“Green Ring of Fennoscandia” the cornerstone of the nature conservation framework in Northern Europe

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Republic of Karelia PA network history in brief

In the period between 1970 and 1997, following KRC initiative, an overwhelming majority of PAs now operating in the republic were nominated and designated:

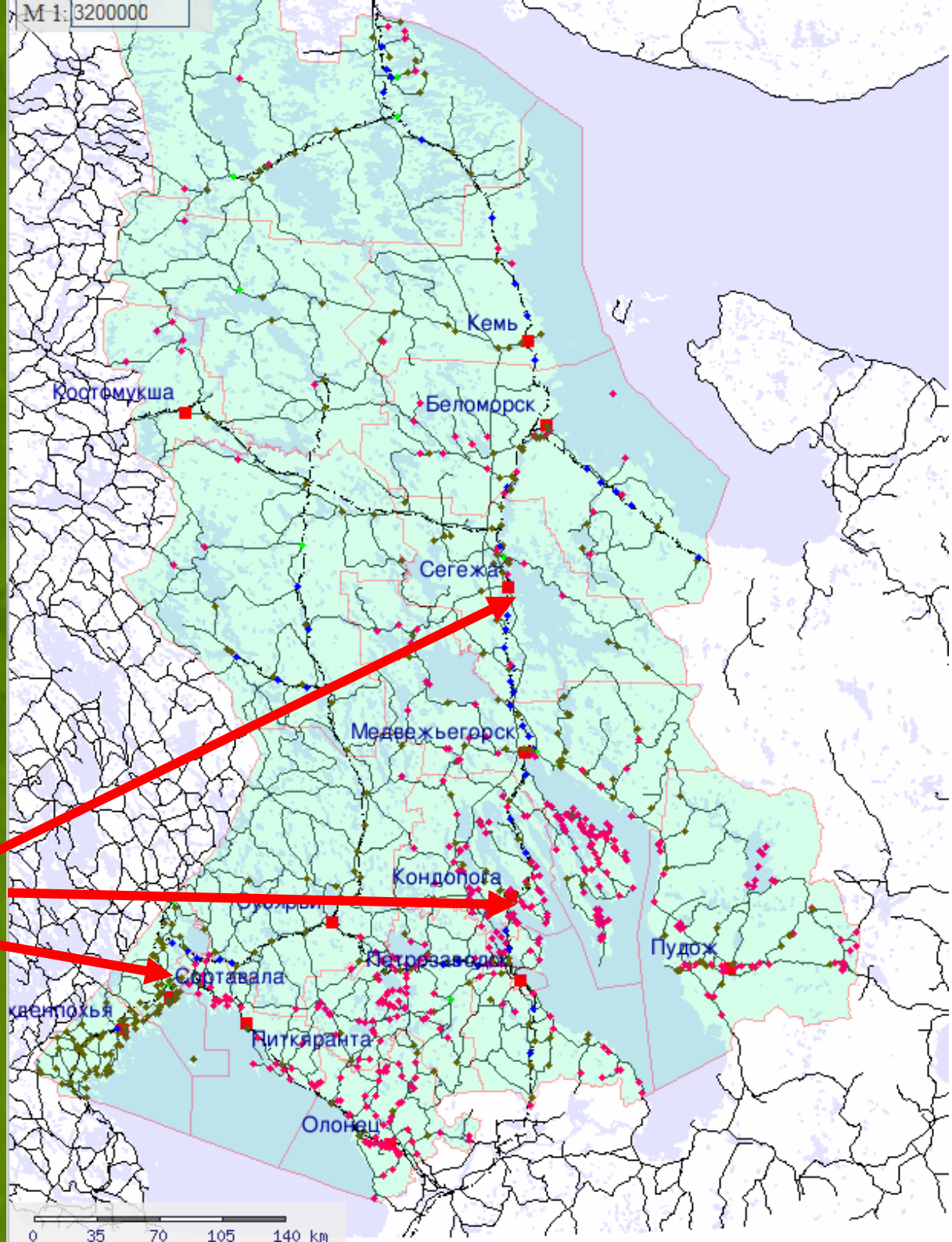
5 federal-level PAs (Kostomukshsky strict nature reserve (zapovednik), 1983; Vodlozersky NP,1991, Paanajärvi NP, 1992; zoological reserves Olonetsky, 1986, Kizhsky, 1989), as well as quite a number of regional-level PAs, incl. 44 nature reserves, 107 nature monuments, etc.

Mandated by the regional Government (*Decree of KASSR Supreme Council of 25.11.1990*), KRC produced the PA Network Development Concept

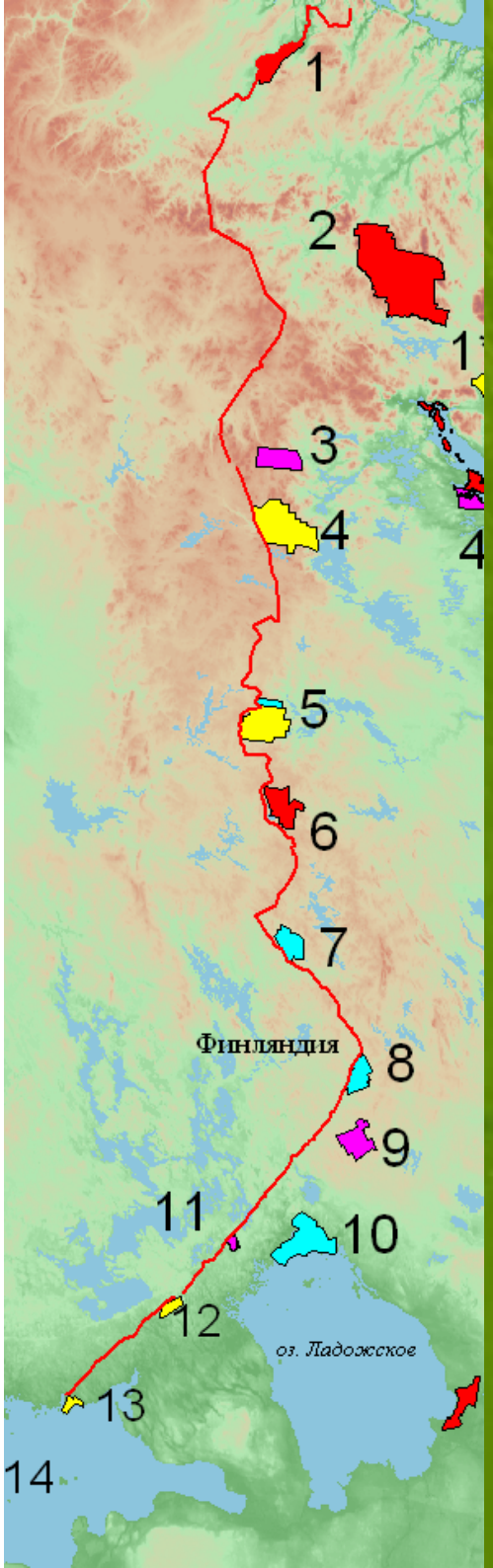
Development of the territory of Karelia

Settlements and main industrial zones formed along the main roads and on the banks of large lakes.

Largest and most valuable PAs formed along the eastern and western boarders of Karelia




So, now we have 2 chains of PAs along the western and eastern borders of Karelia, which are parts of PA networks of Karelia, Finland, Arkhangelsk, Murmansk and Vologda regions
Финляндия
оз. Ладожское
Белое море
оз. Онежское
0 100 200KM



Largest operating and planned PAs in the Green Belt of Fennoscandia

1. Pasvik zapovednik
2. Laplandsky zapovednik
3. Kutsa nature reserve (zakaznik)
4. Paanajärvi NP
5. Kostomukshsky zapovednik
6. Kalevalsky NP with Voinitsa landscape reserve (LR)
7. Tulos LR
8. Koitajoki LR
9. Tolvajärvi LR
10. Ladoga Skerries NP
11. Iso-Ijärvi LR
12. Karel'sky Les LR
13. Prigranichnyi LR
14. Ingermanlandsky zakaznik

There are also some small-size LR
Podkova, Kumi-porog, PAs of Karelian isthmus, etc.

Total area of the above PAs is about 800 000 ha

15-year period of the development of the Green Belt was marked by the International seminar in Petrozavodsk (June 2008).

In the resolution of the seminar participants pointed out the importance of working out a special program on GBF development.

Russian-Finnish project «Green Belt of Fennoscandia» (2009 – 2010)

One of the first steps of implementing the seminar decisions was organizing of the Russian-Finnish project “Developing of the GBF” (2009-2010).

Agreement between Republic of Karelia and Murmanskaia obl. (23 July, 2009)

- The Agreement on economic, scientific and cultural cooperation between Republic of Karelia and Murmanskaia oblast pointed out the importance of joining efforts in developing the Green Belt of Fennoscandia

Memorandum of Understanding on cooperation for the development of the Green Belt of Fennoscandia between

- the Ministry of the Environment of Norway

- the Ministry of the Environment of the Republic of Finland,

- the Ministry of Natural Resources and Environment of the Russian Federation

2010, February 17

Russian-Finnish working group on Nature protection pointed out in the decision of the meeting in Moscow (March, 2010) the necessity of cooperation in developing of GBF

- **The interregional Green Belt is now forming at eastern borders of Karelia, and it fringes also eastern boundaries of Fennoscandia:**

- **<u>border with Murmansk Region</u>: Kolvitsky zakaznik (1), Kanozersky zakaznik (2), Kandalakshsky zapovednik (3);**

- **<u>White Sea coast (within RK):</u> LR Polyarnyi Krug (4), Gridino (5), Syrovatka *(6)*, Kuzova (7), Soroksky (8);**

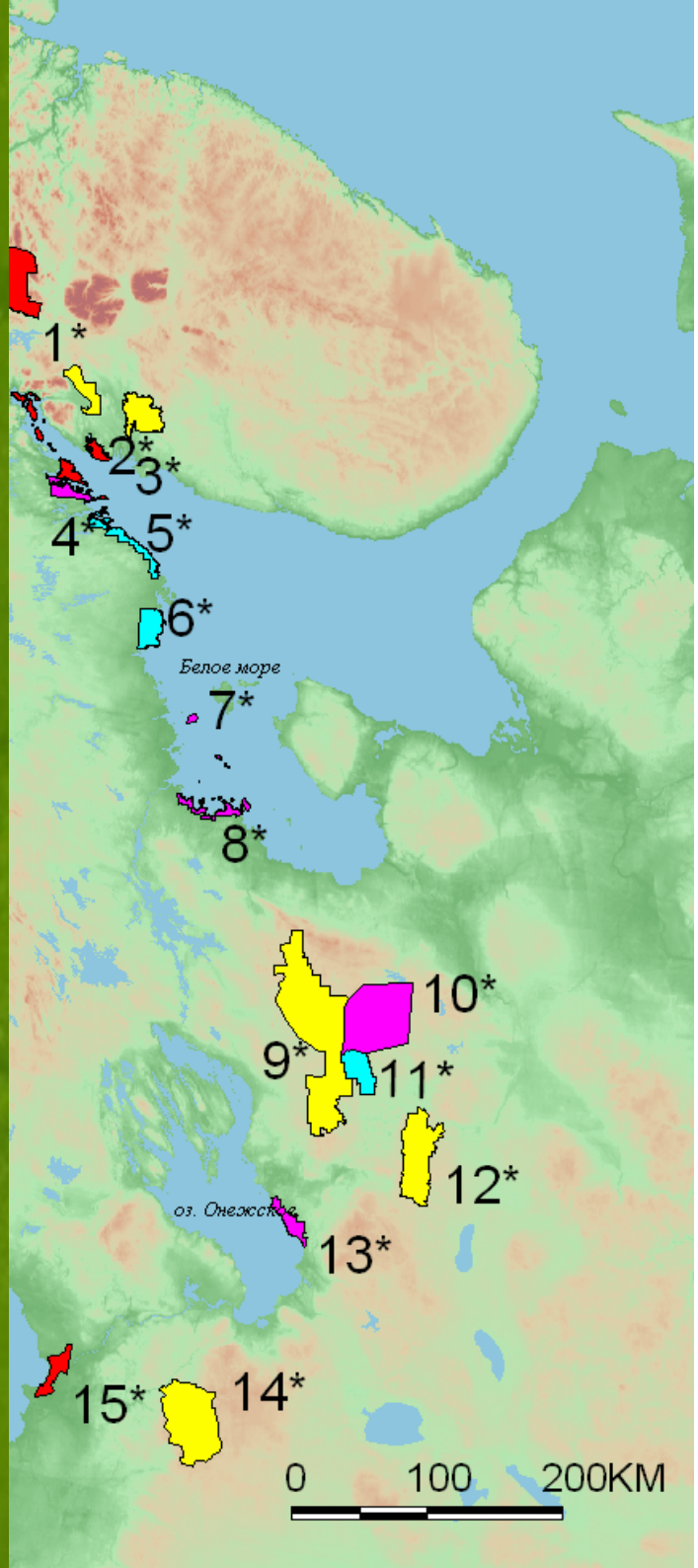
- **<u>border with Arkhangelsk Region:</u> Vodlozersky NP (9), Kozhezersky LR (10), Chukozero LR *(11)*, Kenozersky NP (12);**

- **<u>border with Vologda Region:</u> Atleka LR, Verkhneandomsky LR, etc.;**

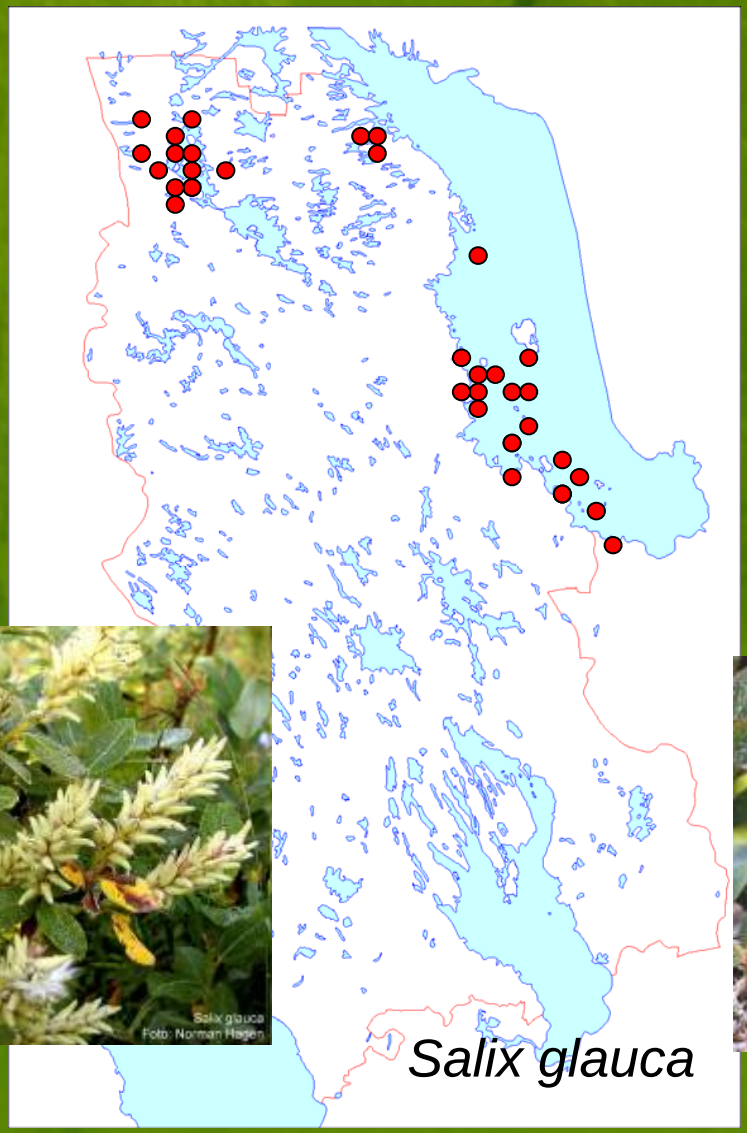
- **<u>border with Vologda and Leningrad Regions</u>: Vepssky Les nature park (14), etc.**

- **border with Leningrad Region: «Niznesvirskii» reserve (15) etc.**

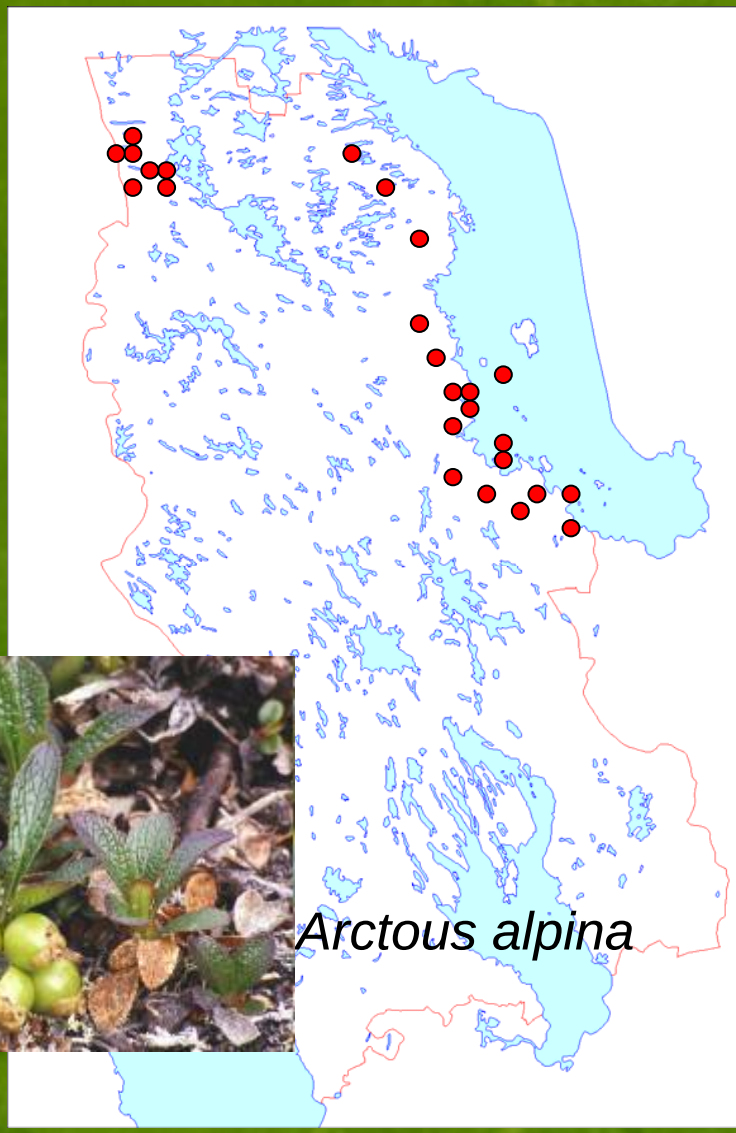
Total area of the PAs is about 1.4 mln. ha



Importance for preserving the biodiversity
Dispersal of northern plant species



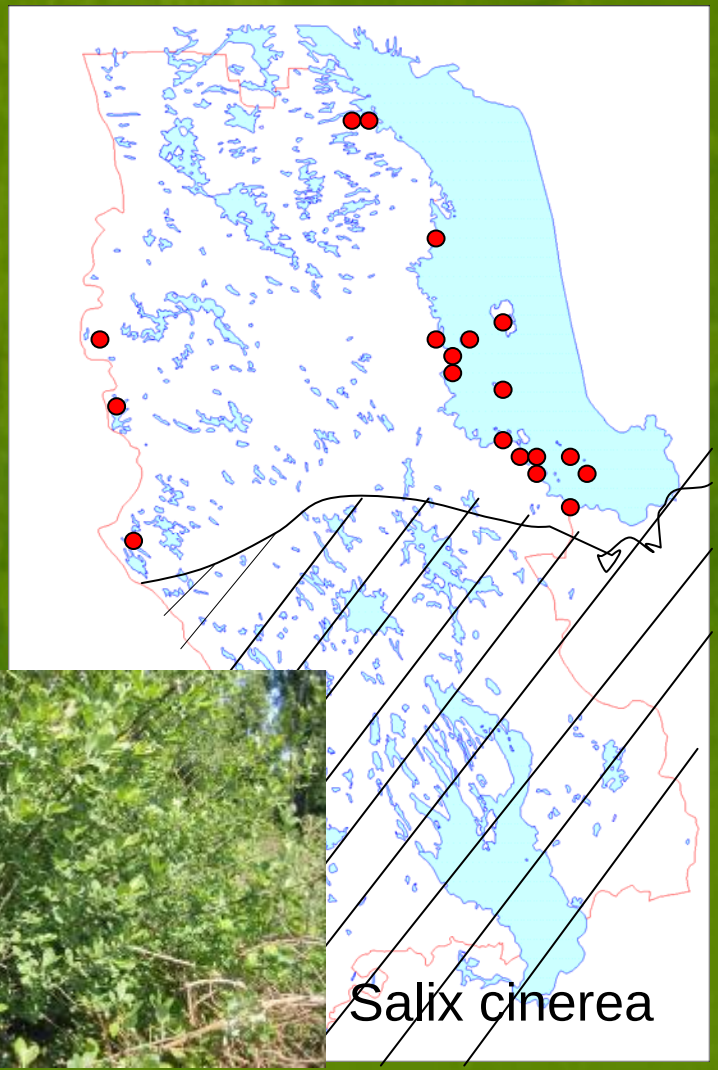
Salix glauca



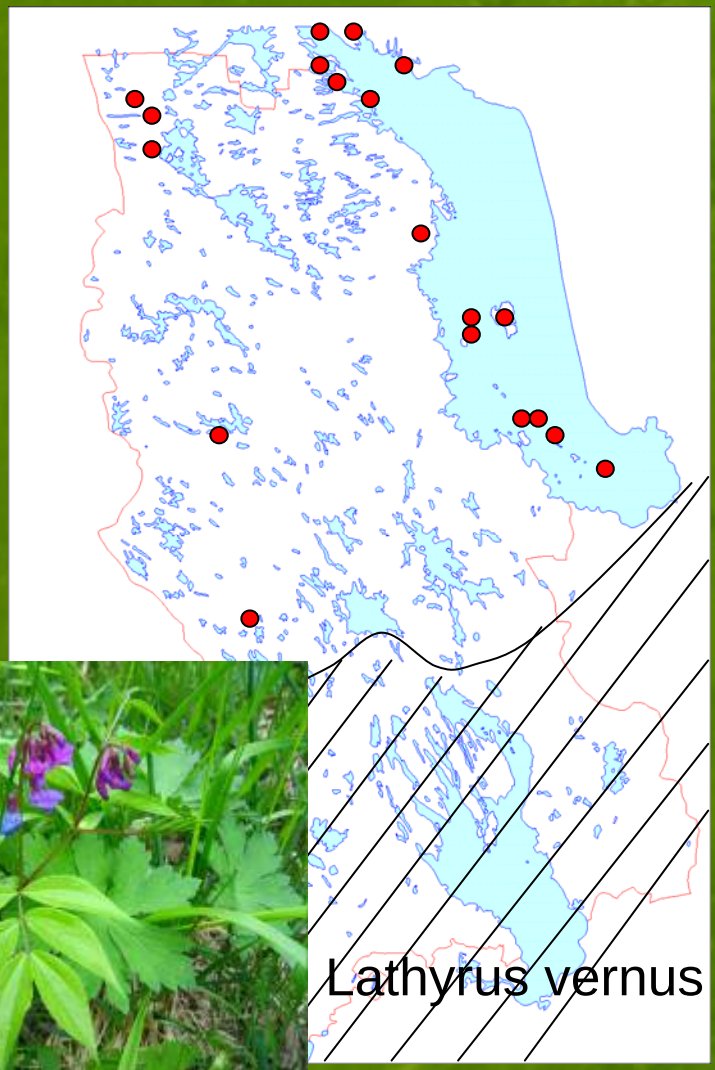
Arctous alpina

(Kravchenko, Kuznetsov, 2003)

Importance for preserving the biodiversity
Dispersal of southern plant species

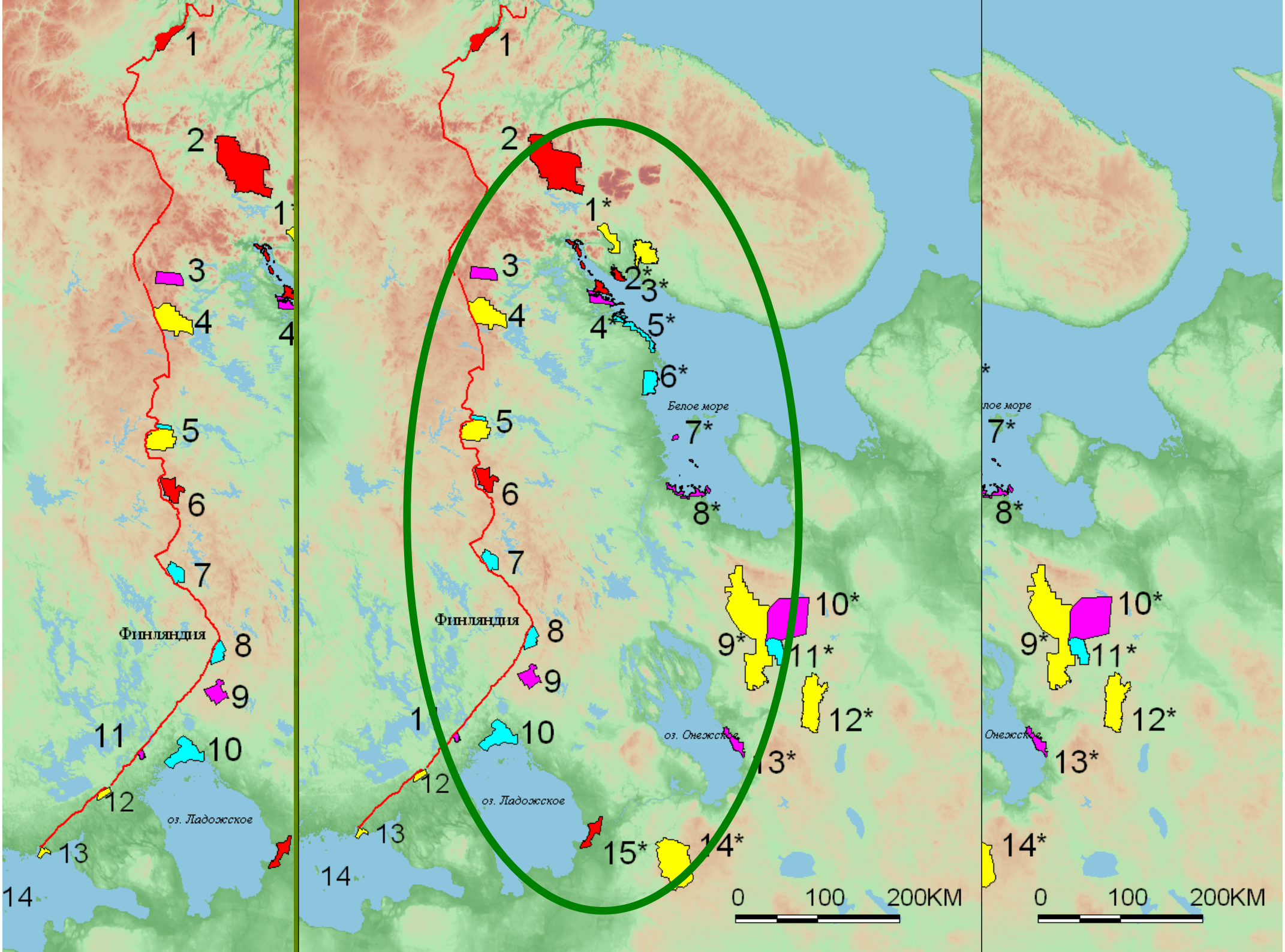


Salix cinerea



Lathyrus vernus

(Kravchenko, Kuznetsov, 2003)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оз. Онежское
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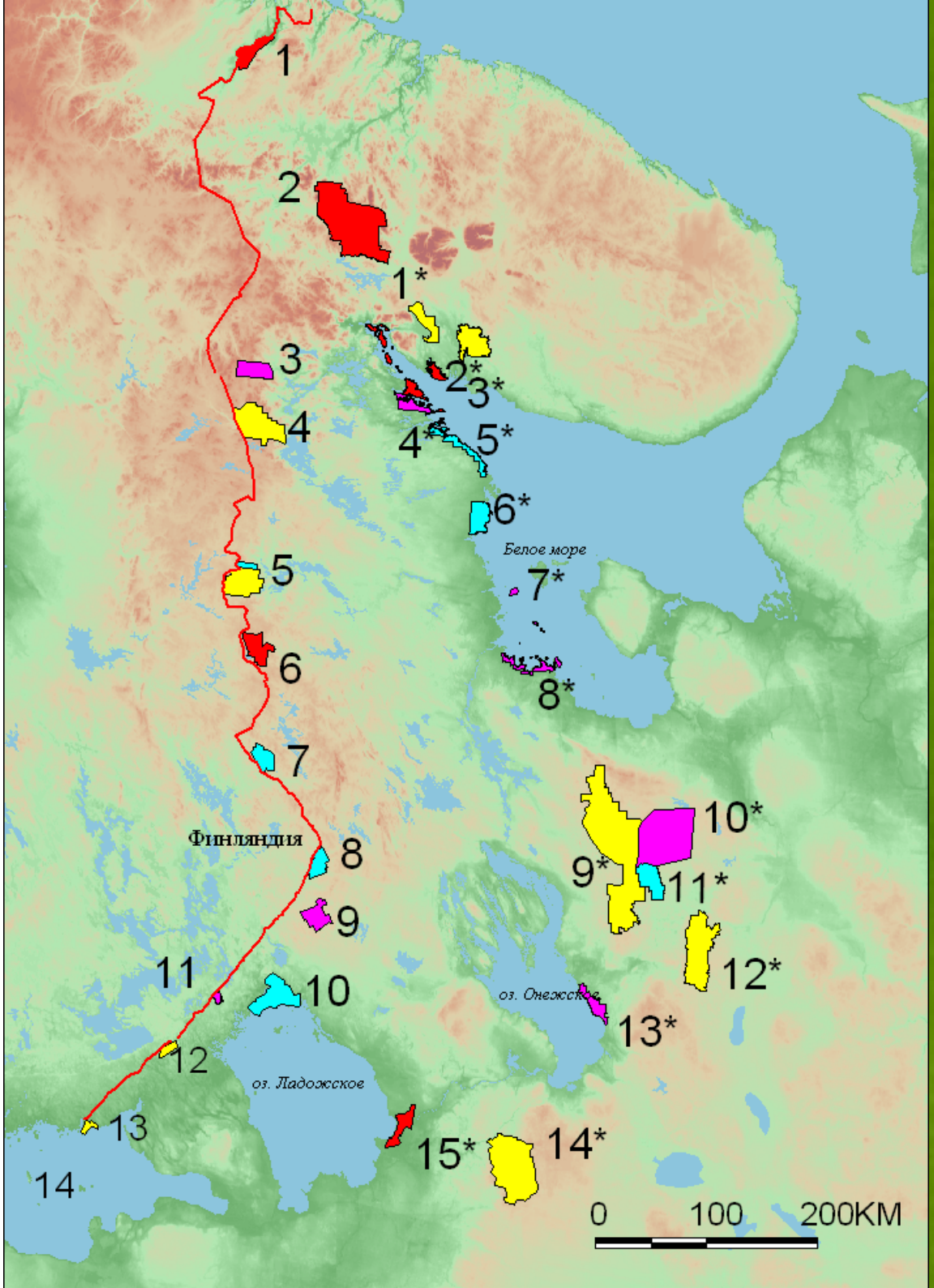
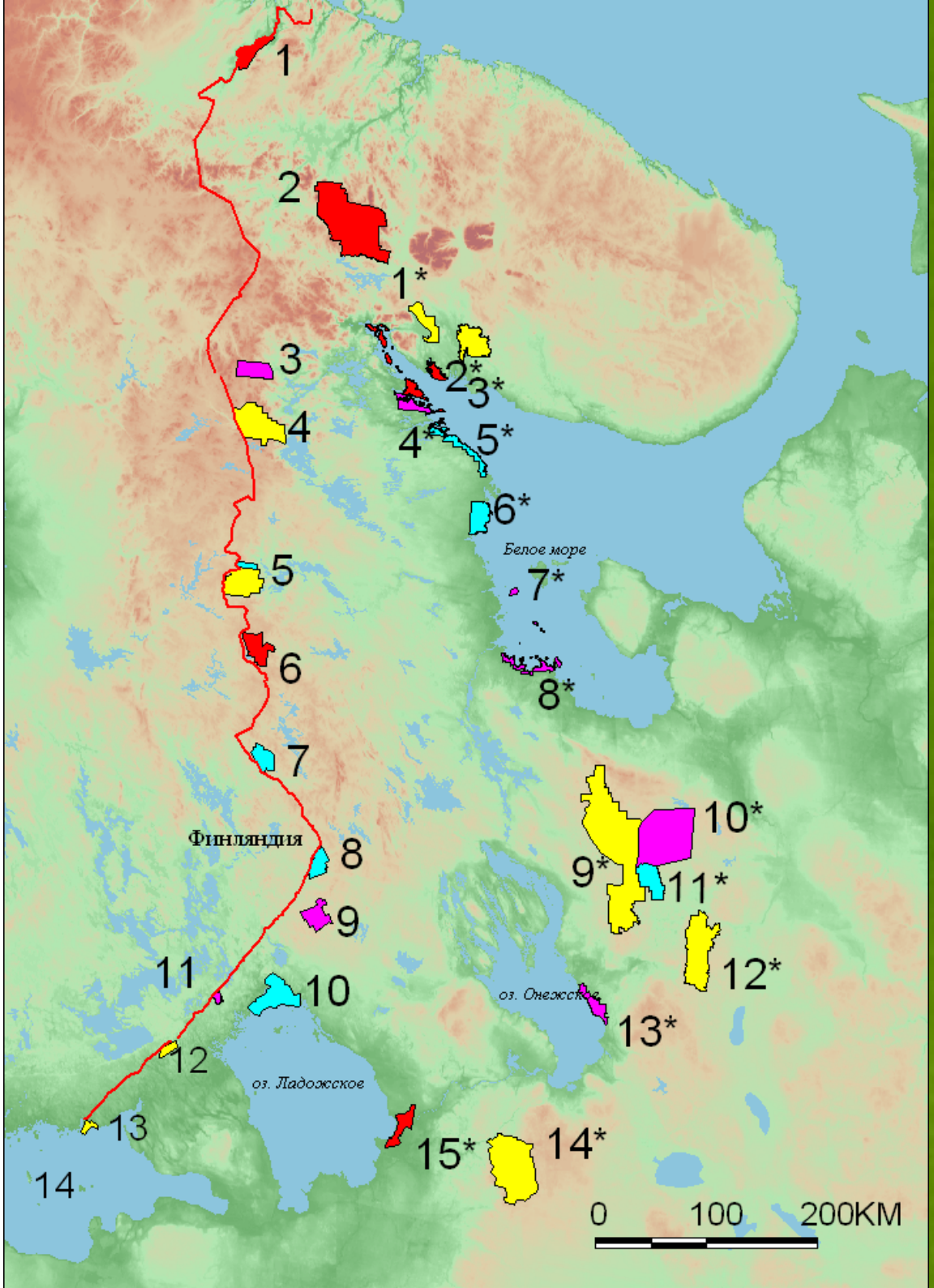


“Green Ring of Fennoscandia” joins together PA systems of

Finland,
Republic of Karelia,
Murmanskaya obl.,
Arkhangelskaya obl.,
Vologodskaya obl.,
Leningradskaya obl.,
St.-Petersburg



Green Ring of Fennoscandia can act as the framework of nature protection in Northern Europe

To strengthen GRF:

- To save waterside protection zones
- To save ecosystems of taiga corridors

MARI METTE TOLLEFSRUD, et al.

Genetic consequences of glacial survival and postglacial colonization in Norway spruce: combined analysis of mitochondrial DNA and fossil pollen. In Molecular Ecology (2008) **17, 4134–4150**

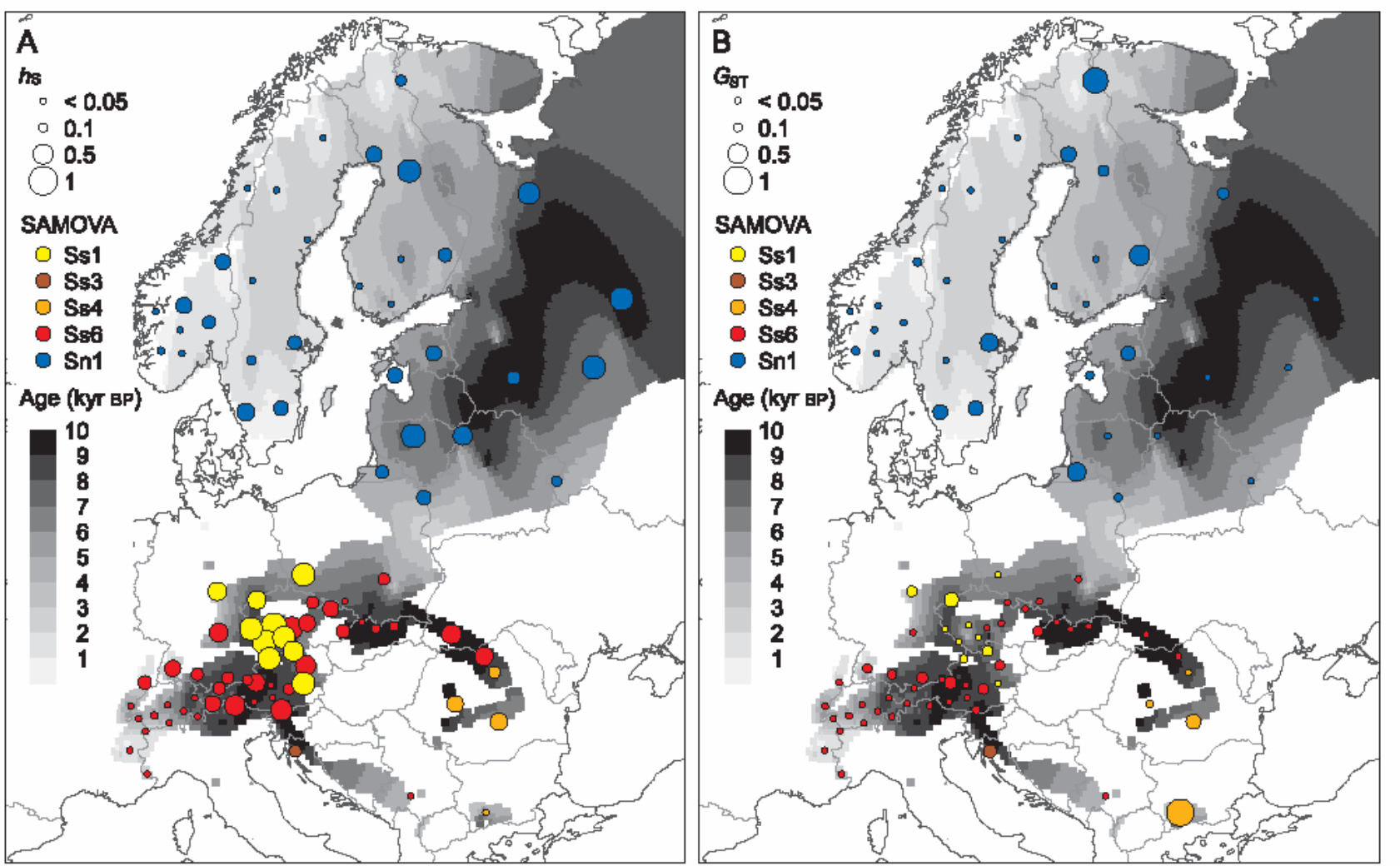


Fig. 5 Combined maps of fossil pollen and average within-population gene diversity (h_S; A) and genetic differentiation (G_{ST}; B) for groups of neighbouring *Picea abies* populations within SAMOVA groups. SAMOVA groups Ss2 and Ss5 were excluded because they contain less than three populations. Circle sizes are proportional to the values of h_S and G_{ST}, respectively. Values < 0.05 are shown as 0.05.

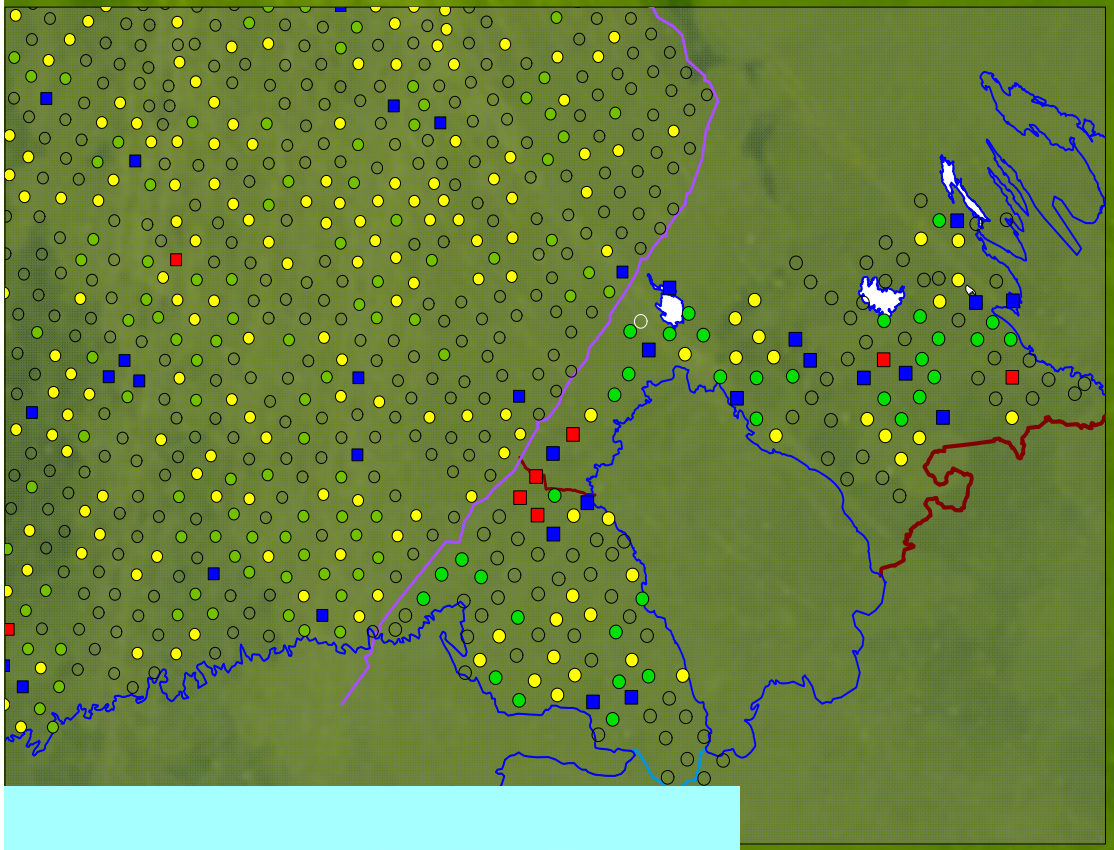
Group of Russian-Finnish researches put forward the concept of TAIGA CORRIDORS (Lindèn et al., 2002; Kurhinen et al., 2009)

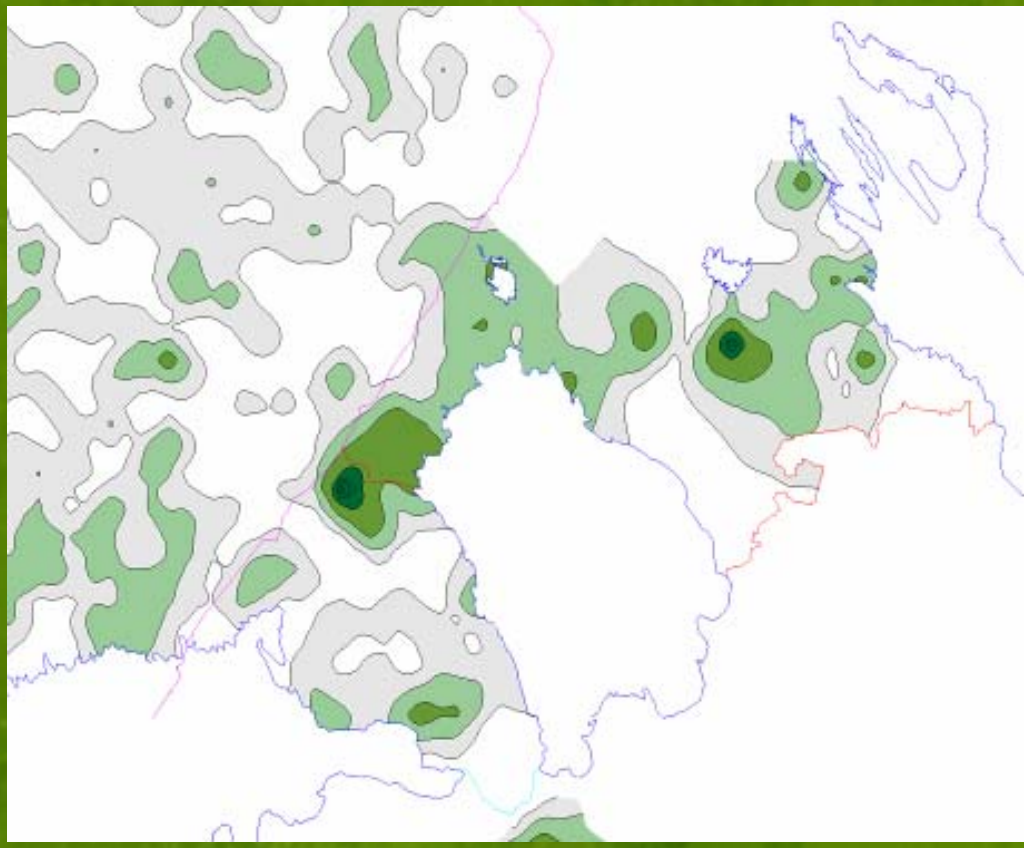
- Fennoscandia is connected with Eurasia through three stretches – “Taiga corridors”

1. South taiga corridor – 50 km
2. Middle taiga corridor – 120 km
3. North taiga corridor – 150 km

Population density of flying squirrel

(Ivanter et al., 2009)



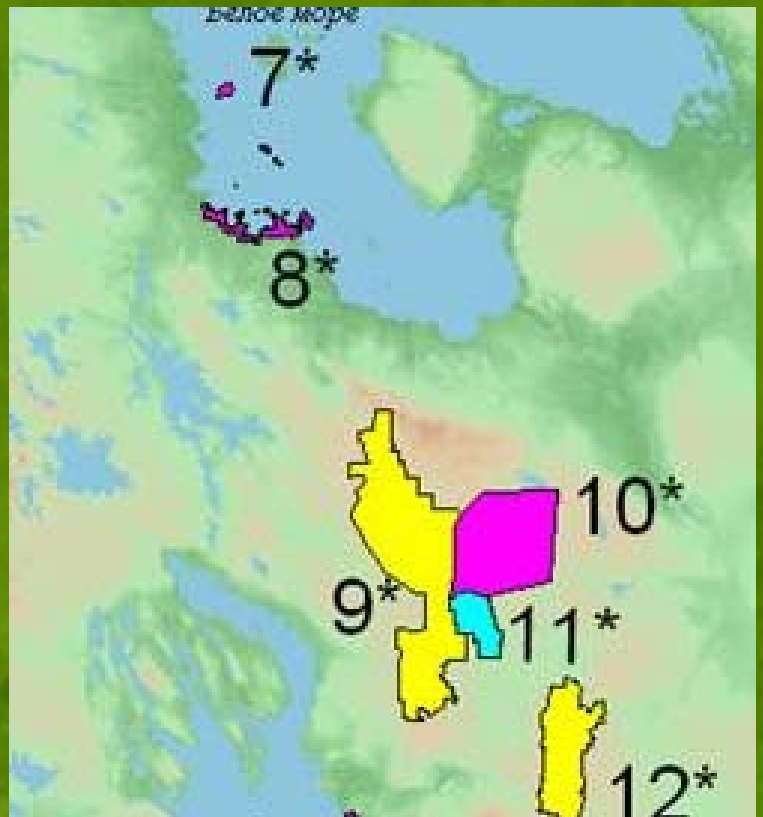


Occurrence of flying squirrel:

dark green – > 60 %
white – 0

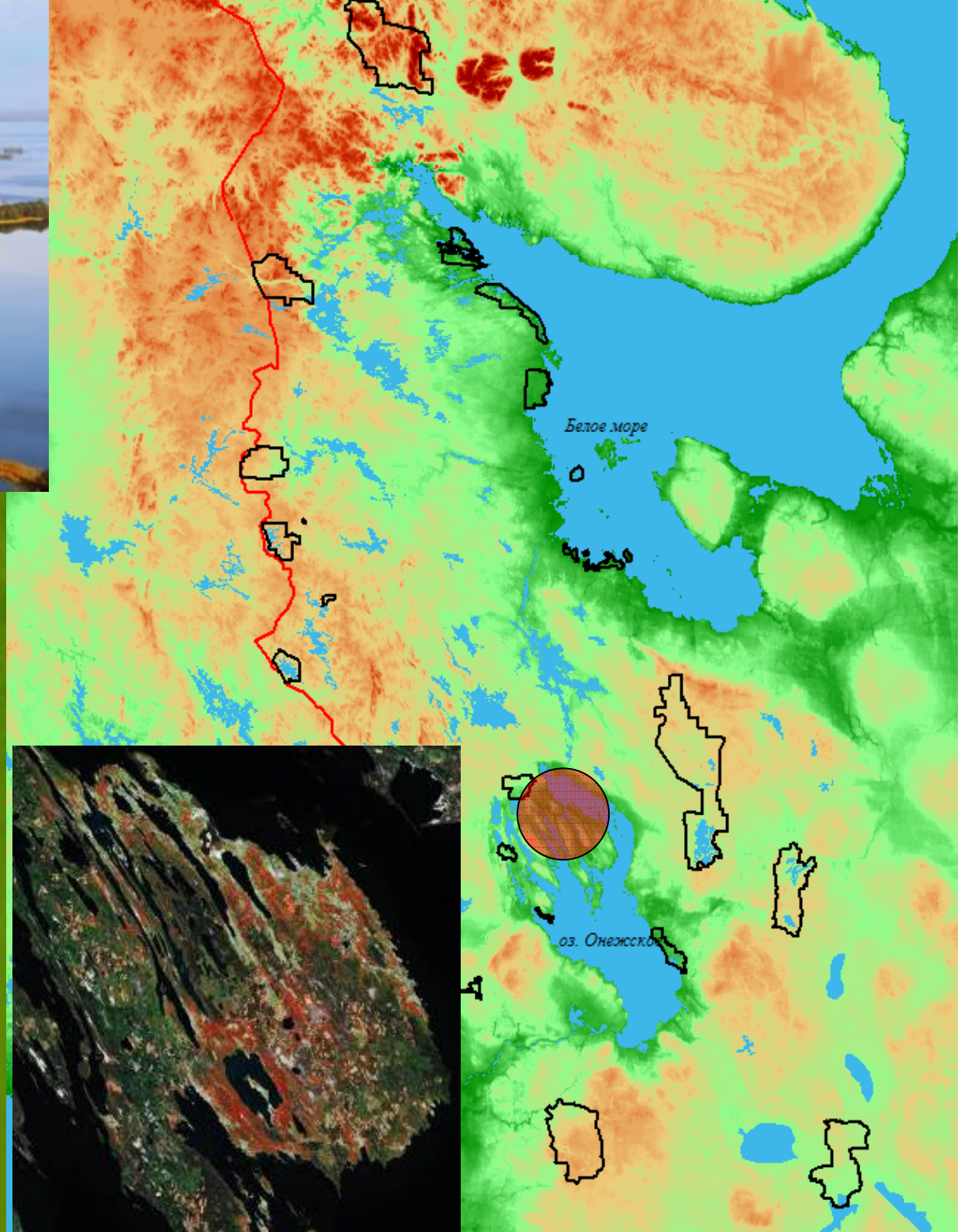
North taiga corridor

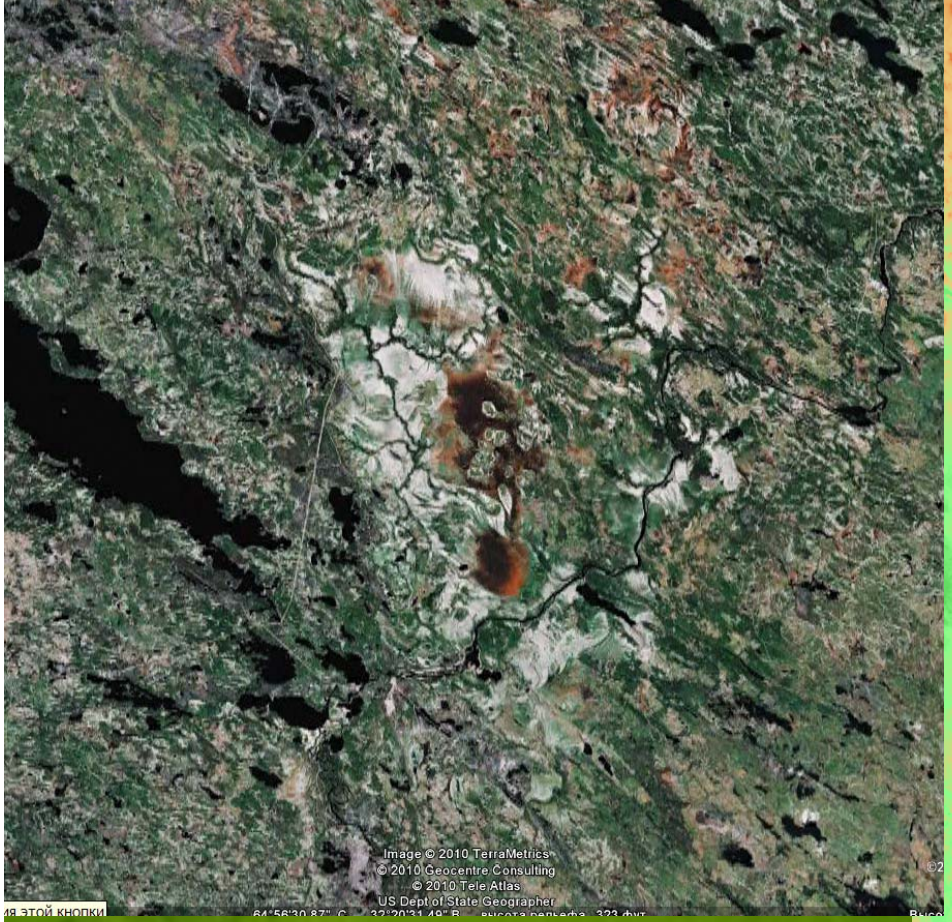
- LR «Sorokskii» (8)
- NP «Vodlozerskii» (9)
- LR «Kozhezerskii» (10),
- LR «Chukozero» (11 in plan)
- NP «Kenozerskii» (12)



Key territories for sustainability

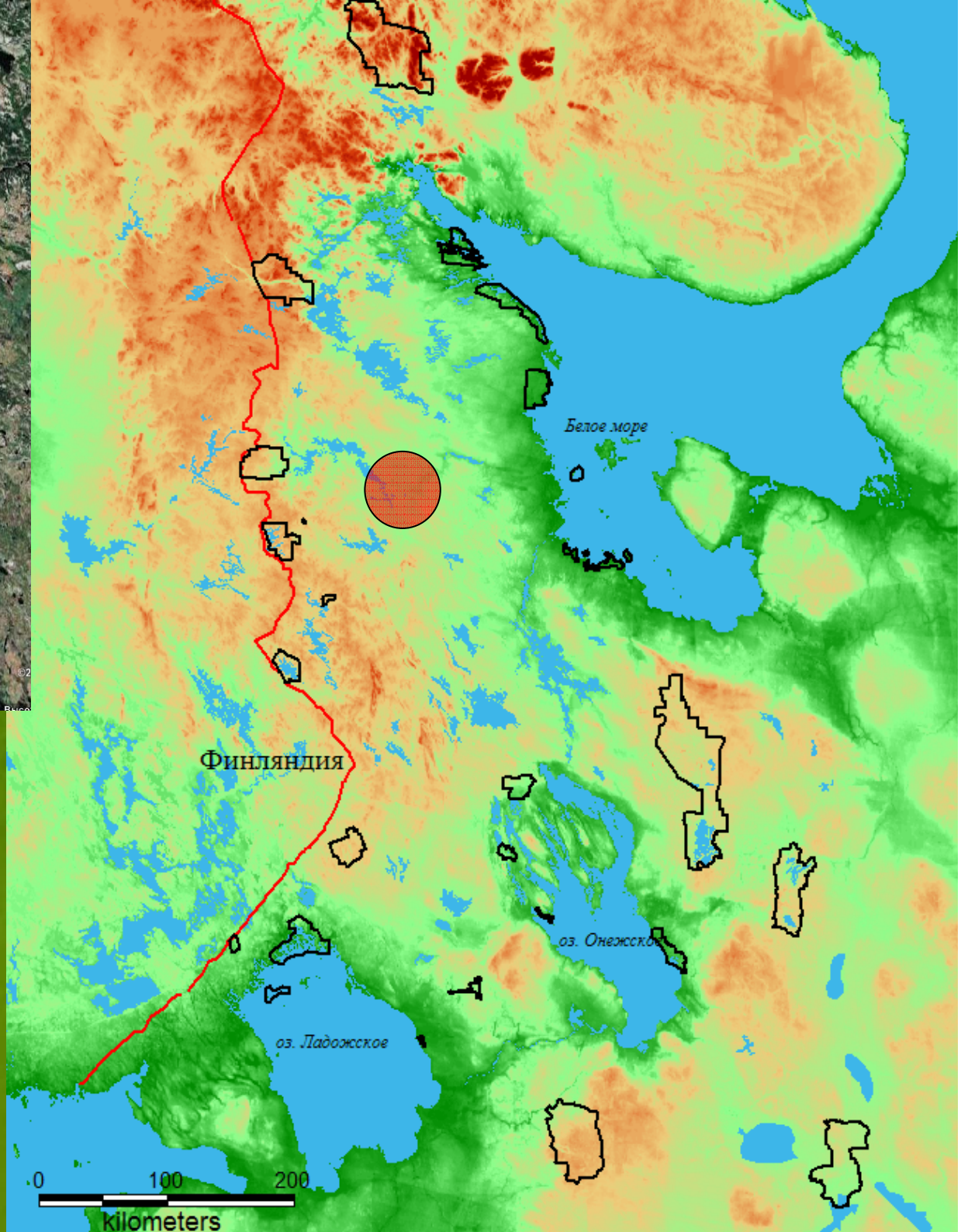
Feasibility study of Nature Park "Zaonezhskii" was prepared and published by Karelian Research Centre in 1992

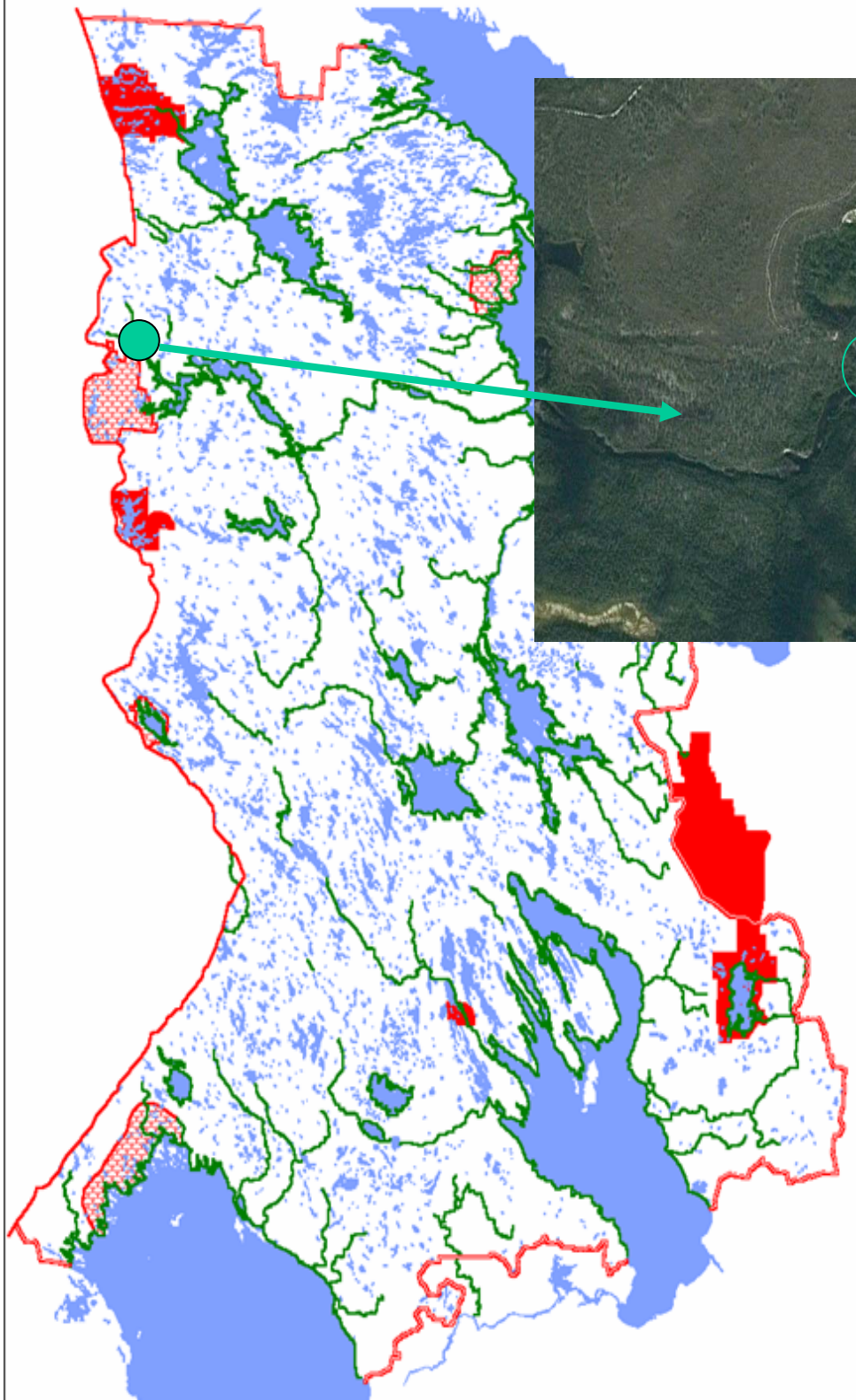




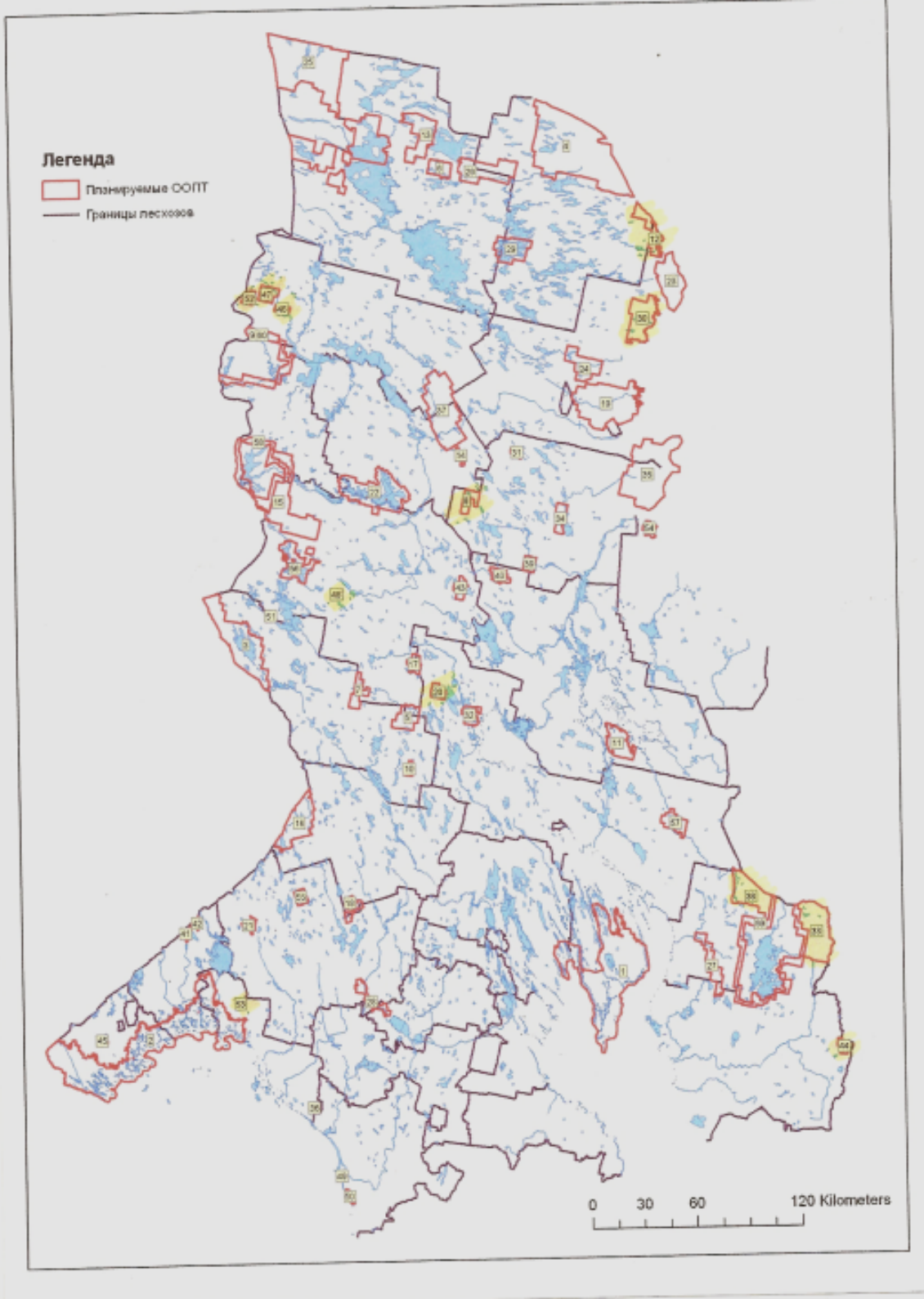
Key territories for sustainability

“Yupiauzhsuo” – the largest in Europe mire system (20 000 ha)





Waterside protection buffers



In 2008, the Feasibility Study for the PA network development in Republic of Karelia was prepared by scientists of KarRC

(leader A. Gromtsev)

Thank you!