Biotope of selected specially protected species of large mammals:
a spatial planning tool how to secure landscape migration permeability in the Czech Republic

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Complex Approach to the Protection of Fauna of Terrestrial Ecosystems from Landscape Fragmentation in the Czech Republic

Partners: NCA, Transport Research Centre, VÚKOZ, EVERNIA: 2015 – 2017

Target species: wolf, lynx, bear and moose

- all of them are included on the list of “species of national importance“
- bounded to forest ecosystem
- umbrella species which cover ecological demands for other smaller forest species

- If we meet their demands while migration (e.g. when overcoming transport infrastructure) than we secure permeability for other smaller forest species
source: species occurrence data

bear 2000 - 2017

number of records in the grid

NCA species occurrence data database
source: species occurrence data
wolf 2000 - 2017

number of records in the grid
source: species occurrence data

 lynx 2000 - 2017

number of records in the grid

- 0 - 1
- 2 - 5
- 6 - 9
- 10 - 19
- 20 +
GIS modelling – barriers
Distance to settlements

© Romportl 2016
GIS modelling – barriers
Road density (traffic intensity)

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www.interreg-danube.eu/transgreen
Biotope of selected specially protected species of large mammals

Critical points for migration
Core areas

- priority to maintain suitable conditions for permanent existence of populations in the area
- maintain area permeability, respect also other ecological demands of the species (sites for feeding, reproduction etc.)

- high overlap with Protected Landscape Areas, National parks, Military areas

- Core areas will be further categorized according to significance for target species
  1) the most sensitive area for breeding. Proposed solely in the central part of forests
  2) area which fulfil conditions for regular use of at least one species, forests, extensively used agricultural land
  3) area for temporal use, linkage biotope, used for migration inside core area

- Regulations for each category will be defined

- Build up areas are a priory excluded from the layer (some buildings cannot be excluded from layer due to working resolution 1:50 000)
Biotope in Zlínský district
- linking the core areas to allow migration possibilities in the minimal extent
- one polygone layer
- build up areas are a priory excluded from the layer (some buildings cannot be excluded from layer due to working resolution 1:50 000)
Biotope in Moravskoslezský district
Critical barrier sites for migration

- the most sensitive areas of the „whole system“ that should be preserved
- migration possibility should be secured/mitigated
- it is not possible to worsen the current permeability (in many places there are already many barriers present)
- each intention/plan that could have negative impact on biotope (worsen permeability), should apply for exception to impact the biotope of specially protected species
- NCA has the responsibility and competence to provide localities of the occurrence of nationally important species (phenomenon number 36), for spatial planning purposes.

- procedure is based on Section 26 of Act No. 183/2006 Coll., on Spatial Planning and Building Regulations and Decree No. 500/2006 Coll. on Territorial Analytical Documents, Territorial Planning Documents and on the Means of Registration of Territorial Planning Activities.

- under the above mentioned category 36, there has been defined sub-category 36b biotope of selected specially protected species of large mammals.

- already included in obligatory part of the Decree no 500/2006 Coll. – ANNEX 1.
NCA – open data for spatial planning purposes

- **Sites of community importance**
  - Evropsky významné lokality
  - Hranice evropsky významných lokalit vymezených v rámci soustavy Natura 2000 a určených k ochraně přírodních stanovišť a nebo populací druhů dle platného nařízení vlády, kterým se stanoví národní se...

- **Special protected areas**
  - Ptačí oblasti
  - Hranice ptačích oblastí vymezených v rámci soustavy Natura 2000 a určených k ochraně ptačích druhů dle platných nařízení vlády, kterými se vymezují ptačí oblasti, a dle směrnice 2009/147/ES o ochr...

- **Memorable trees**
  - Památné stromy
  - Lokalizace objektů vyhlášených památných stromů; vrstva obsahuje jednoduché prvky (Singlepart Features); © AOPK ČR, 2017

- **Biosphere reserves**
  - Biosférické rezervace
  - Hranice biosférických rezervací vymezených v rámci programu Člověk a biosféra (Man and the Biosphere Programme) na území ČR; vrstva obsahuje složené prvky (Multipart Features); © AOPK ČR, 2013

- **Long distance migration corridors**
  - Dálkové migrační koridory
  - Osy migračních koridů vymezené v místech, která jsou v současnosti stále ještě průchozi (ANDĚL, P.; MINÁRIKOVÁ, T.; ANDREAS, M. (eds.) (2010). Migrační koridory pro velké savce v České republice...
Thank you for your attention!

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