Migration study of large mammals at highways in Slovakia

Introduction

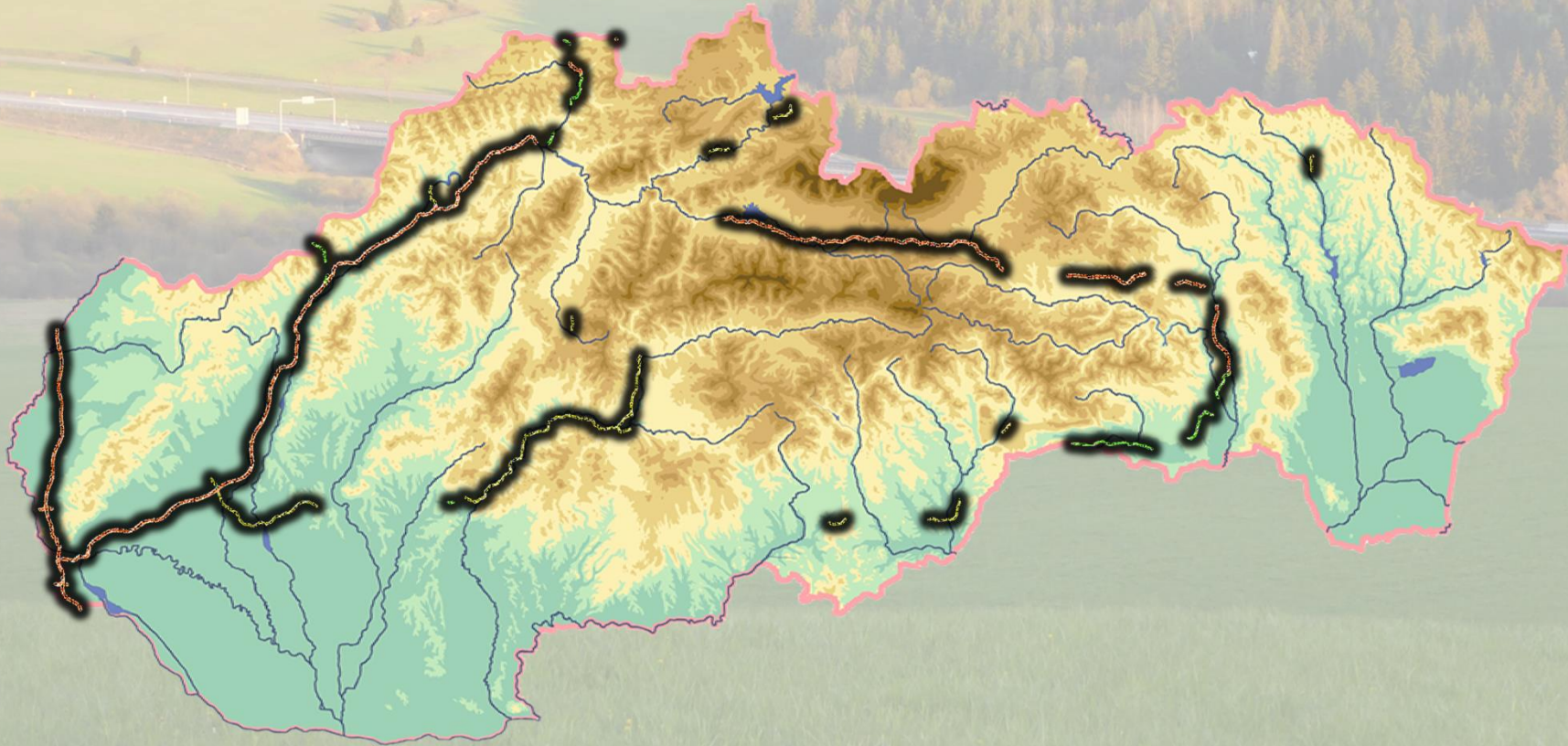Company working on line structures since 1992

Studio of Ecology is a separate part of the company for 16 years

Focused on:

- Preparation of the EIA documentation in this area of work in the CR and SR
- Preparation and executing of monitoring the impacts of line structures on the environment
- Elaboration of migration studies
- Realization of research projects focused on the problems of fragmentation and migration on the huge line structures
- Application of GIS in this issues

Migration study for needs of NDS

- Improving migration of selected species of animals on operated motorways and expressways till 31.12.2012
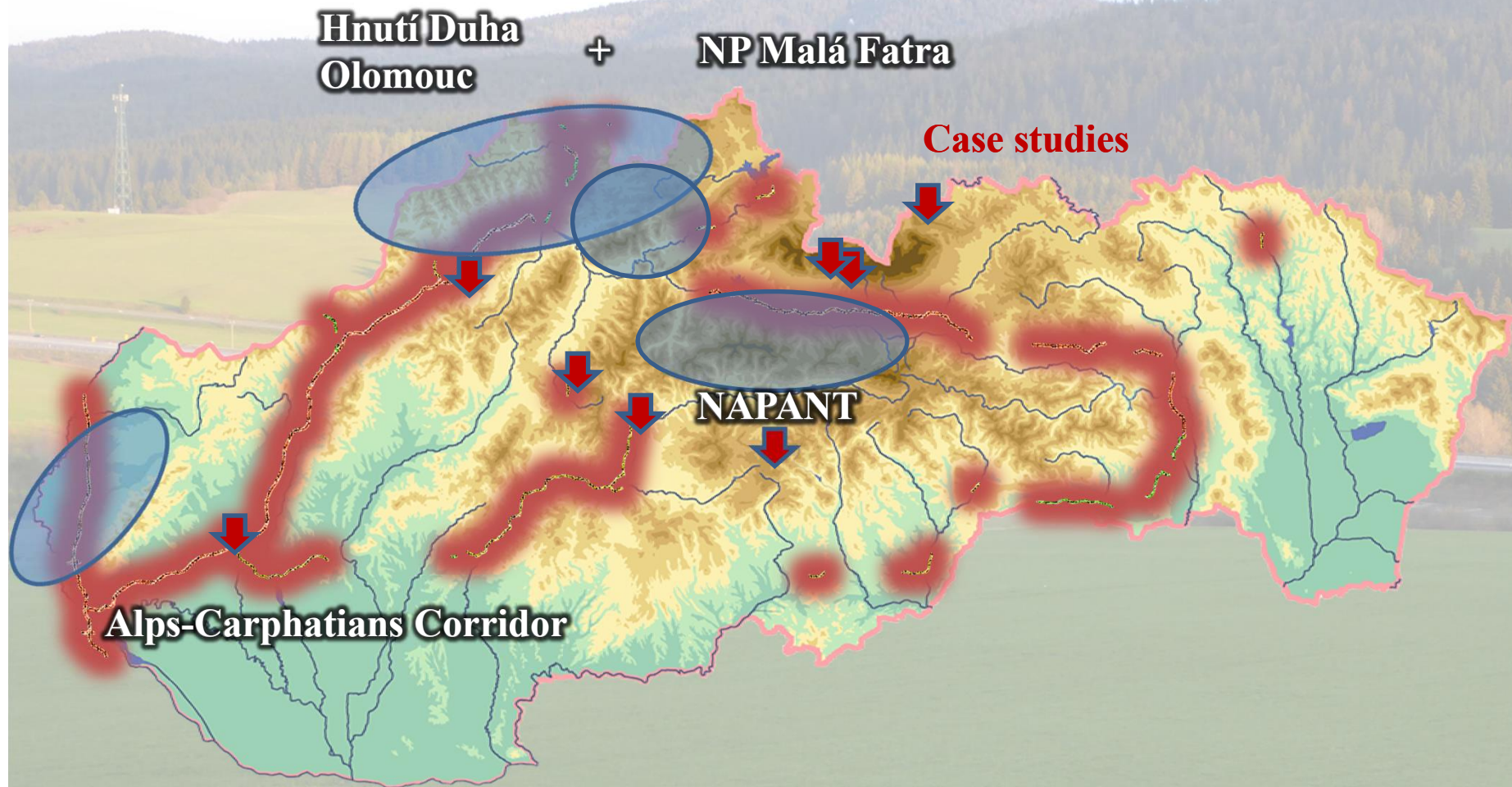
Reasons for assignment

- Escalation of animal-vehicle collisions on the mentioned roads, with a negative impact on animal population and human activities

Reasons for assignment

Hnutí Duha Olomouc + NP Malá Fatra

Case studies

NAPANT

Alps-Carphatians Corridor

- Uncomplet identification of all main corridors for wildlife in Slovakia
- Nothing comprehensive to use at national scale.

Objective of study
suggest actions to reduce the barrier effect

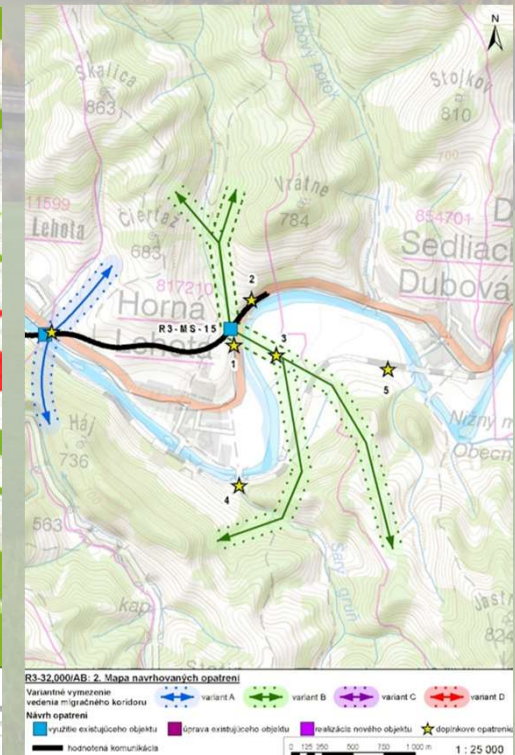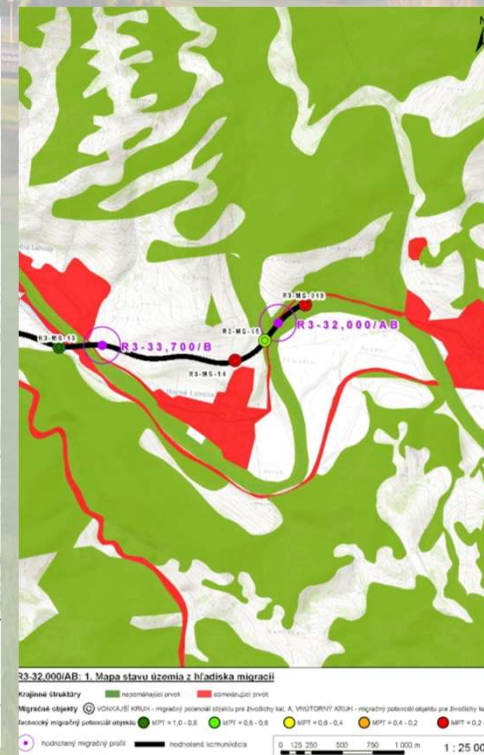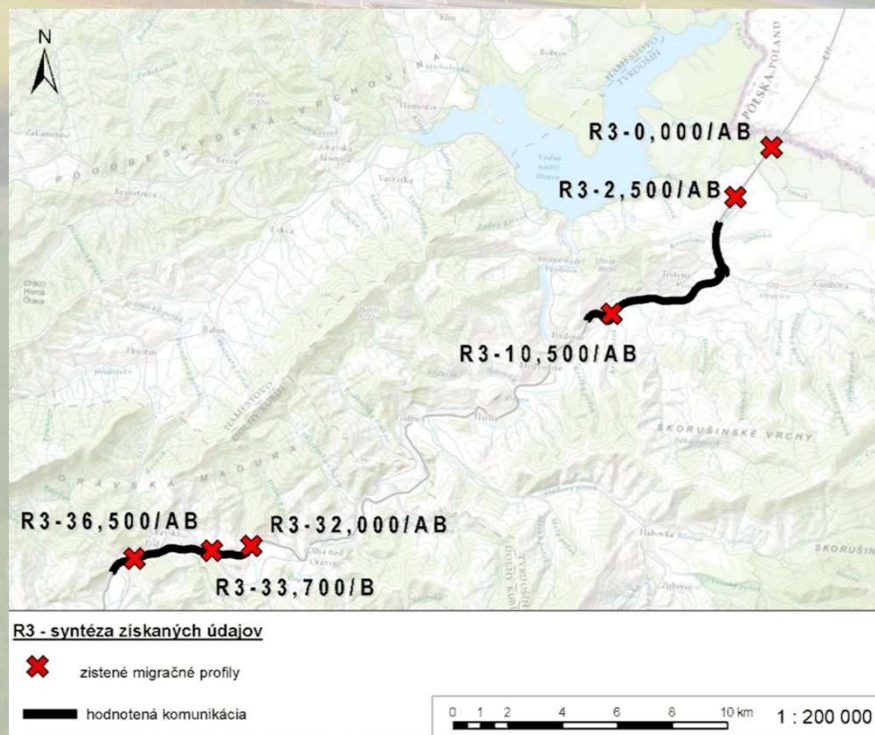improvement of landscape connectivity

nature conservation

IN

transportation security

Input data

- Collisions data (from police, hunters, state nature conservation of Slovakia)
- Status of animals (numbers, areas, ecology, etc.)
- Map materials for spatial planning (CORINE, LANDEP, protected areas, regional and local ecological network, zoning (land) plans, etc.)
- Field survey at three levels!
- Technical norms and approved methodology
- Publications

Methodology

- Defining the animals core areas and the main migration corridors around solved roads
- Evaluate the significance of "migration profile" based on the input data
- Evaluation of road permeability
- The synthesis of the above and draft measures

Results of study

- Comprehensive base for the design and later implementation of concrete measures to improve the situation: highway vs. animal migration needs
- processing will be completed in the final report in 05/2017

Beside it

- Mitigate impact of transport on the environment
- Contribute to the knowledge of migration of fauna in Slovakia (in the Carpathians)
- Combinate technical (constructions) and conservation regulations

Interesting facts and examples about large carnivores

Large carnivores at highways

- Using also smaller structures, mainly it depend on position and time
- Highly motivated migrations
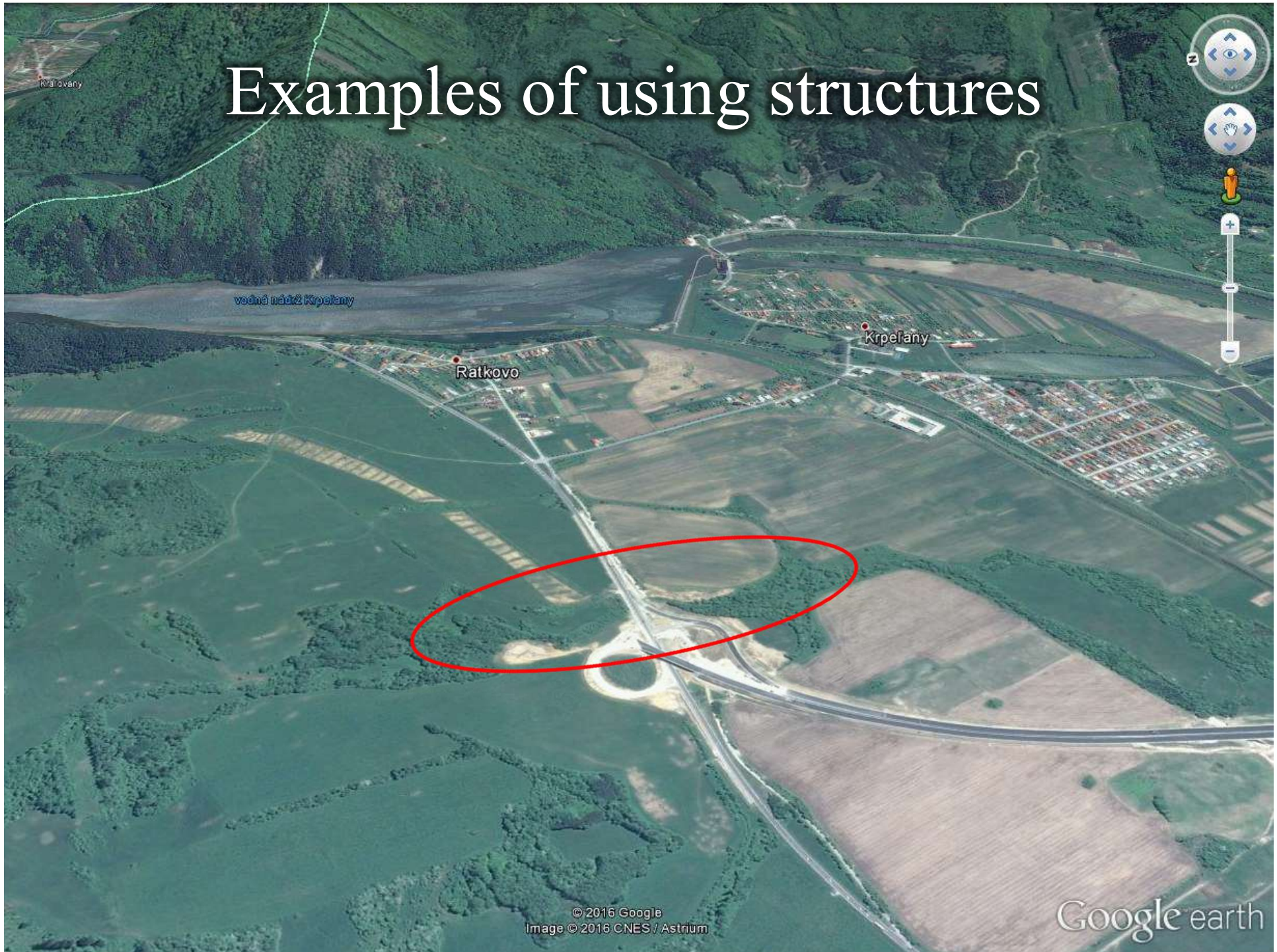- Collisions are often only early after opening new section

Examples of using structures

Footprint of wolf

Examples of using structures

Examples of using structures

1,5m

1,5m

Footprint of bear

Footprints of wolf on construction site

Thank you!