

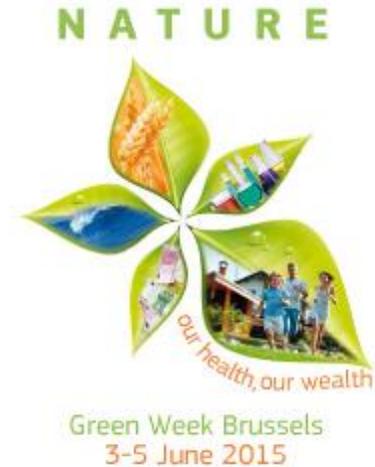


NATURE



Green Week Brussels > 3-5 June 2015

Jobs & Growth through Green Infrastructure



Patrick ten Brink, Senior Fellow and Head of Brussels Office, IEEP

with thanks for inputs by colleagues:

Konar Mutaoglu, Graham Tucker and Marianne Kettunen of IEEP

Green Week: *Nature – our health, our wealth*

Session 2.2 Jobs & growth through green infrastructure

3 June from 16.30 – 18.00

Jobs & growth through green infrastructure

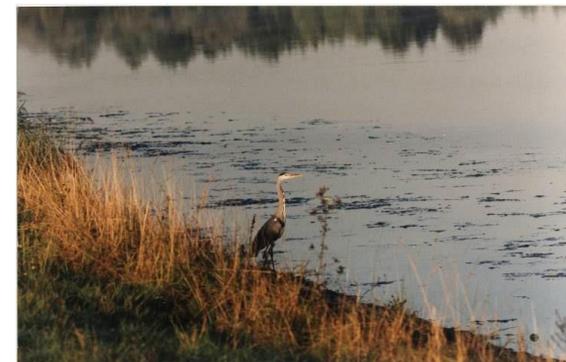
- **What is Green Infrastructure?**
- **What is its purpose?**
- **How does it contribute to jobs and growth?**
- **How is it linked to the Juncker investment package?**
- **How should one calculate GI costs and benefits?**
- **What evidence is there on job and growth potential?**
- **What are the key policy links?**

What is Green Infrastructure?

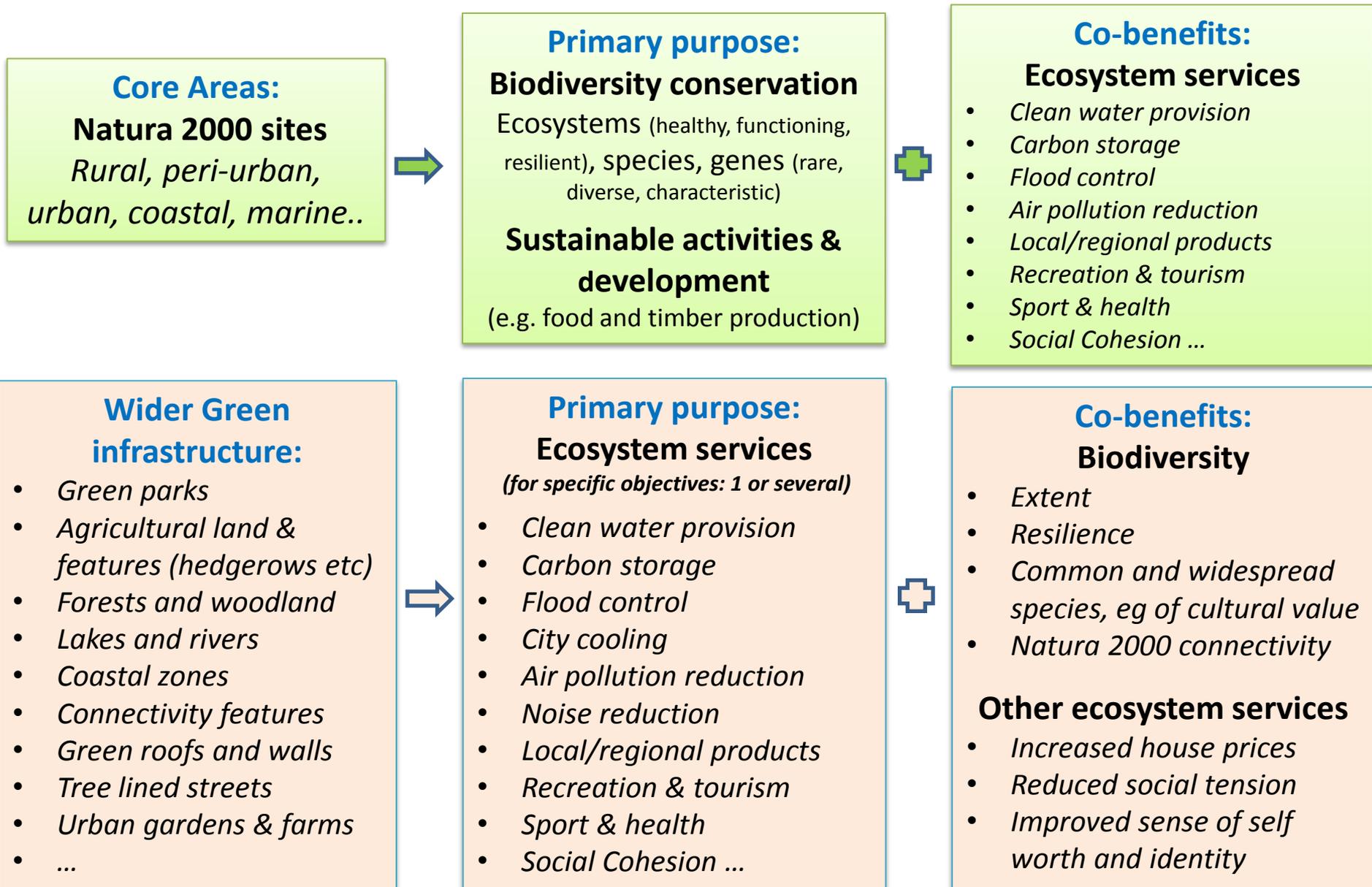
GI: a strategically planned network of **natural** and **semi-natural areas**, with **other environmental features** designed and managed to deliver a wide range of ecosystem services.

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.



GI - What is its Purpose?



How does it relate to jobs and growth?

1. Direct Jobs – short term and long term

- Short term/one-off – setting up management plans; investments in restoration, planting new trees, setting up green walls and roofs, landscaping, engineering works on green roads: **managers, planners, architects (building and landscape), engineers (sound, transport, building)**...
- Longer term: management (mainly by landowners), wardens, facilities (inc. info centres), maintenance of parks, roof gardens, tree lined streets, engagement in social and health programmes, tourism and recreation - **wardens, gardeners, ecologists, social workers, doctors, farmers, foresters, beverage manufacturers, water companies**...

2. Indirect jobs

- Protected Areas – visitors also pay for hotels, restaurant, transport, which in turn leads to the hotels/restaurants paying for services and goods...

3. Induced jobs

- Locational quality can attract investment – e.g. new business or new homes.

4. Saving money (public & private) and using that for investment & jobs

- E.g. lower water purification costs – if it feeds through in water rates, will lead to greater disposable income, creating additional demand in the economy.

How does it relate to jobs and growth?

1. Direct and indirect support for local and regional development and growth

- New products with regional branding
- Attracting tourists and recreation
- Investment in Green infrastructure – new money to region, much of which will stay in the local economy where skills are local.

2. Attracting investment

- Locational quality can attract investment – e.g. new business or new homes – the former bring in new jobs / added-value, the latter more potential disposable income.

3. Saving money (public & private) and using that for investment and growth

- Saving heating and cooling costs – increases disposable income.
- Saving public health costs – increased public budget availability.

How is linked to the Juncker investment package?

Commission priority: **Boosting Jobs, Growth and Investment**

“My number one priority will be getting Europe growing again and getting people back to work.”

EU Commission President: Juncker

http://ec.europa.eu/priorities/jobs-growth-investment/index_en.htm

The Commission's Jobs, Growth and Investment package will focus on cutting regulation, **making smarter use of existing financial resources** and making flexible use of public funds – to **provide up to €300 billion in additional private and public investment** over the next three years.



- **Green infrastructure** can offer **cost effective solutions** and **multiple co-benefits**.
- Often **best value for (public) money**.
- **Smarter use of EU budget** would imply using **more for GI**

Juncker's Investment Package:

- **Infrastructure** – broadband, energy networks and **transport infrastructure**
- **Education, research and innovation**
- Renewable energy and energy efficiency
- **Projects to help young people find work** (building on the Youth Guarantee scheme).



- **Green infrastructure** to be on a par with grey infrastructure (**i.e. support TEN-GI**), which needs to be greened (transport; coastal and inland flood risk infrastructure)
- **Research:** Nature a **“living library of life”**. 500 millions years of experimentation!
- GI and city cooling **saves energy**....
- GI creates **jobs**, helps **re-enter job market**

How should one calculate GI costs and benefits?

Objective: understand the full costs and benefits of GI and take decision upon the full evidence base

1. Costs: Direct costs (one-off & annual) & opportunity costs, over time

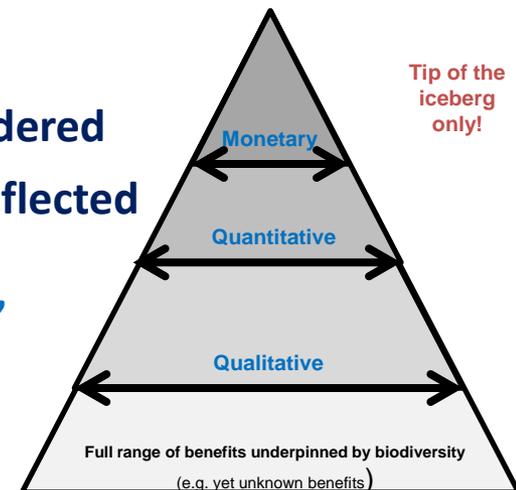
2. Benefits: relating to the specific objective and wider benefits

- E.g. a project **on flood control** will need to show that it is effective at meeting flood risk mitigation objectives and the assessment should include additional benefits such as biodiversity (in physical indicators), recreation and tourism (in mix of indicators, inc. economic), and other ecosystem services

3. Effective decision making builds on the full picture of the evidence base

- Integrate multiple benefits
- Ensure cost and benefits across stakeholders affected are considered
- Ensure sufficiently timescale for full merits of decisions to be reflected

4. In practice this requires an extended cost benefit analysis, that combines qualitative, quantitative and monetary values, using multiple criteria.



What Evidence is there on jobs and growth potential?

Tourism: In **Scotland**, the **Cairngorms National Park** (most of which is a Natura 2000 site) receives around **1.4 million visitors a year**, each spending on average £69 per day on accommodation, food, transport and entertainment (Cairngorms National Park Authority, 2005).

In **Scotland**, direct employment from tourism and recreation attributable to woodland ~ **17,900 FTE jobs**, total associated Gross Value Added= ~ £209m. ~ **7500 volunteers** carried out forest-related work = ~ **47,400 volunteer days** Edwards et al (2009).

In **Finland** the total annual revenue linked to visitor spending in national parks and key recreation areas (total of 45 areas) has been estimated as €87 million per year, **generating €10 return for every €1 of public investment** (Huhtala *et al.*, 2010).

Name or national park <i>Some examples of total 37</i>	Local, accumulative economic impacts of visits (EUR mil / year)	Person-years of employment
Nuukio	2.1	16
Pallas-Yllastunturi	34.3	450
Oulanka	15.5	200



See Kettunen *et al.* (2012) [TEEB Nordic](#), Kettunen and ten Brink (2013) and [Metsähallitus](#) for references

What Evidence is there on jobs and growth potential?

The **206 PAs** managed by the Royal Society for the Protection of Birds (RSPB) across the **UK** (protecting 142,044 ha) support over **1,800 local jobs** (full time equivalent). These jobs are often located in the more **remote, rural or coastal areas of the UK, where economic opportunities tend to be fewer and less diverse** (RSPB, 2011).

In **Belgium, Hoge Kempen National Park** is creating a new dynamic in the ex coal mine area. **Visitors ~ 700.000** in the first year. Employment derived from the national park – directly and indirectly = **~ 400 jobs**. Total **investment ~120 MEUR**, while the **direct economic benefits** (revenues from Hotels, B&B, restaurants, local shops) ~ **20MEUR/yr** (Ignace Schops, 2011).

The implementation of **Natura 2000 network** was considered to have **positive impacts on GDP in Spain**, with an estimated increase in **GDP between 0.1 - 0.26%**, and that the **network would generate an additional 12,792 jobs to the country** (Fernandez *et al.*, 2008).

An analysis of the **EU's 26,000 Natura 2000** sites found that they attracted an estimated **1.2-2.2 billion visitor days per annum**, generating **4.5-8 million full time equivalent jobs**, with **visitor expenditure of some €50-€90 billion** (BIO Intelligence Service, 2011).

We are looking for further good examples to integrate lessons from practice in your countries in the ongoing study – *Health and Social Benefits of Biodiversity and Nature protection.*

Next Steps: Realising GI benefits

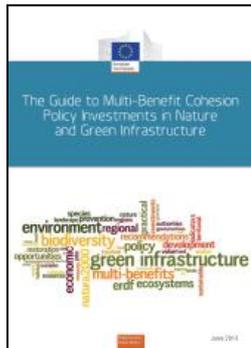
1. **Continue developing and communicating the evidence base - essential to get to a “tipping point” in awareness of GI’s multiple benefits.**
2. **Make use of existing opportunities** – e.g. from EU budgets, to new Natural Capital Facility, to national, regional and local initiatives.
3. **Systematically seek to “integrate” GI into other policies to promote good governance and cost-effective solutions** – biodiversity proofing and mainstreaming.
4. **Explore synergies between policy instruments** – e.g. SEA, EIA, links to spatial planning.
5. **Understand practical tools that can help facilitate solutions** – e.g. mapping, GIS.
6. **Explore and develop innovative governance solutions – who is doing (can do) what to realise GI benefits - e.g. to get public health stakeholders, water companies, to drive change.**
7. **Engage stakeholders & collaborate on making the synergies between nature and their objectives happen.**

Further information



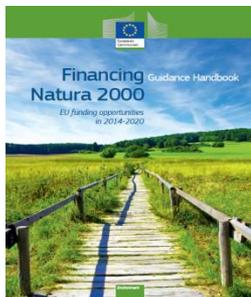
[Green Infrastructure Implementation and Efficiency](#)

Tucker et al., 2011



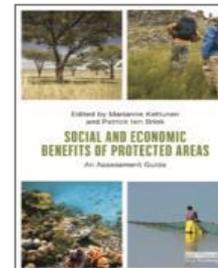
[Guide to Multi-benefits of Cohesion Policy Investments in Nature & GI](#)

IEEP & Milieu 2013



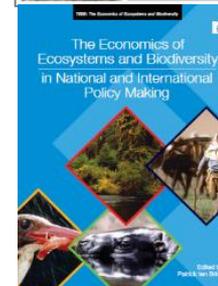
[Financing Natura 2000](#)

Kettunen et al., 2014



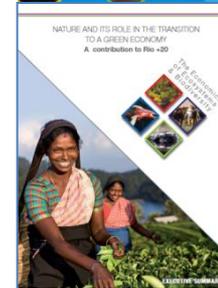
[Social and Economic Benefits of Protected Areas - An Assessment Guide](#)

Kettunen & ten Brink (2013)



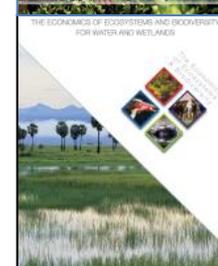
[TEEB for National and International Policy Makers](#)

(ed Patrick ten Brink 2011)



[Nature in the Transition to a Green Economy](#)

ten Brink et al., 2012



[TEEB Water and Wetlands](#)

Russi et al., 2012

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Thank You!

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IEEP is an independent, not-for-profit institute dedicated to the analysis, understanding and promotion of policies for a sustainable environment. www.ieep.eu.

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