



# Main policy tools and instruments for an integrated approach to Green Infrastructure implementation

Leonardo Mazza, IEEP  
AJ McConville, IEEP

Together with:  
Ecologic Institute, Germany  
GHK, United Kingdom  
Syzygy, Netherlands  
TAU Consultora Ambiental, Spain  
University of Antwerp, Belgium  
VITO, Belgium

[www.ieep.eu](http://www.ieep.eu)

**Green Infrastructure projects and policies expert  
workshop - Brussels, 7 September 2011**

# Content of this presentation



## I. Context on the Green Infrastructure Implementation and Efficiency Study

- ❖ Study's aim and insights into approach

## II. Relevant preliminary findings: policy tools and instruments

- ❖ Background for topic 5

## III. Relevant preliminary findings: indicators and measuring efficiency of green infrastructure

- ❖ Background for topic 6



# **I. Context on the Green Infrastructure Implementation and Efficiency Study**

# Study's aim



Study's **aim**: Gathering data and evidence on effectiveness, costs and benefits of GI measures to support the development of the future GI Strategy.

Involves:

- the identification of the **different types of GI measures** + an assessment of their effectiveness and efficiency in terms of biodiversity and broader ecosystem benefits.
- Identifying **where EU policy framework could cost-effectively promote** efficient measures identified

=> Issues covered in working group topics 5 & 6

# Insight into approach (I)



Phase 1: identification of about about 100 GI **measures from across 27 EU MS**. Either pursued specific objectives (eg. climate change adaptation, disaster prevention, biodiversity conservation) or multiple objectives simultaneously.

Phase 2: More in-depth analysis. 3 examples of GI measures selected for **7 different specific topics (e.g. urban GI, GI mapping for planning, GI for connectivity & coherence etc.)**

=> Care given to selecting **initiatives relying on different tools and instruments** to deliver their objectives

# Insight into approach (II)



Currently, working on **4 policy scenarios for a future GI Strategy**:

- a) Business as usual
- b) Maximising the use of existing approaches: MS voluntary measures with EU support
- c) Full integration of GI into EU policies: amending existing legislation
- d) Comprehensive, dedicated EU legal instrument

Options to further promote GI may potentially **affect a wide range of EU policies and instruments**

# EU policy areas of relevance to green infrastructure



**Policy areas in which there are policies and instruments relevant for EU action on GI (cf table 2 in BG Doc):**

<b>POLICY AREAS</b>
<b>AGRICULTURE AND RURAL DEVELOPMENT</b>
FORESTRY
<b>BIODIVERSITY &amp; NATURE</b>
<b>WATER POLICY</b>
<b>CLIMATE CHANGE POLICY</b>
<b>GREEN GROWTH: TERRITORIAL COHESION AND INNOVATIVE FINANCING</b> (AGENDA 2020, INNOVATION, RESOURCE EFFICIENCY, JOBS)
<b>TRANSPORT &amp; ENERGY</b>
<b>IMPACT ASSESSMENT, DAMAGE PREVENTION AND REMEDIATION</b>
SPATIAL PLANNING
<b>MARINE AND COASTAL ZONES POLICY</b>
<b>ENVIRONMENT &amp; HEALTH</b>



## **II. Relevant preliminary findings: policy tools and instruments**

### **- Working group topic 5**



## II. Policy Instruments and tools



**Identified policy measures relied on tools and instruments which generally fell into one of the following categories:**

1. Strategies and Action Plans
2. Information gathering and mapping
3. Regulation and planning
4. Economic/ market instruments
5. Public investments
6. Governance
7. Communication and advisory measures

# 1. Strategies and Action Plans



- ❖ Setting out overall strategic approach to Green Infrastructure provision
  - ❖ **Non-binding, strategic document**
  - ❖ Can potentially include (new) **objectives** (including targets) or **general principles**; may announce **concrete measures**

## 2. Information gathering & mapping



- ❖ Identification and mapping of GI elements and requirements
- ❖ Monitoring of GI elements and their impact objectives
- ❖ Analysis of GI benefits in view of integration into decision-making

# 3. Regulation and Spatial Planning



- ❖ Regulation of land use
- ❖ Spatial planning/integrated territorial development
- ❖ Procedural requirements: EIA/SEA
- ❖ Standards
- ❖ Liability and compensation

## 4. Economic/ market instruments



- ❖ Resource pricing (e.g. taxes, charges, fees, land values)
- ❖ Land management contracts/agreements (incl. PES-schemes)
- ❖ Public procurement

# 5. Public Investment



- ❖ EU expenditure for GI
- ❖ Land purchase
- ❖ GI Restoration or creation projects/programmes
- ❖ Securing long-term financing/maintenance
- ❖ Respond to the value of GI when setting priorities

## 6. Governance



- ❖ Institutions
- ❖ Participatory decision-making process
- ❖ Reporting on implementation
- ❖ Coordination of policies

## 7. Communication & advisory measures



- ❖ Awareness raising
- ❖ Advice and guidance
- ❖ Capacity building
- ❖ Technical assistance **on EU level**
- ❖ Technical assistance at **MS/Regional level** for potential beneficiaries of EU financed projects





### **III. Relevant preliminary findings: indicators and measuring efficiency of green infrastructure**

**- Working group topic 6**

# Aims of the task



## TWO AIMS

“Identify ways to measure how GI contributes to Ecosystem resilience”

“Produce ways to measure the efficiency of GI initiatives”

# Measuring resilience



What are the  **properties** of ecosystems that increase their resilience

AND

How do we **measure** these properties and GI contribution?

- Properties: sp. richness, habitat area, structural complexity, coherence.
- Indicators: sp richness, occurrence of rare spp, “intactness”
- BUT: all assumptions have exceptions/lack data

# Measuring biodiversity and ESS provision from GI initiatives



- ❖ The two primary functions of GI initiatives are **conservation of biodiversity** and **provision of ESS**.
- ❖ Need to establish how best to **measure** these outputs to establish cost-effectiveness of GI
- ⇒ Some indicators include: freshwater provision, soil carbon content, N removal/ha etc.
- ⇒ Ques: are these the right indicators, and is there data for them?

# The 'efficiency' of GI



❖ How cost effectiveness are GI initiatives in delivering their stated objectives?

AND:

❖ What are appropriate **indicators to measure efficiency?**

⇒ How do we get data for these indicators?

⇒ □

⇒ How do measure GI's contribution to them?



**Thank you**

**[www.ieep.eu](http://www.ieep.eu)**

**IEEP is an independent not for profit institute dedicated to advancing an environmentally sustainable Europe through policy analysis, development and dissemination.**

Contacts:           Graham Tucker [gtucker@ieep.eu](mailto:gtucker@ieep.eu)  
                          Leonardo Mazza [lmazza@ieep.eu](mailto:lmazza@ieep.eu)