

GREEN INFRASTRUCTURE – SUPPORT FOR BIODIVERSITY



Ljubljana

Photo: J. Bavcon



**LIFE
NATURAVIVA**

Biodiverziteteta – umetnost življenja
Biodiversity – Art of Life



LIFE16 GRES/000711

GREEN INFRASTRUCTURE - BIODIVERSITY SUPPORT

Green infrastructure of urban environments includes all areas, no matter how small, covered with greenery – plants, which are managed and taken care of by people. It is like a green backbone of cities, representing an extension of nature, or a formed nature encompassed in the city.

Green infrastructure includes both public green areas such as parks, avenues and city greens, and private gardens, balconies with greenery and other areas.

With proper planning and maintenance, green infrastructure can significantly contribute to preserving and improving biodiversity.

*Novo mesto
Photo: B. Ravnjak*





IMPORTANCE OF GREEN INFRASTRUCTURE IN CITIES

Trees and shrub species in cities provide shade, are important oxygen producers, reduce temperature during summer months, reduce exposure of area to wind, represent an important water sink with their large biomass, thereby reducing the chance of flooding, dampen noise and bind microparticles.

Various plants species provide food and living space to different animals, and act as corridors between islands of non-urban environment (nature).

Green infrastructure improves the quality of life, as it represent a place when residents can get in touch with nature. For those who do not have their own garden, public green areas are like a green living room.

*Ljubljana
Photo: J. Bavcon*



Do not plant non-native invasive plant species: these species threaten autochthonous species, as they take over their environment, reproduce quickly, and push out autochthonous species, thus decreasing biodiversity.

Plant as many different plant species as you can: this means improved biodiversity for plants and their pollinators.

Later mowing of green areas: this allows plants to produce seeds and to restore the seed bank in the soil.



WHAT CAN WE DO TO PRESERVE AND IMPROVE BIODIVERSITY?

Planting autochthonous plant species (native species): these are species that developed in our environment and are optimally adapted to our conditions.

Leave dead plant matter during winter: this provides protection for young trees, shelter and hiding places for animals and material for their nests.

Do not use phyto-pharmaceutical products: these cause poisoning and even death to some animals.

Photo: B. Ravnjak

TREES AND HEDGES

*Manna ash
(Fraxinus ornus)
tree-lined lane at
Slovenska cesta in
Ljubljana.
Photo: B. Ravnjak*

In urban environments, trees provide shade, are the largest producers of oxygen, use excess rainwater, provide living spaces to birds, bats, insects, and some other animals. They also provide food for animals with their fruit. Furthermore, they ensure a friendlier green look of the city.

Plant autochthonous shrub species with abundant fruit that do not require a lot of maintenance and are like the tree species adapted to the extreme habitat conditions in cities.



Plant autochthonous trees species that produce nectar for pollinators and are adapted to extreme habitat conditions in cities (lack of space in the ground for the spread of roots, able to withstand high temperatures and drought during summer, and salting during winter). Such species are: manna ash, common whitebeam, European hop-hornbeam, etc.

Hedge shrubs dampen noise, add additional greenery to the city, and provide home, hiding place and food to many animals.



*Cornelian cherry
(Cornus mas)
hedge.
Photo: J. Bavcon*

ROADSIDES AND RIVERSIDES

Green roadsides represent a water sink in cities and can be important habitats for various plant species and soil organisms, while also improving the appearance of the cultural landscape.

Roadsides should not be mown too soon or too often. This will allow spring plants to flower abundantly in early spring, which will be replaced by open area species in the summer. Mowing should not be set too low to prevent grass from drying during summer, thus allowing plants to bloom again from the preserved rosettes.

Photo: J. Bavcon

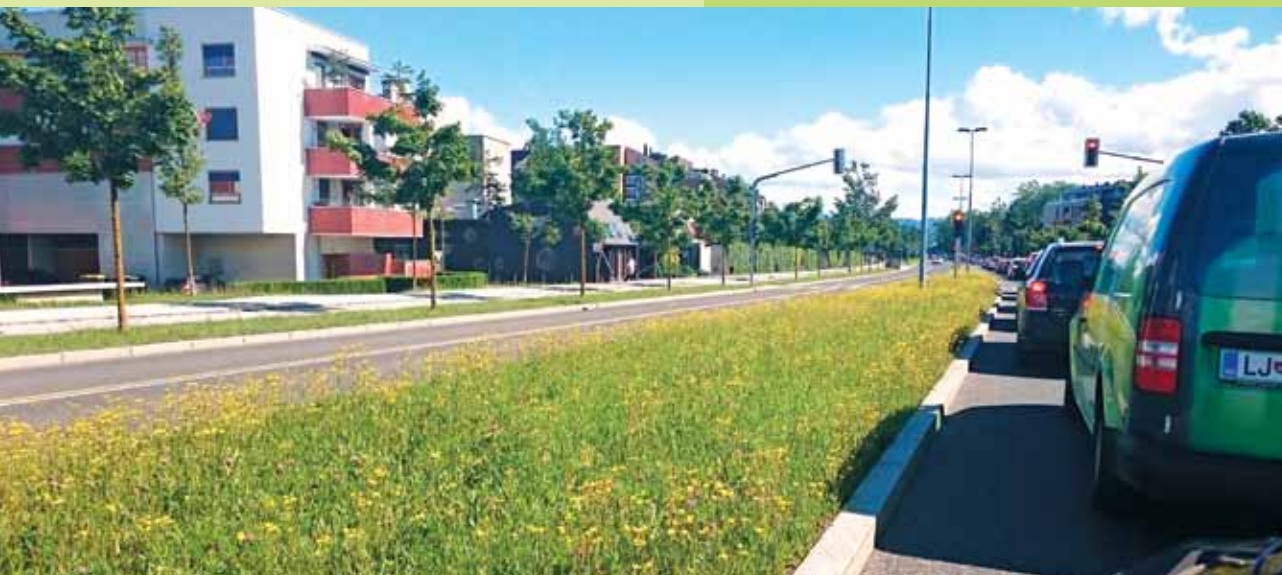


Photo: J. Bavcon

Green riversides are important habitats for riverside plants, water birds and other animals. Plants slow down the flow of water and prevent erosion of riverbanks.

Photo: B. Ravnjak

It is important to preserve and plant autochthonous plant species, and remove invasive species.

Autochthonous plant species, such as willows, poplars, alders, reinforce riverbanks.



GREENS AND GREEN ROAD ISLANDS

Greens are green oasis in cities. They represent a habitat for different plant and animal species, who can pass from nature into cities via the network of greens. They act as water sinks during rain. For residents of cities, they represent a space for socialising and various outdoor activities. Flowering greens provide food for many pollinators.

*Flowering road islands in Koper.
Photo: J. Bavcon*



Photo: J. Bavcon



On greens, we let plants flower, so we delay first mowing. This creates small meadows in the middle of cities, allowing pollinators to find food. After first mowing, we delay subsequent mowing until plants flower again. This reduces the maintenance costs and makes the environment friendlier.

Road islands, with their plant diversity, can act as a horticultural decoration of the city and provide habitats for animals.

*Secondary school
Ledina, Ljubljana.
Photo: J. Bavcon*

In road islands, we plant different autochthonous nectar-producing plants, which provide food for different pollinators. We plant perennials, thus reducing planting costs and provide a habitat for animals during winter.



Photo: J. Bavcon

Parks, large gardens, and large grass- or tree-covered areas in cities should be arranged as naturally as possible, while maintaining safety and appearance. Plants on larger surfaces should be allowed to flower and produce seeds. Remove non-native invasive species. Ensure forest hygiene (remove sick tree) and aesthetic appearance. In parks, we can also plant non-native plant species, but only if they are not invasive.



Photo: J. Bavcon

OTHER GREEN AREAS

Parks, large gardens, large grass areas and green roofs are “green oasis” in the middle of cities that can maintain a network with nature if they are placed correctly. Small gardens, green balconies and window sills represent micro-environment that act as an important supplement to the green diversity in cities.



Photo: J. Bavcon

Encourage residents to put plant species suitable for the environment on balconies and window sills. Plant as many different plant species that flower in different period of the year. This provides food for pollinators throughout the year.



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Professional overview: dr. Danilo Bevk
Photographies: Jože Bavcon, Blanka Ravnjak
Design: Nonparel d.o.o.
Printed by: Nonparel d.o.o.
Published by: University Botanic Gardens Ljubljana
and National Institute Of Biology
For: research counsellor dr. Jože Bavcon &
assoc. prof. dr. Matjaž Kuntner
Place and year: Ljubljana 2019
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vrt Botanic
Univerze v gardens
Ljubljani Ljubljana



NACIONALNI INŠTITUT ZA **BIOLOGIJO**
NATIONAL INSTITUTE OF **BIOLOGY**

Project was financed from finances of European Union for Environment and Climate Change LIFE-financial instrument and Ministry of the Environment and Spatial planning RS.



REPUBLIKA SLOVENIJA
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