



# **Green Infrastructure – Enhancing Europe's Natural Capital**

**Group of Experts on Protected Areas and Ecological  
Networks, 5<sup>th</sup> meeting**

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# Why is the Commission acting?

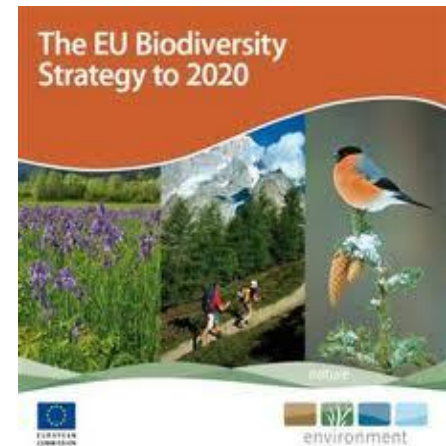
Commitments in the EU 2020 Biodiversity Strategy and the Roadmap to resource efficiency to come forward with a strategy on Green Infrastructure (GI);

Council and EP mandate to develop GI strategy, "*as contribution to further integrating biodiversity considerations into other EU policies*";

Communication on "*Green Infrastructure (GI) – Enhancing Europe's Natural Capital*", adopted on 6 May 2013;

EU Strategy on adaptation of climate change, adopted on 16 April 2013.

General Union Environment Action Programme to 2020 "*Living well, within the limits of our planet*" – the 7th EAP.



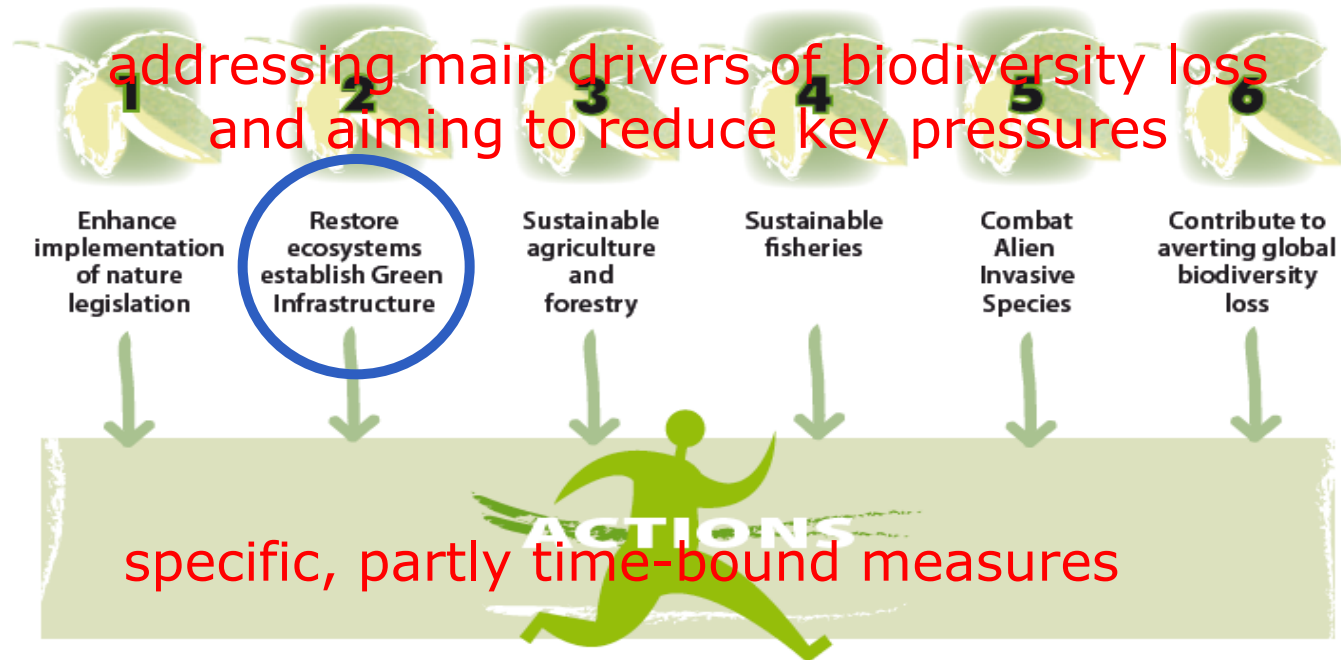
**Policy signals towards decision and cross-boundary level.  
makers, planners and promoters to invest in GI projects at local, regional, national**

# GI in EU Biodiversity Strategy

## Structure of the EU 2020 Biodiversity Strategy



## SIX TARGETS



Action 6b of  
EU Biodiversity  
Strategy:

*The Commission will develop a Green Infrastructure Strategy by 2012 to promote the deployment of green infrastructure in the EU in urban and rural areas, ...*

# Green Infrastructure: What is it?

*Green Infrastructure: 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. It incorporates green spaces (or blue if aquatic ecosystems are concerned) and other physical features in terrestrial (including coastal) and marine areas. On land, GI is present in rural and urban settings.*

***Spatial structure  
delivering nature  
benefits to people***



**Contribution to Europe 2020 Strategy: promoting smart, sustainable and inclusive growth – supporting a shift towards a resource efficient, low-carbon, sustainable economy by investing in our natural capital.**



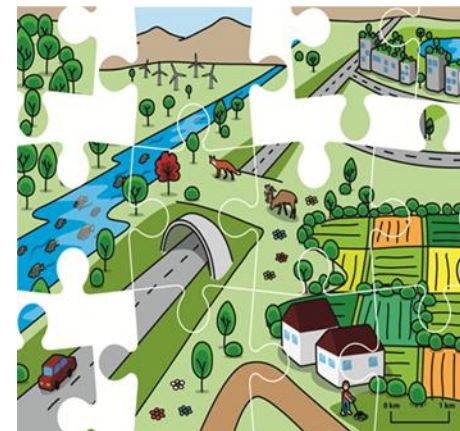
# What is the GI Strategy about?

- Contribution of GI to a number of key policy areas: regional development, climate change, disaster prevention and resilience, agriculture, forestry, urban, water, and biodiversity protection and enhancement;
- Why EU action? **Priorities at EU level:**
  - GI is the backbone of Natura 2000 network.
  - Promote the deployment of GI in main policy areas and their funding mechanisms (integrate into implementation + guidance, awareness raising, best practices).
  - Improve knowledge base and promote innovation
  - Better access to finance (including innovative mechanisms).
- Progress report on implementation in 2017.

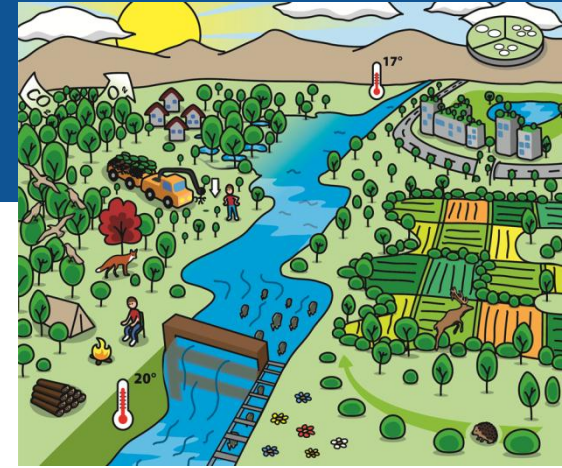
# Green Infrastructure: Elements

Local or town/city scale	Regional and national scale	EU level	Descriptor
Natural and semi-natural ecosystems, such as pastures, woodland, forest (no intensive plantations), ponds, bogs, rivers and floodplains, coastal wetlands, lagoons, beaches, marine habitats	Extensive agricultural and forest landscapes, large marsh and bog areas, rivers and floodplains, shorelines/coastal zones	Freshwater systems, major river basins, mountain ranges, regional sea basins	Core areas – outside protected areas
Local nature reserves, water protection areas, landscape protection areas, Natura 2000 sites	Regional and National Parks and wilderness zones (includes Natura 2000 sites)	Ecological Networks with cross-border areas, incl. Natura 2000 network	Core areas/protected areas
Restored areas which were before fragmented or degraded natural areas, brownfield land or disused quarries; transitional ecosystems due to land abandonment or regeneration processes	Restored ecosystem types	Restored Landscape systems covering a substantial part of agricultural/forestry areas and industrialised sites, including cross-border areas	Restoration zones
High nature value farmland and multi-use forests (such as watershed forests); protection forests (against avalanches, mudslides, stonefall, forest fires), natural buffers such as protection shorelines with barrier beaches and salt marshes	Extensive agricultural landscapes, sustainable forest management on regional and national level, functional riparian systems	Transboundary landscape features on river basin or mountain range level, sustainable coastal and marine management zones related to the respective sea basin	Sustainable use zones
Street trees and avenues, city forests/woodlands, high-quality green public spaces and business parks/premises; green roofs and vertical gardens; allotments and orchards; storm ponds and sustainable urban drainage systems; city reserves incl. Natura 2000	Greenways, green belts, metropolitan park systems	Metropolitan areas with substantial share of high quality green areas in Europe, including coherent approaches in cross-border urban zones.	Green urban and peri-urban areas
Hedgerows, stone walls, small woodlands, ponds, wildlife strips, riparian river vegetation, transitional ecosystems between cropland, grassland and forests	Multi-functional, sustainably managed agricultural landscapes, riparian systems	Supra-regional corridors, substantial share of structure-rich agricultural, forestry or natural landscapes	Natural connectivity features
Eco-ducts, green bridges; animal tunnels (e.g. for amphibians), fish passes, road verges, ecological powerline corridor management	De-fragmentated landscapes, improved areas along transport and energy networks, migration corridors, river continuum	European-wide or transnational defragmentation actions	Artificial connectivity features

*Spatial structure delivering nature benefits to people*







# Multiple benefits

- Usually, high return on green infrastructure investments:
  - Floodplain restoration project along the river Elbe (DE) benefits of shifting dikes, investing in floodplain-adapted agricultural management and constructing fish ladders outweighed costs by a factor of up to four. Recreation, flood protection and carbon benefits, which were not monetised, would increase the value of these calculated benefits even further.
- Sustainable, no-regret investments. Concept immediately applicable;
- Delivering high-level skilled jobs for planning, innovation, management and monitoring; but also jobs for less skilled people in creation and management. Enhances feeling of responsibility of citizens for the area they live in.
- Innovation/SME potential of GI – with links to standards, certification, labelling in support of GI investments.





# GI in urban development



- Importance of promoting GI solutions in Urban Environment Making space for ecosystems; strengthening the functionality of ecosystems for delivering goods and services, such as provision of clean water and air, water retention, attractive recreational areas;
- Mitigating and adapting to climate change effects, such as lower temperatures in cities in summer, retaining rain water;
- Health-related and social benefits;
- Cost-effective solutions (e.g. air cooling, flood control);
- Connecting urban, peri-urban, and rural areas;
- Link with integrated sustainable urban development in 2014-2020 Cohesion Policy;
- Build on existing initiatives e.g. on sustainable cities, European Green Capital ...



# GI in rural environment

- Importance of promoting GI solutions into agricultural and forestry management (multiple benefits instead of single-purpose land management);
- Making space for ecosystems; strengthening the functionality of ecosystems for delivering goods and services, such as carbon sequestration, water retention, functional landscapes, habitats for wildlife;
- Mitigating and adapting to climate change effects;
- Health-related and social benefits;
- Cost-effective solutions (e.g. disaster protection, flood control);
- Connecting protected and non-protected areas;
- Links with new ERDF and CAP in 2014-2020 policies (such as integration of GI into new rural development funds).



©: known to EC



# GI promotion and best practice sharing



Green infrastructure encourages a more integrated and multi-functional landscape.

On the 5 May 2013, the European Commission published a new Strategy to promote the use of green infrastructure across Europe. This article outlines the key elements of the Strategy. Green infrastructure (GI) is a tried and tested tool for generating ecological, economic and social benefits for society by alternative to man-made construction, for instance in relation to climate regulation or flood prevention. It also helps society to better appreciate and value the multiple benefits that nature generates in terms of ecosystem services. Unfortunately, most of these services are still all too often subjected to land-take for housing, industry, roads or recreation. The need for an EU framework to promote Green Infrastructure. The new EU-wide GI Strategy, published in May, aims to create a robust enabling framework in

*Promote GI approaches in communication to citizens  
Developing dedicated IT platform*

- Already available:
  - **Information material on website**
  - **Facebook application, video, illustrations**
  - **GI is *de facto* part of the Green Capital award**
  - **BISE with GI platform currently being updated**
  
- Upcoming:
  - **Brochure for wider public**
  - **Better integration into on-going communication measures and IT facilities, also from other DGs**
  - **Working Group on Implementation of GI**

## Green Infrastructure – **enhancing** Europe’s natural capital

working with nature, rather than against it. This, in turn, encourages a more integrated and multifunctional land use and development policy which makes best use of nature-based development solutions, where appropriate. Compared to single-purpose, grey infrastructure, GI has many advantages: it can provide a cheaper, more adapted treated as free commodities and used as if their supply is limitless, which is why much of Europe's natural capital continues to be degraded. The EU has already lost many healthy ecosystems and what remains is now highly fragmented due to urban sprawl, infrastructure development and changing land uses. Every year, more than 1 000 km<sup>2</sup> order to promote and facilitate GI projects within existing legal, policy and financial instruments. It rests on four main pillars: 1. Promoting Green Infrastructure in the main EU policy areas Recognising that GI can make a significant contribution to the EU's main policy areas, especially as regards regional

Natura 2000 Newsletter 07/13  
[http://ec.europa.eu/environment/nature/info/pubs/natura2000nl\\_en.htm](http://ec.europa.eu/environment/nature/info/pubs/natura2000nl_en.htm)



# EU Financing possibilities



*Structural Funds (the European Regional Development Fund and European Social Fund)  
Cohesion Fund*

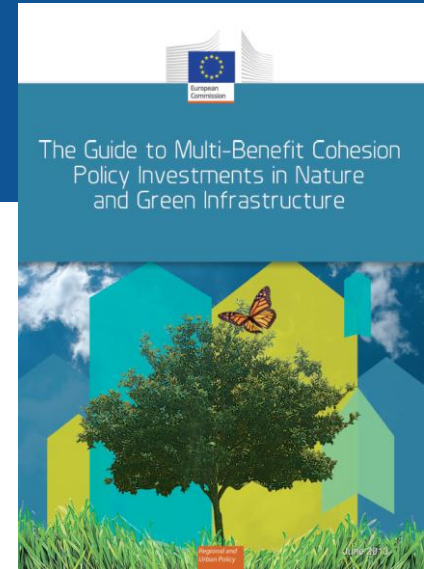
*CAP Funding*

HD Art. 10 programs, High Nature Value Farmland  
after reform: ecological focus areas, landscape structures

*LIFE+*

Brochure with 65 project examples from 17 MS

**+ Non-EU funding (governments, EIB, private banks, developers  
and civil society)**





# Role of Member States and civil society

Authorities, businesses and civil society need to take actions on all relevant levels – local, regional, national and cross-border – to deploy Green Infrastructure in urban, peri-urban and rural areas.

MS and sector-based policies should integrate Green Infrastructure solutions into their programming and financing work (including partnership agreements and operational programs), and invest in capacity building for guaranteeing an integrated approach.

Added European value ensured through cross-border, interregional and transnational cooperation through regional macro-strategies and through a better use of territorial cooperation and of exchanges of information, experience and good practices.

Step up MS, regional and local policy tools and funding instruments for GI complementing the EU action framework.

Strategically integrate GI into spatial planning processes.

# Institutional follow-up

*Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions*

- Council:
  - **LT PRES plans to discuss GI as lunch item at October ENV council**
- EP
  - **Oral question with resolution in Plenary (September - October)**
- CoR:
  - **Adoption of Opinion in October. Joint conference with EESC in November.**
- EESC:
  - **Adoption of Opinion in October. Joint conference with CoR in November.**

## EU actions

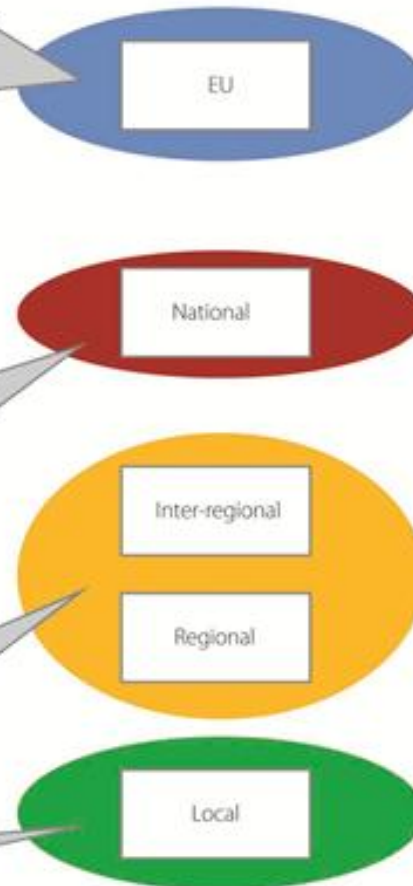
- GI integration into EU policies and implementation
- GI integration into EU funding mechanisms and access to alternative funding
- Research on value of biodiversity and ecosystem services
- Collection of GI initiatives - analysing impacts, costs & benefits
- GI strategic goal and indicators
- Communication, participation and education

- Provide and promote a GI framework and goals for greater EU coherence
- Provide best practices, experience and guidance
- Communication and education
- Promoting stakeholder involvement

- Promote inter-regional and regional GI
- Advise on GI integration into EU funded operational programmes
- Providing best practices, experience and guidance

- Fund targeted local actions

## Levels targeted:



# Actions on all levels

Figure and text adapted from the Recommendations of the GI Working Group on [http://ec.europa.eu/environment/nature/ecosystems/index\\_en.htm](http://ec.europa.eu/environment/nature/ecosystems/index_en.htm)



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- Natura 2000 Network ▶
- Species protection ▶
- Green Infrastructure
- Invasive Alien Species
- Climate Change
- Partnerships
- Knowledge Base ▶
- Information ▶

### Green Infrastructure

What is Green Infrastructure?



Green Infrastructure is addressing the spatial structure of natural and semi-natural areas but also other environmental features which enable citizens to benefit from its multiple services. The underlying principle of Green Infrastructure is that the same area of land can frequently offer multiple benefits if its ecosystems are in a healthy state. Green Infrastructure investments are generally characterized by a high level of return over time, provide job opportunities, and can be a cost-effective alternative or be complementary to 'grey' infrastructure and intensive land use change. It serves the interests of both people and [nature](#).

The Commission has produced a brochure explaining the main issues of Green Infrastructure. More detailed background on Green Infrastructure, including relevant studies with best practice examples, can be found [here](#).



For illustrations of the Green Infrastructure concept click [here](#).

#### An EU-wide strategy on Green Infrastructure: Enhancing Europe's Natural Capital

**NEW** The Commission has adopted a Green Infrastructure Strategy, 'to promote the deployment of green infrastructure in the EU in urban and rural areas'.

Communication from the Commission: Green Infrastructure (COM(2012) 228 final)

[http://ec.europa.eu/environment/nature/ecosystems/index\\_en.htm](http://ec.europa.eu/environment/nature/ecosystems/index_en.htm)

<https://circabc.europa.eu/faces/jsp/extension/wai/navigation/container.jsp>

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