EU Funding supporting nature-based solution projects in EU

Europe’s biodiversity beyond 2020 – Tackling the challenges to achieve targets

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Laura Palomo Rios
H2020 Environment and Resources
Laura.Palomo-Rios@ec.europa.eu
EASME

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EASME

- One of the EC's Executive Agencies
- Working together with the parent DGs
- Managing EU programmes
  - Parts of H2020 → SC5 Environment and Resources
  - SME-instrument
  - EMFF
  - LIFE
  - COSME
SC5 Objective: "help realise a green economy, i.e. a circular, climate resilient economy in sync with the natural environment, thereby contributing to achieving smart, sustainable and inclusive growth."

Address the targets set by the:

- 7th Environment Action programme
- EU Adaptation Strategy, Biodiversity Strategy
Nature-Based Solutions (NBS)

[the innovative approach]

Nature-based solutions to societal challenges are solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions.

1. Enhance the framework conditions for NBS at EU **policy** level

2. Develop a European **community of innovators** through awareness and engagement

3. Provide the **evidence and knowledge base** for nature-based solutions

4. Advance the development, uptake and upscale of innovative nature-based solutions through **systemic innovation** and co-design, co-development, co-implementation of solutions and leverage of funding (large demos)

5. **Mainstream** nature-based solutions within the international R&I agenda.
**FP6-FP7-H2020 BiodivERsA** is a network of national and regional funding organisations promoting pan-European research on biodiversity and ecosystem services, and offering innovative opportunities for the conservation and sustainable management of biodiversity.


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**Diagram: NBS typology**

- **TYPE 1:** better use of natural / protected ecosystems
- **TYPE 2:** NBS for sustainability and multifunctionality of managed ecosystems
- **TYPE 3:** design and management of new ecosystems

- Marine protected area networks and fisheries
- Innovative planning of agricultural landscapes
- Greening buildings, artificial ecosystems
- Greening cities

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Eggermont et al. (2015)
**EKLIPSE**

**H2020 EKLIPSE** is the European Mechanism to answer requests from policy makers and other societal actors on biodiversity related issues (replies to in-depth questions/analyses/knowledge).

[http://www.eklipse-mechanism.eu/](http://www.eklipse-mechanism.eu/)

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**Oppla**

**Oppla** is a knowledge open platform on ecosystem services, natural capital and nature-based solutions that is part of a joint activity between the FP7 projects OPERAs and OpenNESS.


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**Impact evaluation framework**

to guide the evaluation of nature-based solutions projects  
(WG on NBS)
## Horizon 2020: Creating a community of practice on NBS

<table>
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<th>Project</th>
<th>Type</th>
<th>Code</th>
<th>Description</th>
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<td>CSA</td>
<td>SC5-10-2016</td>
<td>Development of a multi-stakeholder dialogue platform and Think tank to promote innovation with Nature based solutions</td>
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<td>NAIAD</td>
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<td>Nature4Cities Naturvation</td>
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<td>New governance, business, financing models and economic impact assessment tools for sustainable cities with NBS</td>
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<td>CONNECTING Nature Urban GreenUp UNALAB GrowGreen</td>
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<td>Large scale demonstrators on nature-based solutions for hydro-meteorological risk reduction</td>
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SC5-10–2016: Multi-stakeholder dialogue platform to promote innovation with nature to address societal challenges (CSA)

- A multi-stakeholder platform (science-policy-business-society)
- Continuous dialogue and interaction
- Promoting successful NBS
- Enhancing collaboration
- Facilitating synergies among NBS projects

www.think-nature.eu
SCC-03–2016: Research and Innovation on business, finance and governance models and Economic Impact Assessment (RIA)

- capture the multiple impacts & values of NBS for decision-making, including in spatial planning
- identify promising governance, business/finance and participation models
- leverage of investments and synergies between private and public action

NATURE4CITIES
Case studies: Milano (IT), Alcalá de Henares (ES), Ankara (TR) and Szeged (HU)
www.nature4cities.eu

NATURVATION
Case studies: Barcelona (ES), Győr (HU), Leipzig (DE), Newcastle (UK), Malmo (SE), Utrecht (NL)
www.naturvation.eu
SCC-02-2016/2017: **Demonstrating innovative nature-based solutions in cities (IA)**

- **(2016)** NBS for water and climate resilience in urban areas
- **(2017)** NBS to enhance health, wellbeing and social cohesion through inclusive urban regeneration

2016

**GROW GREEN**

UNALAB

Connecting Nature

2017

**CLEVER CITIES**

**EdiCitNet**

**proGIreg**

**URBiNAT**

**Urban GreenUP**

**EU budget of ~12Mill EUR per project**

**Minimum involvement of 5 cities per project**

www.unalab.eu

www.growgreenproject.eu

www.urbangreenup.eu

www.connectingnature.eu
Providing a robust, EU-wide evidence base and develop a European reference framework on nature-based solutions in cities

- Develop and implement monitoring schemes to assess efficacy and performance of nature-based solutions, looking at benefits and co-benefits
- Develop methodologies for replication and up-scaling
- Identify and assess barriers and ways to overcome them
- Dissemination in sustainable data platforms
Cities as ‘living laboratories’ for the co-design, co-production, co-monitoring of NBS

Demonstration of NBS through implementation and monitoring

Committed to the mobilization of financial resources for the deployment of NBS

Seek advice, expertise, assistance, capacity-building...

Have access and participate in the tools/methodologies developed in front-runners

Committed to develop re-naturing urban plans integrating NBS
Cities present in H2020-SCC-02-2016/2017
Urban challenges...

- Water scarcity
- Flooding
- Pollution
- Heat stress
- Biodiversity loss
- Habitat loss
- Wellbeing and health
- Economic opportunities, green jobs
- Participatory planning, Governance
- Densification, urban sprawl
- Social justice, Social cohesion
Co-design, co-creation, co-monitoring...
Daylighting, Re-naturalization of River course

Permeable pavements

Bio-filters

Vegetated floodway, swales

Wetlands

Green roofs, green walls

Floodable parks
Retention ponds
Alluvial meadows

Green spaces

Reforestation, Street trees
SC5-09–2016: Operationalising insurance value of ecosystems

- Develop replicable methods for the implementation of nature-based approaches for flood and drought risk
- Evidence base and methods for the quantification, qualification and valuation of the insurance value of ecosystems to enable its full operationalization.
- Activate the insurance value of ecosystems into conventional and new types of insurance policies and innovative business models
- Test in 9 demo sites (urban and at the catchment level)
- 3 years, 5 Mill EUR
SC5-08–2017: Large-scale demonstrators on nature-based solutions for hydro-meteorological risk reduction

- Implementation of NBS for hydro-meteorological risk reduction
  - Mountains and coastal areas
  - Watershed or landscape scale
- Comparing and providing evidence-base of green and hybrid solutions compared to grey solutions
- Provide proof of concept for up-scaling and replication
- Project size: ~12 Mill € EC contribution
- 4-5 year projects
RECONECT: Regenerating ECOsystems with Nature-based solutions for hydro-meteorological risk rEduCTion

- **Different demo sites:**
  - Demonstrators Type A (4)
  - Demonstrators Type B (6)
  - Collaborators (17)

- **Types of “water risks”**: Storm surges, floods, droughts

- **NBS**: “room for the river”, creation of meanders and re-meandering of rivers, terraced landscapes, afforestation, terrain slope stabilisation
OPERANDUM: Open-air laboratories for nature-based solutions to manage hydro-meteorological risks

✓ Establishment of 11 open-air laboratories:

✓ Po Valley (IT)
✓ Lake Puruvesi (FI)
✓ UNESCO Biosphere Reserve Elbe Valley (DE)
✓ Spercheios River (GR)
✓ Catterline (UK)
✓ Dodde River (IRL)
✓ Shiyang River Watershed (China)
✓ The Hong Kong New territories (China)

✓ Floods, droughts, land-slides, storm surges

✓ NBS: forest and cropland management, vegetation for sea defense, vegetated terraces for erosion control, vegetated drainage systems, optimization of vegetation use
PHUSICOS: According to nature

✓ Addressing NBSs for hydro-meteorological hazards in rural mountain landscapes.

✓ 3 large-scale demonstrator Sites: 1) Serchio River Basin (IT), 2) The Pyrenees in Spain-France-Andorra, and 3) Valley of Gudbrandsdalen in Norway

✓ 2 small-scale complementary concept cases to test specific challenges:
  Kaunertal Valley (AT)
  Isar River Basin (DE)

✓ Potential NBS:
  Afforestation, forest management, restoration and re-vegetation, microbe-assisted vegetation to reduce erosion, retention basins...
NBS: Linking Natural & Cultural Capital

Introducing the initiative “Charter of Rome on Natural and Cultural Capital”
More NBS projects to come, 2018/2020 calls

| SC5-13-2018 | RIA | Strengthening international cooperation on sustainable urbanization: nature-based solutions for restoration and rehabilitation of urban ecosystems  
EU-China collaboration |
|------------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SC5-13-2019| RIA | Strengthening international cooperation on sustainable urbanization: nature-based solutions for restoration and rehabilitation of urban ecosystems  
EU-CELAC collaboration |
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- Private sector / innovation agencies
- Local / national authorities / agencies

Call for experts:
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Executive Agency for Small and Medium-sized Enterprises

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