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Inspire Policy Making with Territorial Evidence



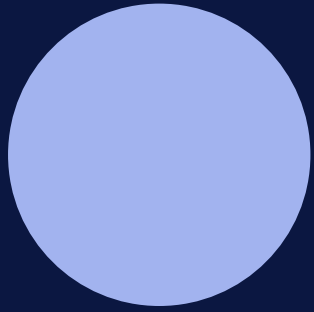
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Bulgarian Presidency of the Council  
of the European Union

# GRETA Green Infrastructures

ESPON Seminar “Territorial Cohesion Post 2020: Integrated Territorial Development for Better Policies”

Policy Lab 3 Sustainable regions:  
circular economy, energy transition and green infrastructure



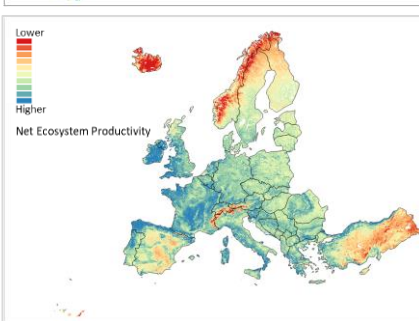
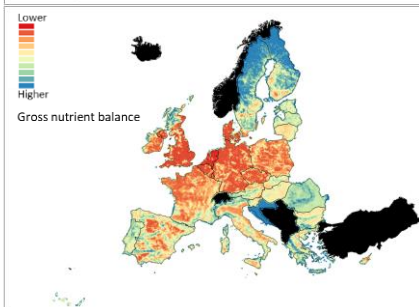
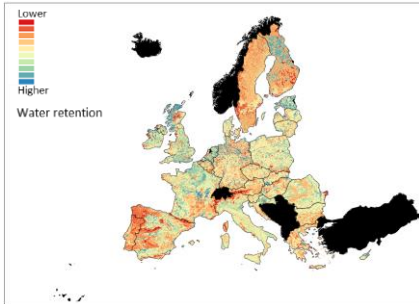
## Question 1:

How can green infrastructures address climate change challenges?  
Can you show an example?



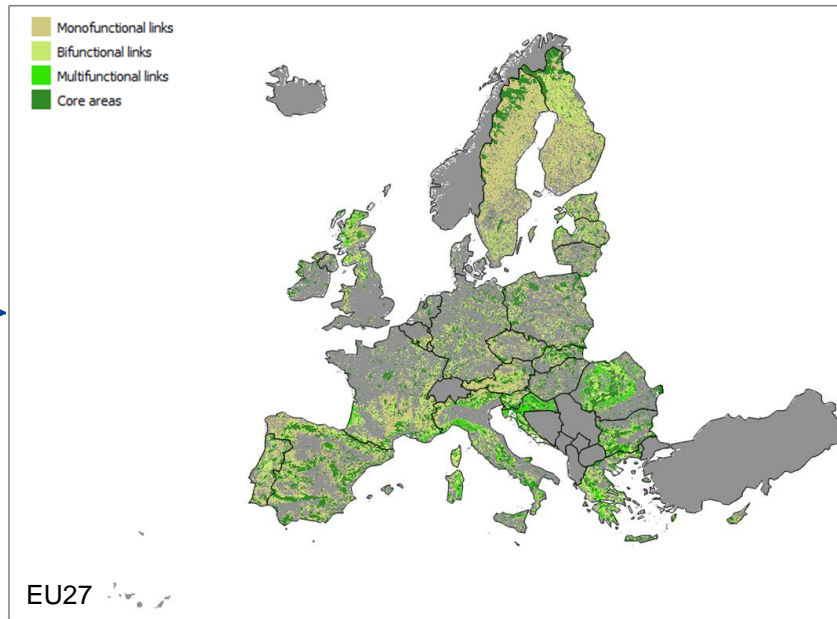
# Question 1: How can GI address CC challenges?

## Ecosystem Service Mapping (JRC, 2015)



Multifunctionality

## Potential of GI network to address multiple Climate Change challenges



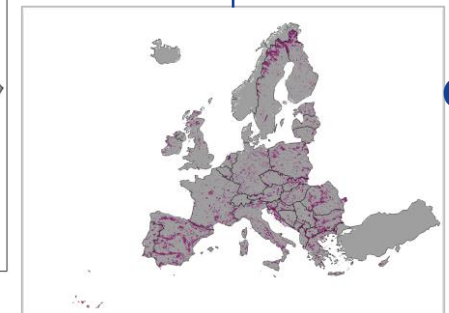
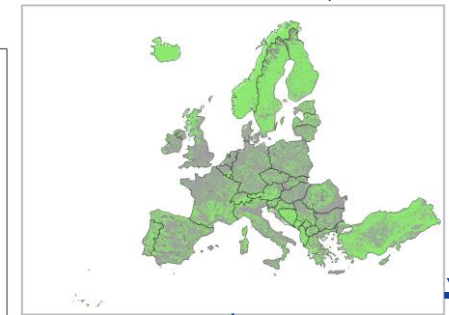
### ESS supply:

- Water retention
- Gross nutrient balance
- Net Ecosystem Productivity

## Physical Mapping

### GI connectors

Natural and Semi-natural areas not protected (CLC, Copernicus HRL impervious and High Natural Value Farmland)



**GI Hubs**  
(N2K + EMERALD Sites)

Connectivity

# Question 1: How can GI address CC challenges?

- **Green Infrastructure has the potential to contribute** to:
  - Flood protection (adaptation) - Water retention
  - Emission of nitrogenous gases (mitigation global warming) - Gross nutrient balance
  - Carbon Sequestration (mitigation) - Net Ecosystem Productivity
  - Health and well-being: i.e. temperature reduction (i.e. heatwaves effect mitigation), air quality, access to nature, recreation

## **From the demand side, having a pan-European GI network allows:**

- Identification of hot spots: areas with GI potential + high risks i.e. Climate change vulnerable areas, flood risk hazards maps.
- Identification of areas where habitats /species are more vulnerable to climate change hazards and in need for restoration
- Detecting trends of GI network. Analysing GI network together with land use change maps (i.e. EU-LUPA) could help detecting: habitat loss, fragmentation and degradation due to heavy urbanization, intensive agriculture...
- Detecting regions in need for/or with high potential for cooperation and transboundary response to climate change challenges by means of GI planning.

**BUT Spatial scale matters!!!** Adaptation may require a local approach i.e. river basin, urban áreas...

# 2

## Question 2:

How can social, economic and environmental aspects related to green infrastructures be embedded in planning and governance?

**Tentative good practice examples from GRETA**

## Question 2: How can social, economic and environmental aspects related to GI be embedded in planning and governance?

- **Better informed and knowledge- based decision making**
  - GI mapping (spatial distribution, ESSupply) to support spatial planning at different scales-
  - Monitoring and reporting to provide evidence on GI performance (social, economic, environmental)
  - Open data platforms and continuous updating of data portals with georeferenced information on protected areas and their environmental qualities
- **Legitimizing governance structures**
  - Multi-stakeholder committees for GI-governance and implementation on national and regional levels (France)
  - Allow for active NGOs in hearing processes for spatial planning (Sweden, Denmark, Spain)
- **Innovative GI valuation methods:**
  - Methods to assess interaction among ESS : i.e GRETA is exploring Casual Loop Diagrams to see enabling factors for GI implementation and territorial development
  - Economic Valuation Methods: GRETA will explore by consultation with key stakeholders in case studies, whether economic valuation methods do (or have potential to) provide the information about environmental and social benefits of green infrastructure in decision making and planning processes

## Question 2: How can social, economic and environmental aspects related to GI be embedded in planning and governance?

- **Incorporation of GI concept and approach into legal frameworks:**
  - GI incorporated, enhanced and protected in current regulation (e.g. Finland, Croatia, Poland, Basque Country)
  - Designation of GI areas/features and set up land use criteria/restrictions/standards and different planning scales. i.e index for for biotope calculations; green or open space factor calculations in new land use developments. E.g. Cyprus requests new land use development to convert 10-15 % of the area into “public green space” via permits in spatial planning.
  - According to our research GI could make a significant contribution to spatial planning, climate change, disaster risk reduction, agriculture and forestry but the systematic incorporation of the concept into some policy sectors (e.g. finance, health, social services) still as a challenge.
- **Financial and economic good practice:**
  - A cost effective approach to land use decisions: preserve green areas now rather than ‘rewild’ areas in the future;
  - More visible and direct funding was seen as an opportunity for GI development (e.g. Germany, Ireland)
  - Combine public and private funds: i.,e use of ENRD (+LEADER and LCCD) in rural development to enhance environmental qualities (e.g. Scotland, Croatia 2014-2020)
  - Use Cohesion policy to enhance degraded urban areas (e.g. Slovenia 2014-2020)

# 3

## Question 3:

How can green infrastructures create or use new types of territorial interactions?



# Question 3 - How can green infrastructures create or use new types of territorial interactions?

GI reinforces territorial interactions:

- **Horizontal interaction**, cooperation, among different stakeholders (public- public/public-private) as well as between sector policies
  - **Vertical interaction**: interaction at different scales of planning. Valencia Metropolitan area is a good example how different layers are integrated: from regional to local, down to street level –amongst other examples such as Trnava.
  - **Transboundary interaction** is crucial to guarantee effectiveness.
- Ecosystem based adaptation into climate change policies
  - Nature based solutions into innovation policy
  - Natural water retention measures into water and risk management
  - Integrated coastal zone management
- \* GRETA explores this interaction in 4 case studies: Alpine macro-region, Greater Copenhagen, Euroregion Euskadi, Bayonne, Navarre and Southern Estonia- North Latvia.



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# Thank you!

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