



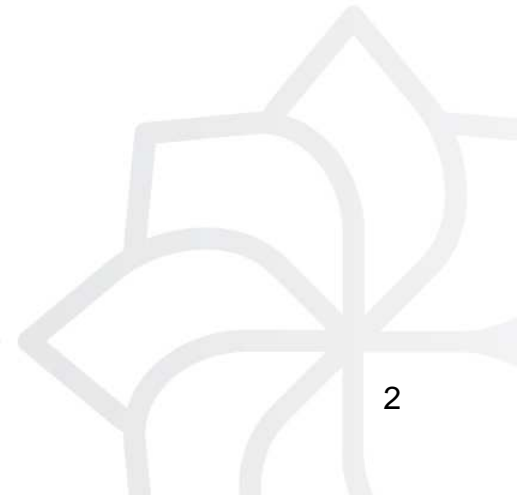
Mid-Term Conference

23rd April 2013
Tatranská Javorina

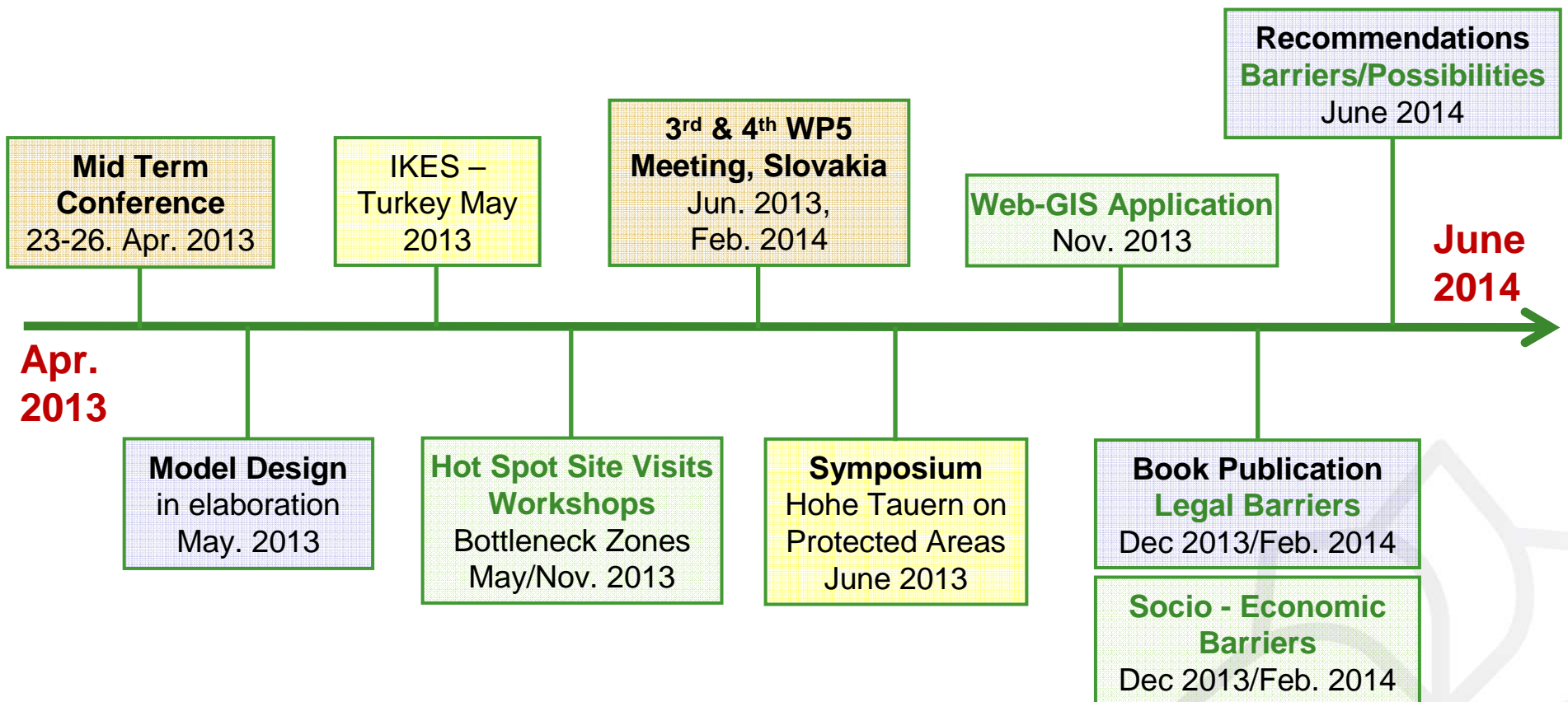
EURAC.research WP-5

WP-5: Connectivity & Continuum

- Progress & Activities
- Outputs & Results
- Outlook



Progress of WP5 – Activities in RP4/5



Jointly for our common future



WP5 Preliminary Results

Activities

Progress

- GIS Corridor Model continued (*Corridor-Design, Linkage Mapper*)
- Detected and selected core areas and most probable Least-Cost paths for lynx, bear, wolf and chamois in the Carpathians
- Main potential occurrence areas for low-mobility species - hare, capercaillie, otter in the Carpathians & Pilot areas.

Problems & Opportunities

- Considered Barriers: settlements and roads for the LCP
- Additional useful data:
 - Wildlife Road kills → clusters of road kills can validate passage sites and LCPs
 - Fenced areas, - dams, - over head power lines, - hydro-electric power plants, - oil pipelines, - touristic infrastructures

Hot Spots for lynx, bear & Wolf

Technical Approach

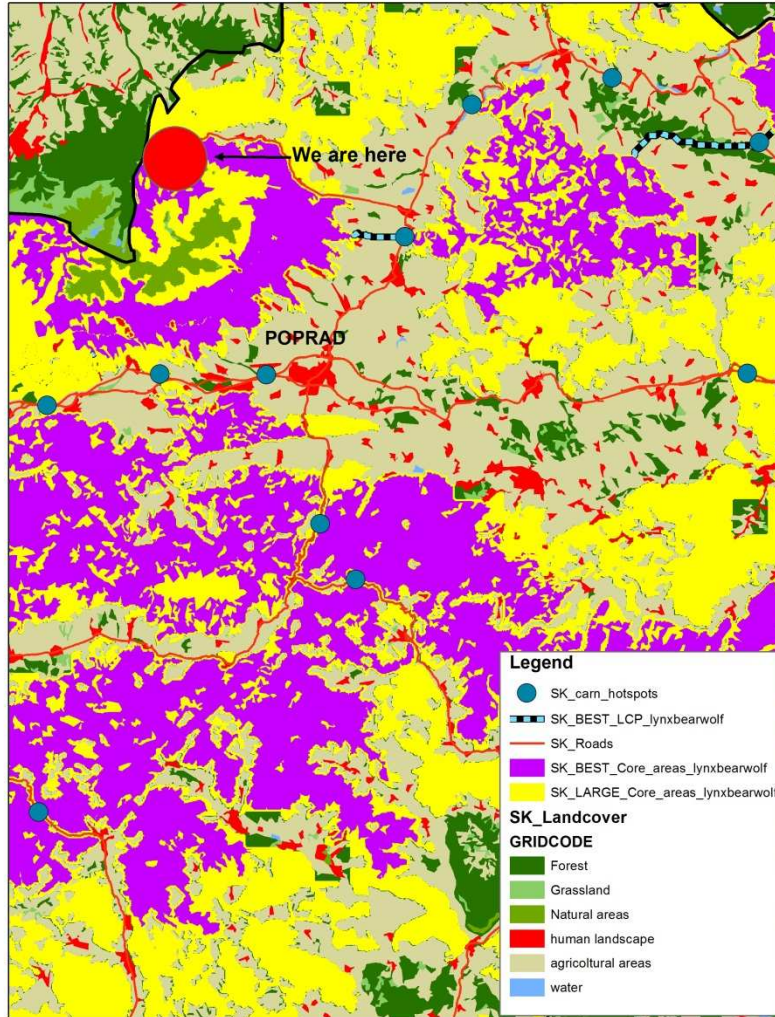
- Intersecting the population patches = minimum occurrence area
- Summing the main core areas = maximal area of possible occurrence
- Intersection of all corridors of these three species = area of migration & dispersal

Experience based selection

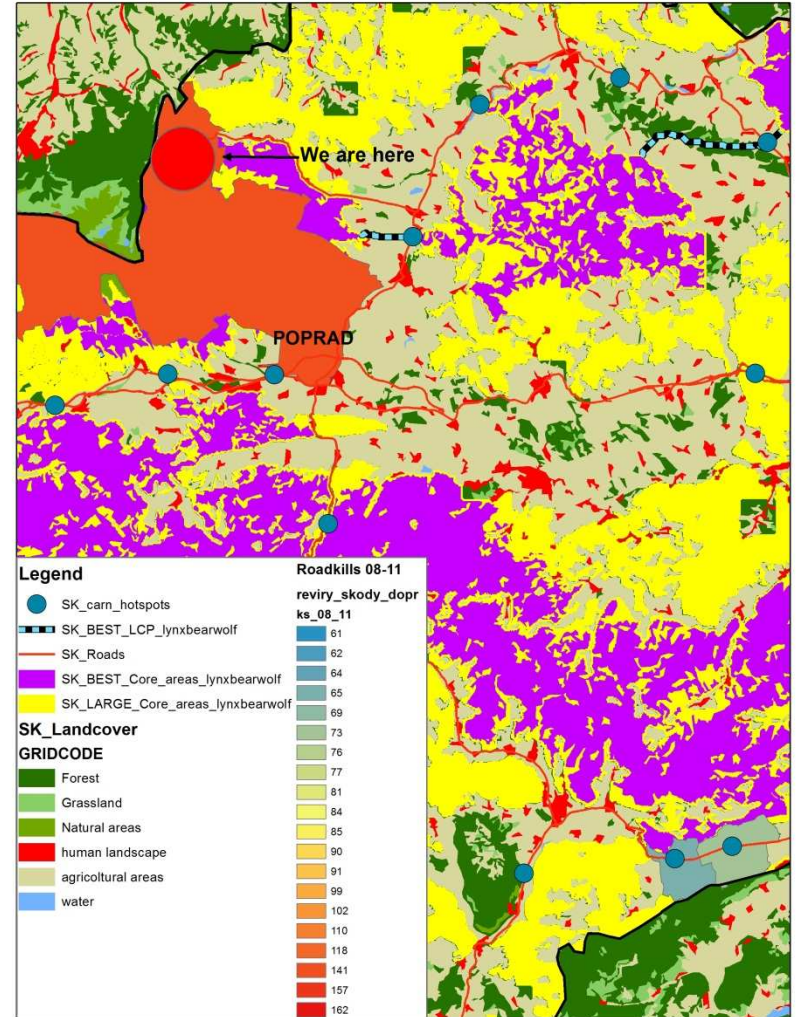
- Most reliable LCPs were selected according to ecological needs and to landcover
- Gaps interrupting LCPs are indicated as hot spots
- Partners should determine one very interesting hot spot zone for each country from the pre-selection
- Road kills data received from SK and CZ (waiting for HU)



Slovakia



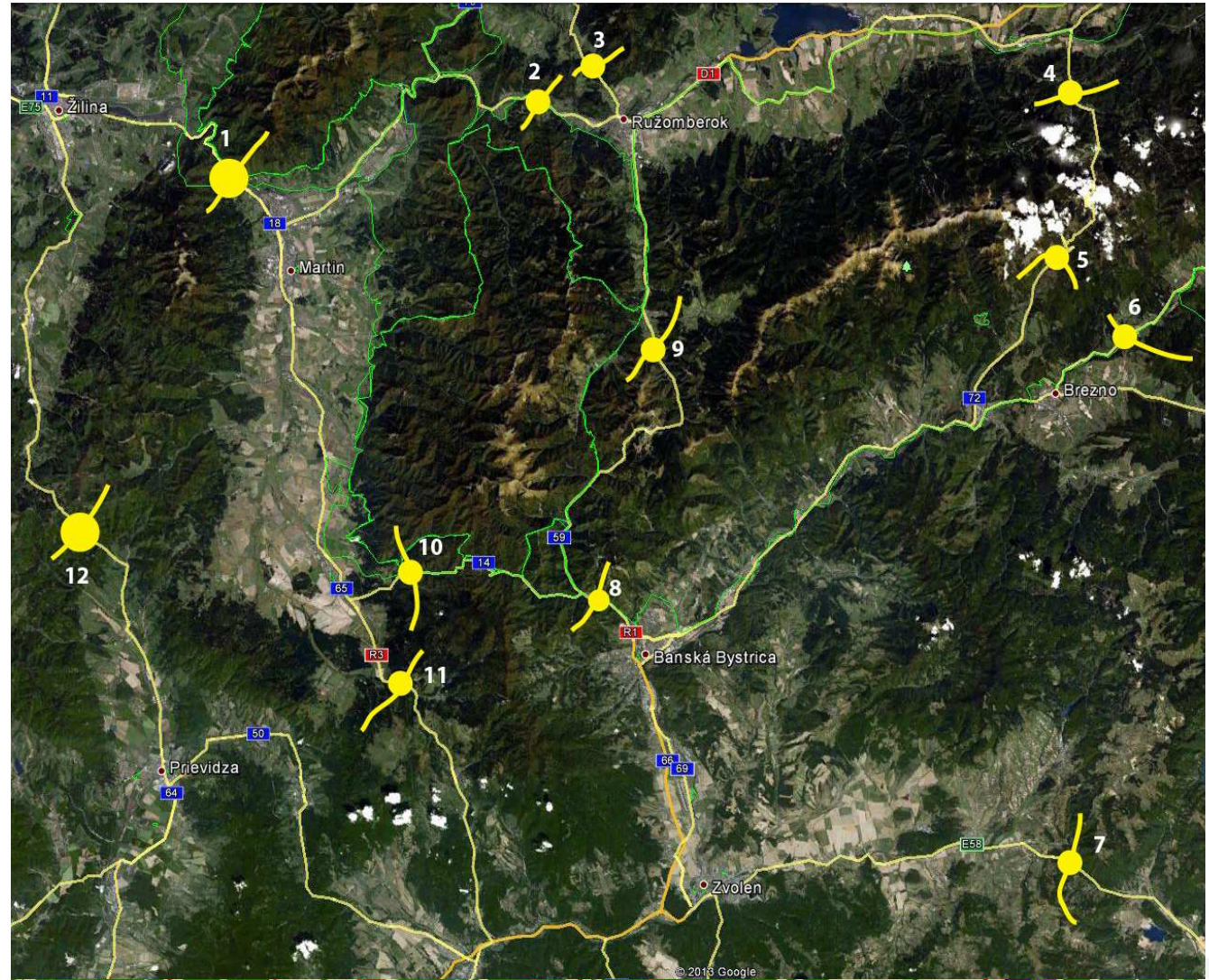
Model alone



Model + Road kill data

Hot Spots Slovakia Z1







<https://maps.google.com/maps/ms?msid=205508727170858826729.0004d9fc3c585798bd50a&msa=0&ll=48.658314,18.781128&spn=0.95067,2.705383>

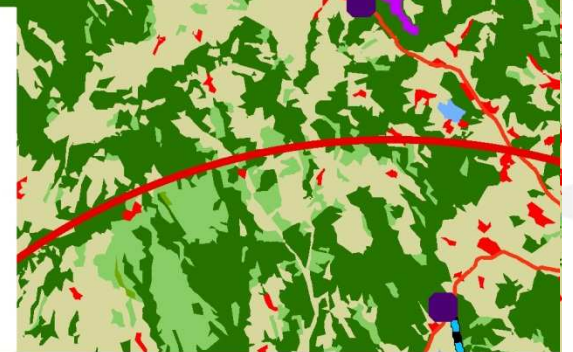


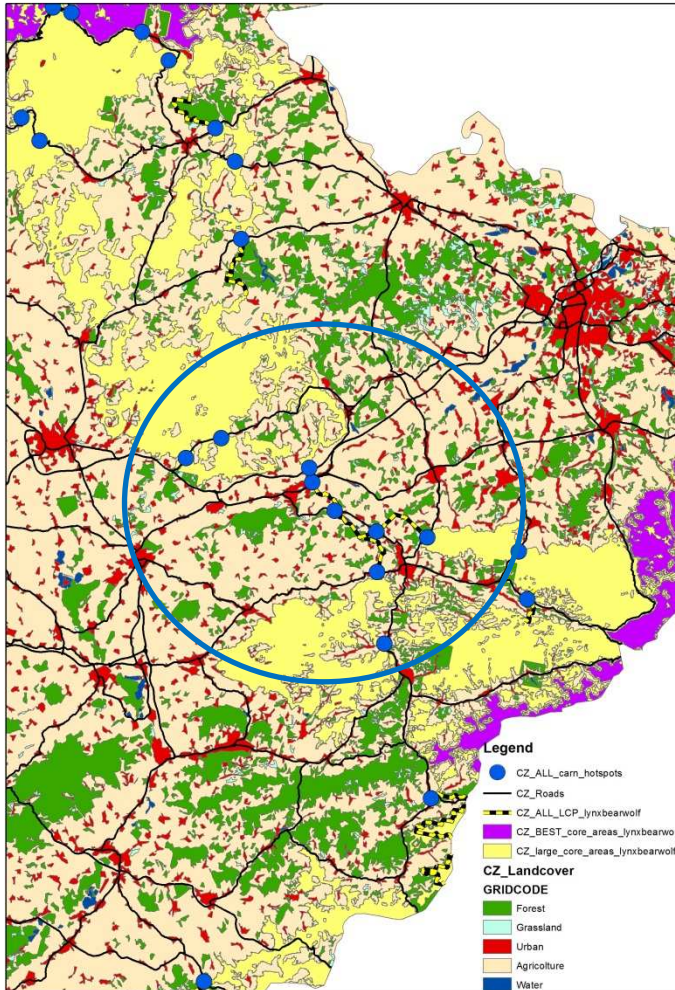
Legend

-  SK_carn_BEST_hotspots
-  SB_carn_BEST_LCPs
-  SK_BEST_Core_areas_lynxbearwolf
-  SK_LARGE_Core_areas_lynxbearwolf
-  Hotspots
-  Main roads

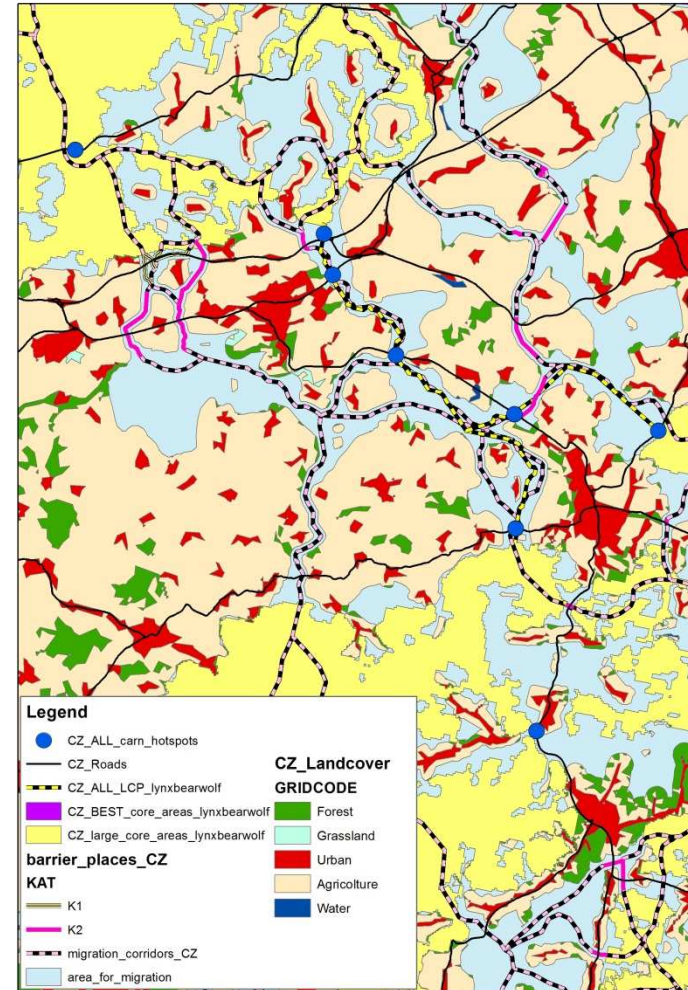
SK_Landcover

-  Forest
-  Grassland
-  Natural areas
-  human landscape
-  agricultural areas
-  water

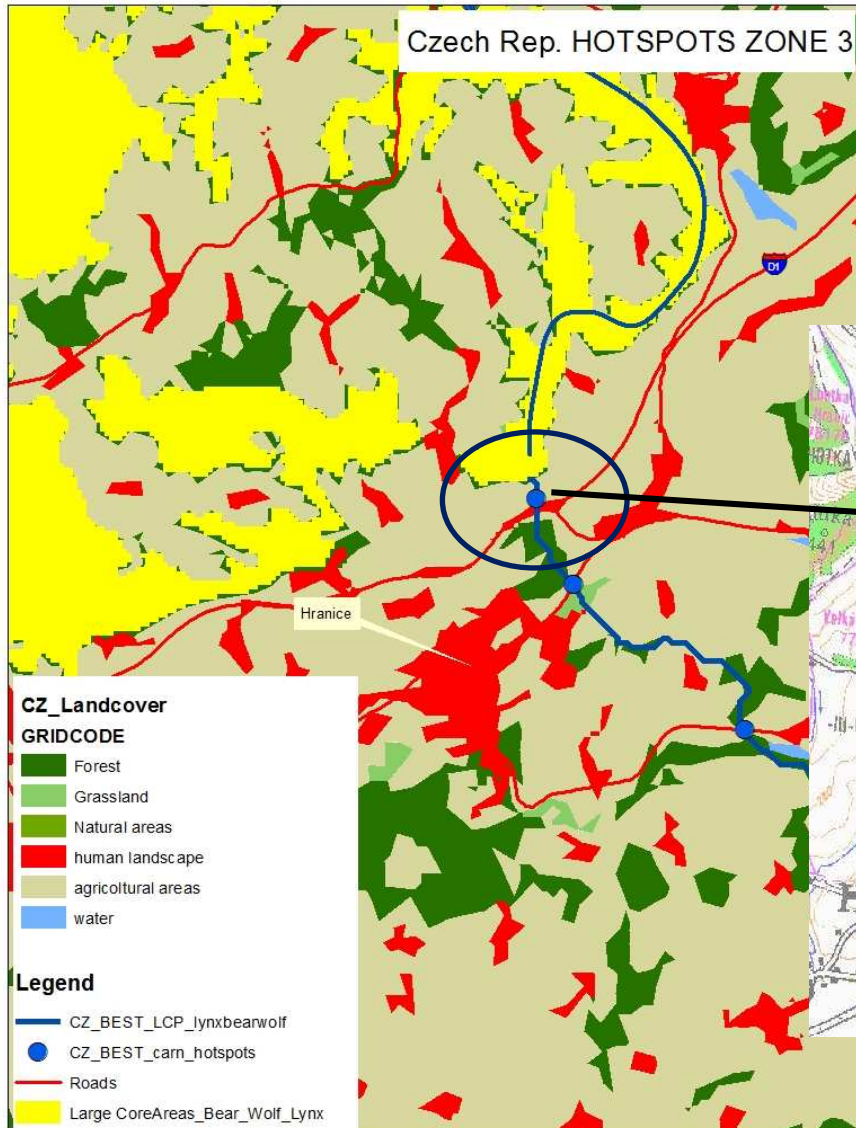




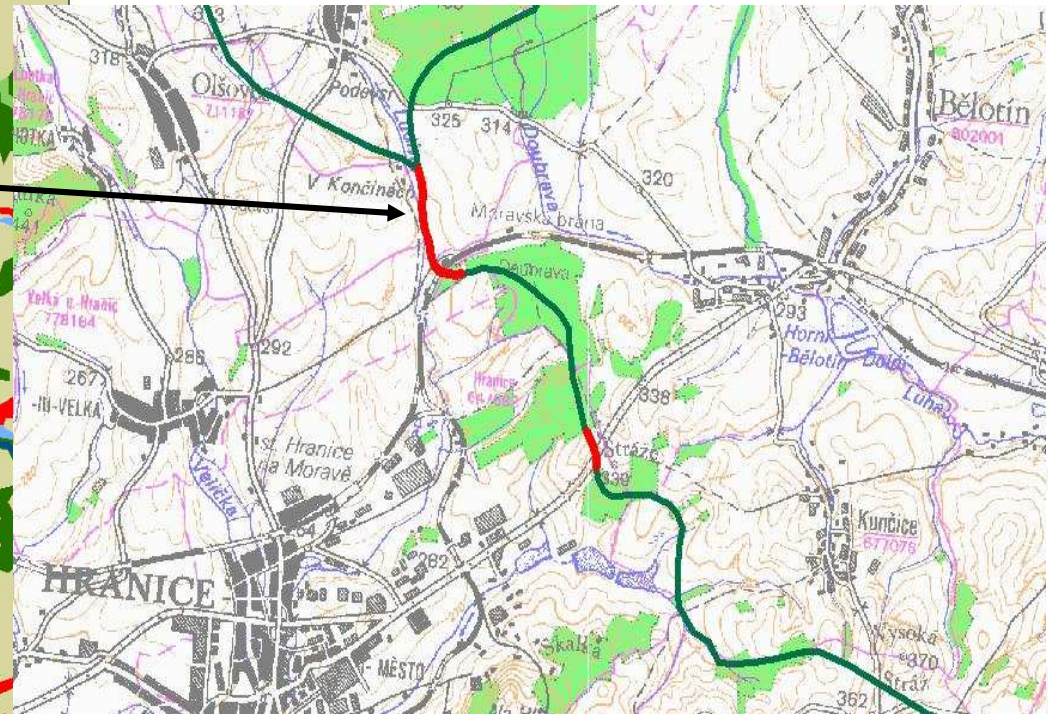
Czech Rep



Jo



Critical barrier section (red color) of the migration corridor (northern one – combination of the railway and highway underpass close to each other) 2 km west from Běloutín.





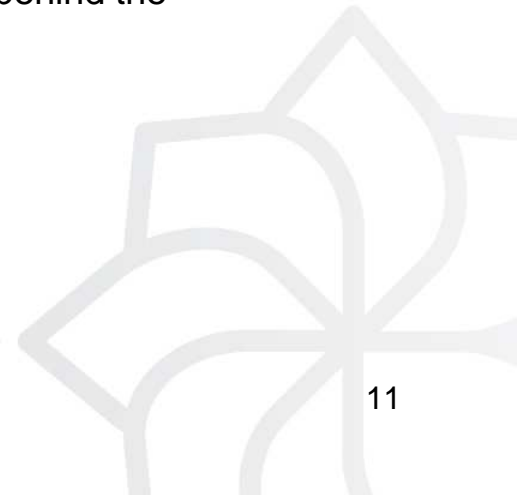
Source: Strnad M.

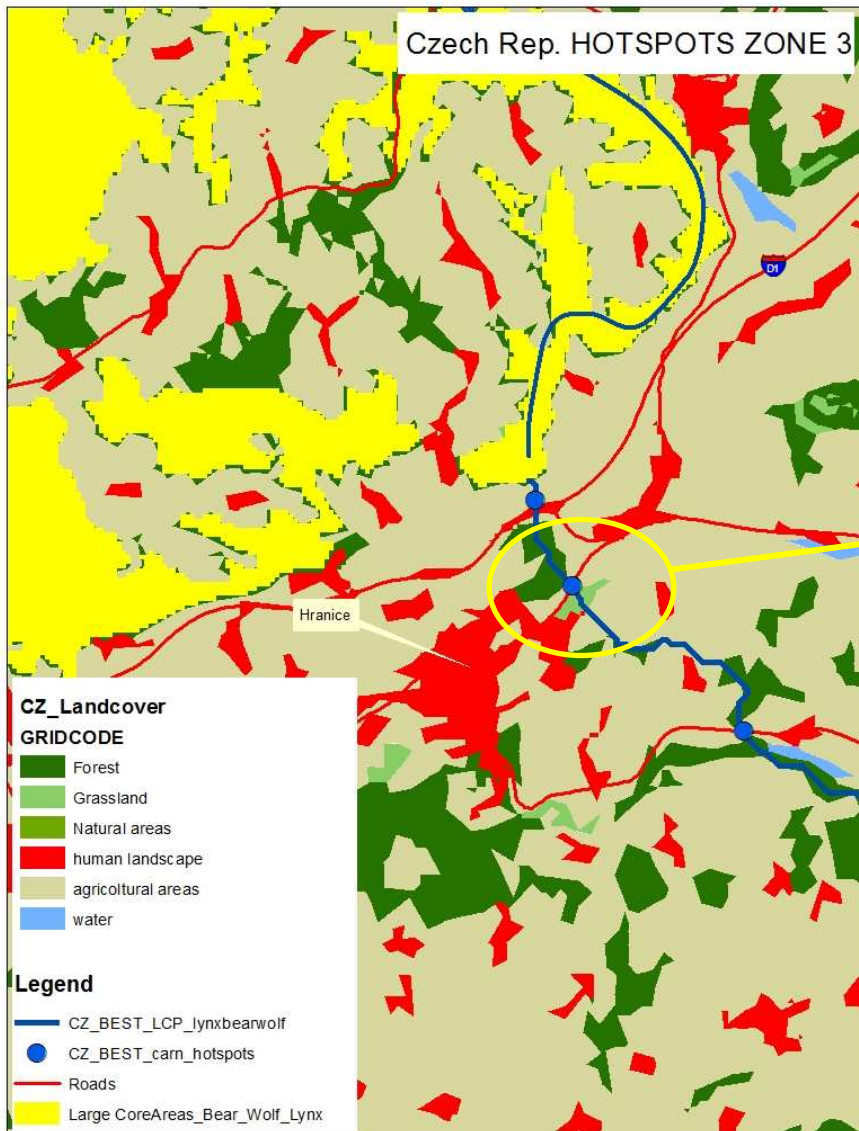
Photo: Railway corridor leading east to the city Běloutín.



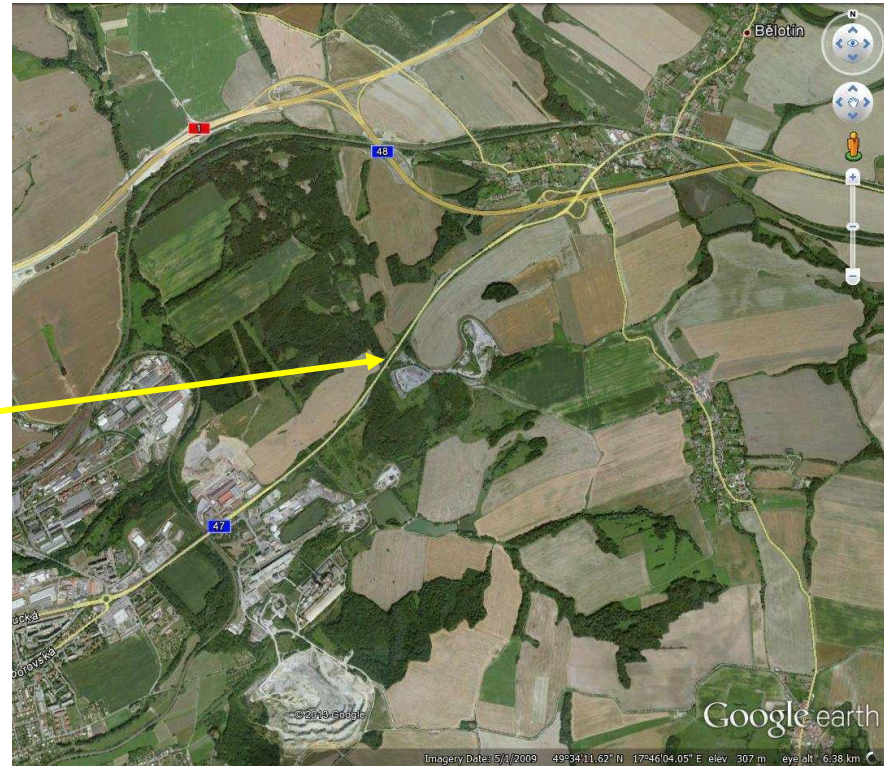
Source: Strnad M.

Photo: Elevated highway (underpass on the highway D47 - view to the north). There is riparian vegetation obvious along the stream Ludina behind the underpass.





From the south - problematic is the road I/47, where the traffic flow is over 10 000 car/day



Jointly for our common future

Web-GIS

Potential of the Web-GIS

Instrument to distribute geographic information which become available to a large audience

Information from the web-GIS are easy accessible for the users on their computers/tablets without having GIS installed

Combine and integrate different types of information, either raster or vector, in an open platform.

Structure of the Web-GIS

Info

Project description and period

Layer

Session where a real time maps and a spatial data catalog are provided in order to show general information on the landscape character and on ecological connectivity

Legend

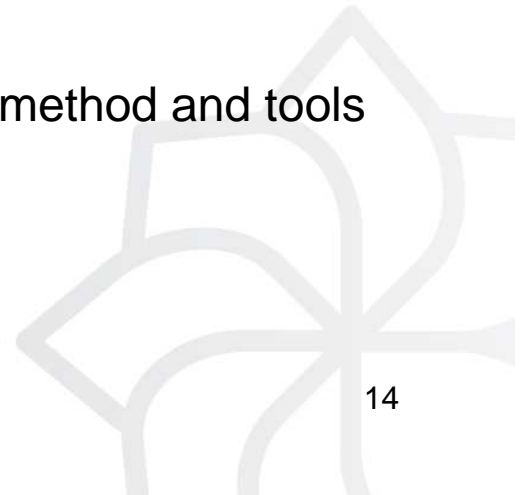
Session that explain the information contained into the layers

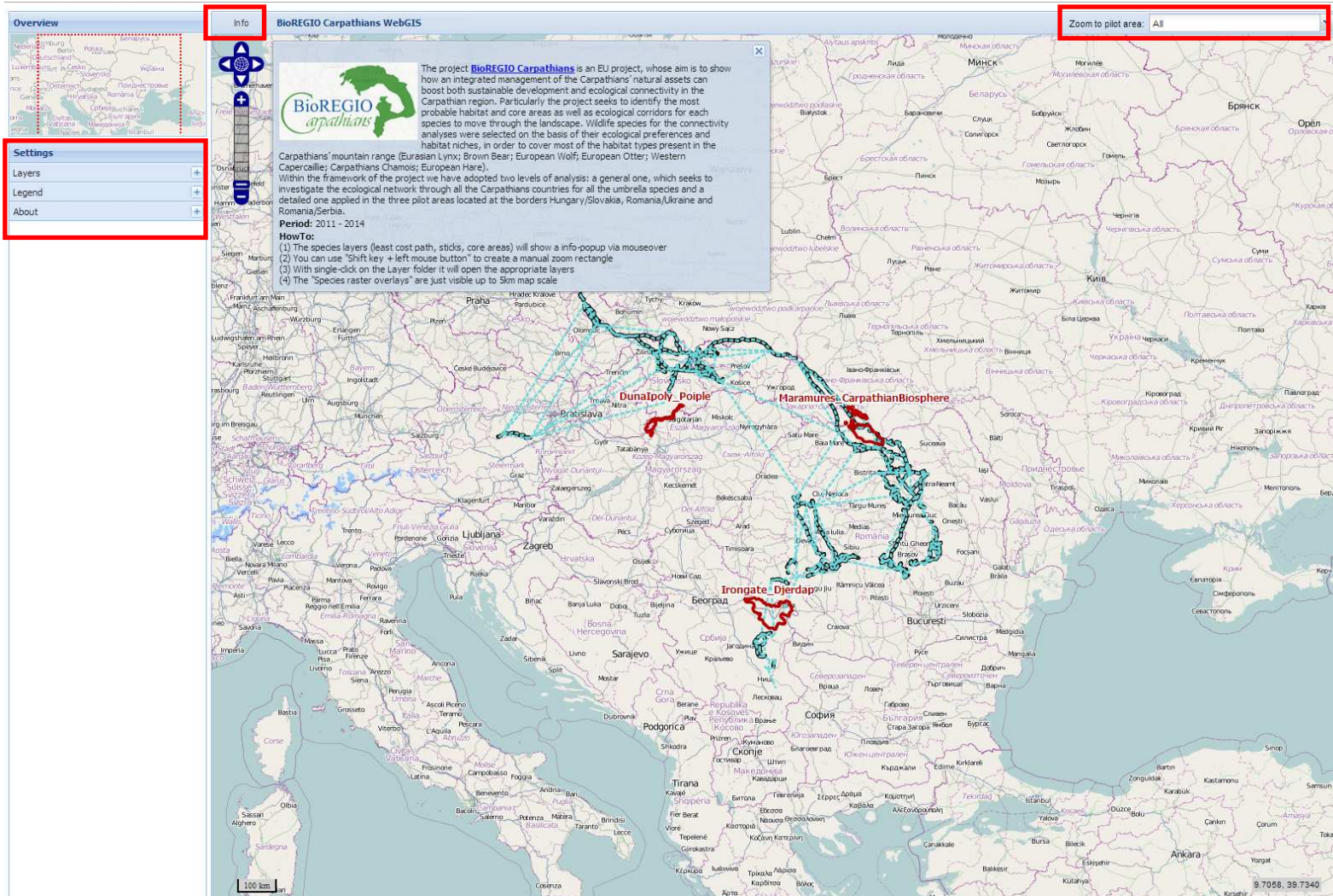
About

Session that give main information about the datasets used, method and tools

Search engine

Offers the possibility to zoom into the pilot areas





Slide 15

RE4

questa slide la metterei qui perché spiega la struttura e non ha senso metterla alla fine

Ravazzoli Elisa, 11/04/2013

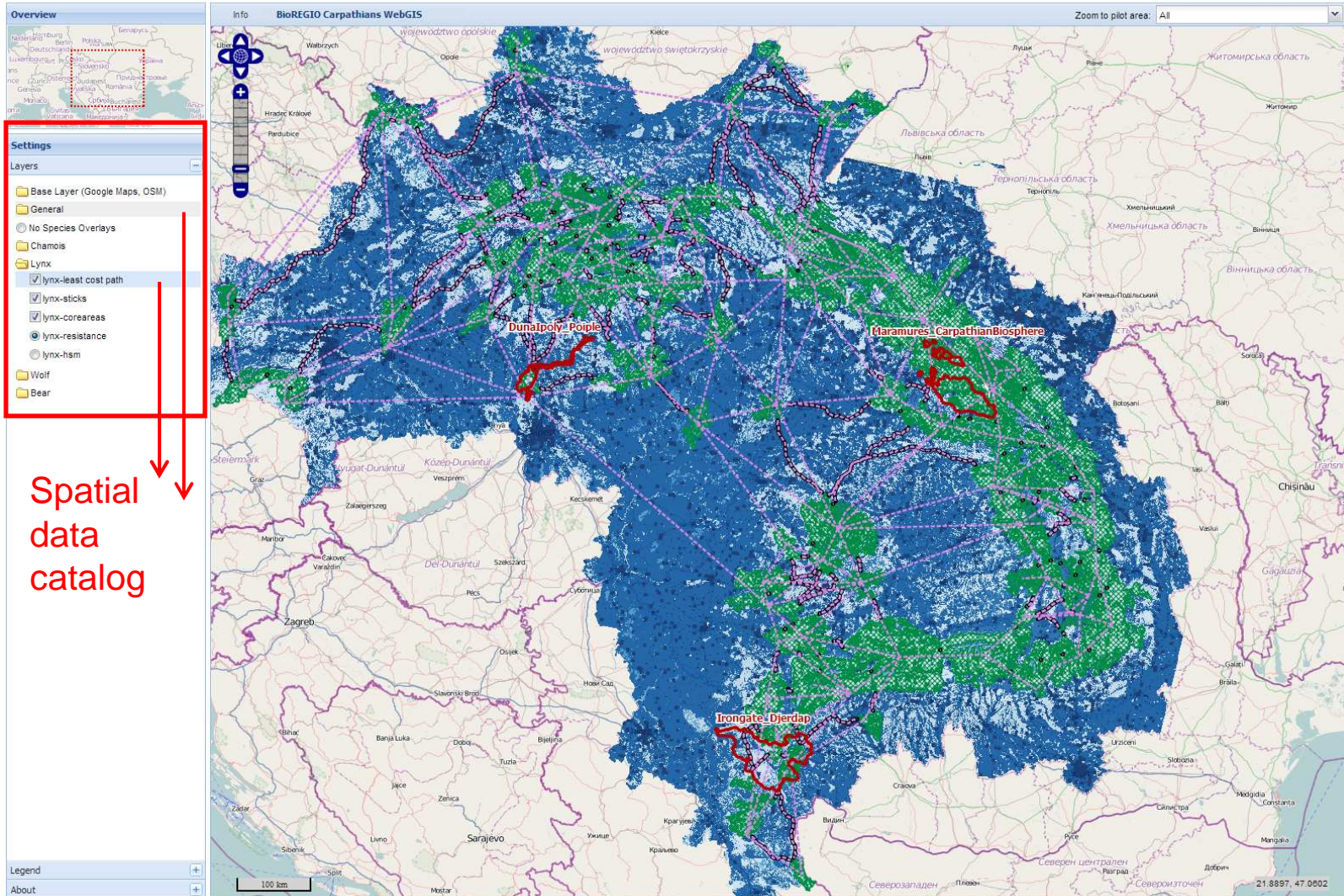
- Web-GIS application is in the developing phase

<http://webgis.eurac.edu/bioregio/>

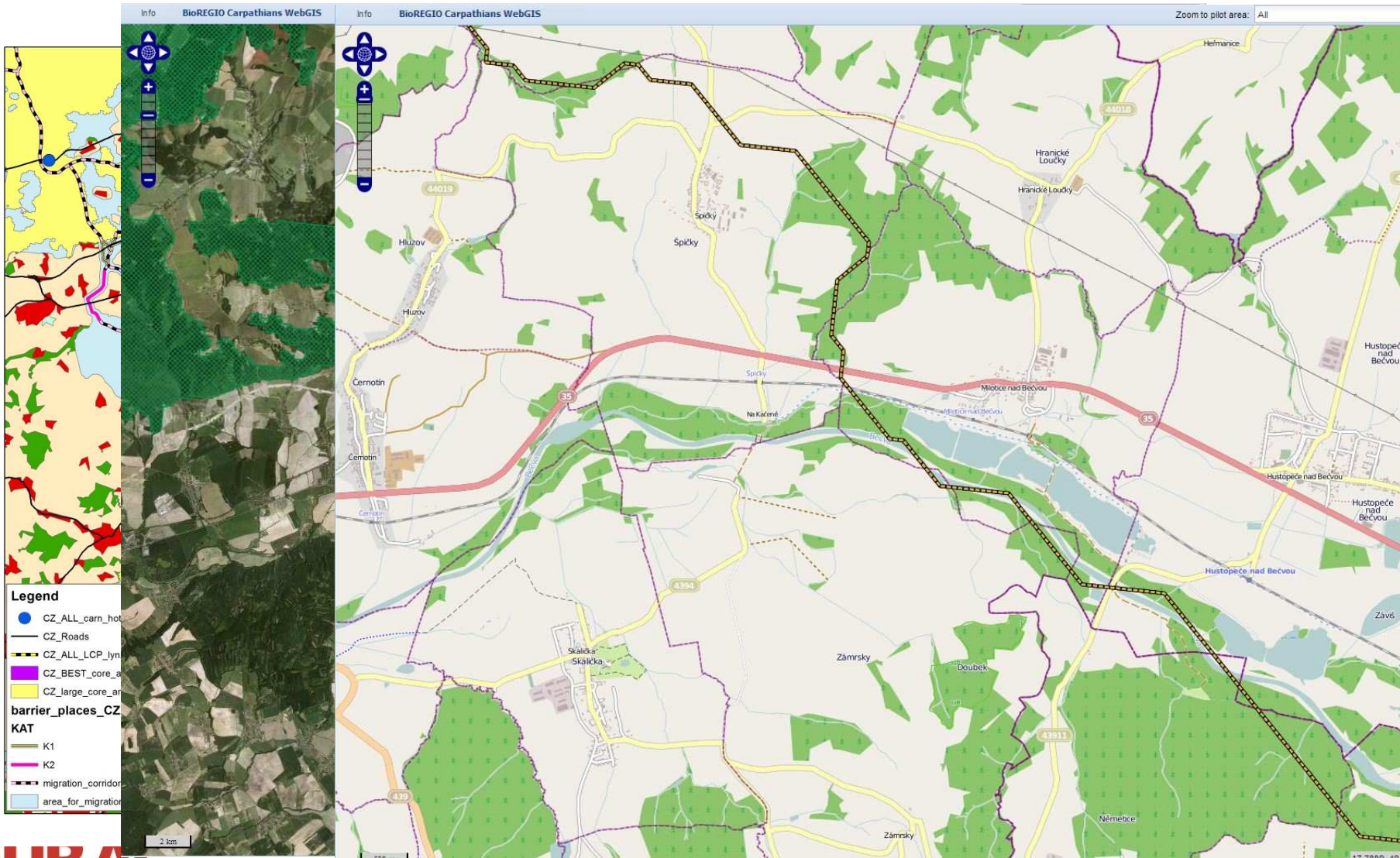
Main components of the Web-GIS

- Real time map browser with different Base layers: Google Map (Physical, Street, Satellite, Hybrid)
- Spatial Data catalog: cities, roads, rivers, lakes, NUTS3 Carpathians, Countries, Land Cover
- Spatial Data catalog of Species: Lynx, Bear, Wolf, Chamois
- Species overlay only for vectorial information, NOT on raster data
- Data on Ecological Connectivity for each species: LCPs, Sticks, Core Areas, Resistance, HSM

Real time map



Spatial data catalog



Slide 18

RE5

qui ci sono tre immagini sovrapposte e nn e chiaro cosa vuoi mostrare; se vuoi mostrare i different base layer forse dovresti metterla prima

Ravazzoli Elisa, 11/04/2013

Outlook: Additional Tasks

- Road kills data → can be added to the Web-GIS or just used to validate the LCPs (as in Slovakia and Czech Republic)
- In the popup of the web-GIS, there are units missing for core areas :euc_dist, cw_dist, from_core, to_core. LCPs popus provide all the
- Species' presence data → validate the core and occurrence areas
- Geographic features for low-mobility species → virgin forests for Capercaillie
- Planned infrastructures → i.e., Lugoj-Deva Motorway in Romania; planned transportation infrastructures in Czech Republic
- LANDSAT classified land-cover and high-resolution images for Pilot Areas
- Synthesis Report and book on legal barriers
- Recommendation on Socio-economic barriers

Thank You

