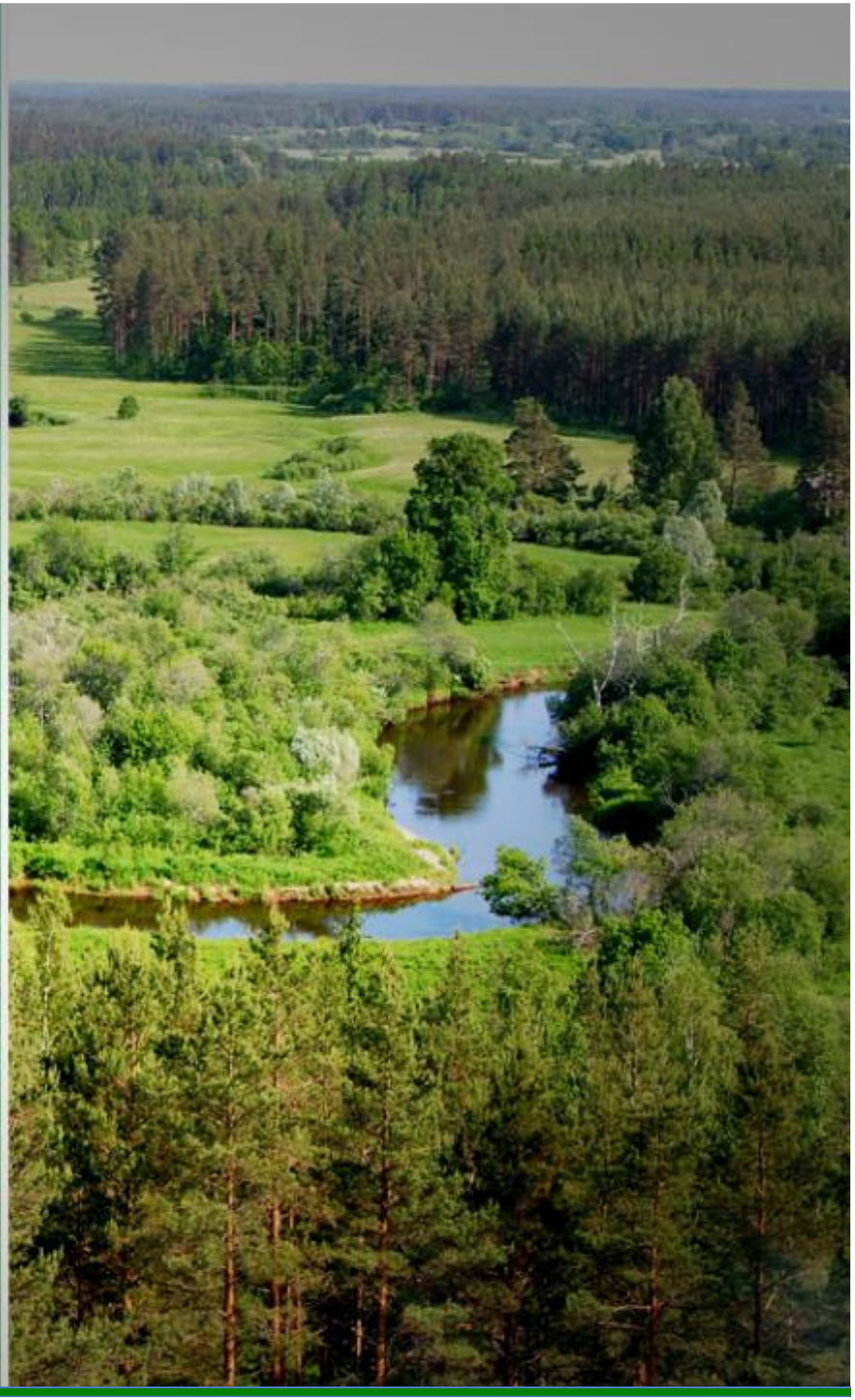

Forest areas of
high public interest



We map areas with high public interest, where local communities and interest groups are involved in forest management planning

Principles explained

1) Avoid cuts more than 3 ha
2) Clear cuts fit in to the landscape
3) Biodiversity trees
4) Planting in next spring
5) No cuts in neighbouring area
6) Residuals removed from roads
7) Soil preparation doesn’t harm roads
8) Time limits
9) etc




R&D is needed to meet high expectations and
to do our work better, be smarter