Landscape is a network

Green areas, flows, biodiversity

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Unit 09

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Activity 1 (12—15yr)

What is a natural/ecological and physical/anthropic connection

Goal:

- **introduction of the concept of ecological network** defining the four fundamental and interconnected elements (Core areas, Buffer zones, Ecological corridors, Stepping zones);
- students learn the concept of an ecological network and **recognise different landscape elements allowing visual recognition and classification** (e.g. between natural ecological and anthropic);
- learn that the **ecological network** elements and their different **shape/extent/quality etc. result in different types of landscapes.**

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Activity 1 (12—15yr)

Description of activities:

1. Presentation of the ecological network concept and of the four elements
2. The students, divided into groups, identify anthropic and natural elements (green areas, trees, agricultural fields, etc.) assuming which are part of the ecological network and why (points 1—4).
3. The students will enter in a table (Tab.1) the anthropic/ natural elements they have identified, giving reasons for their choice

N. IMG/ SLIDE	ELEMENT	ANTHROPIC	NATURAL				SHAPE & LANDSCAPE TYPE
			Core area	Buffer zone	Ecological corridor	Stepping zone	
1	River				X		Sinuous and natural shape. Presence of lawn areas at various slope levels, with herbaceous plants, shrubs and trees. The sounds and colours are typical of natural and water environments. Various types of birds and other animals can be seen. It represents a continuous linear connection fundamental to territorial biodiversity

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What is an ecological network?

Let us try to give some definitions or examples of ecological networks

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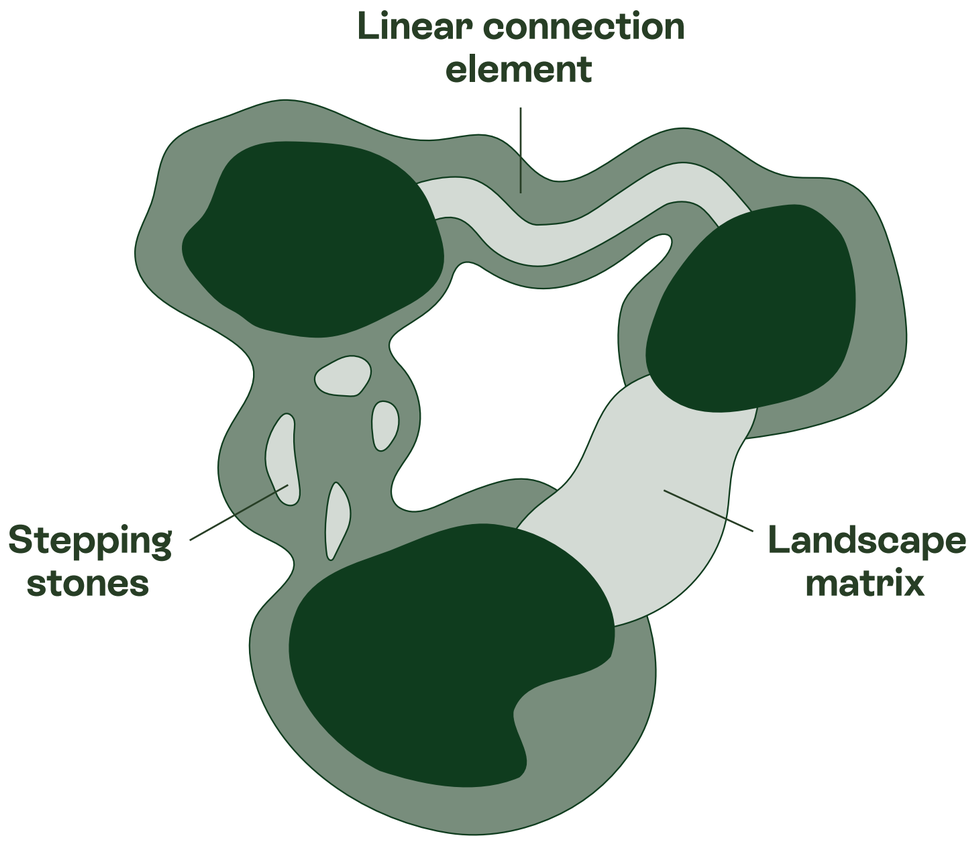
Ecological network
two illustrations of the concept



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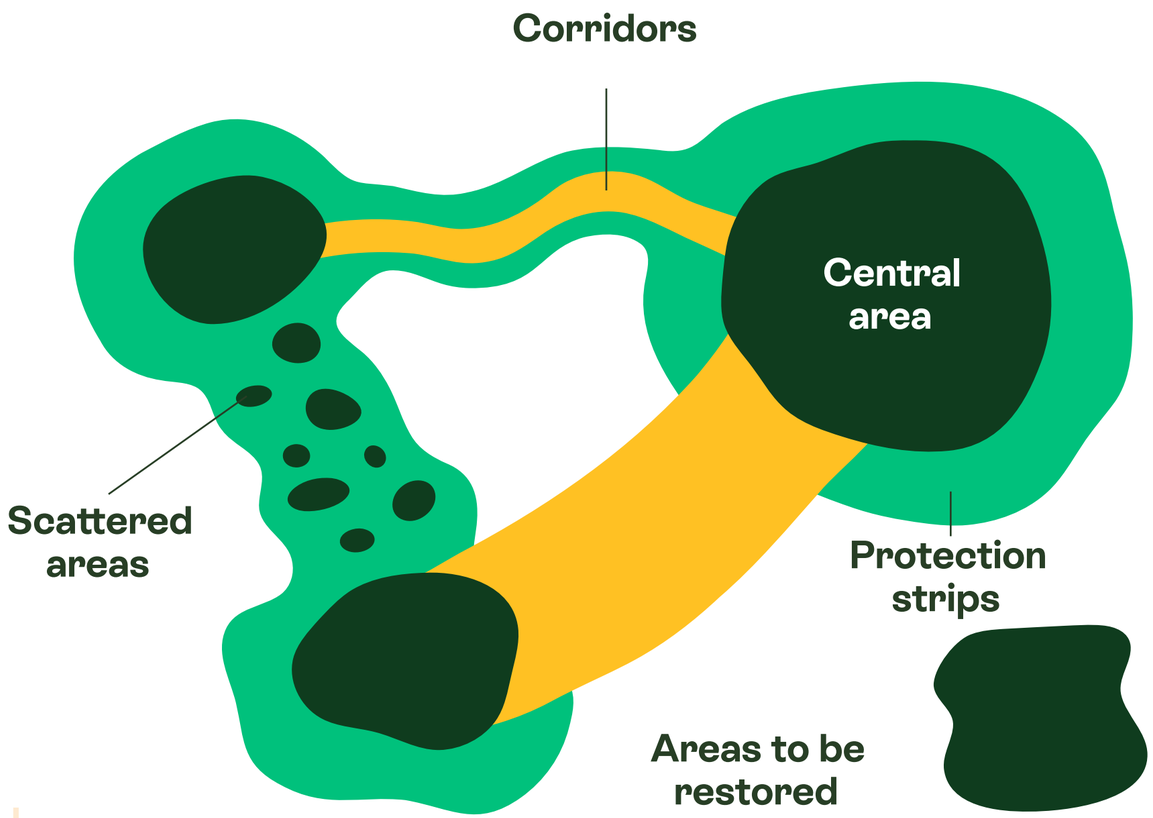

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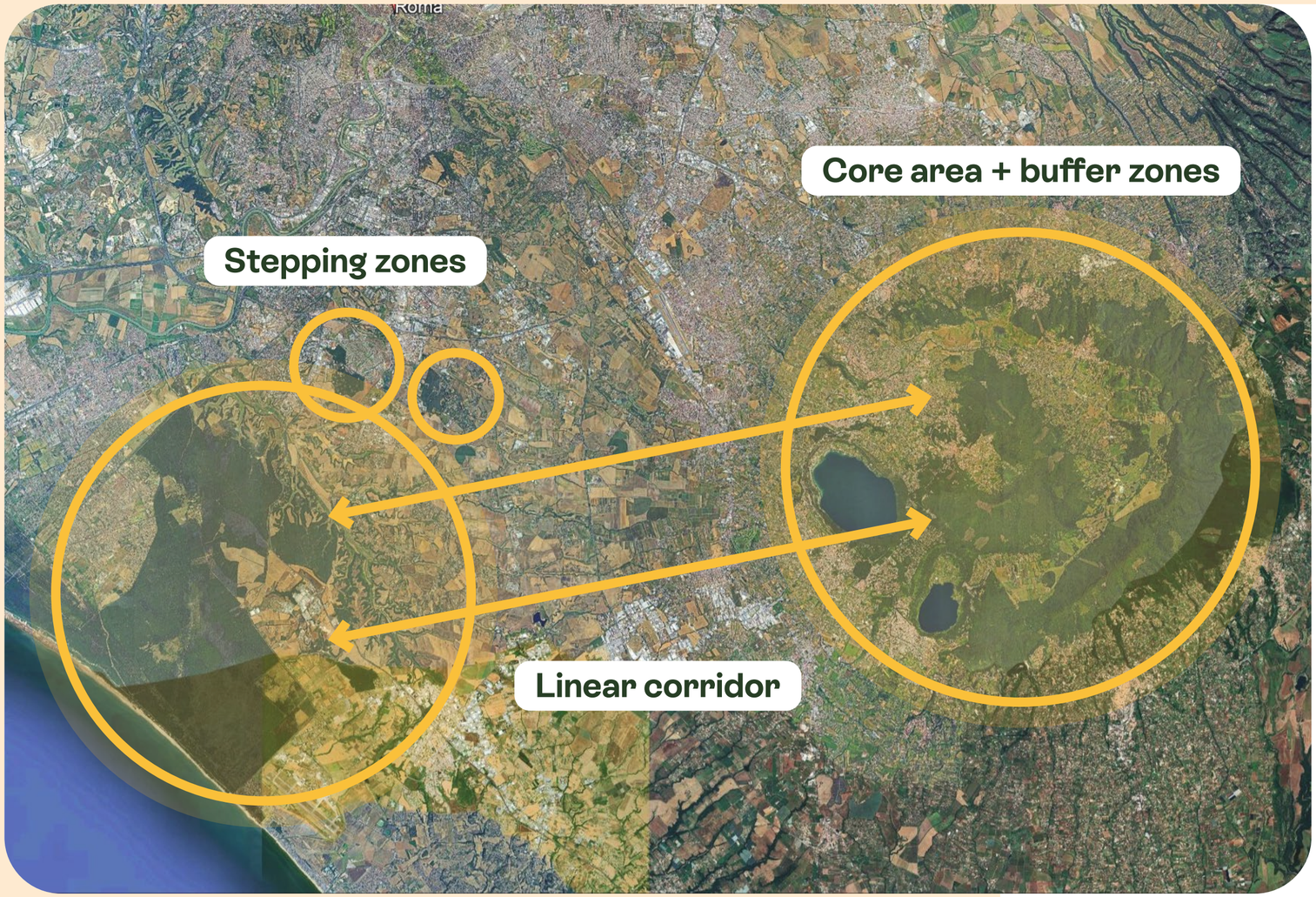
Ecological network
practical example



Core Areas
Large Parks and Nature Reserves

Buffer zones
- Natural edge areas

Stepping zones
- Forests and forested areas
- Parks

Linear corridor
- Rivers/ditches/canals
+ related vegetation etc.

Geographical scale

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Ecological network
practical example

Urban/territorial scale

Different Scales for Ecological Networks
How we identify ecological networks changes depending on the size of the area we are looking at.

Core Zones May Vary
An area might not always have two main zones that are connected or separated.

Challenges in Cities
Urban areas have many challenges. We need to solve these by designing ecological networks that work at different levels.

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Ecological network
practical example

Neighbourhood scale

NB: a linear ecological corridor can serve as stepping zones, depending on the observation scale and how the specific ecological network operates.

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...now try to identify the barriers and causes of the fragmentation and decline of the ecological network... (mostly for anthropic footprint) which means it's less able to handle climate challenges!

...follows are some examples

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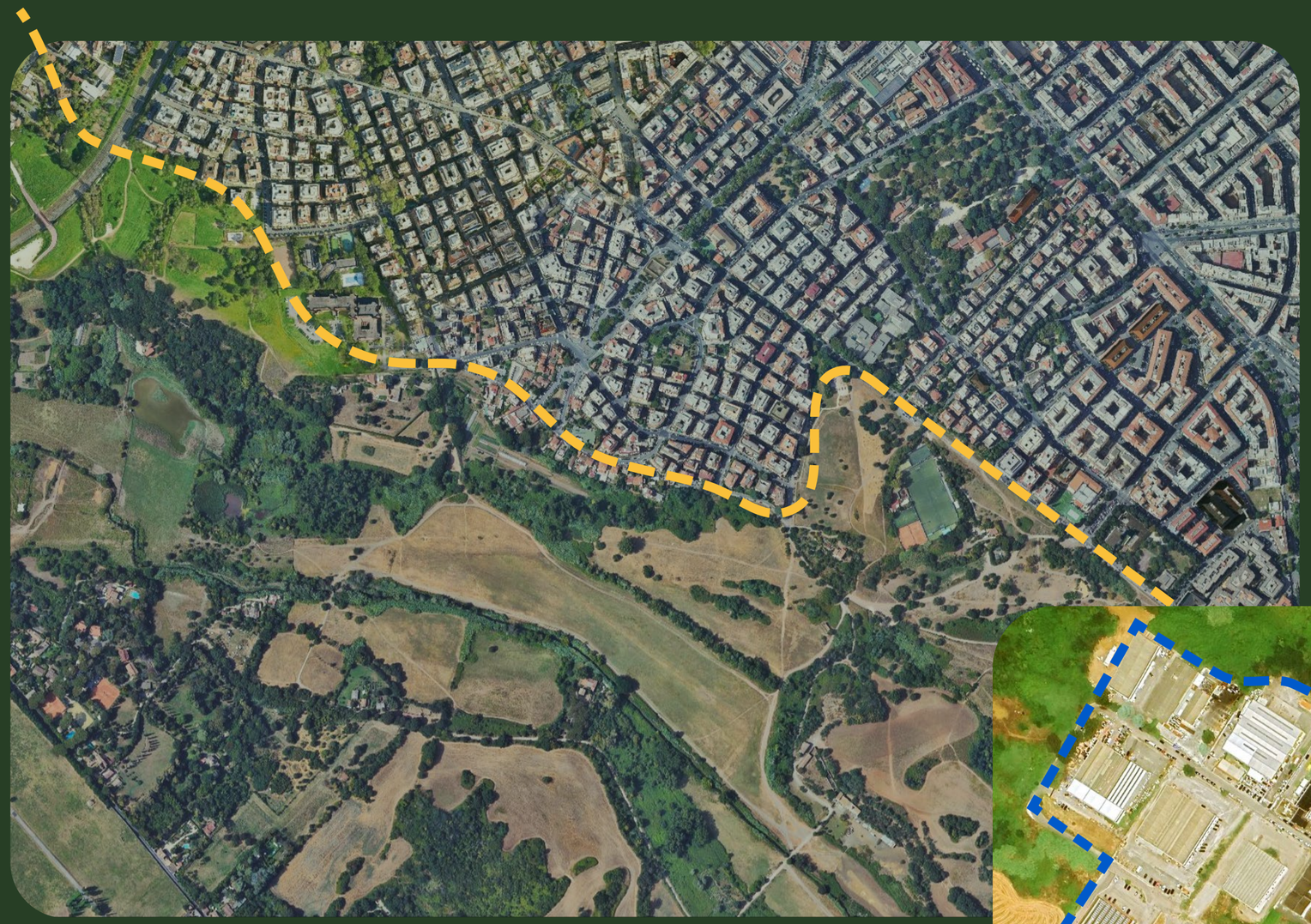
Example



Urban expansion
harming agricultural and natural landscapes (matrix)

Development of **industrial areas** and **technological facilities**

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Example

Loss of forest cover (damage to trees from natural causes)

Roadways
and **transportation networks**

...it‘s exactly where the ecological network is interrupted that we need to take action to improve the quality of green spaces in the city... for the benefit of all species!

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Thanks for your contribution!