

TRANSGREEN. Integrated Transport and Green Infrastructure
Planning in the Danube-Carpathian Region
for the Benefit of People and Nature

Spatial planning in Transgreen project

Prof. Maroš Finka – Dr. Vladimír Ondrejčka
SPECTRA CE EU

•

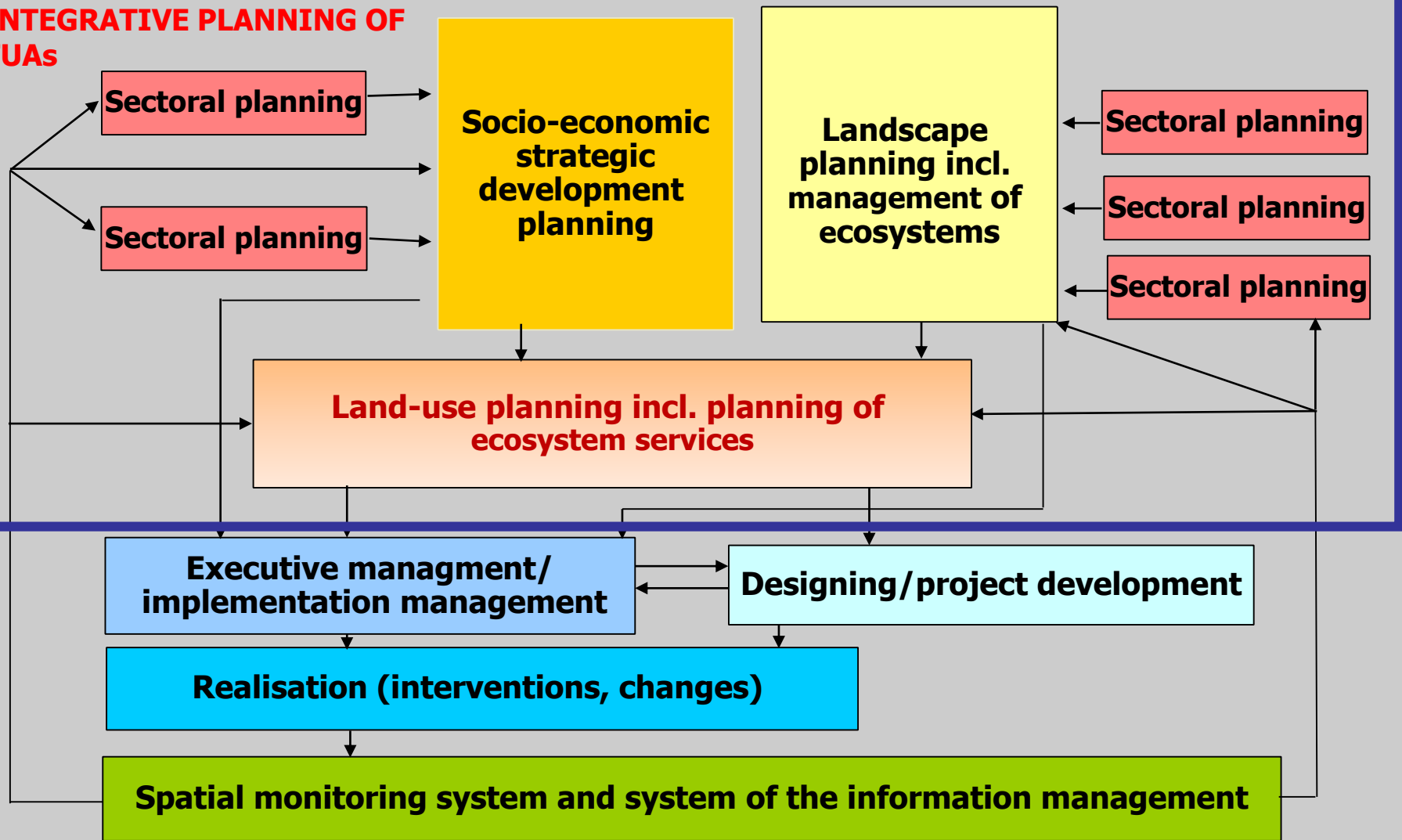
„TRANSGREEN” International Conference on NATURAL-INFRASTRUCTURE

4th April 2019, Budapest

Harmonisation of green and grey infrastructure development

- **From analyzing and putting together to the integrated action** =- harmonizing focusing on mutual cumulative impacts of green and grey infrastructure
- It means:
 - Problem and demand identification
 - Development and analyze of solutions
 - Strategic planning and decision making
 - Implementation planning
 - Implementing incl. providing resources
 - Monitoring
- The only **integrative framework** for this process is offered by **SPATIAL PLANNING**
- Priorities: **Avoidance – Mitigation – Compensation.**

INTEGRATIVE PLANNING OF FUAs



INTEGRATIVE FUA DEVELOPMENT MANAGEMENT

How to **avoid or to minimize** the conflicts and negative effects of the transport on the wildlife?

- to reflect the needs to protect the wildlife already in the initial strategic decision
- to include proper approaches, methods and instruments for minimizing the conflicts and negative effects in all planning phases
- to follow multidisciplinary and cross-disciplinary approach
- to work together (politicians, technicians, engineers, economists, landscape designers and environmentalist)
- to involve actively all stakeholders in each phase.

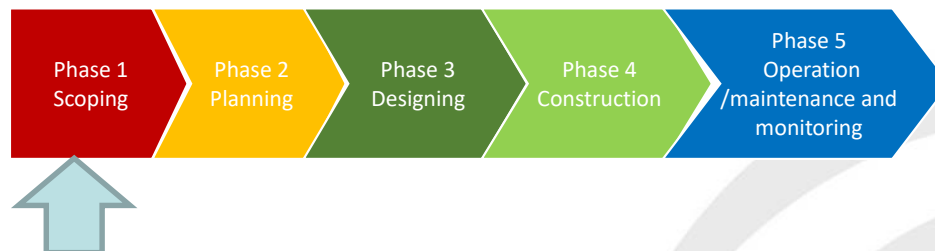
Common logic of steps in the linear transport infrastructure development as described in the TRANSGREEN Handbook



3 different modes of transport infrastructure development:

- a. the **development of new roads** and railway lines or their parts
- b. the **update of existing roads** and railways (modernising, extension in former corridors, increase of capacities, speed ...)
- c. the **improving ecological status** of existing routes and railways

Challenges in respective phases



SCOPING

- Realistic **identification of current and estimation of future demand** on transport performance, mirroring the development of the society and its economy
- **assessment of the potential to cover identified demand** by existing transport infrastructure capacities and precondition for its efficient use
- estimation of the **threats and conflicts between existing transport infrastructure and wildlife** and its sustainable development
- **estimation of the challenges resulting from future development** in the context of global change and specific regional/local social, economic and environmental development.

Challenges in respective phases



PLANNING PHASES

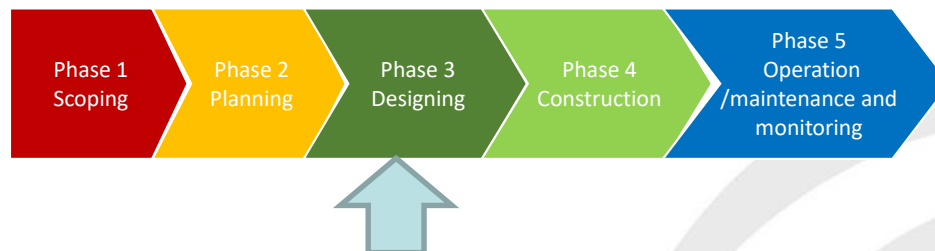
- **strategic planning** setting main goals, principles, parameters including principal placement,
- **detailed planning** including precision of the main features of the developed transport infrastructure following the frames defined at the level of strategic planning.

Two confronted elements for the process of harmonization in this phase:

A. the intervention: construction of the linear infrastructure with defined parameters deriving the effects on wild life in the phase of construction and operation

B. the ecosystems of the countryside which is going to be affected by the intervention with its specific features including the resilience (by localisation/definition of the corridor of the road or railway).

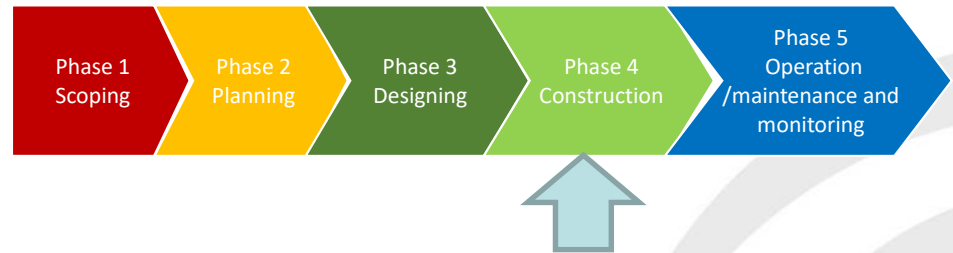
Challenges in respective phases



PROJECTING/DESIGNING

- is crucial for **identification of optimal technical solutions**
- measures are focused on **lowering and mitigating the negative effects** of the construction and operation of linear transport infrastructure.
- **reflection of the statement of the SEA** authority
- the final phase of projecting has to react to the **requirements resulting from the EIA** process play too.
- the EIA process including **the public participation**
(challenge of efficiency of multiple addressing the public)

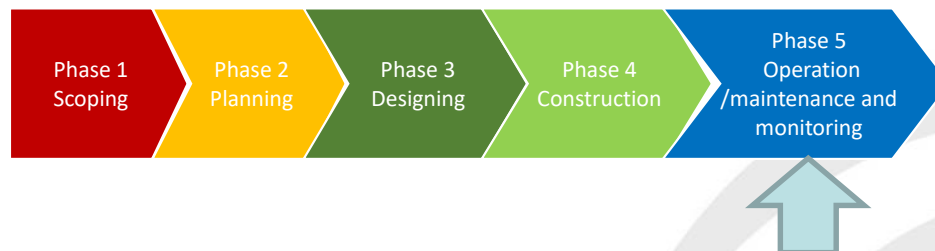
Challenges in respective phases



IMPLEMENTATION/ CONSTRUCTION

- can affect **much broader area than the area of the road or railway line** itself.
- can discover **unexpected features of the environment requested the modification** of the technologies used event the changes in the location of the road or railway line
- **permanent monitoring** is important part already in this phase

Challenges in respective phases



OPERATION, MAINTENANCE AND MONITORING

- **comprehensive monitoring and assessment** is the precondition for objective assessment of the effects
- Monitoring can show **unpredictable effects and is precondition for flexible reaction** by proposing and implementing proper measures.
- Monitoring outputs should serve not only in relation to the assessment and optimizing of given road/railway line, but as well as a **source of knowledge and experience for planning, projecting and designing** of other transport infrastructure.

Strategic recommendations in relation to spatial planning

- to consider SPATIAL PLANNING as **crucial instrument to prevent** progressive isolation of wildlife populations consists of anchoring migration corridors in the relevant legislation and ensuring proper protection/management.
- **to shield dedicated wilderness and road-less areas** critical for wildlife dispersal from new infrastructure and settlement projects.
- to understand the measures for leveraging the conflicts as **beneficial for nature, but also preventing human life**
- To include the information about **future development** in given areas into decision making, otherwise solutions that work today might become obsolete in the near future.

- Similarly, **predicted habitat changes** induced by climate change should be considered in integrated planning at landscape level.
- To take into consideration **national and international spatial development** strategies in the mitigation planning
- Protection of delimited corridors in spatial plans is a fundamental task and a matter of **inter-sectoral cooperation, requiring legal procedures**. Where these are not in place yet, respective amendments should be considered.

Prof. Maroš Finka, M. Arch., PhD.

maros.finka@stuba.sk

Vladimír Ondrejčka, MSc., PhD.

vladimir.ondrejicka@stuba.sk

www.spectra-perseus.org