



LIETUVOS  
GAMTOS  
FONDAS

*Dalia Bastytė*




# **Ecological Networks in Lithuania: Their Meaning, Status and Functionality**

Tbilisi, 2016

# Ecological Network?

- Special Areas of Conservation (SACs) designated under the Habitats directive
- Special Protection Areas (SPAs) designated under the Birds directive
- are combined under Article 3 of the Habitats directive to form 'a coherent ecological network' referred to as the Natura 2000 network.

# Natura 2000

-  Habitats Directive sites
-  Birds Directive sites
-  Areas belonging to both Directives

Data from January 2011



Azores

Madeira

Canary Islands

# Ecological Network

- is a spatial system favourable to the animal migration
- including their habitats of highest bio-ecological importance,
- their environment,
- and migration corridors of animals and plants.



# The EU legal framework

Connectivity measures should be implemented if they are necessary to:

- support the coherence, including functional connections, of the Natura 2000 network;
- maintain or restore FCS in habitats and species of Community interest; or
- maintain or restore populations of birds in accordance with Article 2 of the Birds directive.

# The EU legal framework

*‘where they consider it necessary, Member States shall endeavour to improve the ecological coherence of Natura 2000 by maintaining, and where appropriate developing, features of the landscape which are of major importance for wild fauna and flora, as referred to in Article 10.’*



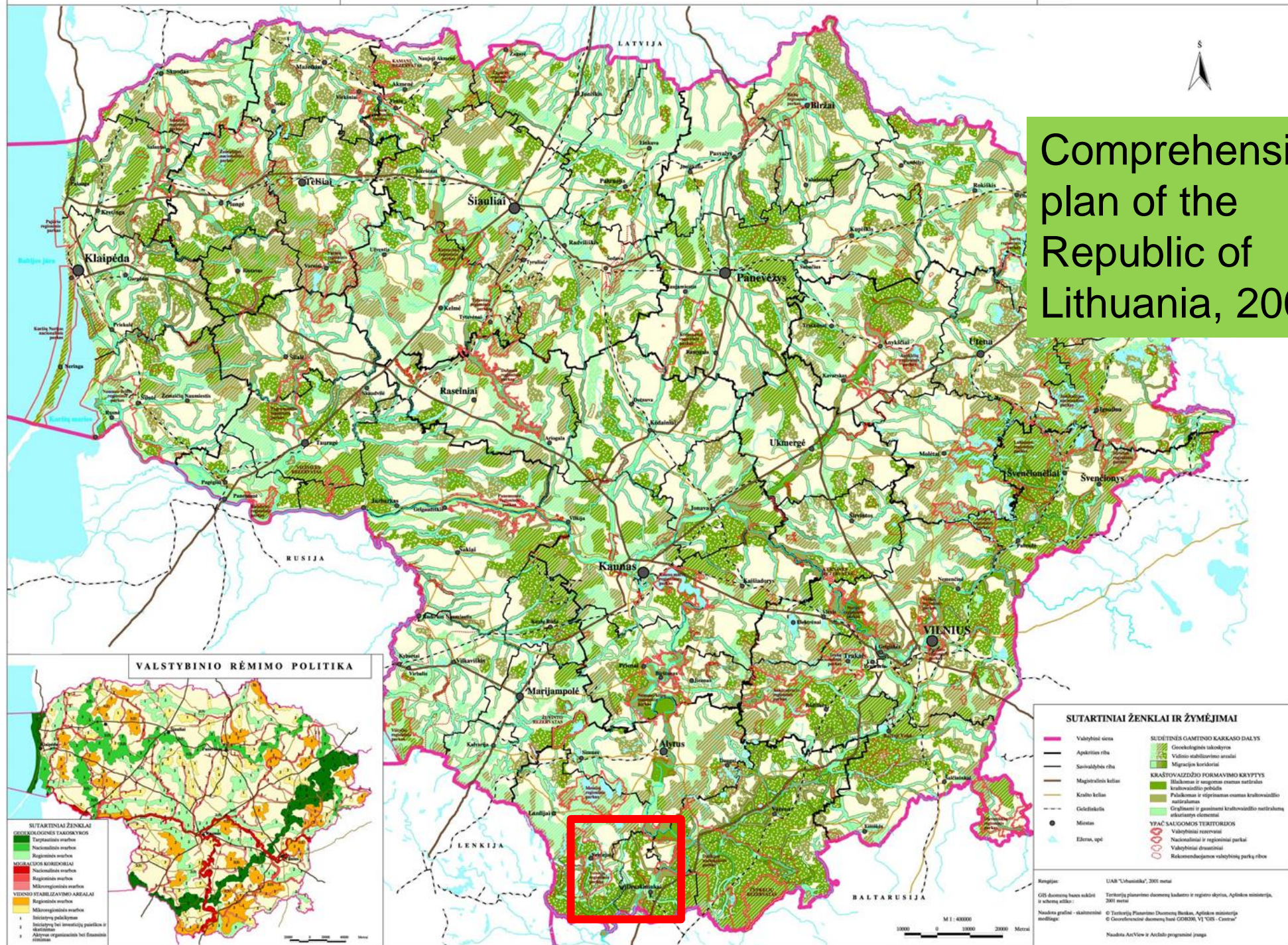
# Nature Frame: Idea and Realisation

- Scheme of Environment protection of the LSSR, **1986**
- Methodology of Nature Frame localization, **1989**
- Nature Frame schemes M 1:50000, **1989-1994**
- The Act on Protected areas, **1993**;
- Comprehensive plan of Lithuania, **2002** M1:400 000
- Comprehensive plans of the Regions of Lithuania M 1:200 000
- Comprehensive plans of municipalities , **2010** M 1:50 000
- Landscape plans, (different scale) since **2011**
- Programme for Biodiversity and Landscape conservation, **2015** – revising general plans and improvement of ecological state in the Nature Frame

# Nature Frame: components

- Geoeological divides** – territories of extraordinary ecological value and/or sensitivity (in upper position of the geosystems): watersheds, upper river basins, highlands with lakes, wetlands, seashore, intensive groundwater feeding zones, karst areas between the main ecosystems, sustaining general ecological balance of natural landscape;
- Areas of inside nodes and axes of geosystems** – territories serve as filters transforming side run-off or other especially biological natural migration flux (middle position in the geosystems): forestation massives, tree sheds and grows, natural meadows, bogs, other valuable ecotopes, which compensate the negative impact on the natural geosystems;
- Migration corridors** – valleys, areas of stabile ravines, hollows, other lower position areas, important for the intensive migration of material, energy and information.





Comprehensive  
plan of the  
Republic of  
Lithuania, 2002



# Development of a Pilot Ecological Network through Nature Frame areas in South Lithuania







- LIFE+ Nature project;
- 2010 – 2014;
- Native Lithuanian reptile and amphibians species listed in the II and IV Annexes of the Habitats Directive;
- Ca. 40.000 ha area of the network inside 230.000 ha region.



# Main actions:

- Development of criteria setting up ecological network within nature frame;
- Restoration of habitats;
- Protection of populations;
- Education of the general public;
- Knowledge exchange between the experts.



# Selection of the sites

- I. By recognising the officially protected national reserves and Natura 2000 areas as **core zones of EN** (BAST\_LKS94);
- II. By forming the **EN buffer zones** as 1 km wide belts surrounding the national reserves and Natura 2000 areas;
- III. By forming the **EN stepping stone corridors** between the core zones as follows:
  1. By selecting waterbodies of suitable size for specific protected species;

# Selection of the sites

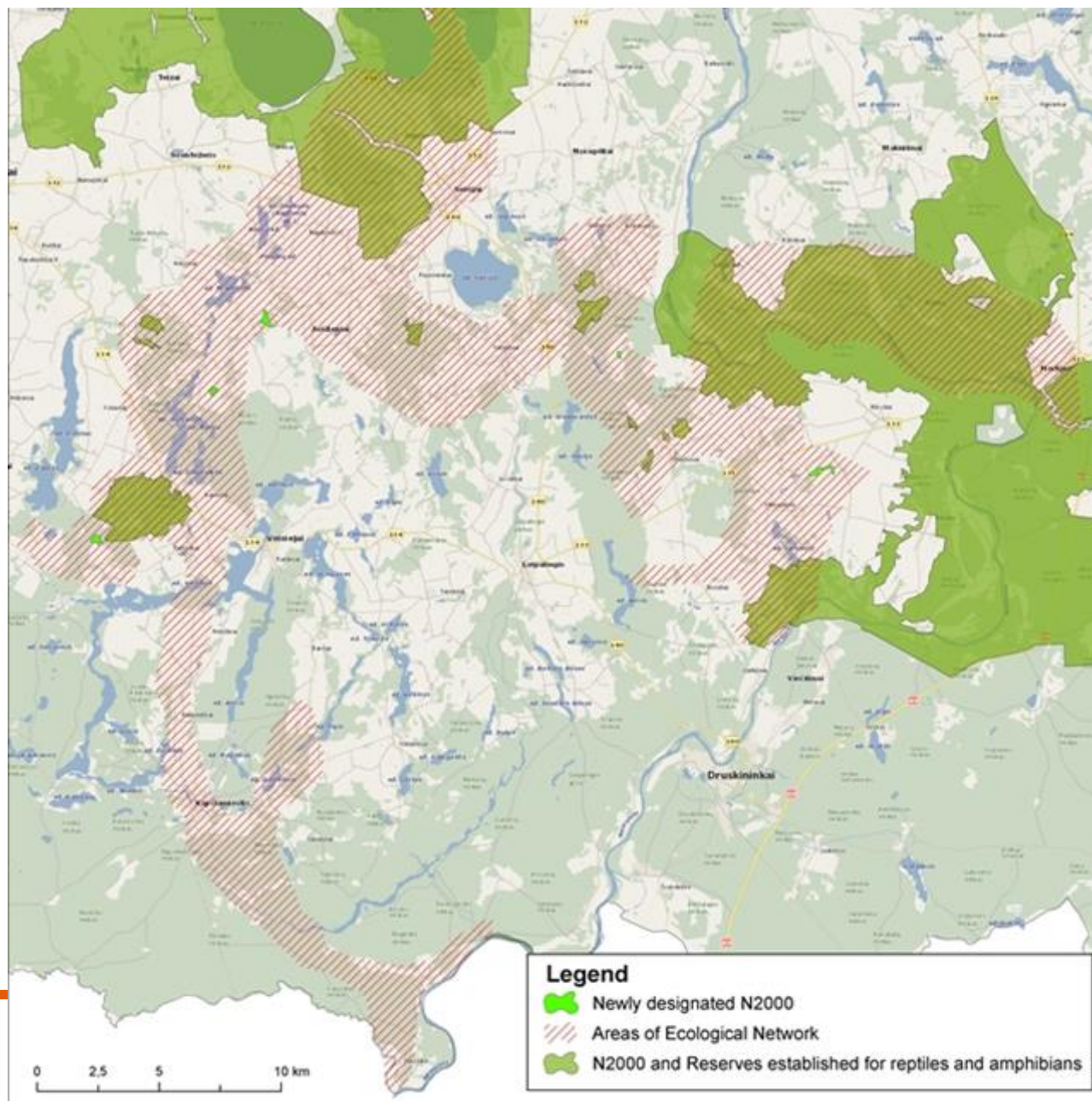
2. By selecting areas suitable for restoration or establishment of new shallow bodies of water, fitting for specific protected species:

- a) By selecting habitats of suitable soil type of certain size;
- b) From the soil habitats selected, selecting those at a certain distance from the suitable bodies of water;
- c) By assessing the existence of forests meeting the ecological needs at a certain distance from the habitats selected.

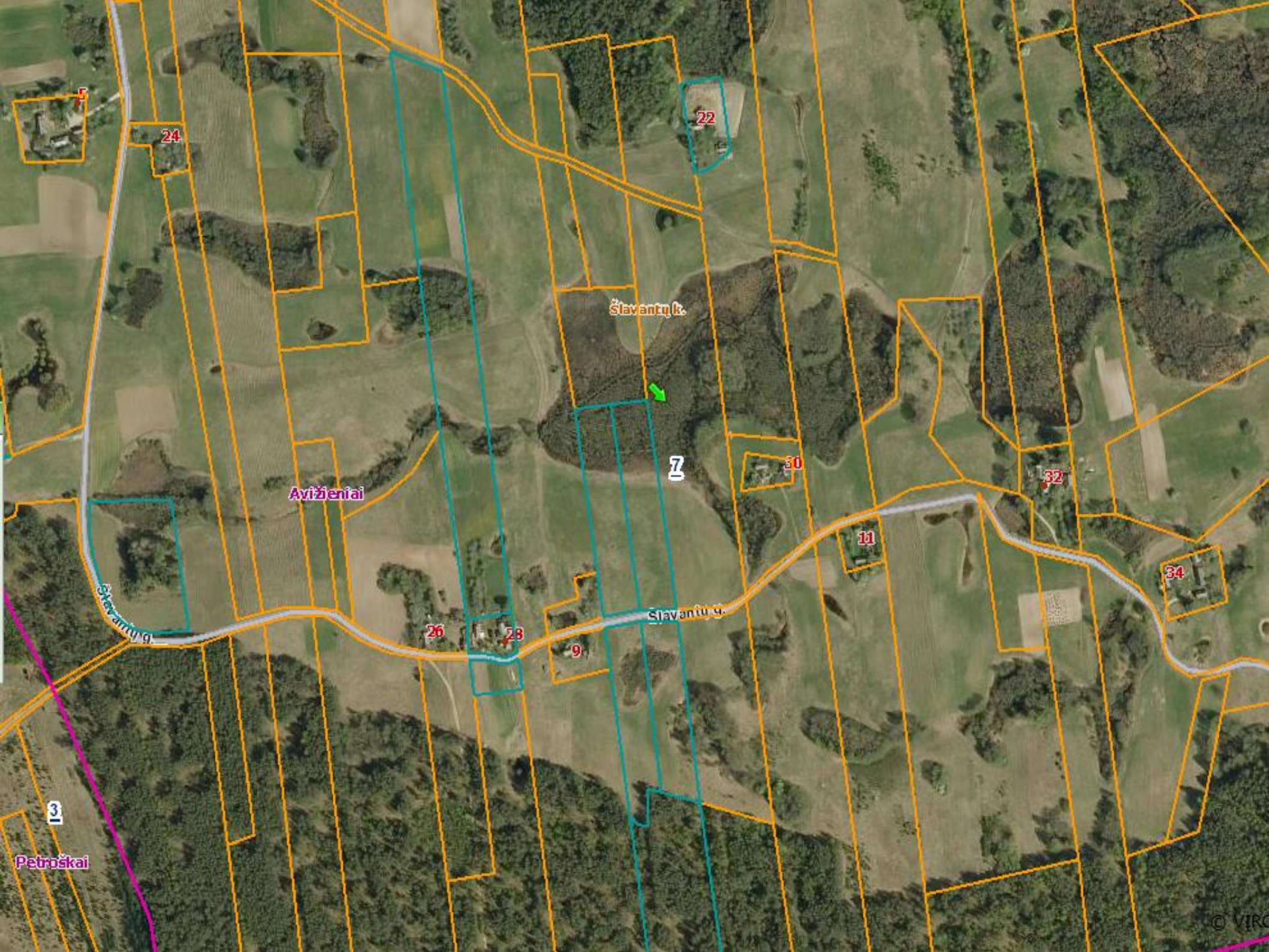
3. By avoiding cities and towns, residential areas with compact build-up, as well as other areas (road crossings, pollution sources etc.) with potential intense negative impact on the target species; by distinguishing zones, at 500 m distance from road crossings and pollution sources, where no EN should be formed, and no important elements, important for protected species, should be installed.



# Selection of the sites







24

22

Slavantų k.

7

Avižieniai

30

32

11

34

Slavantų g.

26

28

9

3

Petroškai



# Agreements with the landowners



# Habitat restoration



# Habitat restoration

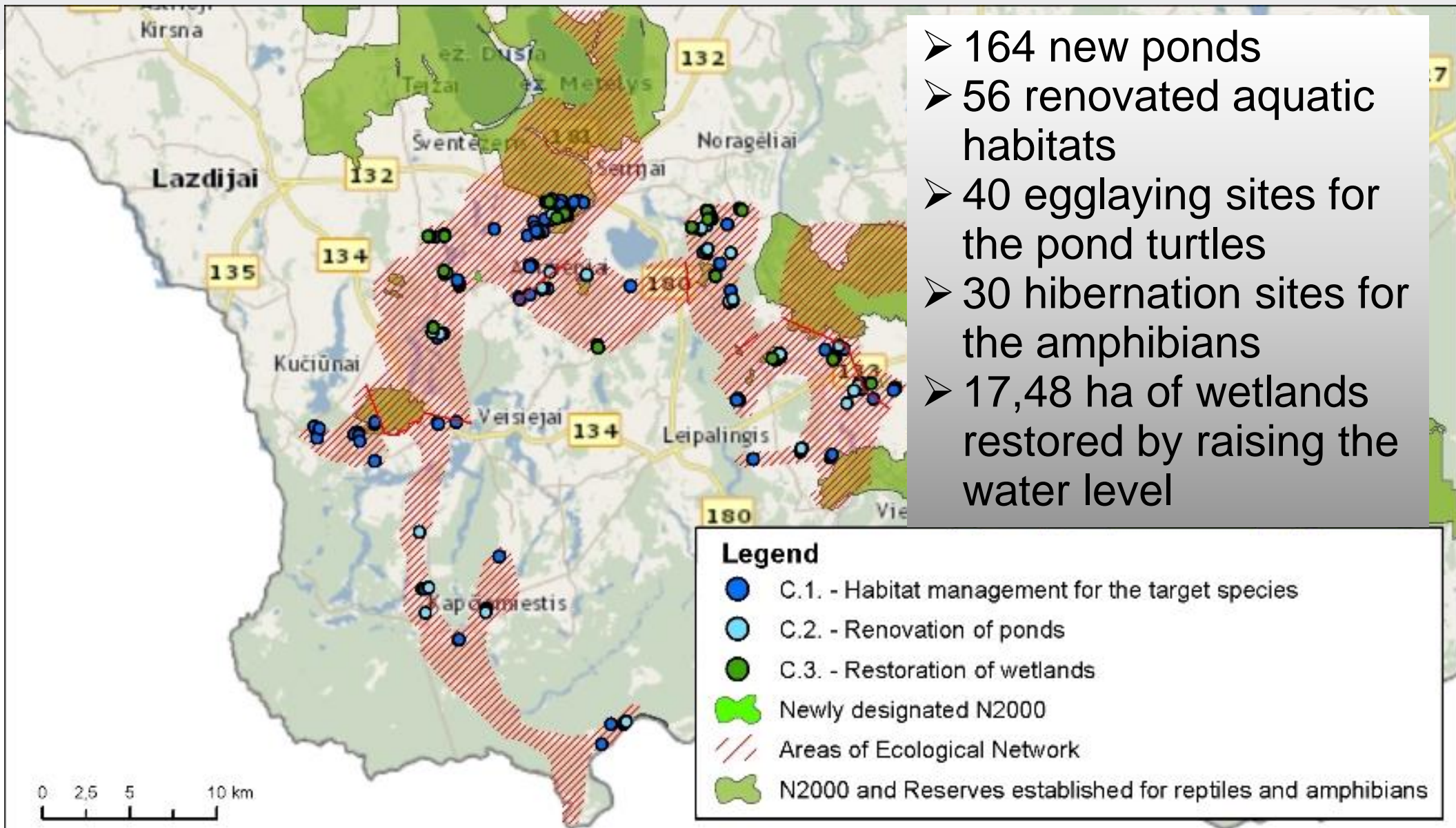
- ❑ Renovating aquatic habitats (56 ponds);
- ❑ Creating wetlands (17,48 ha of wetlands restored by raising the water level);
- ❑ Improving existing terrestrial habitats:
  - ❑ 40 nesting sites for pond turtles
  - ❑ 30 amphibian hibernation places





# Habitat restoration

- 164 new ponds
- 56 renovated aquatic habitats
- 40 egg-laying sites for the pond turtles
- 30 hibernation sites for the amphibians
- 17,48 ha of wetlands restored by raising the water level



# Protection of populations – pond turtles

- ✓ Protection of the egg clutches
- ✓ Protection of hatchlings
- ✓ Headstarting



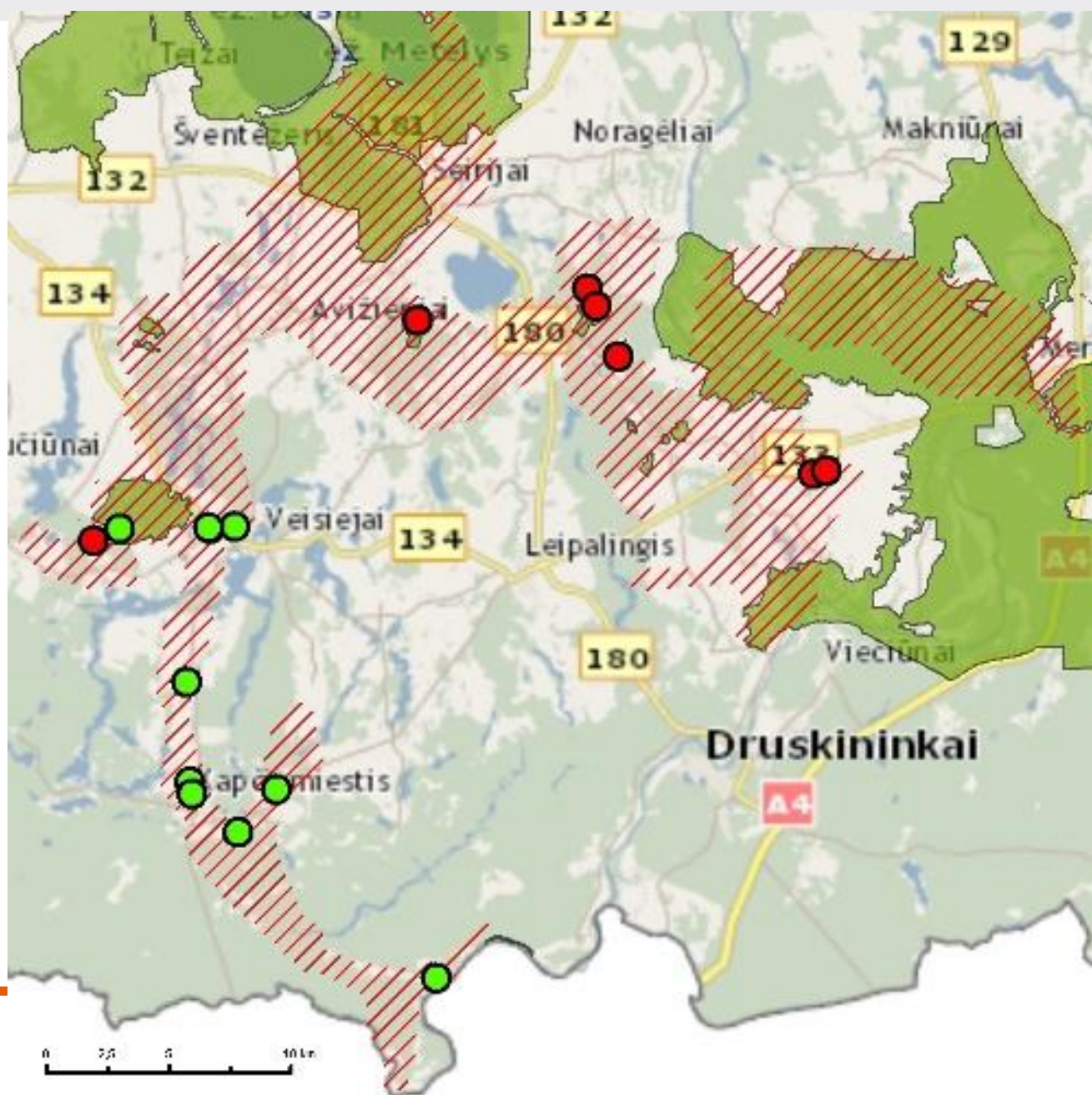


# Protection of populations – tree frogs

- Headstarting of the Oriental tree frogs (*Hyla orientalis*)



# Protection of populations





# Education and knowledge exchange





# Securing a long term impact

- Directorates of protected areas inside core zones
- Landowners in the corridors





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**Thank you for your  
attention!**



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