



TAKING
COOPERATION
FORWARD

 Strategies for Intervention at European, Regional and Local level

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Roles of Green Infrastructure

- The *European Green Infrastructure document (Green Infrastructure (GI) – Enhancing Europe’s Natural Capital COM(2013) 249 final)* states that green infrastructure plays a key role in policies related to **climate change, disaster risk management and natural capital (Land and Soil, Water, Nature Conservation)**.



Roles of Green Infrastructure

- Protecting ecosystem state and biodiversity
- Improving ecosystem functioning and promoting ecosystem services
- Promoting societal well-being and health
- Supporting the development of a green economy and sustainable land and water management



Roles of Green Infrastructure

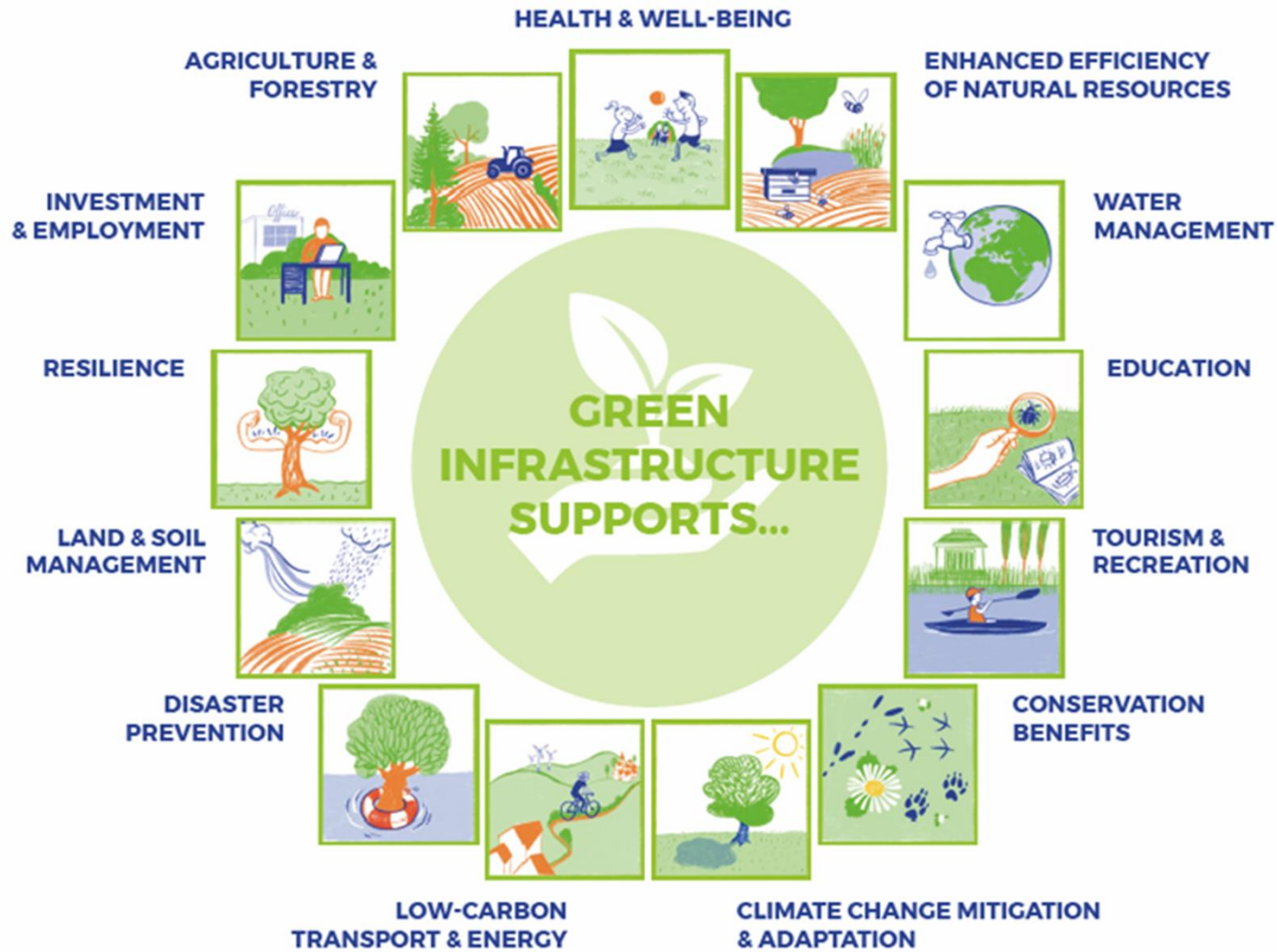


Why do we need a green infrastructure local strategy?

- To have a public and accessible document
- To raise awareness
- To present the evidence and the case for intervention
- To generate support from communities and decision-makers
- To guide and concentrate actions for the best public benefit
- To identify cross-sector cooperation opportunities



Public Benefits



Public Benefits

Health and well-being

- Air and sound environment quality
- Accessibility for exercise and amenity
- Health and social conditions

Education

- Teaching resource and 'natural laboratory'

Resilience

- Resilience of ecosystem services

Investment and employment

- Image
- Investment
- Employment
- Labour productivity

Efficiency of natural resources

- Soil fertility
- Biological Control
- Pollination
- Storage of freshwater resources

Adaptability to climate change

- Carbon storage and sequestration
- Temperature control
- Storm damage control

Disaster prevention

- Erosion control capacity
- Ability to prevent the risk of forest fires
- Flood risk prevention capacity

Water management

- Regulation of water flows
- Water purification
- Water provisioning

Land and soil management

- Resistance to soil erosion
- Soil's organic matter
- Soil fertility and productivity
- Capacity of mitigating land take, fragmentation and soil sealing
- Land quality and attractiveness
- Property values

Conservation benefits

- Existence value of habitat, species and genetic diversity
- Bequest and altruist value of habitat, species and genetic diversity for future generations

Agriculture and forestry

- Multifunctionality and resilience of agriculture and forestry
- Pollination
- Resistance to the invasion of pest

Tourism and recreation

- Tourist attractiveness of the territory
- Availability of range and capacity for recreational opportunities

Low-carbon transport and energy

- Integration of transport solutions
- Innovativeness of energy solutions



Players of a strategy

- The entity responsible for implementing the strategy
- The strategy developer
- The stakeholders
- The economic operators involved



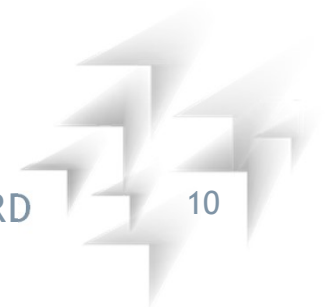
Characteristics of a strategy

- A strategy should recognize both strategic and local **needs** and **locations** and **themes** that are regarded as priorities.
- It can be aspirational but at the same time it should present realistic, mutually agreed and achievable **goals** and **objectives**.
- It should be accessible and able to be easily **understood** and **used** by a wide range of stakeholders.



In the European Commission document, it is said that:

...consistent, reliable data are essential for effectively deploying GI. **Information** is needed about the **extent and condition of ecosystems**, the **services** they provide and the **value** of these services...



Moreover,

...more research is needed to improve our understanding of the links between **biodiversity** (species/habitats) and the **condition of the ecosystem** (vitality, resilience and productivity) and between the **condition** of the ecosystem and its **capacity to deliver ecosystem services**.



The steps of drawing up a strategy

- **characterization/analysis** of the territory covered by the strategy as well as the territorial context in which it is located
- **analysis of existing planning tools**
- **stakeholder needs analysis**
- **evaluation of values and criticalities** (environmental and non-environmental)
- **zoning** of the area concerned by the strategy



The steps of drawing up a strategy

- The sequence in which to conduct the different phases may differ depending on whether a **priority analytical approach** and a **priority participatory approach** are used.
- In the first case, the characterization/analysis phase is carried out, the results of which are presented to the stakeholders for sharing in the setting of the objectives.



The steps of drawing up a strategy

- In the second case, priority is given to the interaction activity with stakeholders, in order to collect the necessary inputs for the drafting of the strategy, which, however, must be verified in the light of the results of the characterization/analysis activity.
- In any case, whatever approach is used, both phases must be used to define concrete and shared objectives and define a useful and realistic strategy



Strategy structure

The strategy must refer to all the results of the different steps:

- Land use mapping
- Naturalness, connectedness and functionality assessment
- Field activities
- Public Benefit Assessment



Public Benefit Assessment Tool

The Green Infrastructure Public Benefit Assessment is aimed at producing an **analysis of the PB situation on a local scale**, which can be placed side by side with the results of the analyses at different scales carried out within the characterization analysis, in order to allow the definition of strategies and action plans for Green Infrastructure in the study areas.



Public Benefit Assessment Tool

The evaluation procedure is based on two processes, conducted in parallel, which aim to generate two different sets of information, which must be taken into account when preparing strategies.



Public Benefit Assessment Tool

The first process aims to assess the level of "available" public benefits provided by the territory considered and the relative location within the analyzed territory.



Public Benefit Assessment Tool

To get this target, each benefit from the PBs list is connected to one or more Landscape Services.

PB-LS matches are established a priori, but they can be modified based on considerations relating to local situations (which will be declared from time to time). In particular, some connections can be considered or not depending on the specificity of the local land uses and landscape services.



		Health and well-being	Education	Resilience	Investment and employment	Efficiency of natural resources	Adaptability to climate change	Disaster prevention	Water management	Land and soil management	Conservation benefits	Agriculture and forestry	Tourism and recreation	Low-carbon transport and energy
Regulation service	Gas regulation	X		X			X							
	Local climate regulation	X		X		X	X	X	X	X	X	X	X	
	Disturbance prevention	X		X	X	X	X	X	X	X	X	X		
	Water regulation			X		X	X	X	X	X	X	X		
	Water supply	X		X		X	X	X	X	X	X	X	X	
	Soil retention			X		X	X	X	X	X	X	X		
	Soil formation			X		X				X	X	X		
	Nutrient regulation			X		X			X	X	X	X		
	Waste treatment	X		X		X			X	X	X	X		
	Pollination			X		X				X	X	X		
	Biological control			X		X	X			X	X	X		
Habitat service	Refugium service		X	X	X	X	X	X	X	X	X	X	X	
	Nursery service		X	X		X	X			X	X	X		
Production service	Food				X								X	
	Raw materials				X									
	Genetic resources			X	X	X					X			
	Medicinal resources				X									
	Ornamental resources													
Information service	Aesthetic information	X	X		X					X	X		X	
	Recreation	X	X		X					X			X	X
	artistic information	X	X		X					X	X		X	
	historic information	X	X		X					X			X	
	Science and education	X	X		X						X		X	X



Public Benefit Assessment Tool

Subsequently, on the basis of the matrix which identifies the relationships between landscape services and land use typologies, and defines their intensity, it is possible to produce another matrix that correlates each benefit with each type of land use, and to express a value.



CLC code	CLC description	Regulation functions																Production functions										Information functions										Carrier functions										Total Functional Value
		Gas regulation	Climate regulation	Disturbance prevention	Water regulation	Water supply	Soil retention	Soil formation	Nutrient regulation	Waste treatment	Pollination	Biological control	Habitat functions	Refugium function	Nursery function	Food	Raw materials	Genetic resources	Medicinal resources	Ornamental resources	Aesthetic information	Recreation	Cultural and artistic information	Spiritual and historic information	Science and education	Habitat	Cultivation	Energy-conversion	Mining	Waste disposal	Transportation	Tourism-facilities																
111	Continuous urban fabric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	3	4	2	0	2	5	0	1	0	0	3	2	23														
112	Discontinuous urban fabric	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	2	3	3	4	2	0	1	4	0	1	0	3	2	24														
121	Industrial or commercial units	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	4	0	1	0	3	0	10															
122	Road and rail networks and associated land	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	1	0	0	1	0	0	0	5	2	11																
123	Port areas	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	1	0	0	1	0	0	0	5	2	13																
124	Airports	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	5	2	9																
131	Mineral extraction sites	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	5	2	0	7																
132	Dump sites	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	5	0	0	5																
133	Construction sites	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1																
141	Green urban areas	2	2	4	1	2	1	2	1	1	2	1	2	2	1	0	0	0	0	1	2	3	5	3	0	1	1	0	0	0	4	40																
142	Sport and leisure facilities	1	1	2	0	1	1	1	1	0	2	0	1	2	0	0	0	0	0	1	1	5	1	0	0	1	0	0	0	5	24																	
211	Non-irrigated arable land	1	1	3	1	3	0	1	2	1	1	1	2	2	2	2	5	2	2	1	1	2	1	3	0	1	1	0	5	0	0	43																
212	Permanently irrigated land	2	1	3	1	4	0	1	2	1	1	1	2	2	2	2	5	2	2	1	1	2	1	3	0	1	1	0	5	0	0	44																
213	Rice fields	2	1	3	1	4	1	1	2	2	1	2	4	3	4	2	5	2	2	1	1	2	3	1	4	2	2	1	0	5	0	54																
221	Vineyards	2	1	3	1	3	1	2	3	1	1	1	2	2	2	5	3	2	1	1	3	3	3	4	3	2	1	0	5	0	0	55																
222	Fruit trees and berry plantations	3	2	3	2	3	1	2	3	2	2	5	3	2	2	2	2	2	2	1	3	3	3	3	2	2	1	0	5	0	0	62																
223	Olive groves	2	2	4	2	3	1	3	3	2	2	2	3	3	2	3	5	2	2	2	4	4	3	4	4	3	1	0	5	0	0	68																
231	Pastures	3	1	3	1	3	1	4	4	2	3	3	3	4	4	3	5	2	3	3	1	3	4	4	3	1	3	1	0	5	0	0	70															
241	Annual crops associated with permanent crops	2	1	3	1	3	1	2	3	1	1	3	2	2	2	4	3	1	3	1	2	2	2	3	1	2	1	0	4	0	0	52																
242	Complex cultivation patterns	2	1	3	1	3	1	2	3	1	2	2	3	3	2	2	4	2	1	2	1	2	3	3	2	2	1	1	4	0	0	55																
243	Land principally occupied by agriculture, with significant areas of natural vegetation	2	2	3	1	3	2	3	3	2	2	3	4	3	4	3	3	2	3	3	3	3	3	3	3	1	0	3	1	0	0	67																
244	Agro-forestry areas	3	3	4	1	4	3	4	4	2	3	3	2	4	4	3	3	5	3	3	3	2	3	3	2	3	1	0	3	3	0	0	77															
311	Broad-leaved forest	5	5	5	5	5	5	5	5	4	4	5	5	5	5	5	5	5	5	5	5	5	5	4	5	5	1	0	1	1	0	0	2	114														
312	Coniferous forest	5	5	4	4	5	5	5	5	4	4	5	5	5	5	4	3	5	4	5	5	5	4	5	5	1	0	1	1	0	0	2	111															
313	Mixed forest	5	5	5	4	5	5	5	5	5	4	4	5	5	5	4	3	5	5	4	5	5	5	4	4	5	1	0	1	1	0	0	2	111														
321	Natural grasslands	4	3	3	3	4	4	5	5	4	3	4	4	5	5	3	2	1	5	3	4	5	5	4	4	5	0	0	1	0	0	0	1	92														
322	Moors and heathland	4	3	4	4	4	5	5	4	3	3	4	5	5	5	3	2	3	5	3	4	5	5	4	4	5	0	0	1	0	0	0	1	95														
323	Sclerophyllous vegetation	4	3	4	4	3	3	5	5	4	3	4	4	5	5	4	3	3	5	3	4	4	5	4	3	4	5	0	0	0	0	0	0	1	92													
324	Transitional woodland-shrub	4	3	4	4	3	4	5	5	4	3	4	4	5	5	5	3	2	3	4	3	3	4	4	4	3	2	5	0	0	0	0	0	0	87													
331	Beaches, dunes, sands	2	1	2	5	2	2	2	1	1	1	1	5	5	5	2	0	1	4	2	3	4	5	2	4	4	0	0	0	1	0	0	2	65														
332	Bare rocks	0	0	0	1	1	1	0	0	0	0	1	0	3	4	1	2	0	0	3	2	3	3	4	4	0	5	4	0	0	0	0	0	2	36													
333	Sparsely vegetated areas	1	1	1	1	1	2	1	1	1	1	2	1	4	4	4	2	0	0	3	2	3	3	4	3	1	4	4	0	0	0	0	0	0	45													
334	Burnt areas	0	0	0	0	0	0	1	1	0	1	1	2	1	2	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	10													
335	Glaciers and perpetual snow	1	1	3	0	4	5	0	0	0	0	0	1	2	2	2	1	0	0	2	0	3	4	5	5	1	5	4	0	0	0	0	0	2	45													
411	Inland marshes	4	4	4	4	5	5	4	5	4	5	2	1	5	5	5	3	1	2	5	4	2	4	4	4	2	4	5	0	0	0	0	1	0	88													
412	Peat bogs	4	4	5	3	4	4	5	5	4	4	1	3	5	5	4	2	0	4	4	3	1	4	4	4	2	4	4	1	0	0	2	2	0	1	86												
421	Salt marshes	3	1	3	3	4	3	4	4	3	3	2	1	4	5	4	2	1	1	4	3	2	4	4	3	3	4	5	0	0	0	0	0	0	0	70												
422	Salines	1	0	2	0	3	2	0	2	1	2	0	0	4	4	4	2	1	0	3	2	2	2	3	2	0	4	3	0	0	0	0	0	1	41													
423	Intertidal flats	2	0	3	5	3	0	1	1	1	3	0	2	5	5	4	2	3	0	3	2	4	4	4	2	4	4	0	0	0	0	0	0	1	58													
511	Water courses	3	2	4	3	4	5	2	1	3	5	0	3	5	5	5	3	2	5	3	4	5	5	4	5	5	1	0	0	4	0	0	3	93														
512	Water bodies	3	2	4	3	4	5	3	4	3	5	0	3	5	5	5	3	3	2	5	3	3	5	4	5	4	5	5	1	0	0	3	0	3	94													
521	Coastal lagoons	4	3	5	4	4	4	4	4	4	5	2	3	5	5	3	4	1	5	3	4	5	5	5	4	4	5	0	0	0	0	0	0	1	93													
522	Estuaries	3	3	5	3	4	4	3	3	3	5	0	4	5	5	5	4	4	2	5	3	4	5	5	5	4	4	5	1	0	3	1	0	2	1	95												
523	Sea and ocean	3	3	5	2	4	5	3	1	5	5	0	3	5	5	5	5	5	3	5	5	5	5	5	5	5	5	1	0	0	2	0	0	4	3	103												

CLC code	CLC description	Health and well-being	Education	Resilience	Investment and employment	Efficiency of natural resources	Adaptability to climate change	Disaster prevention	Water management	Land and soil management	Conservation benefits	Agriculture and forestry	Tourism and recreation	Low-carbon transport and energy	
111	Continuous urban fabric	1,20	1,171	2,000	0,109	1,000	0,000	0,000	0,000	0,075	1,044	1,000	0,133	1,150	1
112	Discontinuous urban fabric	1,20	1,186	2,014	1,118	1,015	1,011	1,017	1,013	1,088	1,056	1,017	1,144	1,150	1
121	Industrial or commercial units	0,20	1,029	1,000	0,018	1,000	0,000	0,000	0,000	0,013	1,013	1,000	0,022	1,000	0
122	Road and rail networks and associated land	0,30	1,057	1,007	1,036	1,008	1,011	1,017	1,013	1,025	1,019	1,008	1,044	1,050	1
123	Port areas	0,60	1,071	1,007	1,055	1,008	1,011	1,017	1,013	1,038	1,025	1,008	1,056	1,100	1
124	Airports	0,10	1,029	1,007	1,018	1,008	1,011	1,017	1,013	1,013	1,013	1,008	1,022	1,000	0
131	Mineral extraction sites	0,00	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0
132	Dump sites	0,00	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0
133	Construction sites	0,00	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0
141	Green urban areas	2,20	2,214	2,150	1,145	1,115	1,178	2,200	2,188	2,188	2,163	1,158	1,211	2,300	2
142	Sport and leisure facilities	1,30	1,129	1,086	1,082	1,069	1,100	1,117	1,113	1,113	1,081	1,092	1,133	1,250	2
211	Non-irrigated arable land	1,30	1,157	1,157	1,182	2,138	1,167	1,167	1,150	1,156	1,169	2,158	1,189	2,100	1
212	Permanently irrigated land	1,30	1,157	1,164	1,182	2,146	1,178	2,183	2,163	1,163	1,175	2,167	1,189	2,100	1
213	Rice fields	1,90	2,271	2,200	2,236	2,185	2,222	2,217	2,200	2,219	2,225	2,208	2,267	2,150	1
221	Vineyards	2,20	2,271	2,171	2,264	2,154	1,178	2,200	2,175	2,213	2,200	2,175	2,289	2,250	2
222	Fruit trees and berry plantations	2,30	2,229	2,236	2,255	2,215	2,211	2,217	2,213	2,250	2,244	2,242	2,267	2,250	2
223	Olive groves	2,90	2,329	2,236	2,309	2,208	2,244	2,267	2,250	2,275	2,263	2,242	2,344	3,300	2
231	Pastures	2,40	2,314	2,271	2,300	2,262	2,256	2,267	2,263	2,288	2,294	2,283	2,311	2,350	3
241	Annual crops associated with permanent crops	1,70	2,200	2,186	2,218	2,169	2,189	2,200	2,175	2,200	2,200	2,200	2,222	2,200	2
242	Complex cultivation patterns	2,00	2,243	2,200	2,227	2,185	2,211	2,217	2,200	2,225	2,213	2,217	2,256	2,250	2
243	Land principally occupied by agriculture, with significant areas of natural vegetation	2,50	2,314	2,257	2,264	2,238	2,267	2,250	2,238	2,269	2,269	2,258	2,289	2,300	2
244	Agro-forestry areas	2,70	2,286	2,307	2,291	2,277	2,311	2,333	3,313	2,294	2,300	2,308	2,300	2,300	2
311	Broad-leaved forest	4,80	3,486	3,486	3,473	3,446	3,500	3,500	3,488	3,481	3,481	3,483	3,467	3,500	3
312	Coniferous forest	4,70	3,486	3,471	3,455	3,431	3,478	3,467	3,463	3,469	3,469	3,467	3,467	3,500	3
313	Mixed forest	4,60	3,471	3,479	3,445	3,438	3,489	3,483	3,475	3,469	3,475	3,475	3,456	3,500	3
321	Natural grasslands	3,90	3,471	3,407	3,382	3,392	3,400	3,400	3,388	3,419	3,425	3,408	3,411	3,500	3
322	Moors and heathland	4,10	3,471	3,414	3,409	3,392	3,422	3,433	3,413	3,425	3,431	3,417	3,422	3,500	3
323	Sclerophyllous vegetation	3,80	3,443	3,407	3,400	3,385	3,400	3,400	3,388	3,406	3,419	3,408	3,400	3,450	3
324	Transitional woodland-shrub	3,60	3,400	3,407	3,355	3,385	3,411	3,417	3,400	3,394	3,413	3,417	3,367	3,450	3
331	Beaches, dunes, sands	3,10	2,414	3,257	2,327	2,254	2,300	2,333	3,275	2,294	2,288	2,258	2,311	2,450	3
332	Bare rocks	1,90	2,314	2,086	1,245	2,092	1,089	1,117	1,088	1,138	1,125	1,075	1,244	2,400	3
333	Sparsely vegetated areas	2,20	2,343	3,171	2,260	2,169	2,178	2,167	1,150	1,200	2,200	2,167	1,288	2,350	3
334	Burnt areas	0,00	0,043	1,057	1,027	1,062	1,044	1,017	1,025	1,044	1,050	1,058	1,011	1,000	0
335	Glaciers and perpetual snow	2,90	2,343	3,143	1,218	2,123	1,200	2,233	2,175	2,206	2,181	2,142	1,333	3,450	3
411	Inland marshes	4,10	3,414	3,414	3,364	3,385	3,411	3,450	3,450	3,394	3,406	3,408	3,378	3,450	3
412	Peat bogs	3,80	3,386	3,393	3,336	3,354	3,411	3,433	3,425	3,381	3,381	3,392	3,356	3,400	3
421	Salt marshes	3,20	2,400	3,314	2,318	2,308	2,311	2,350	3,338	3,331	2,344	3,325	2,333	3,400	3
422	Salines	1,80	2,286	2,164	1,200	2,162	1,167	1,183	2,175	2,181	2,181	2,167	1,233	2,250	2
423	Intertidal flats	2,90	2,386	3,221	2,336	3,215	2,256	2,283	2,263	2,263	2,256	2,233	2,322	2,400	3
511	Water courses	4,30	3,486	3,336	3,409	3,315	2,367	3,383	3,388	3,369	3,369	3,333	3,456	3,500	3
512	Water bodies	4,20	3,471	3,364	3,400	3,346	3,378	3,400	3,400	3,388	3,388	3,367	3,444	3,500	3
521	Coastal lagoons	4,40	3,471	3,407	3,409	3,377	3,411	3,433	3,438	3,419	3,425	3,408	3,456	3,500	3
522	Estuaries	4,30	3,471	3,371	3,409	3,338	3,400	3,400	3,400	3,388	3,394	3,367	3,456	3,500	3
523	Sea and ocean	4,50	3,500	3,364	3,455	3,331	2,389	3,400	3,425	3,394	3,394	3,358	3,500	3,500	3

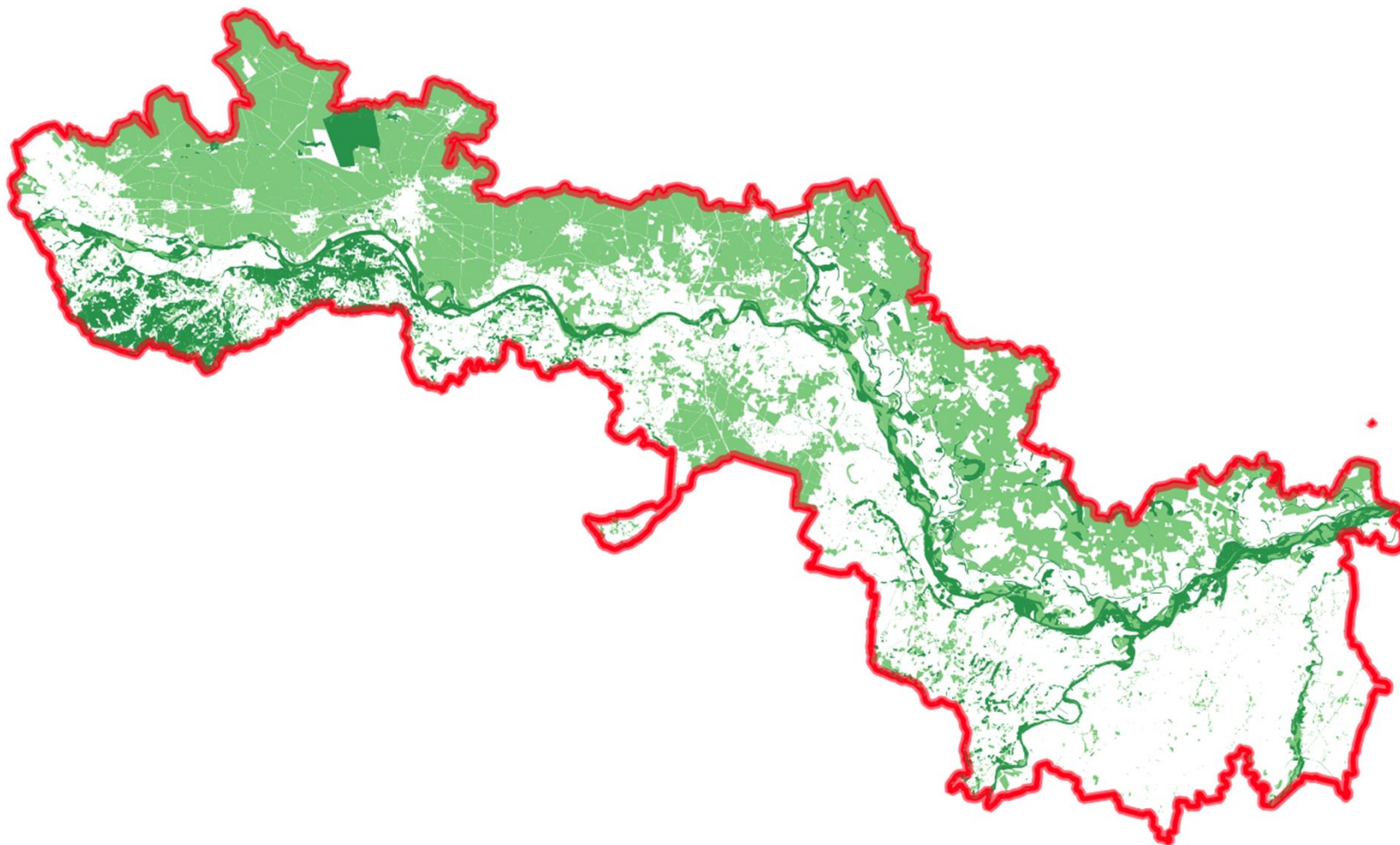
Legend:
no GI
GI according to specific circumstances
GI

Public Benefit Assessment Tool

Thereafter, it is possible to produce a series of maps presenting the distribution in the territory of the supply of each benefit, on the basis of the land use maps and the delimitation of GI network.



Water Management



Public Benefit Assessment Tool

The use of other, different source datasets, useful in the assessment of the Benefit availability provided by the territory, can be put in place in order to integrate this land use based evaluation.



Public Benefit Assessment Tool

The second process is aimed to gather the information necessary to identify **existing needs and perspectives** regarding the implementation of the Green Infrastructure network in the examined territory, as well as collecting from the territory and from institutional stakeholders the largest amount of data on the benefits provided by the existing Green Infrastructure (in addition or integration to what was obtained with process 1).



Public Benefit Assessment Tool

The consultation of the stakeholders identified for the project in each study area, joined in groups can be carried out according to the best interaction methods (meetings, questionnaires, interviews, etc.).

The consultation regards two topics, discussed separately.



Public Benefit Assessment Tool

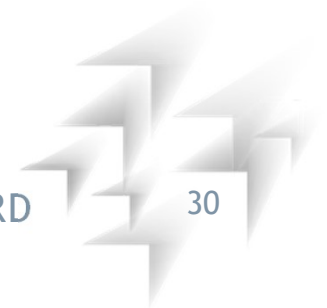
The first purpose is to gather from institutional stakeholders (mayors, public administrators, officials, associations, others) indications on the **benefit needs** required by the territory.

Moreover, information will be collected about the **development perspectives** of the Green Infrastructure network, on **projects or scenarios** already formalized and on the **expectations** for increases in the supply of public benefits.



Public Benefit Assessment Tool

This assessment can be carried out through different **consultation channels** and also through the identification of the main regional and local **policies** or **strategies** that directly address the various public benefits or can indirectly determine their implementation.



Public Benefit Assessment Tool

The second purpose is to gather information on the **presence and location** of elements of Green Infrastructure and the relative Public Benefits (“which benefits from which infrastructure”), interacting with both institutional stakeholders and with organizations or with single or associated citizens.



Strategy

The whole of the activities carried out in the analysis and data collection phases, whether priority has been given to characterization and analysis activities or interaction with stakeholders, leads to the availability of the information needed to define the strategy



Strategy

- Public Benefit already provided
- Need of the territory in terms of Public Benefits
- Existing values (environmental and social)
- Critical issues to be addressed
- Needs of the local population (and any external users)
- Constraints and planning already defined



Public Benefit priority list

Conservation benefits

Maintaining/enhancing existence value of habitat, species and genetic diversity
Maintaining/enhancing bequest and altruist value of habitat, species and genetic diversity for future generations

Disaster prevention

Enhancing erosion control capacity
Reduction of the risk of forest fires
Flood hazard reduction

Climate change mitigation and adaptation

Increase in carbon storage and sequestration
Improvement of temperature control
Improvement of storm damage control

Agriculture and forestry

Enhancing multifunctionality and resilience of agriculture and forestry
Enhancing pollination
Enhancing pest control

Water management

Improvement of regulation of water flows
Improvement of water purification
Improvement of water provisioning

Tourism and recreation

Increase in tourist attractiveness of the territory
Expansion of range and capacity for recreational opportunities



Public Benefit actual availability

Conservation benefits
Existence value of habitat, species and genetic diversity
Bequest and altruist value of habitat, species and genetic diversity for future generations
Water management
Regulation of water flows
Water purification
Water provisioning
Disaster prevention
Erosion control capacity
Ability to prevent the risk of forest fires
Flood risk prevention capacity
Agriculture and forestry
Multifunctionality and resilience of agriculture and forestry
Pollination
Resistance to the invasion of pest
Adaptability to climate change
Carbon storage and sequestration
Temperature control
Storm damage control
Health and well-being
Air and sound environment quality
Accessibility for exercise and amenity
Health and social conditions



Strategy structure

The strategy can be hierarchically organized in general objectives and detailed objectives, eventually differentiated for the different areas defined with the zonation (if necessary).

General objectives are linked with the benefit identified as priorities.

For each general objective, one or more detailed objectives have to be defined. The detailed objectives are localized in specific portions of the Case study areas and are described in detail.



Strategy structure

The choice of the general objectives is guided by the needs, the threats, the strengths, the weaknesses and the opportunities defined within the Public Benefit Assessment.

The localization of the detailed objectives is guided by the geographical information previously collected.



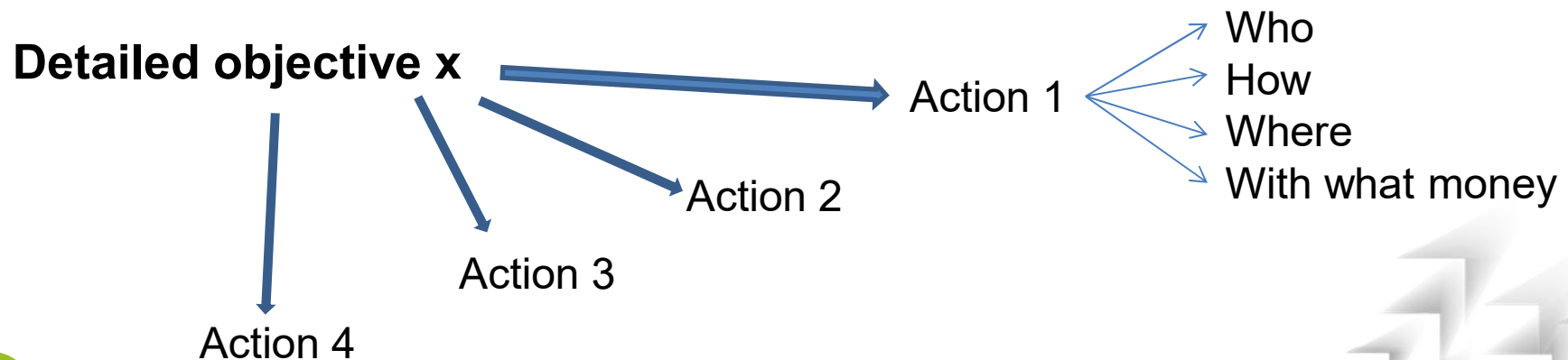
	Tutelare ed incrementare il valore conservazionistico dell'area	Tutelare e migliorare la reticolarità ecologica del territorio	Migliorare l'integrità degli ambienti acquatici e dei territori fluviali in particolare	Potenziare la sicurezza idraulica del territorio	Ridurre l'inquinamento e migliorare la salute della collettività	Costruire un territorio resiliente rispetto ai cambiamenti climatici	Tutelare gli elementi identitari del paesaggio e incrementare la qualità paesaggistica	Favorire lo sviluppo di attività economiche sostenibili
Biodiversità e miglioramento della reticolarità								
Tutela degli Habitat e delle specie di Interesse per la Rete Natura 2000								
Miglioramento dei SP di regolazione e di supporto								
Incremento della connettività tra elementi naturali								
Funzionalità fluviale e rischio idrogeologico								
Miglioramento dell'integrità ecologica dei corsi d'acqua principali								
Miglioramento dell'integrità ecologica del reticolo secondario naturale ed irriguo								
Razionalizzazione dell'irrigazione e riduzione dei consumi idrici								
Promozione di interventi per la creazione di fasce tampone								
Promozione di interventi di gestione conservativa della vegetazione riparia								
Contrasto dei fenomeni erosivi di versante								
Paesaggio								
Promozione di siepi, filari, fasce boscate lungo i corsi d'acqua, la viabilità minore, i limiti di proprietà								
Contenimento dello <i>sprawl</i> urbanistico								
Mantenimento agricoltura collinare di presidio								
Inquinamento/Salute								
Diminuzione delle vulnerabilità ai nitrati (tra cui gestione delle terre a bassa capacità protettiva)								
Miglioramento della qualità dell'aria								
Agricoltura								
Promozione modalità di produzione agricole a basso impatto								
Promozione di marchi di prodotti e di processo								
Favorire scelte aziendali rivolte al rilascio di ambiti naturali in azienda								
Incrementare nuclei di arboricoltura da legno (anche pioppicoltura "non convenzionale") in sostituzione della pioppicoltura "convenzionale" (uso cloni M.S.A. migliore sostenibilità ambientale).								
Promozione del territorio								
Indirizzo delle attività estrattive in modalità sostenibile								
Recuperare e rafforzare la viabilità minore per la realizzazione di percorsi ciclopedonali								
Promozione dei sistemi di percorsi e dei siti di importanza storico paesaggistica (Valorizzazione dei sistemi delle Pievi, delle Grange, dei Castelli, delle strutture idrauliche)								
Sviluppare le attività di ospitalità rurale								



Action Plan

The Action Plan is the implementation of the Strategy: the way to concretize the objectives identified in it.

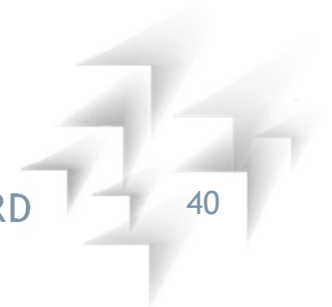
One or more actions constitute the concretization of a detailed objective.



Action Plan

In the Action plan we can insert only the action for which we can define who is the principal actor, in **which** way it can be realized, **where** is the best localization and **what** could be the sources of funding.

This means that we probably can't insert in the Action Plan all the objectives defined in the Strategy. But the Action Plan can be implemented when some action may become feasible.



Action Plan

Whenever possible, we will prioritize win-win actions: actions that respond to different objectives (and are finalized to different benefits).



Actions



4.1.1. Azione Definizione di priorità di intervento per la riqualificazione degli elementi del reticolo idrografico secondario

Localizzazione/Ambiti territoriali	<ul style="list-style-type: none"> • corridoio fluviale • aree naturali planiziali • risaie • ambiti agricoli non risicoli
Tipologia di azione	<input type="checkbox"/> intervento attivo <input checked="" type="checkbox"/> azione regolativa <input type="checkbox"/> programma di monitoraggio o di ricerca <input type="checkbox"/> azione didattica o di divulgativa <input type="checkbox"/> promozione
Motivazioni	<p>Gli interventi di riqualificazione ambientale in generale e quelli localizzati in corrispondenza degli elementi del reticolo secondario in particolare hanno efficacia diversa in funzione della loro localizzazione. A parità di correttezza di progettazione ed efficacia di realizzazione, la localizzazione degli interventi è un fattore strategico perché ne determina l'efficienza in termini di miglioramento dell'integrità ecologica a livello di area vasta.</p> <p>La definizione e la condivisione di criteri e procedure per definire priorità di intervento non consentono solo di rendere il processo di pianificazione più efficace ma anche più condiviso, trasparente e replicabile.</p> <p>La disponibilità di criteri e procedure per definire priorità di intervento oltre a rendere più efficiente la progettazione degli interventi, fornisce uno strumento di valutazione territoriale dei valori e delle criticità ambientali presenti in corrispondenza del reticolo secondario e del territorio circostante.</p>



Contestualizzazione nell'ambito della strategia di miglioramento delle Infrastrutture Verdi e nel quadro della governance territoriale	<p>L'azione "Definizione di priorità di intervento per riqualificazione degli elementi del reticolo idrografico" secondario risponde all'obiettivo di dettaglio "miglioramento dell'integrità ecologica del reticolo idrografico secondario" che ha diretta influenza sulla totalità degli obiettivi generali individuati:</p> <ul style="list-style-type: none"> • Tutelare ed incrementare il valore conservazionistico dell'area • Tutelare e migliorare la rete idrografica e ecologica del territorio • Migliorare l'integrità degli ambienti acquatici e dei territori fluviali in particolare • Potenziare la sicurezza idraulica del territorio • Ridurre l'inquinamento e migliorare la salute della collettività • Costruire un territorio resiliente rispetto ai cambiamenti climatici • Tutelare gli elementi identitari del paesaggio e incrementare la qualità paesaggistica • Favorire lo sviluppo di attività economiche e sostenibili <p>Negli ultimi 10 anni sono stati avviati numerosi progetti, nell'area di indagine, finalizzati al miglioramento dell'integrità ecologica del reticolo minore; si tratta comunque di interventi troppo spesso puntuali (rispetto all'estensione dell'area considerata) e, fatto salvo l'ispirarsi a criteri progettuali di basi in larga misura comuni e condivisi, manca, di fatto, una pianificazione complessiva e ed progettualità retta da una valutazione oggettiva delle priorità nonché dalla definizione di procedure di realizzazione degli interventi replicabili</p> <p>Gli strumenti di pianificazione vigenti nel territorio oggetto della Strategia contengono numerose indicazioni che vanno dagli aspetti schiettamente pianificatori a quelli gestionali. A fronte di una evidente rilevanza di questi ambiti, riconosciuta da tutti gli strumenti di pianificazione esaminati, mancano strumenti che consentano una pianificazione e gestione integrata del reticolo secondario.</p>
Descrizione dell'azione e programma operativo	<p>A partire dalle indagini di caratterizzazione ed analisi ambientale già disponibili, sulla base di quanto già realizzato nel territorio in esame, nonché in esperienze analoghe condotte in Italia ed in Europa è possibile definire modalità di valutazione dei corpi idrici del reticolo secondario che, unitamente all'esame di altre caratteristiche territoriali, possono consentire la definizione di un modello per definire la priorità degli interventi di riqualificazione degli elementi del reticolo secondario.</p> <p>Le caratteristiche che dovranno essere prese in considerazione sono:</p> <ul style="list-style-type: none"> • Origine e regime idrologico • Naturalità del regime idrologico, della morfologia, delle cenosi presenti • Usi del suolo circostanti • Regime delle proprietà dei terreni contigui agli elementi del reticolo
Verifica dello stato di attuazione/progresso dell'azione	<p>Livello di approfondimento dell'analisi territoriale</p> <p>Livello di condivisione con le Amministrazioni coinvolte nel processo di pianificazione e con gli stakeholder</p>

Actions



Descrizione dei risultati attesi	Definizione di priorità di intervento attraverso la messa a punto di una procedura Condivisione di una procedura oggettiva per l'individuazione di priorità di intervento Definizione e sperimentazione di un modello per la valutazione del valore degli elementi del reticolo secondario
Indicatori di monitoraggio	Numero di siti oggetto di attività progettuale (anche a livello preliminare)
Interessi economici coinvolti	Proprietari frontisti Consorzi Irrigui
Soggetti competenti	Ente Parco Consorzi Irrigui Provincia di Vercelli Provincia di Alessandria Regione Piemonte
Portatori di interesse	Associazioni agricole Consorzi irrigui Gestori dei siti culturali/naturali Pro loco dei Comuni Comuni cittadini Associazioni ambientaliste Professionisti del settore (naturalisti, biologi ambientali, agronomi, forestali, ingegneri ambientali)
Tempi e stima dei costi	Si tratta di un'azione propedeutica alla progettazione e realizzazione degli interventi di costruzione di nuove formazioni, che dovrebbe essere condotta nell'arco di un anno, attraverso analisi dei dati disponibili e conduzione di rilievi specifici. Il costo può essere sostenuto direttamente da uno dei soggetti competenti individuati, attraverso l'attività del proprio personale tecnico, o essere oggetto di incarico.
Riferimenti programmatici e linee di finanziamento	Linee di Finanziamento: Trasferimenti all'Ente-Parco dalla Regione Piemonte, Fondi per lo sviluppo locale e il turismo regionali e nazionali, Fondi Europei dei programmi Interreg, PSR 2020-2027.



Riferimenti e allegati tecnici	
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In conclusion:

The Strategy can be also a book of dream

but

The Action Plan is a work agenda





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