WP-5: Connectivity & Continuum

- Progress & Activities
- Outputs & Results
- Outlook
Progress of WP5 – Activities in RP4/5

- Mid Term Conference
- IKES – Turkey
  May 2013
- 3rd & 4th WP5 Meeting, Slovakia
- Web-GIS Application
  Nov. 2013
- Recommendations
  Barriers/Possibilities
  June 2014
- Model Design in elaboration
  May 2013
- Hot Spot Site Visits Workshops
  Bottleneck Zones May/Nov. 2013
- Symposium
  Hohe Tauern on Protected Areas
  June 2013
- Book Publication
  Legal Barriers
  Dec 2013/Feb. 2014
- Socio - Economic Barriers
  Dec 2013/Feb. 2014
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&m
sa=0&ll=48.658314,18.781128&spn=0.95067,2.705383

Legend
- SK_carn_BEST_hotspots
- SK_BEST_Core_areas_lynxbearwolf
- SK_LARGE_Core_areas_lynxbearwolf

SK_Landcover
- Forest
- Grassland
- Natural areas
- human landscape
- agricultural areas
- water
Czech Rep

Model alone

Model + Migration corridors + barriers data
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 Bělotín.
Photo: Railway corridor leading east to the city Bělotín.

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.
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 of 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
questa slide la metteri qui perché spiegas la struttura e non ha senso mettelala 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
qui ci sono tre immagini sovrapposte e non è 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 necessary info
Thank You