Interreg
Danube Transnational Programme
TRANSGREEN

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Overall Budget: 2.481.321,16 Euro **ERDF Contribution:** 2.109.122,95 Euro

Monitor existing infrastructure towards nature conservation

Ecoduct or "green bridge" Dolní Újezd, Czech Republic ©Miroslav Kutal, Friends of the Earth

PILOT AREA:
Kysuce-Beskydy
(Czech Republic-Slovakia)

Stage of the infrastructure project:

1 Scoping / Early planning

2 Planning

3 Construction

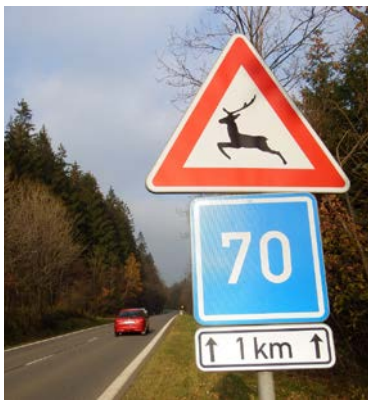
4 Operation, monitoring & maintenance

Kysuce - Beskydy area located on the Czech-Slovak border is a good example of the Operation and Maintenance Stage of an infrastructure project. Once the infrastructure is built, regardless of the existence of mitigation measures to improve landscape permeability, continuous monitoring is essential. Monitoring provides information on whether animals actually use the passage structures, based on which it is possible to assess if the connectivity is ensured or if more measures need to be taken for the safety of both people and animals. New measures might need to be introduced, either in a form of small investments, e.g. installing warning signs, repairing fencing, or in a form of substantial interventions, e.g. building of a new ecoduct. TRANSGREEN pilot area Kysuce - Beskydy offers examples of both of these types of measures.

Measures proposed

Construction of ecoducts as compensation and mitigation measures

Results of long-term monitoring confirmed the importance of the area located between the towns Mosty u Jablunkova (CZ) and Svrčinovec (SK) for migration of large carnivores. Eventually, the construction of two ecoducts (one at each side of the CZ-SK state border) was proposed as a compensation and mitigation measure in order to safeguard landscape permeability for large mammals. This proposal is a result of great efforts of many stakeholders involved in the protection of this area, from NGOs, Public Administrations to the relevant Ministries. Project TRANSGREEN contributed to the continuation of these efforts and its partners also provided arguments in favour of the "green bridges" solution during two international Czech-Slovak meetings organized by the Ministry of Environment of the Czech Republic and the Ministry of Transport and Construction of the Slovak Republic. Consequently, the Czech Road and Motorway Directorate (ŘSD) provided for consultation a plan for the proposed ecoduct in July 2018. On the Slovak side, the site for D3 Svrčinovec ecoduct construction has been chosen and its design is being discussed among relevant stakeholders.

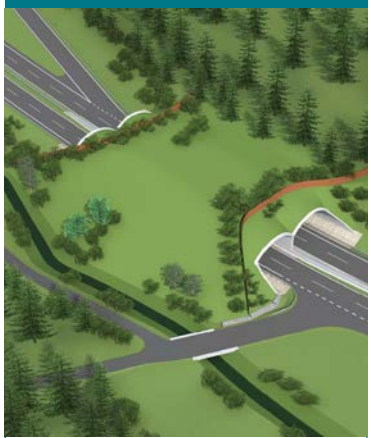


Warning sign installed in ecological corridor Pindula CZ08 -Trojanovice
©Dana Bartošová, Nature Conservation Agency of the Czech Republic

Planned ecoduct

Features:

- ✓ Location: 49.4960186N, 18.7647825E, in the Mosty u Jablunkova near the Czech-Slovak state border.
- ✓ 47 m wide, to accommodate large mammals' migration
- ✓ suitable fencing for leading the animals across the bridge
- ✓ no asphalt cover for adjacent forest road



Visualization of proposed plan for Mosty u Jablunkova ecoduct
©Planning documentation of Czech Road and Motorway Directorate

Measures proposed

Installation of warning signs "Beware of wildlife" on main critical sections of ecological corridors

Improvements in road safety and landscape permeability can also be achieved by installing suitable road signs. These "Beware of wildlife" signs alert the drivers to pay attention and slow down. In the Kysuce - Beskydy pilot area, 17 sections of selected roads were identified as critical for animal (large mammals) crossing in the CZ and 27 in SK. In the Czech Republic these sections were reported to relevant District Authorities. As a result, 7 warning signs with recommended speed limit 70 km/h were installed.

Pilot area: Kysuce - Beskydy (Slovak Republic - Czech Republic)

Key species and ecological connectivity

This pilot area is especially known for the presence of large carnivores. There are 15 Sites of Community Importance (NATURA 2000 sites) which were designated for the protection of all three key large carnivore species: lynx, wolf and bear. Landscape keeps its extraordinary aesthetic value that stems from historical coexistence of a human and the mountains. The area is also known for species-rich meadows and pastures or for remnants of old-growth beech forests. Ecological corridors for protected species of large have already been identified in this area. Several sections of these corridors are crucial for connectivity and therefore it is essential to keep the transport infrastructure in these sections permeable.

Research undertaken

Monitoring of traffic intensity patterns on roads in critical sections of ecological corridors

Goal: to determine traffic flow characteristics & duration of permeable conditions = time gaps between passing vehicles allowing animals to cross

Method: monitoring traffic patterns (traffic intensity) by detection devices SIERZEGA SR-4. For each vehicle there were recorded: time of passage, speed, travel direction, length.

Duration: September-October 2017. 168 hours per locality (5 work days, 1 Saturday, 1 Sunday)

Locations: 38 localities on 3 types of roads, selected with local wildlife experts

Results:

Road type	Traffic Intensity median (min - max)	Permeability for wildlife crossing median (min - max)	
	vehicles/24 h	Day	Night
1st class roads included in European system (AGR agreement) (10 localities)	**10901** (3770-29645)	**0,1%** (0%-12%)	**48%** (7%-70%)
Other 1st class roads (16 localities)	**5503** (740-13547)	**3%** (1%-54%)	**81%** (63%-96%)
2nd and 3rd class roads (12 localities)	**3438** (934-12544)	**15%** (1%-47%)	**91%** (60 % - 97 %)

Research undertaken

Monitoring existing underpasses and overpasses

Goal: mapping migration permeability (usability) of existing Green Infrastructure (GI) objects, namely underpasses and overpasses

Factors considered:

- ✓ the type of structure and its dimensions (openness index) (technical parameters)
- ✓ terrain type either on or underneath the structure
- ✓ location
- ✓ type of surroundings
- ✓ disturbance factors eg. presence of barriers in the vicinity

Method: Field inspection and photo documentation

Status: ongoing - till 12/2018

Locations: 415 objects were visited and documented up to date (July 2018)