The contribution of the European Green Belt to EU-level Green Infrastructure

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in collaboration with
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European Green Infrastructure (GI) Strategy
Enhancing Europe’s Natural Capital

GI: a strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services [...] is present in rural and urban settings. [COM/2013/0249 final]

GI is contribution for protecting biodiversity, promoting ecosystem services, societal health and well-being. [EC DG ENVIRONMENT 2012]
EU Green Infrastructure Strategy

Relevant EU policies and documents

- EU Biodiversity Strategy to 2020 (European Commission, 2011): one of the six main targets is GI development
- Green Infrastructure (GI) Strategy – Enhancing Europe’s Natural Capital (European Commission, 2013)
- Supporting the implementation of Green Infrastructure – Final Report (European Commission, 2016): Assessing costs and benefits of a possible TEN-G (making GI a policy and funding priority)
- EU Action Plan for nature, people and the economy (European Commission, 2017): Provide guidance to support the deployment of GI for better connectivity of Natura 2000 areas
- In progress: Guidance on a strategic framework for further supporting the deployment of EU-level green and blue infrastructure. To be published by EC at the end of 2018
Core criteria and European added value:

Such projects should fulfil the following cumulative criteria:

i) Enhance the delivery of multiple ecosystem services;

ii) Significantly contribute to the goals of EU Nature legislation;

iii) Strategic approach with an EU-level impact: either a scale which is significant and transcends administrative boundaries; or involve a minimum of two Member States; or implement a national GI strategy or a national restoration prioritisation framework.
Analysis Approach
i) Contribution to multiple ecosystem services

Method Approach:
Assignment of potential Ecosystem Services to Corine Land Cover

Burkhard et al., 2014

The Millennium Ecosystem Assessment (MEA, 2005)
i) Contribution to multiple ecosystem services

Multifunctionality of all functions and benefits

- low
- Number of ES Supported
- high

Indicative spatial reference area EGB
European Green Belt 150 km study area
AUT EGB countries
Countries

Data source:
© EuroGeographics for the administrative boundaries, European Green Belt Association

Conception, analysis, cartography:
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S. Hennig
W. Rolf

Version: July 2018

Financially supported by
Contribution to functions and benefits

i) Contribution to multiple ecosystem services

- Regulating Services
  - Global climate regulation
  - Local climate regulation
  - Air quality regulation
  - Water flow regulation
  - Water purification
  - Nutrient regulation
  - Erosion regulation
  - Natural hazard regulation
  - Pollination
  - Pest and disease control
  - Regulation of waste

- Provisioning Services
  - Crops
  - Biomass for energy
  - Fodder
  - Livestock (domestic)
  - Fibre
  - Timber
  - Wood Fuel
  - Fish, seafood & edible algae
  - Aquaculture
  - Wild foods & resources
  - Biochemicals & medicine
  - Freshwater
  - Mineral resources

- Cultural Services
  - Abiotic energy sources
  - Recreation & tourism
  - Landscape aesthetics & inspiration
  - Knowledge systems
  - Religious & spiritual experience
  - Cultural heritage & cultural diversity
  - Natural heritage & natural diversity

Legend:
- Balkan Green Belt
- Balkan and Central European Green Belt
Contribution to multifunctionality of all functions and benefits

i) Contribution to multiple ecosystem services

Balkan Green Belt

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<th>Distance</th>
<th>Regulating ES</th>
<th>Provisioning ES</th>
<th>Cultural ES</th>
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Balkan and Central European Green Belt

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Contribution to multifunctionality of high functions and benefits

**i) Contribution to multiple ecosystem services**
ii) Contribution to EU Nature Legislation

- Representation of protected core habitat areas
- Stepping stones
- Distance between protected core habitat areas
- Core habitat and buffer zones
- Corridors
- Permeable landscape matrix + functional habitat connectivity
- Functional connectivity between habitat complexes of forest, grassland, and wetlands
ii) Contribution to EU Nature Legislation

Core habitat – protected areas along Balkan Green Belt
Spatial coherence of protected area network along Balkan Green Belt

ii) Contribution to EU Nature Legislation
Functional habitat connectivity potentials within Balkan Green Belt

ii) Contribution to EU Nature Legislation
Qualitative analysis:

Scale (which is significant and transcends administrative boundaries)

• Significant scale which transcends administrative boundaries on different levels;

Cooperation (involvement of a minimum of two Member States)

• Various types of cooperation on pan-European level;

• well-established and long-lasting transboundary cooperation amongst EU and non-EU countries as well as between governmental and non-governmental organizations from all 24 countries of the European Green Belt;

• Structure in place to support strategic and co-ordinated approach on a pan-European level

Relevance for Member states (national GI strategy or prioritization framework)

• Several countries recognize EGB as a relevant element contributing to national GI concepts
In summary:

- Multifunctionality analysis results, suggest that **EGB contributes to EU level GI criteria I multiple ecosystem services**. In particular multiple regulating and cultural functions and benefits with high and very high potentials have been found significantly higher than in all adjacent countries.

- Connectivity analysis results suggest that **EGB contributes to EU level GI criteria II goals of EU Nature legislation**. According used indicators EGB contributes to a higher proportion and better connectivity of core habitats (Natura 2000/ Emerald) and a better functional connectivity between different habitat types within the landscape matrix outside of protected areas.

- Qualitative analysis results suggest that **EGB contributes to EU level GI criteria III strategic approach with an EU-level impact**, in particular due to promoting cooperation on pan-European level and contribution to implementation of a national GI strategy.