



# From Fragmentation to Connectivity: Ecological Corridors



## 1. Fragmentation

**Habitats** are fragmented into **smaller patches** by (among other factors) human activity, resulting in a **net loss of habitat area**. Edge effects further reduce the amount of core habitat with high biodiversity value.

The **isolation** of habitat patches leads to **declines in species richness** and long-term persistence. When patches become too small or disconnected, some species face local extinction.

**Edge effect:** biodiversity declines towards the boundary (edge) of a habitat.

Overall goal: protect 30% of EU's land area

These are stepping stones!

Give animals a path to thrive!

## 4. Functions

**Habitat connectivity**  
Connects isolated habitat areas and allows for wildlife movement

**Ecosystem services**  
Supports services like carbon storage, pollination, water regulation

**Biodiversity conservation**  
Protects species diversity

**Climate change adaptation**  
Enables species to shift their ranges in response to changing climates

**Less human-wildlife conflict**  
Reduces road kills, disturbance, and noise impacts on wildlife

## 2. Ecological Corridors

Ecological corridors are spatially structured linkages that **facilitate connectivity** among discrete and often isolated habitat patches. They are found across natural, rural and urban areas.

These corridors occur in various forms and are typically classified according to their **structural configuration** (see 1, 2, and 3 in the next section) or their **spatial context and placement** within the broader landscape (see 4, 5, and 6).

## 3. Types of Corridors

- Stepping stones**
  - Small, isolated patches**
    - Serves as vital stopovers across fragmented lands
- Linear**
  - Narrow, continuous strips**
    - Links habitats and enables quiet passage
- Land-scape**
  - Broad, heterogenous areas**
    - Sustains movement and ecological flow at scale
- Riparian**
  - River-lined vegetation belts**
    - Guides wildlife while shielding aquatic habitats
- Urban**
  - Green threads through cities**
    - Preserves motion and biodiversity amid concrete
- Mountain/alpine**
  - High-elevation routes**
    - Enables migration across peaks as climates shift

## 5. Challenges

**RECOGNITION:** benefits undervalued and poor communication

**RESEARCH GAPS:** short-term focus and limited long-term resilience data

**IMPACT:** weak support for funding and policy