
**Green Infrastructure in Central, Eastern and South Eastern Europe:
Is there a universal solution to environmental and spatial challenges?**

**Green Infrastructure in Serbia:
Towards Efficient Policies in the Field of
Environment and Planning**

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Today – more than 50% of world population lives in cities
Until 2040 – more than 70% of urban population

Green infrastructure (i.e. green systems) serves the interests of both **PEOPLE** and **NATURE**.



Green infrastructure affects:

- the spatial structure of natural zones
- environmental features of urban patterns

Green systems:

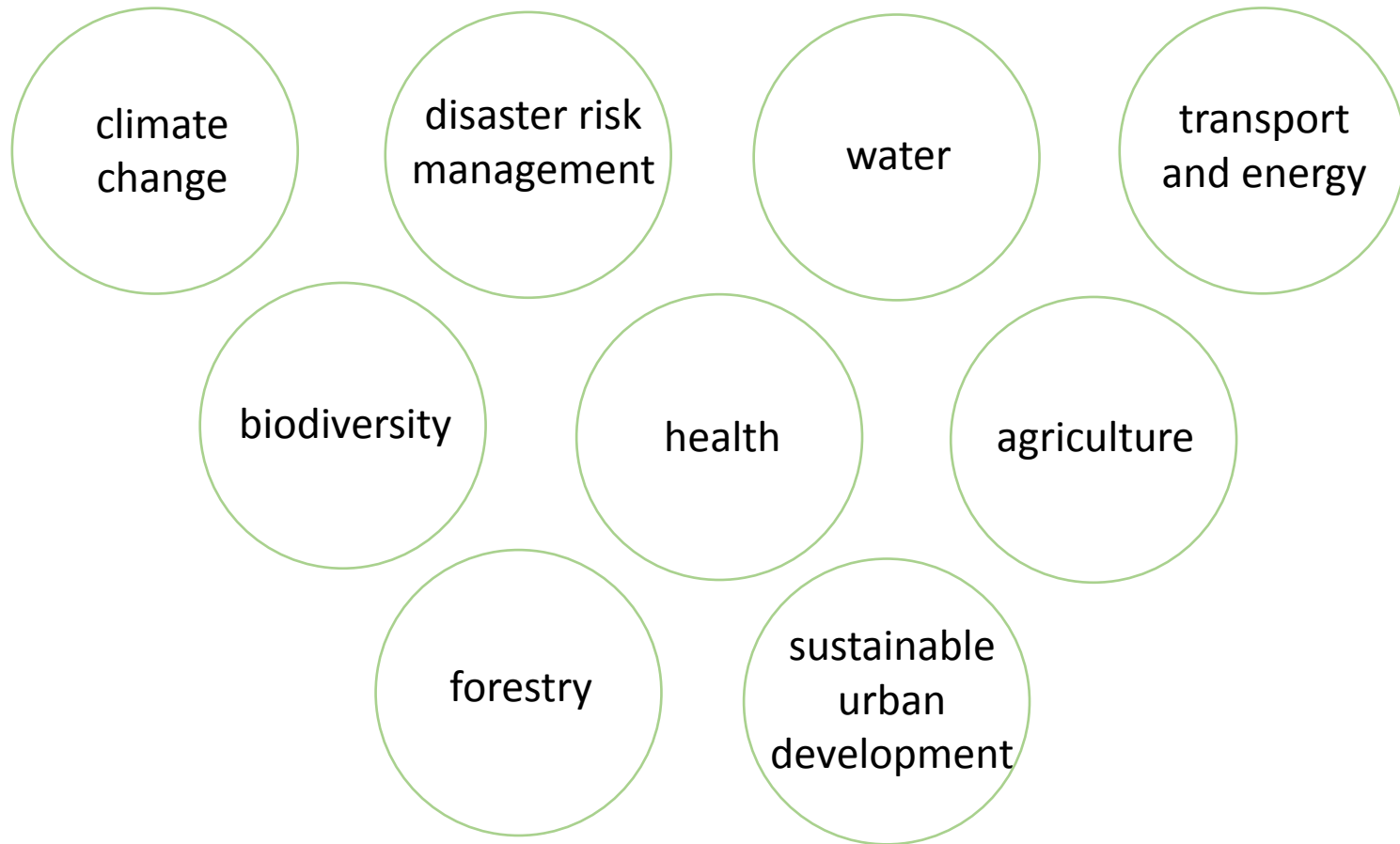
A cost-effective alternative to intensive land use, also creating

- new jobs
- social cohesion

Table 3.1 Compatibility of green infrastructure functions with examples of other policy objectives

Green infrastructure functions and benefits	Policy priorities							
	Economic	Environmental				Social		
	Economic growth & employment	Protect & enhance cultural heritage	Protect & enhance the landscape, geodiversity & natural environment	Biodiversity conservation & enhancement	Climate change mitigation & adaptation	Promoting sustainable transport & reducing the need to travel by car	Community cohesion & lifelong learning; volunteering	Healthy communities; health & well-being
Access, recreation, movement and leisure	●	●				●	●	●
Habitat provision and access to nature		●	●	●	●		●	●
Landscape setting and context for development	●	●	●				●	●
Energy production and conservation	●				●			
Food production and productive landscapes	●	●	●		●	●	●	●
Flood attenuation and water resource management	●		●	●	●			●
Cooling effect	●		●		●			●

Source: Natural England, 2009.



One of the most effective ways to deal with strengthening the green infrastructure is through spatial planning.

Table 3.3 Overview of key interactions between EU sector/environmental policies and green infrastructure benefits

EU environmental and sector policy areas	Potential synergies		Potential conflicts			
	Green infrastructure benefits	Policy objective	Green infrastructure benefits	Policy objective		
Climate change	Interconnected habitats	↔	Resilience to deal with climate impacts	No conflicts		
	Storing floodwater	↔	Resilience to deal with climate impacts			
	Mitigation of urban heat island	↔	Resilience to deal with climate impacts			
	Encouraging sustainable travel	↔	Reduction in GHGs			
Biodiversity	Interconnected habitats	↔	Sustain and improve biodiversity	No conflicts		
Energy	Reducing energy use in buildings, and encouraging sustainable travel	→	Securing energy supply	Interconnected habitats	↔	Securing energy supply
	Natural habitats	↔	Promoting biomass	Natural habitats	↔	Promoting biomass
	Space for renewable energy	↔	Promotion of renewable energy	Natural habitats	↔	Promoting biofuels
Transport	Encouragement of sustainable travel	↔	Modal shift and integration of transport systems	Natural habitats	↔	Minimising congestion



EU documents

Focused on open spaces in terms of improvement of the environment quality

- Sixth Environment Action Programme
- Thematic Strategy on Urban Environment
- European Landscape Convention
- Leipzig Charter
- Aalborg Charter of European Cities
- Towns Towards Sustainability



Regional documents

Focused on climate changes

South East European Climate Change Framework Action Plan For Adaptation (2008)

Albania, Bosnia and Herzegovina, FYR Macedonia, Montenegro and Serbia

- Reducing the sensitivity towards climate change
- Improving the resilience of socio-economic, environmental and cultural systems
 - >> institutional capacities and appropriate policies

The Republic of Serbia:

water management, forestry, agriculture, public health, land use, biodiversity and buildings



Regional documents

Focused on climate changes

Regional Climate Vulnerability Assessment: Synthesis report (2008)

Croatia, FYR Macedonia, Montenegro and Serbia

- Focus on adaptation measures to climate change
- Creating of new and implementing the existing legislation in the field of planning and environment



Regional documents

Focused on climate changes

Assessment of capacities for low-carbon and climate resilient development (UNDP, 2009)

Western Balkan countries

- Improving the institutional capacities
- Strengthening the expertise in the respective fields
- Establishing the coordination mechanisms among various sectors
- Creating the new legislation



National documents

Focused on environment and planning

Initial National Communication under the UNFCCC (Ministry of Environment, Mining and Spatial Planning, 2010)

- Conclusion:
Main efforts of creating the legislation and institutional and political framework according to the demands of UNFCCC were made since its ratification in 2001



National documents

Focused on environment and planning

- Sustainable development strategy, 2008
- National programme of environmental protection, 2010
- National strategy of involvement of the Republic of Serbia into the mechanism of clean development, 2010
- Energy development strategy until 2015, 2004
- Forestry development strategy, 2006
- Biodiversity strategy, 2011
- Spatial development strategy, 2009



National documents

Focused on environment and planning

Environmental legislation

- Act on environmental protection, 2004
- Act on protection and improvement of green areas, draft

Planning legislation

- Act on spatial plan, 2010
- Act on planning and construction, 2011



National documents

Focused on environment and planning

Act on environmental protection, 2004

Green areas:

- Public green areas
- There is an obligation for taking these into account within spatial and urban plans, in order to keep and improve natural and artificial space values



National documents

Focused on environment and planning

Act on protection and improvement of green areas (draft)

Green system:

- Various categories of green areas are classified
- Public green areas & other green areas
- Synergy effect: “obligation for building the communal infrastructure – waterway, public lightning; maintenance of other public spaces in the vicinity of green areas – traffic, pedestrian routes”



National documents

Focused on environment and planning

Sustainable development strategy, 2009

Green infrastructure:

- Provide absolute protection of green and open spaces within urban pattern and public spaces by planning “green infrastructure”, “green urbanism” and “green architecture”
- Increase public awareness on the significance of sensitive development and maintenance the quality of environment



National documents

Focused on environment and planning

Act on spatial plan, 2010

Green corridors and green network:

- Goal: protection and improvement of environment
- Urban zones: development of green areas in the cities, planning and maintenance of green corridors and networks
- Rural zones: afforestation and improvement of the quality of landscape



National documents

Focused on environment and planning

Act on spatial plan, 2010

Measures for the improvement of urban landscape:

- Building regulation should be in accordance with the character of landscape
- Keeping the elements of rural landscape in peri-urban areas
- Maintenance, improvement and sustainable use of open, green spaces and nature elements in the cities
- Creating the network of green and public spaces in order to connect natural and cultural values of settlement, peri-urban and rural areas

Local initiatives

Belgrade Master Plan (Urban Planning Institute, 2003)


System of green city areas:

Network of various types of green areas and their integration within urban pattern

Improvement by: registration, formulation of cadastre of green areas, and their valorisation

- Housing areas
- Commercial and public areas
- Transportation corridors

Local initiatives

An aerial photograph of Belgrade, Serbia, with a blue river (the Sava) winding through it. Overlaid on the map are various green and blue areas representing green infrastructure. A green arrow points to a specific area in the upper left. A green text box is overlaid on the map.

Project “Green Regulations of the City of Belgrade” (Urban Planning Institute, 2007)

- Revitalisation of the existing green areas
- Planning of the new green network

Recommendations

1 Role of local and national governments

Local:

- Increase awareness of ecological situation
- Highlight potential of GI to contribute to functional habitat connectivity

National:

- Promote and support development of GI
- Coordination among relevant agencies
- Create relevant legal frameworks where lacking
- Support public private partnerships

Recommendations

2 Integrating GI in spatial planning, policy and development

Regulative instruments:

- Adoption or revision of legislation by a political institution for regulating land use

Spatial planning:

- Determine method for preserving or enhancing GI and time scale (e.g. integrated coastal zone management, regional or national GI strategies, climate adaptation strategies)

Strategies and action plans:

- “Guidance with political commitment“ (can include general principles to be considered, or concrete priorities and measures to be taken)

Thank you for your attention!