GTL Project

GreenTecLab

Seven principles of planning for biodiversity in the city

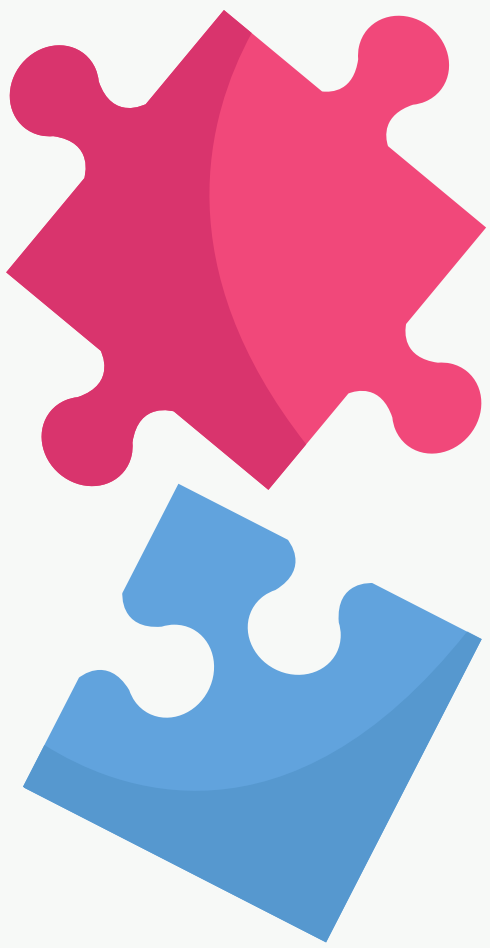
1

Protection of remaining ecological assets and habitats

Identify and protect areas of high biodiversity in and around cities. While areas with lower biodiversity are also valuable, we cannot preserve everything in mixed-use urban landscapes and must focus in the first instance on areas where we have the most to lose (or the most to gain).

2 Connectivity of biological populations and habitats

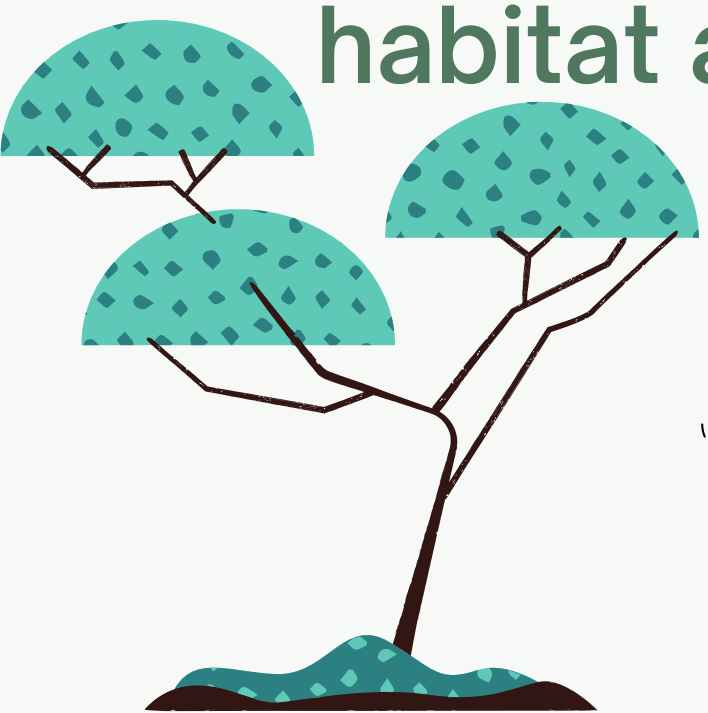
To maintain genetic diversity and the long term persistence of populations and diverse ecological communities it is important to re-establish connectivity between areas of habitat to allow the movement of animals and the propagules of fungi and plants across the urban landscape.



3

Construction of diverse and complex habitats to attract or retain biodiversity

Cities need to construct ecosystem components that enhance not just the number but also the diversity of spaces and species, including constructed habitat analogues such as green roofs and walls.



4 Cycles that mimic natural flows

Ecosystem cycles are often dramatically altered in urban environments. Water, nutrients and energy cycling are critical for sustaining ecosystem services and biodiversity; conversely, the ecosystem services these cycles provide (such as clean water and removal of pollutants) depend on diverse biological communities.

5

Interactions within and between ecosystem elements

Biological interactions including competition for resources, symbiosis, herbivory, predation and parasitism are important processes that shape biodiversity of a given location. In the built environment, planners must encourage not only interactions between people in cities, but within and between ecosystems.

6 Benevolence of urban infrastructure to reduce negative impacts on biodiversity

Urban infrastructure can have obvious adverse effects on biodiversity. Modifying current design practices and standards by incorporating ecological knowledge and evidence can help mitigate impacts associated with the hostility of built structures.

7

Novelty of urban ecosystems and ecological communities

For biodiversity to persist or increase in urban environments, areas supporting novel ecological communities need to be acknowledged as important habitats even though their abiotic and biotic conditions may differ from those of remnant ecosystems.

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