# ECOLOGICAL CONNECTIVITY AND NATURE-BASED SOLUTIONS IN THE CARPATHIAN REGION

APPLIED RESEARCH PROJECT IHEID - UNEP

THE GENEVA GRADUATE INSTITUTE AND UNEP

# ECOLOGICAL CONNECTIVITY AND NATURE-BASED SOLUTIONS IN THE CARPATHIAN REGION

Research on the potential socio-economic and environmental impacts of implementing Nature-based Solutions (NbSs) to enhance ecological connectivity in the Carpathian region.

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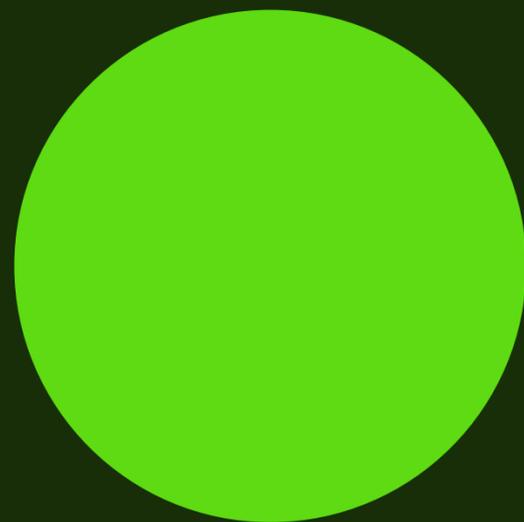
- P1 - Understanding the problem statement

- P2 - Case Study Sampling

- P3 - Identification of Drivers and Assumptions

- P4 - Development of a Theory of Change for the Case Studies

"We do not inherit the earth from our ancestors, we borrow it from our children"

– Native American Proverb

# UNDERSTANDING THE PROBLEM STATEMENT

## Identification of fragmented ecosystems in the Carpathians

- Old-Growth Montane Conifer Forests
- Riparian and Wetland Ecosystems

## Why the Carpathians and why these ecosystems?

Different research studies from International Organizations like UNEP, The Carpathian Convention, BioRegio, WWF, and The Carpathian Ecoregion Initiative show the importance of ecosystems through frontiers for the development of the countries and the preservation of the environment.

# IDENTIFICATION OF DRIVERS AND ASSUMPTIONS
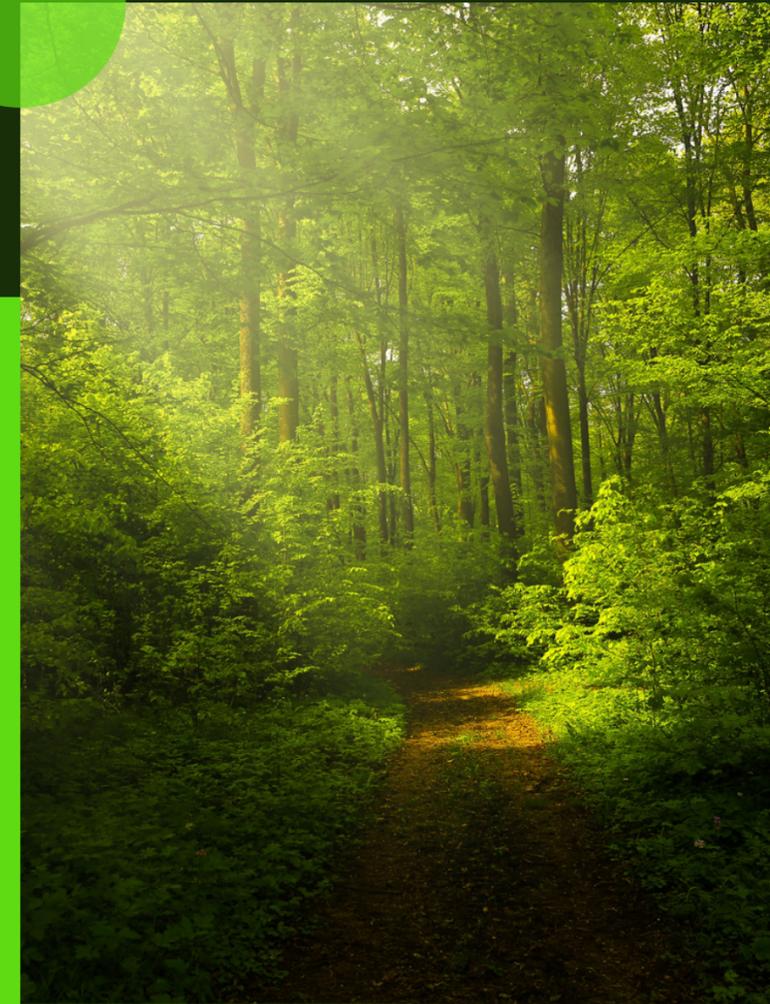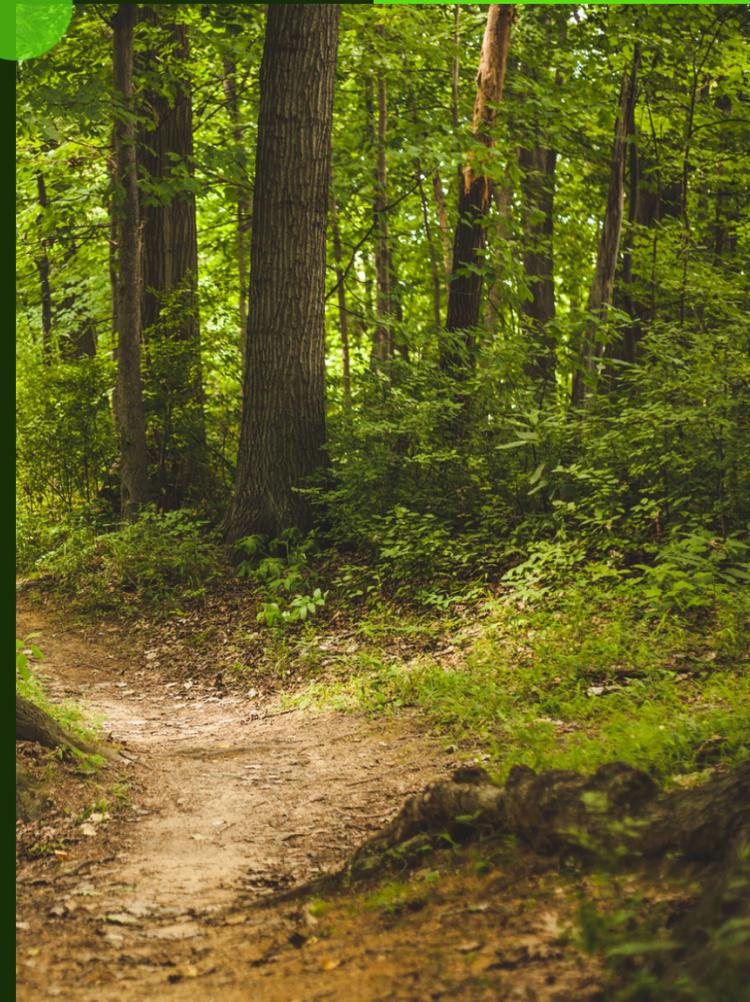
Deconstructing the socio-political institutional limitations to ecological connectivity.

The identification of the structural barriers (economic and legal) to the implementation of NbSs to enhance connectivity can enable us to identify the preconditions necessary to scale up these solutions.

This phase is aimed at recognizing the drivers and assumptions that affect the implementation and scaling up of the NbSs used in the case studies to then be able to formulate policy recommendations. UNEP's definitions of drivers and assumptions will be used.

Assumption: a significant external factor or condition that needs to be present for the realization of the intended results but is beyond the influence of the project and its partners. Assumptions are often positively formulated risks.

Driver: a significant external factor that, if present, is expected to contribute to the realization of the intended results of a project. Drivers can be influenced by the project and its partners.

# DEVELOPMENT OF A THEORY OF CHANGE FOR THE CASE STUDIES

Explains the process of change by outlining causal linkages, i.e., its outputs, project outcomes, 'intermediate states, and long-lasting outcomes. The identified changes are mapped as a set of interrelated pathways with each pathway showing the required outcomes in a logical relationship with respect to the others, as well as with a broad chronological flow.

Source: UNEP

# RIPARIAN AND WETLAND ECOSYSTEMS

There is a wide array of ecosystem services that can be provided by riparian and wetland environments:

- Provisioning services such as freshwater fish are more obvious, but these ecosystems also provide other provisioning services such as gravel.
- Regulating services such as flood risk management and carbon sequestration.

Reforestation of riparian buffers can for instance help with erosion control (Keeton & Crow, 2009).

# OLD-GROWTH MONTANE CONIFER FORESTS

- Data of forest regrowth increasing and old/virgin forest decreasing (specifically montane conifer forests).

- Identifying alternative economic and social benefits of old-growth forest conservation

- The ecoregion covers an area of 125,337 km².

- It is surrounded by temperate broadleaf and mixed forests ecoregion in the neighboring lowlands.

Sources: UNEP and WWF

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## THANK YOU

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