



Multifunctional green systems for landscape improvement

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The current state of landscape planning in the Czech republic

- There doesn't exist any separate landscape planning in the Czech republic
- current practice shows that the problems of the landscape out of the built up area is by more reasons considerably less developed.
- The Building Act 183/2006 Col. requires that Master plan of community should content:
 - Urban concept
 - Landscape management concept
 - Transport and technical infrastructure concept
- For the full implementation of the landscape management concept in spatial plans have yet lacked detailed implementing regulations

Methods and Approaches of Landscape planning in eghties and nineties

Landscape - ecological planning (LANDEP)

- Creation model of environmentally optimal land use through detailed analysis of data about the planned area and their subsequent evaluation and synthesis
- Environmentally friendly land management, optimal landscape segmentation and creation of a network of ecologically stable landscape elements.
- Used in landscape studies of specific naturally and culturally valuable areas



Agrodesign

- **functional and aesthetic shaping of the rural landscape space with respecting and use of modern technology management of agricultural land,**
- **traditional cultural landscape components (windbreaks, hedges, land terraces, bounds etc.**
- **result has to be technologically, biologically and perceptually balanced territorial unit, including aesthetics of contained biological and technical elements.**



Contour planting on terraces in Montgomery County, Iowa. USDA Photo by Tim McCabe.

Territorial systems of ecological stability

Územní systém ekologické stability - ÚSES

- On the break of seventies and eighties the group of environmentally oriented planners were inspired by technical infrastructure concepts
- Not only to protect existing parts of authentic nature and landscape, but to establish an active instrument for creating minimal spatial parametres of nature and landscape also in intensively economicly used landscape



Territorial systems of ecological stability

Územní systém ekologické stability - ÚSES

- specific active nature and landscape conservation planning approach.
- interconnection of natural ecosystems areas by using linear elements in order to maintain the natural balance
- three hierarchical levels: local, regional and supra-regional ÚSES
- Supra-regional system was developed for all Czech republic area and it makes conditions for creating of regional and local system
- ÚSES is always incorporated into a land-use plan



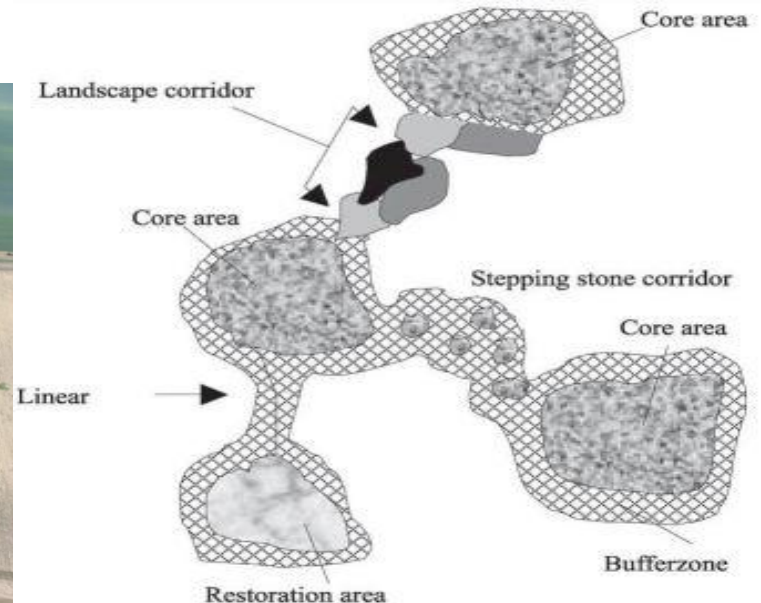
Territorial systems of ecological stability is based on: ISLAND BIOGEOGRAPHY

- Larger islands have richer biodiversity
- If the island doesn't reach minimal area, it can't develop fully functional biotope
- Biodiversity on each island decreases with the growing distance from other islands



Territorial systems of ecological stability consists of:

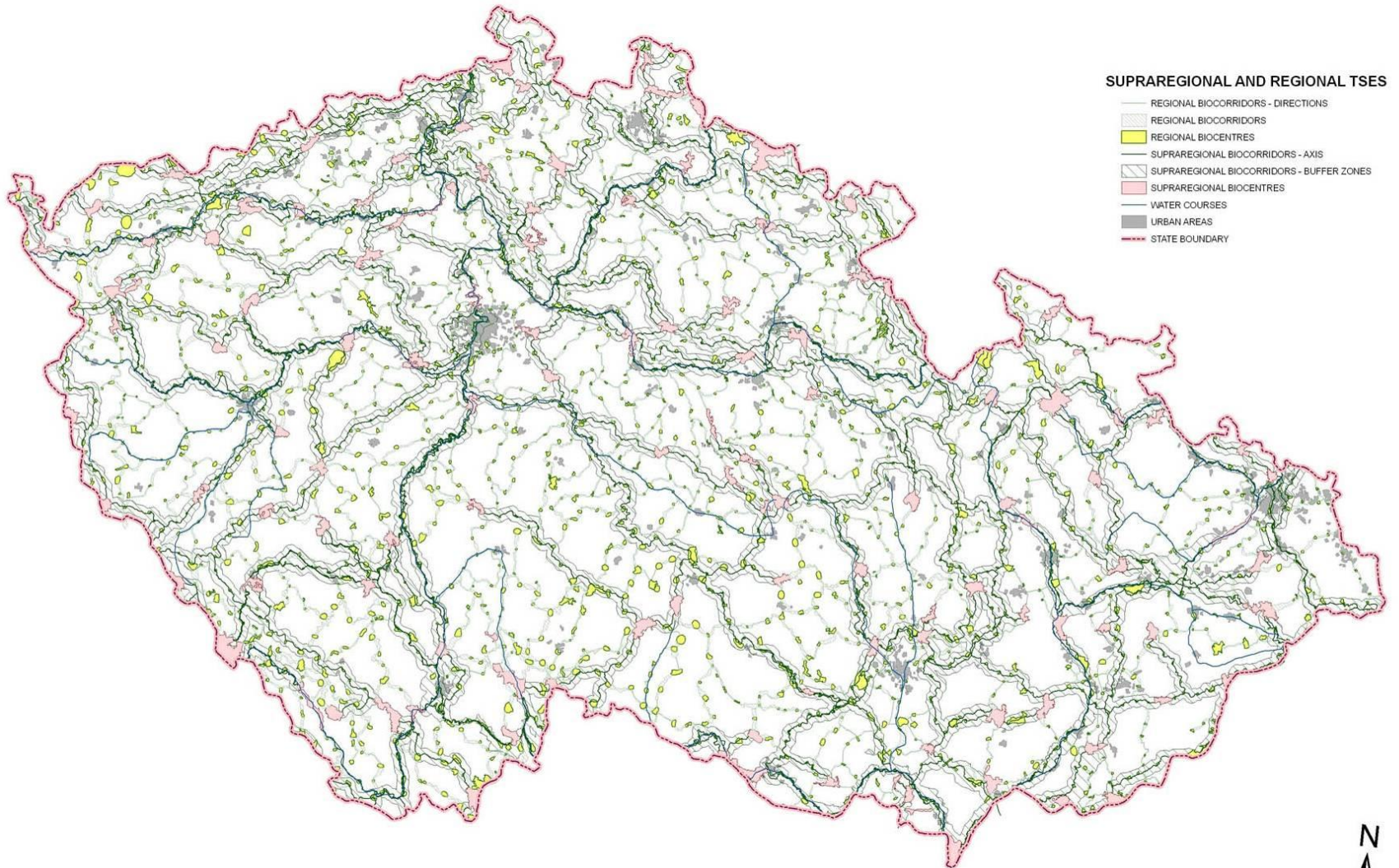
- **Biocentres** - areas which by its size and the state allow the long-term existence of a target species and natural ecosystems.
- **Biocorridors**- elements making the connection between biocentres, which support migration of organisms, their contacts, orientation in the field as well as line element have an aesthetic value in the area.
- **Interactive elements** – have a positive effect on the surrounding countryside, but have no prescribed limit width and length, may not even be related.



Territorial systems of ecological stability consists of:

- **The principle of representativeness** (potential diversity of ecosystems)
 - ÚSES elements must include all typical examples of natural ecosystems of the region
- • **The principle of limiting spatial parameters** - must observe methodically prescribed area , width and length of ÚSES
- • **The principle of spatial relations** – in the routes of corridors mustn't be natural or technical barriers against migration of organisms
- • **The principle of the current state of the landscape** – Into ÚSES should be preferentially incorporated existing natural elements of the environment
- • **The principle of social limits and requirements** - in the design of ÚSES need to be taken into account its multi-functionality, as it can serve as a windbreak, erosion control measure, alley, or riparian. In urgent cases it is necessary to look for an alternative location of ÚSES

SUPRAREGIONAL AND REGIONAL TSES OF THE CZECH REPUBLIC



0 50 100 150 Kilometers



Territorial systems of ecological stability should respect typical character (mosaic) of regional landscape :



Territorial systems of ecological stability – obliged parts of master plans :

- Must be coordinated with other functions of area (alleys, windbreaks, erosion control hedges)
- Must be coordinated with land reform plans
- Discussion about the scale (detail) of TSES plans



TSES and Green infrastructure – commons and differences

- Green infrastructure – the notion infrastructure is better to understand for specialists and also for the public
- Green infrastructure – includes also systems of city parks and alleys
- Green infrastructure includes also „green thinking and acting“ – adequate drainage surfaces, organic farming etc.
- Green infrastructure is on the beginning of expert discussions in Czech republic while TSES has already more than 25 years long practice



Territorial system of environmental stability

- During the last years realization of the local bio-centers and bio - corridors especially in intensive agricultural landscapes
- Necessary to coordinate the local habitat linkings TSES with the erosion control measures
- Land in community or state property is necessary
- Line woody elements can significantly mitigate surface runoff, while landscape and divide large units of arable land
- Recreational use



Thanks for your attention!

