

SHORT TERM SCIENTIFIC MISSION (STSM) SCIENTIFIC REPORT

STSM title: NBS in city policies: mapping the terrain
Action number: CA17133;
Implementing nature based solutions for creating a resourceful circular city

STSM start and end date: 2019-09-30 to 2019-11-10
Grantee name: MSc Arch. Maria Carmen Garcia Mateo

This report is submitted for approval by the STSM applicant to the STSM coordinator

PURPOSE OF THE STSM:

It is foreseen that 80% of the European population will be living in urban areas by 2050. Scientific evidence shows the potential of Nature Based Solution to tackle environmental, societal and economic challenge related to urbanization, climate change, loss of biodiversity and ecosystem services in cities.

The aim of the STSM research activities was

- to discuss the status quo of NBS integration in urban planning of cities on the example of H2020 Project proGReg, for better **implementation policies on NBS at the city level**
- to establish a comparative analysis across the proGReg eight case study cities,
- to identify the gaps and potentials through a comprehensive mapping of the terrain on NBS policies in cities allowing for upscaling and replication of those solutions in a form of a validated roadmap for sustainable cities across Europe and world-wide.

DESCRIPTION OF WORK CARRIED OUT DURING THE STSM

The data that have been analysed comprises the deliverables D2.1 and D2.2 of proGReg H2020 project and also review of some recent literature European Commission policies and frameworks (environment, climate change, circular economy), such as urban regeneration, biodiversity or health and wellbeing, some of them under implementation and now under revision and planned to be launched during Ursula Von der Leyen mandate at the beginning of 2020.

MSc Arch. Mari Carmen Garcia Mateo completed her STSM at the RWTH Aachen University, Institute of Landscape Architecture, where she collaborated with Dr. Rieke Hansen, and Dr Axel Timpe, coordinator of proGReg.

Policy data from proGReg case study cities, reflecting the status quo of NBS integration in urban planning, were analysed in order to identify gaps and potentials for better policies on NBS on the city level. The policy context and the supportive conditions for city planning and what could be

helpful framing conditions for deploy NBS were explored: where are windows of opportunity to integrate NBS in the plans and policies.

Some research question that arose were:

What is the added value of NBS for citizens?, What does successful implementation of NBS policies look like?, Why do implementation gaps exist on NBS into urban planning?, How can we move from knowing that stakeholders need to take ownership of these NBS laws to actually make that happen?, How can Europe facilitate the process?.

In relation to the new strategic agenda 2019-2024, the European Commission intends to strengthen its role towards environment and lead the transition to a healthy planet.

According to the EU reflection paper towards a sustainable Europe by (2019) *“True sustainability change for the benefit of all Europeans through achieving the SDGs requires a comprehensive approach, Governance and ensuring policy coherence at all levels. The EU, its Member States and its partners need to take into account the interlinkages between the different sustainability challenges and opportunities, and support coherence between different policy areas, sectors and levels of decision-making. All stakeholders have to be on board and play an active role in the sustainability transition”*. The EU Adaptation Strategy has been analysed as an EU framework with the research activities conducted pointed the importance of mainstreaming NBS into sectoral policies, in particular: spatial planning and environmental impact assessment (EIA).

A symposium was hosted by RWTH Aachen University, Institute of Landscape Architecture, where NBS implementation was a debate and consideration and recommendation among discussed between MSc Arch. Mari Carmen Garcia Mateo, Dr Axel Timpe and Prof. Dr. Frank Lohrberg, among others.

DESCRIPTION OF THE MAIN RESULTS OBTAINED

Below is a summary of the most relevant findings.

- (i) proGInreg cities aim at integration and embedding of NBS in local policy development processes in seven European post-industrial cities. The plan and policy framework analysis provide the strategic and governance context, setting the normative framework for NBS implementation.
- (ii) The key assessment domains of the proGInreg project are: socio-cultural inclusiveness, human health and wellbeing, ecological and environmental restoration, and economic and labour market.
- (iii) proGInreg is implemented in seven different countries across the EU. The analysis covered all four Follower cities (Cascais, Cluj Metropolitan Area, Piraeus, and Zenica) and three Front runner Cities (Dortmund, Turin and Zagreb)
- (iv) The seven postindustrial European cities count with strategic regional and local planning where the potential of NBS could be implemented.

Recommendations that can be drawn are:

- (i) The NBS should be included in urban planning and decision-making processes. It was perceived that cities with more investment in research and innovation funding are more suitable to enable and implement transition pathways to becoming inclusive, resilient, sustainable, low-carbon and resource efficient, and thus to tackle most of the challenges Europe is facing today, such as climate change, health and well-being, loss of biodiversity of unsustainable urbanization. Therefore, cities will contribute to improve the environmental, social and economic dimension providing the way towards a more resource efficient, competitive and green economy while implementing NBS.

(ii) Innovative solutions and a more coherent and holistic approach are needed to support nature, society and the economy. Research has shown that implementing NBS in Cities can accelerate the transition to sustainability by enhancing innovative urban planning and governance models.

(iii) A more integrated and holistic approach to sustainability is needed in Urban Planning: the strategies and an action plan at the city level needs to be defined to deploy NBS in public space to enhance and tackle societal, environmental and economic challenges and ensure positive environmental outcomes.

(iv) The capacity building and awareness at the city level should be promoted through ambassadors of NBS.

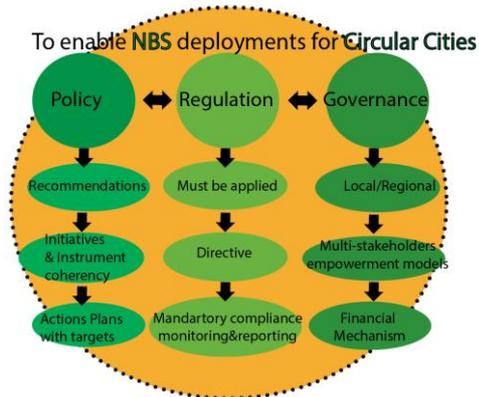


Diagram ©Mari Carmen Garcia Mateo

The results of this STSM will also contribute to the EU Adaptation Strategy through mainstreaming of NBS into sectoral policies, in particular: disaster risk reduction, spatial planning, environmental impact assessment (EIA).

FUTURE COLLABORATIONS

Thanks to the STSM collaboration, both institutions MCG Research & Innovation Sustainability Architecture /Urban Planning and RWTH Aachen University, Institute of Landscape Architecture will maintain cooperation for the next years through:

- R&I EU projects in consortium.
- A joint paper to be submitted to Environmental Science and Policy. Planned title: NBS integration e implementation in sustainable urban planning; strengthen the European Green Deal and EU recommendations, with authors: Mari Carmen Garcia Mateo, Rieke Hansen, Axel Timpe. The aim of the paper is to provide a unique NBS EU framework system and EU recommendations on implementation NBS policies in urban planning in cities for sustainable urban regeneration, policy recommendations in future research and innovation actions
- (iii) Collaboration on case studies in Spain related to urban agricultural heritage.