Elinkeino-, liikenne- ja ympäristökeskus

Multipurpose planning of Finnish coastal areas:

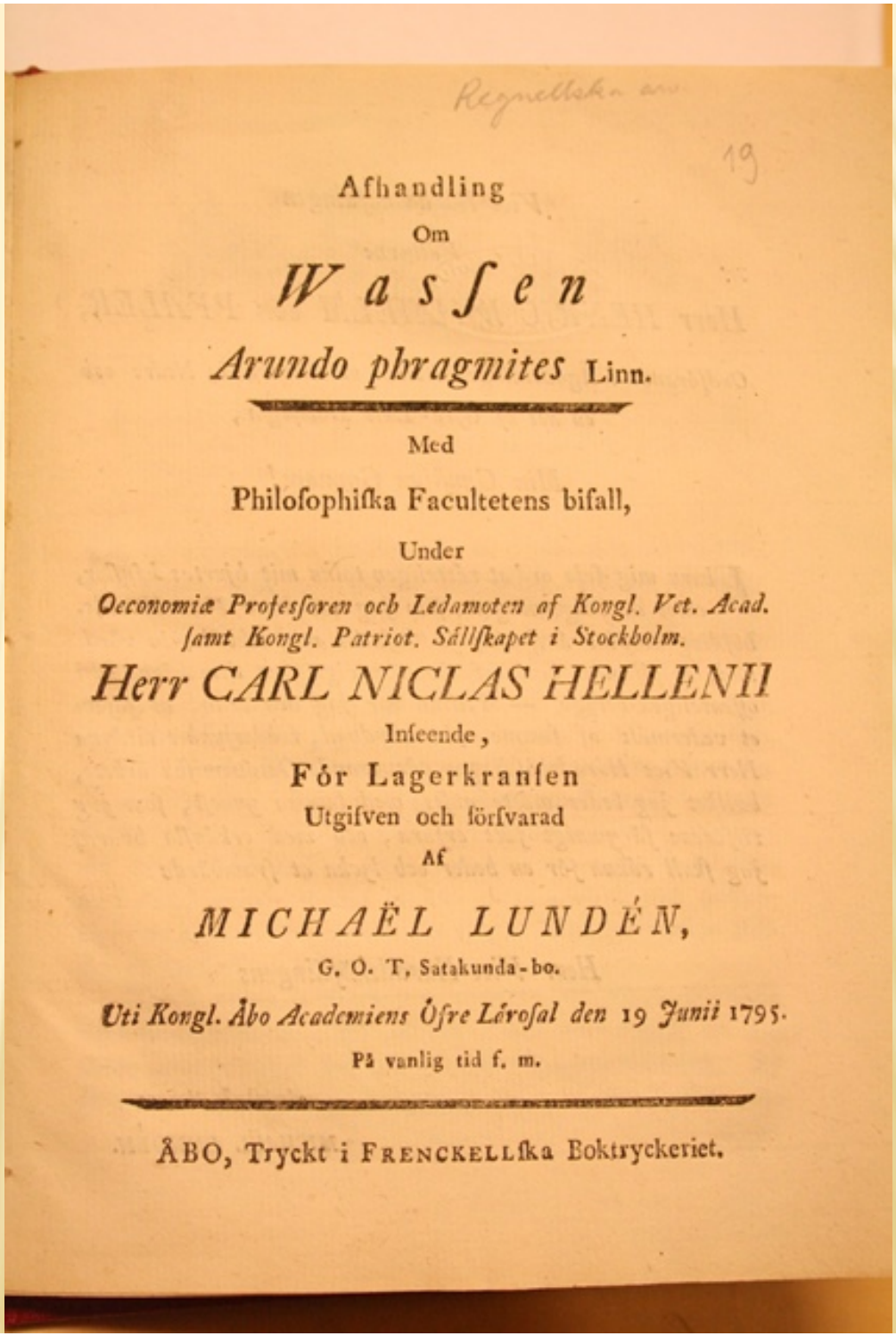
Centre for Economic Development, Traffic and Environment for Southwest Finland

Senior Advisor Iiro Ikonen

Project coordinator Terhi Ajosenpää

12.02.2013

First doctoral thesis of Phragmites in Finland in 1795,
Michael Lundenin Åbo Akademi
”Om vassen” (”of the Reed”) 1795



Afhandling
Om
Wasſen
Arundo phragmites Linn.

Med
Philoſophiſka Facultetens biſall,
Under
Oeconomiæ Profeſſoren och Ledamoten af Kongl. Vet. Acad. ſamt Kongl. Patriot. Sällſkapet i Stockholm.
Herr CARL NICLAS HELLENII
Inſeende,
För Lagerkranſen
Utgifven och förſvarad
Af
MICHAËL LUNDÉN,
G. O. T, Satakunda-bo.
Uti Kongl. Åbo Academiens Öfre Läroſal den 19 *Junii* 1795.
På vanlig tid f. m.

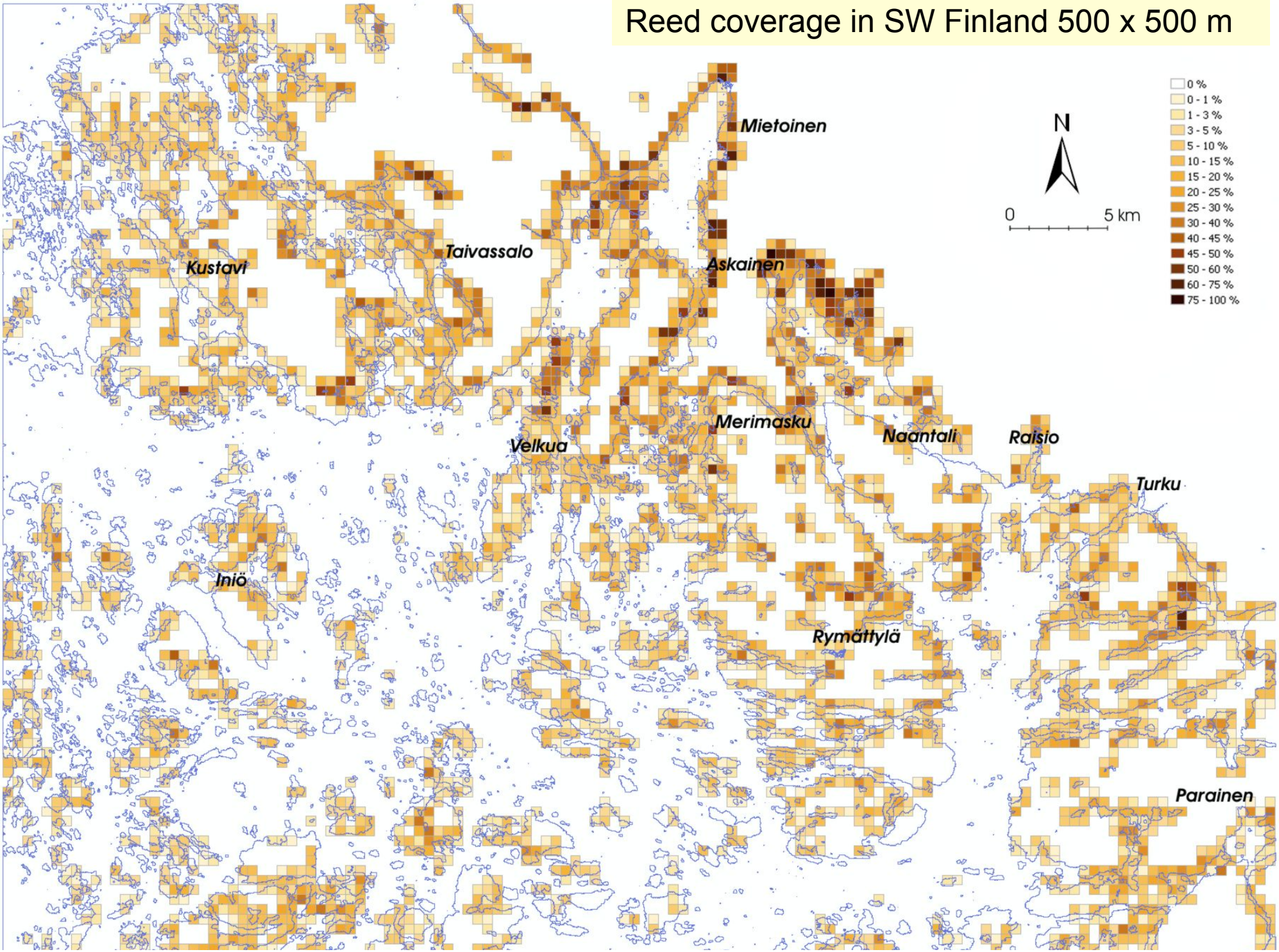
ÅBO, Tryckt i FRENCKELLſka Boktryckeriet.

In his doctoral thesis, *Michael Lunden* describes 1795 the quality of Common Reed as fodder as follows:

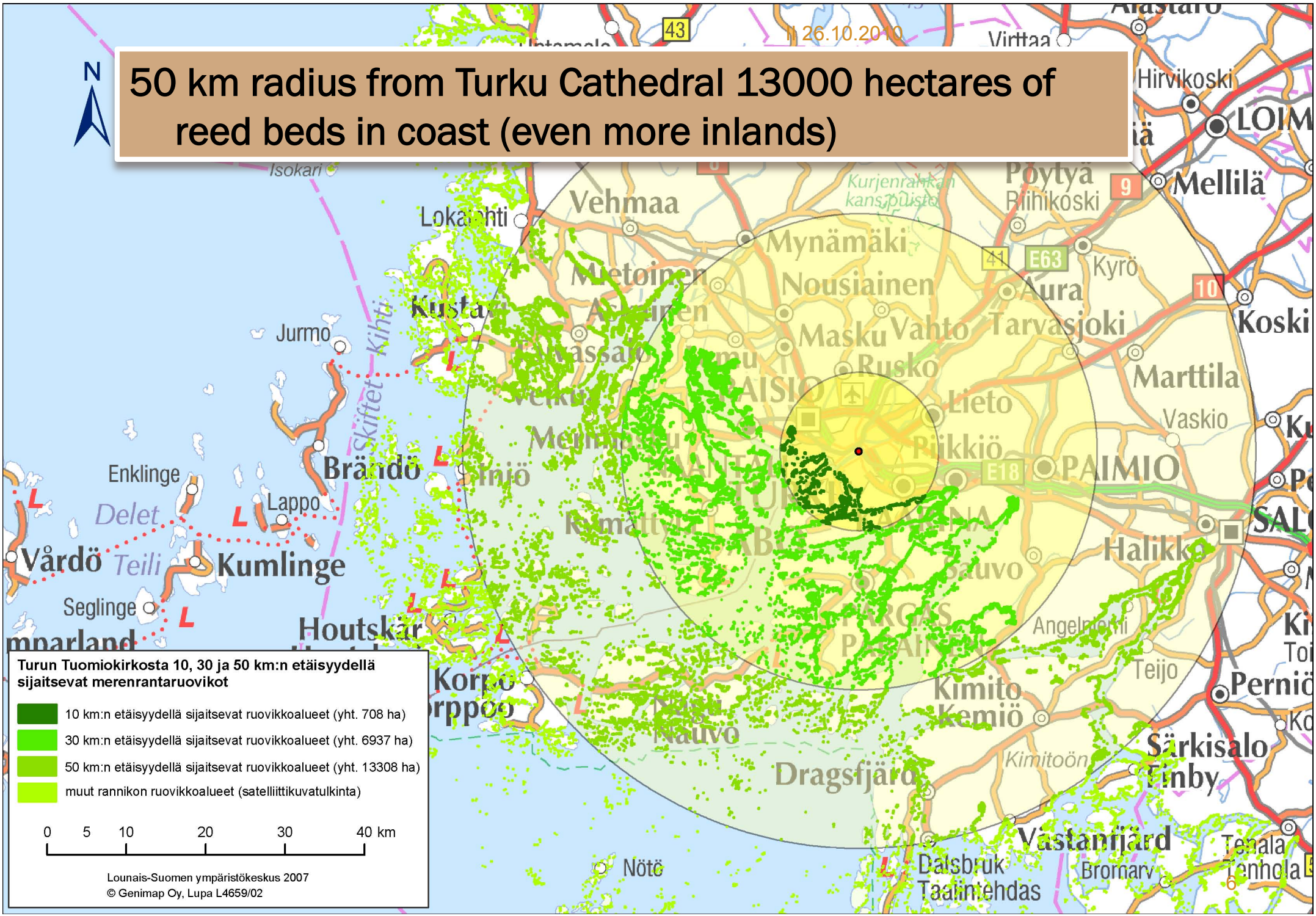
"For as long as common reed grows, and before its seeds start to ripen, the leaves and stems are soft, juicy and sufficiently sweet to make this plant one of the best for cattle fodder. We can also notice that cattle in the summer rush from the best meadows down to the shore whenever possible to the reed bed, where they eat reed until late at night. The increased milk production is definite proof of the excellent properties of the fodder"...**and that is why species was planted**

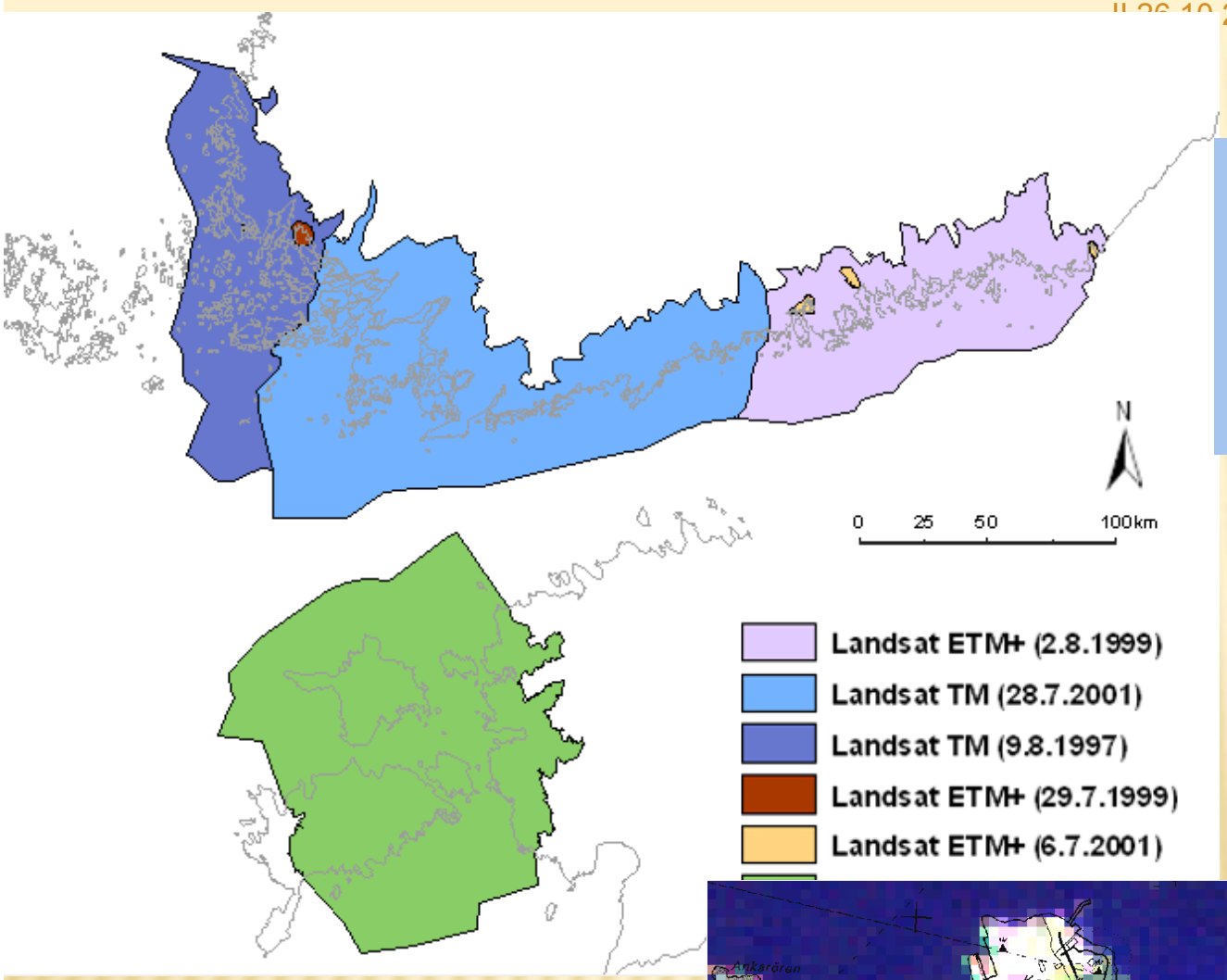
II 25.01.2010

Reed coverage in SW Finland 500 x 500 m



50 km radius from Turku Cathedral 13000 hectares of reed beds in coast (even more inlands)

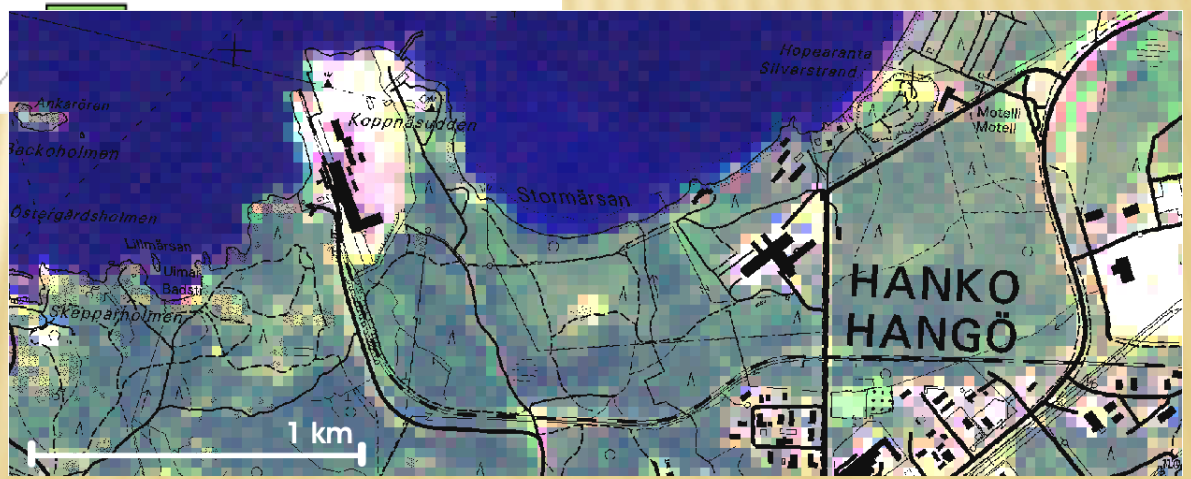




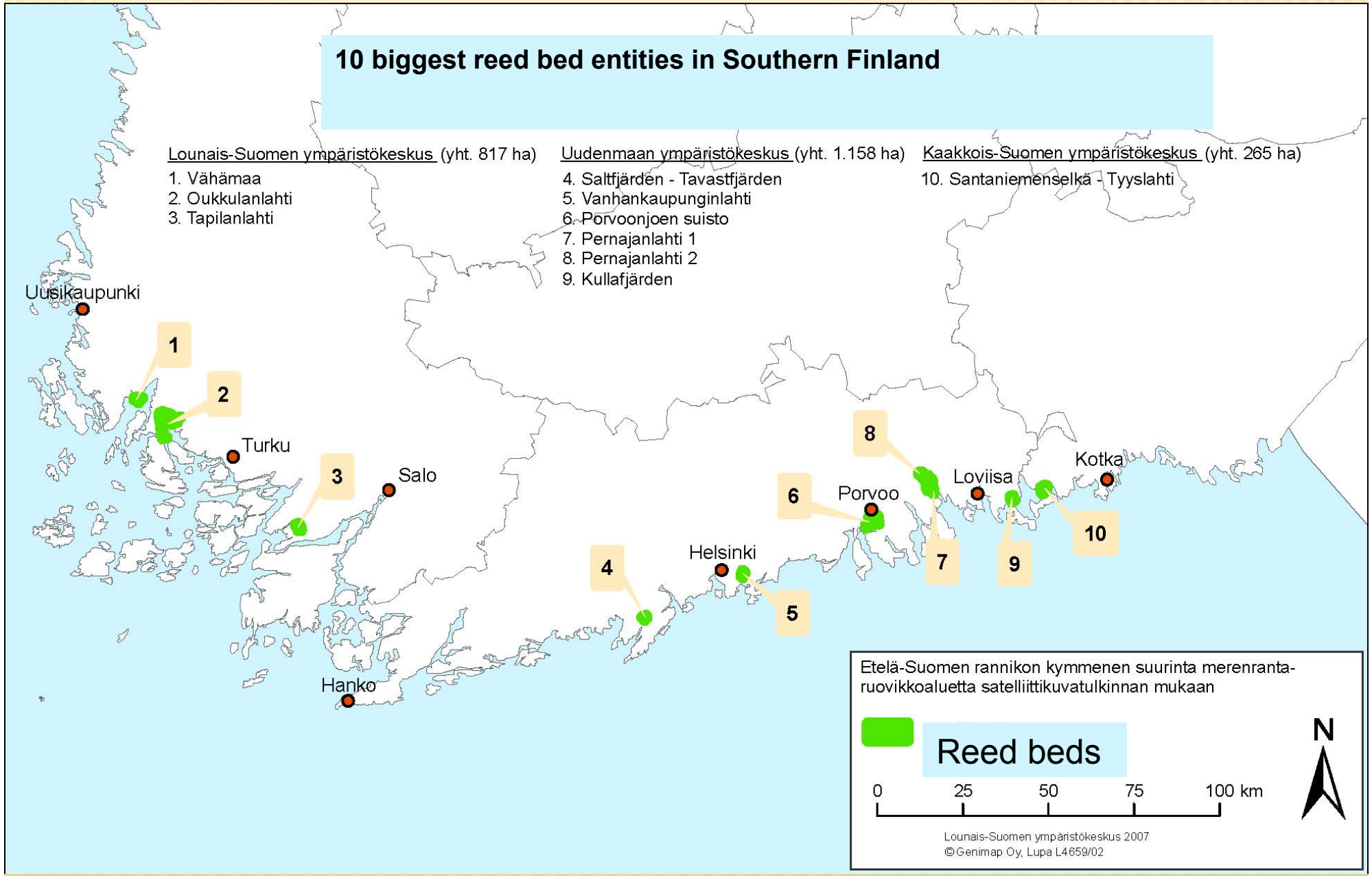
Satelliitte mapping

Reed beds

Turun yliopiston maantieteen laitos ja Turun AMK



10 biggest reed bed entities in Southern Finland



Reed strategy vision 2018

Finnish coastal zone reed beds and coastal meadows form optimal network for water protection, biodiversity, recreation and utilisation.

Part of coastal zone reed beds are restored (back) to coastal meadows. National reed harvesting support has been introduced and harvesting of the summer and winter reed for bioenergy and construction purposes has started full speed after **MULTIPURPOSE PLANNING** of coastal zone.

The machinery used in reed harvesting is also used in other nature management and water protection actions. The sustainable use and management of coastal areas profit local people, landowners and entrepreneurs (win-win situations).

Reed strategy conclusions in 2008:

30 000 hectares of reed beds on coastal zone of Southern Finland . Approximately 12 500 hectares could be utilised and 7500 hectares should be turned into coastal meadows.

Total amount??? 100-300 thousand hectares.

PROJECTS IN THE REED BEDS IN SW FINLAND

- **Reed strategy in Finland and Estonia.** Applicant ELY-centre. Interreg IIIA 1 mill.€
- **ProNatMat.** Applicant Turku University of Applied Sciences. Interreg IVA. 1.1 mill €. -2012
- **Cofreen**, Applicant Turku University of Applied Sciences. www.cofreen.eu. Interreg IVA. 1.1 mill. €. -2013
- **Natureship** . Applicant ELY-centre. 2009-2013 (January). 1,4 million €. *Integrated planning of coastal areas and habitat management in the Baltic Sea* www.environment.fi/natureship
- **VELHO**, 2,8 mill. €. EU Agricultural Fund. 3 million euro. Applicant Ely-Centre. Water protection, Natura 2000 wetland management plans, Multipurpose planning -2014

NATIONAL PLANNING

- **RAMOS (2011-2013).** MoE set a group with Regional ELY-centres of Finland, MoA, Finnish Environment Institute, NGOs, Finnish Farmers Union

GOALS

- **Guide for Multipurpose planning** of shore areas ready it the end of 2013
- Enhacement of **relevant supporst for A-E programme** 2014-203
- Planning carried out 2014-2020 with help of the A-E programme and other relevant financing
- Pilot areas in VELHO-project and Cofreen -project

PLANNING AREAS IN SOUTH-WESTERN FINLAND

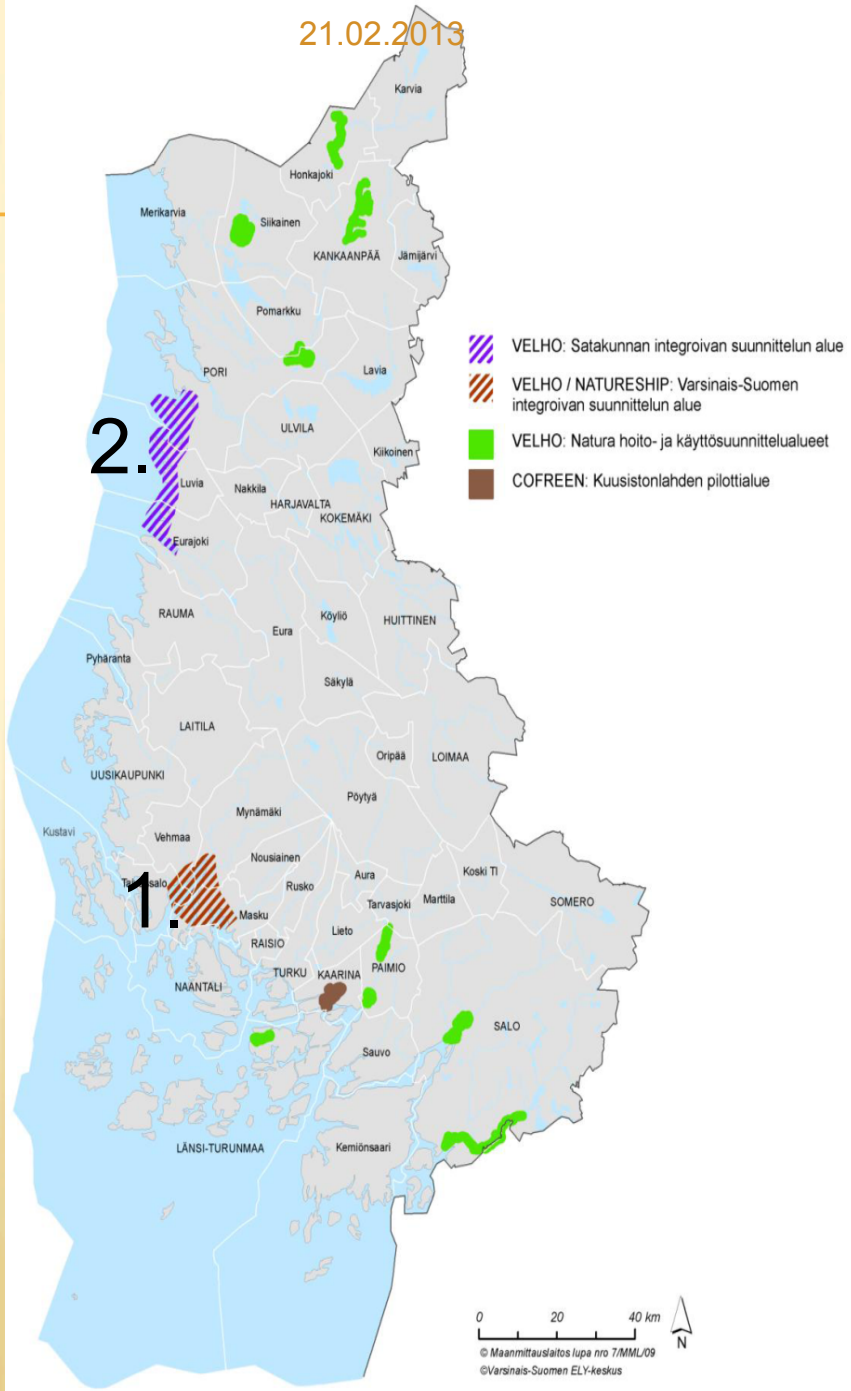
Pilot areas in VELHO

1. Mynälahti-Oukkulanlahti
2. Eurajoki-Luvia + other coastal areas in Satakunta
3. Eight Natura 2000-wetlands

Pilot area in Cofreen

1. Kaarina Rauvolanlahti

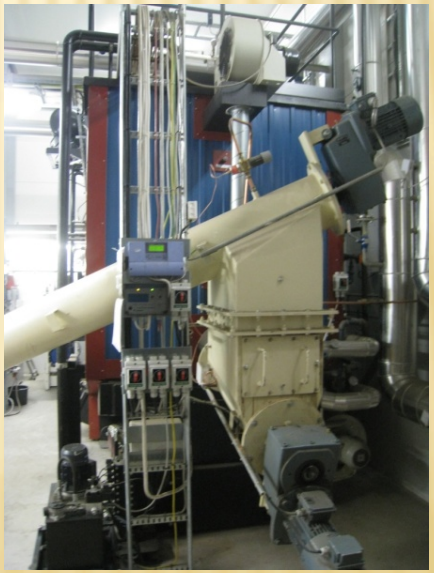
- Co-operation with many projects:



WINTER REED FOR CONSTRUCTIONS/ THATCHING, ENERGY USE, HANDICRAFT







TAKING OUT BIOMASS

SUMMER REED FOR BIOGAS, FODDER AND ORGANIC/COVER MATERIAL

Cycling of nutrients,open landscape

OBJECTIVES FOR COASTAL MULTIPURPOSE PLANNING 2014-2020

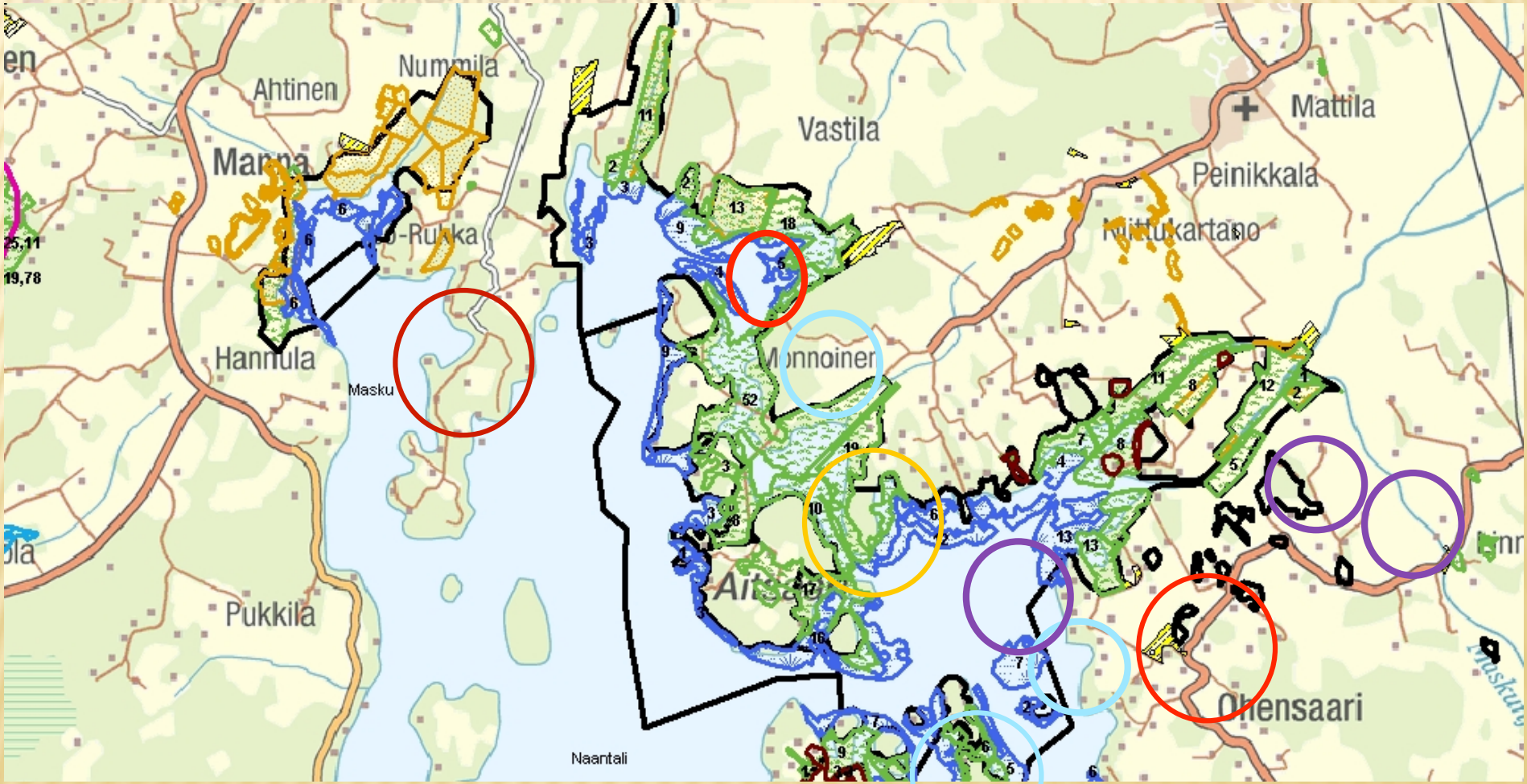
- To introduce **a new concept of planning** for coastal areas in Finland
- To integrate **different goals** of using coastal areas
- To find out and establish a network of **optimal ecosystem services**
- To increase **attraction and living possibilities** on rural areas
- To develope **co-operation** between different sectors and local groups
- Enhance projects/support via **Finnish Agri-Environement programme**

Ritva Kemppainen

MANY GOALS ARE CONNECTED TOGETHER

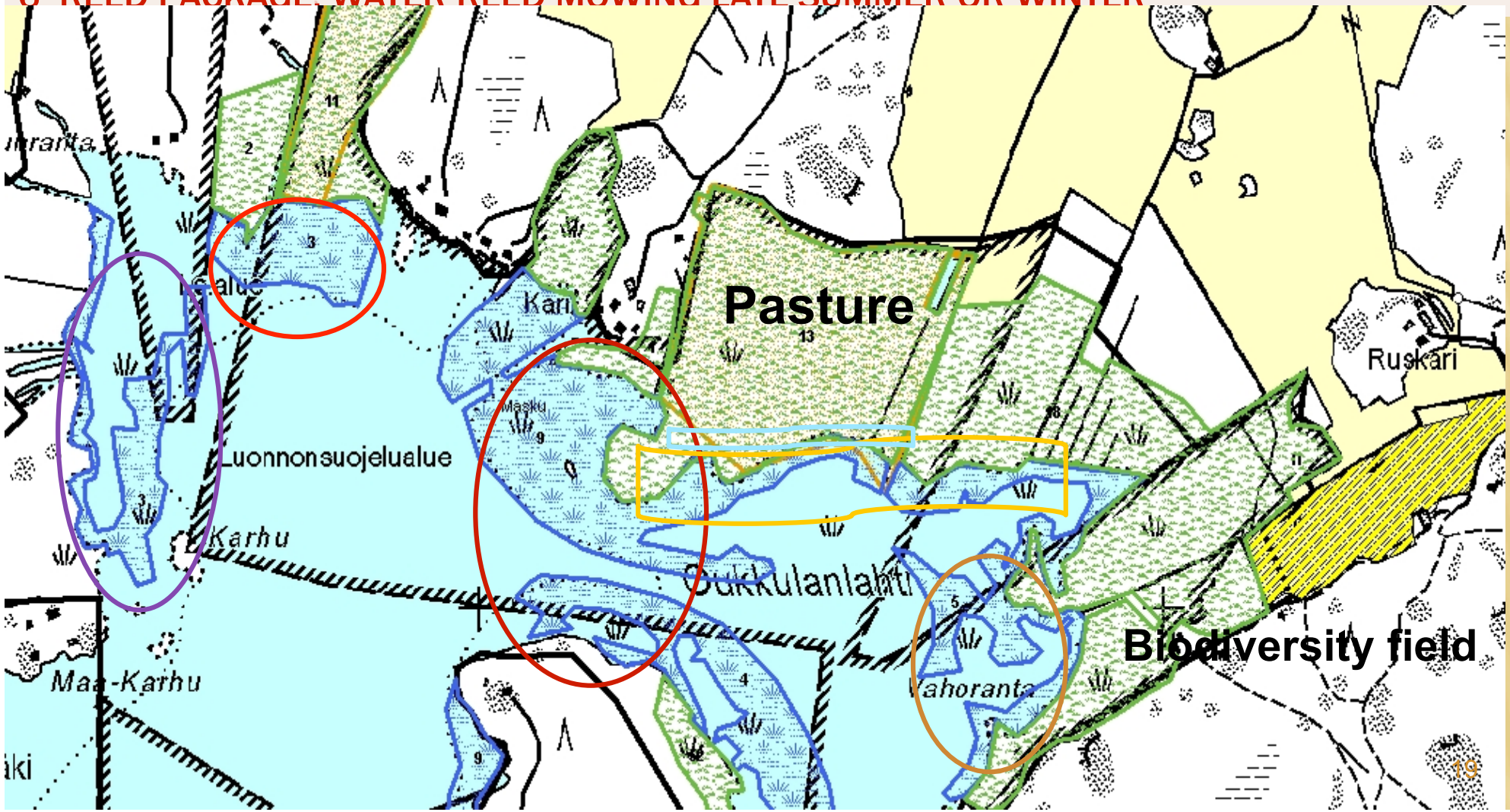
- Utilization of natural resources
  - Bioenergy production, construction materials, fishing, tourism, multiple use of reed
- Water protection
  - constraction of wetlands, buffer zones
- Biodiversity conservation and management
  - restoration of coastal meadows
  - valuable reed birds and other
  - species living in red beds
- Recreation
  - summer cottages, boating, bird watching, fishing, hunting, skating
- Landscape management
  - maintaining openess (fields, water areas)

1. WATER REED HARVESTING PACKAGES 2. FOOTREED HARVESTING PACKAGES
3. NUTRIENT REMOVAL (MOWING IN THE WATER) AND RECYCLING OF MATERIAL
4. RESTORATION OF COASTAL MEADOWS



WATER REED, FOOT REED AND COASTAL MEADOWS

1. REED CRUSHIING, RESTORATION OF MEADOW
2. WATER REED MOWING IN THE VICINITY OF COASTAL MEADOW
3. WATER REED MOSAIC MANAGEMENT
4. REED CUTTING EARLY SUMMER
5. REED CUTTING NEAR DITCHES EARLY SUMMER
6. REED PACKAGE, WATER REED MOWING LATE SUMMER OR WINTER



ATTEMPT TO INCLUDE REED IN FINNISH AGRI-ENVIRONMENT SYSTEM 2014-2020 GOING ON !

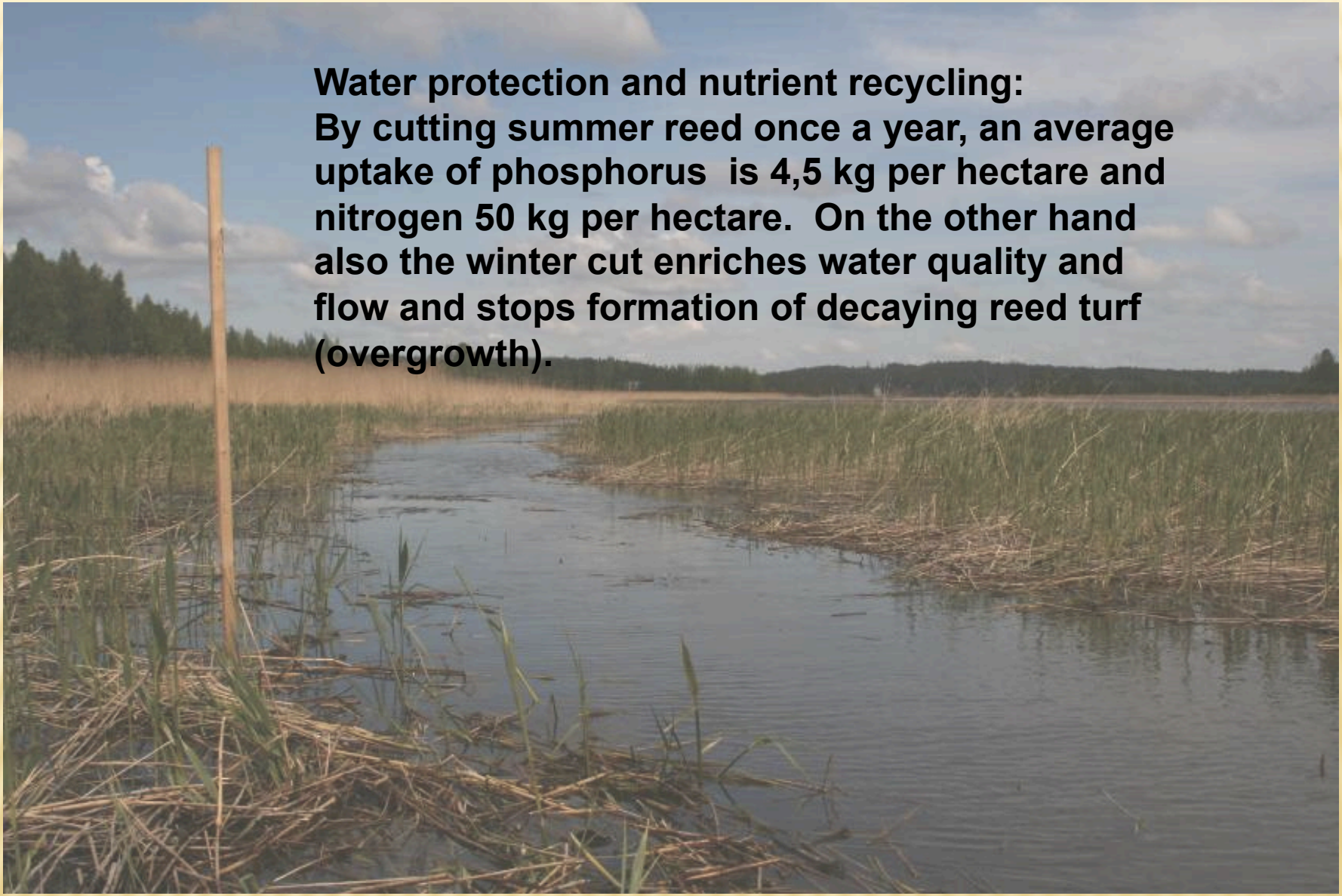
Searched for possiblities....

- Establisment of national group and multipurpose planning for coastal areas of Finland
- Hectare and result based support for winter and summer cutting
- Investment supports
- Inno-status in A-E programme
- ”Organic material to the field” - support
- National, regional and local projects

HAY HAY, BYE BYE ! HAY UTILISATION IN FOCUS

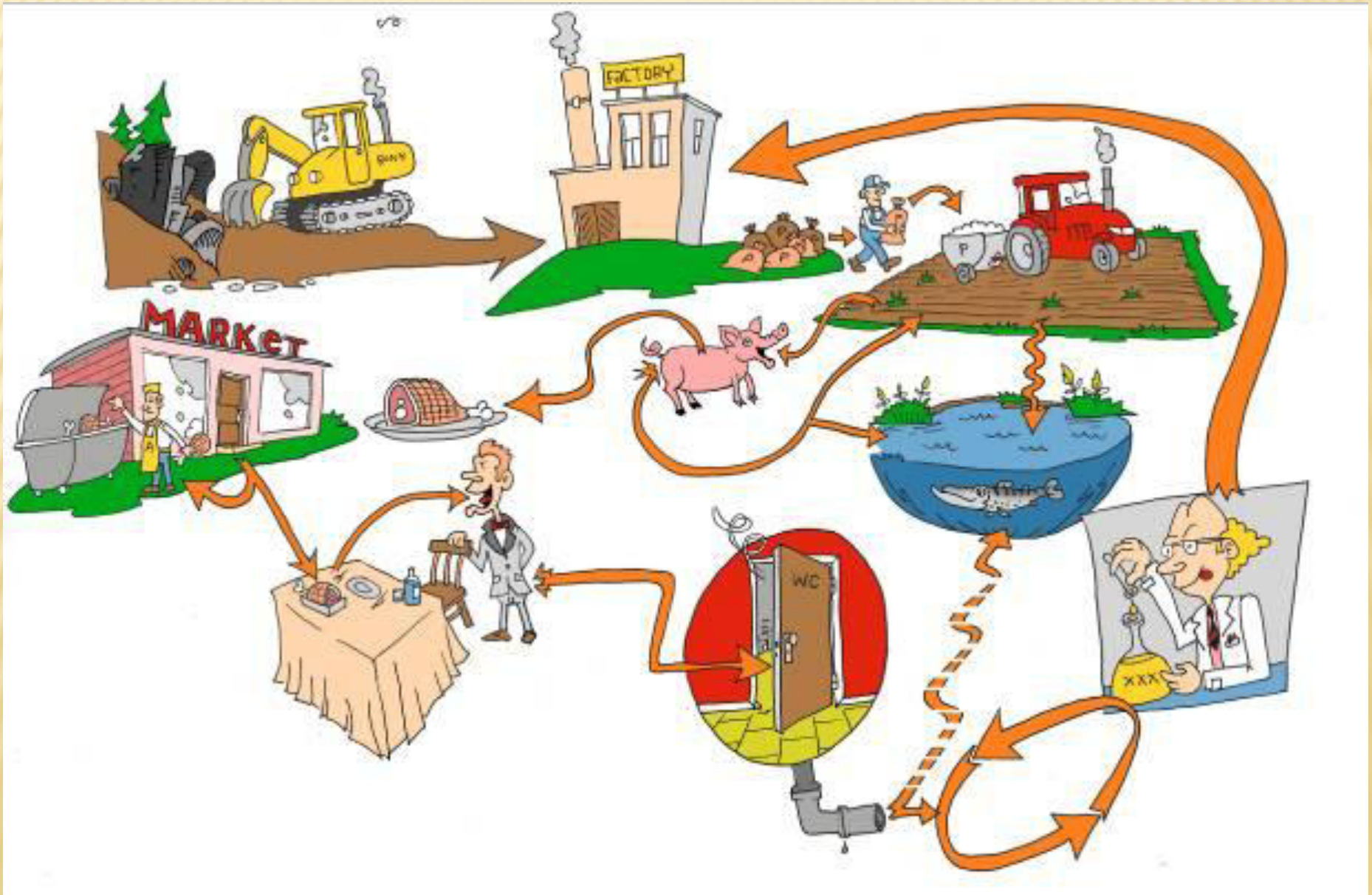
Aims

- Use hay from Buffer zones
- Use hay from reed beds



Water protection and nutrient recycling:
By cutting summer reed once a year, an average uptake of phosphorus is 4,5 kg per hectare and nitrogen 50 kg per hectare. On the other hand also the winter cut enriches water quality and flow and stops formation of decaying reed turf (overgrowth).

RECYCLING OF P IMPOTANT




Co-operation with Estonian colleagues
has been very important and fruitful

Need for international co-operation

• Utilisation of hay biomass in focus in the whole Europe

• Nutrient recycling, bioenergy, climate change, bioidiversity, water protetion, alien species.

•Practical level co-op important.

•Novel solutions: Machinery and constructions

•Innovative planning methods

•Finding areas of excellencies

Kuva: Heidi Lampen

Reed projects in Southwest Finland

Some publications in English in www.ruoko.fi and www.cofreen.eu

Energy from Reed, Harvest, technical possiblities and environment protection. Water Boards . Isotalo, Ilkka, Kauppi, Pekka, Ojanen, Titta, Puttonen, Pasi & Toivonen, Heikki 1981.

Reed energy - Possibilities of using the Common Reed for energy generation in Southern Finland. Martti Komulainen, Päivi Simi, Eija Hagelberg, Iiro Ikonen & Sami Lyytinen
Reports from Turku University of Applied Sciences 67. Reports from Turku University of Applied Sciences 67

Read up on Reed (edit. Ikonen et Hagelberg 2007)'


Elinkeino-, liikenne- ja
ympäristökeskus
Thank you !
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