

SHORT TERM SCIENTIFIC MISSION (STSM) SCIENTIFIC REPORT

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

Action number: 17133

STSM title: The role of NBS in urban planning

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Grantee name: Federico Cuomo

PURPOSE OF THE STSM

As a result of the severe consequences of climate change, urban governments are challenged to deal with a vast array of emergency phenomena, ranging from urban heat islands, flooding, and treatment of waste-runoff waters to food provision and distribution. The short-term scientific mission (CA17133) aims at exploring how city councils and municipalities across Europe are introducing Nature Based Solutions (NBSs) in urban planning policies. NBSs are considered natural processes capable of producing essential ecosystem services for tackling climate change on an urban scale. To this extent, we take into account NBSs operating in five main areas: water management, resource recovery, urban gardening, built environment and climate change mitigation. Specifically, our research aims to investigate how the Budapest City Council is attempting to introduce NBSs in urban planning policies, analysing the main problems, barriers, enablers and solutions perceived by public officials, practitioners and experts directly involved in this promising field of policy.

DESCRIPTION OF WORK CARRIED OUT DURING THE STSMS

Literature review

Desk research was divided into three main stages. First, we framed the topic set by the STSM project, identifying the five main key words proposed by the COST Action Circular City: Nature Based Solutions, circular cities, climate change, city council policies, urban gardening. This initial screening was built on an in-depth analysis of about one hundred scientific publications, selected through Google Scholar and published between 2011 and 2021, containing at least two of the COST's keywords. From this sample, we then chose those papers that analysed the topic from a

social science perspective, resulting in the selection of forty papers that represented the theoretical background of our work.

Second, to dig into the Budapest case of study we investigated the literature which deals with NBS, urban agriculture and city council policies in the Hungarian capital. To this end, we reviewed both the scientific and grey literature concerning climate change mitigation policies, NBS management and urban gardening in Budapest.

Third, starting from the analysis of the collected documents, we mapped the public and private actors who have been taking part in this policy area in the last ten years. This analysis yielded a list of 40 contacts, including public officials from the City or Municipalities of Budapest, urban gardeners, representatives of environmental technology companies or European project consultancies, public and private research centres involved and members of citizens' committees and grassroots.

Fieldwork

Based on this list, we collected 17 semi-structured interviews on the Budapest case study: 6 members of urban gardening communities, 4 public officials from the City of Budapest, 4 researchers and academics in urban planning and environmental sciences, 2 representatives of NGOs committed to NBSs related projects, 1 employee from WWF Budapest.

The question track was jointly defined with the COST action research group and was divided into three main steps. The first one concerned the respondents' background and their awareness of the NBS topic. Once the natural solution closest to one's field of activity had been identified, we moved on to explore what kinds of main problems, barriers, enablers and possible solutions are influencing the role of NBSs in Budapest. Eventually, we dealt with questions about a broader perspective on the future of urban planning policies in Budapest. All interviews were transcribed using Otter.ai software, and double-reviewed by the STSM and the host. This was followed by a qualitative analysis of the data using the open-coding method based on categorizing the answers by assigning codes to terms belonging to the same semantic area. This effort allowed preliminary results to be drawn.

DESCRIPTION OF THE MAIN RESULTS OBTAINED

Problems

The collected data seem to reveal four types of problems regarding NBSs in urban planning policies in Budapest: (1) The scarcity of public spaces to dedicate to NBs is a shared perception expressed by all respondents; (2) Administrative problems that can be traced back to the lack of policy coordination concerning climate change mitigation and NBSs. The 23 Municipalities in Budapest, which are responsible for the management of public spaces, have very different viewpoints on how NBSs should be promoted and developed. (3) the managerial and representative capacities of NBSs practitioners; (4) also, a knowledge transfer gap emerged as a crucial problem.

Barriers

Closely related to the four issues above, two main negative drivers seem to hinder the implementation of NBSs in urban planning policies. Economic and communication barriers are the most frequently mentioned by respondents. On the one hand, Municipalities have recently faced a

cut-off in the budget at disposal for green space management, including the promotion of NBSs. On the other hand, communication barriers are perceived by academics, public officials and NGOs representatives. Communication regarding NBS is often done through spot events, such as exhibitions and festivals, which do not allow knowledge transfer.

Enablers

“Enablers” were considered to be all methods, projects or behavioral aspects that were seen by respondents as promising factors for unlocking implementation and improving urban planning policies about NBSs. As far as urban gardening is concerned, an enabling driver is seen in the farming experience owned by gardeners in Budapest. Many members of community gardens are farmers who had to move from the countryside to the city, but still retain valuable practical knowledge in resource and organic waste management. Looking at water reuse or climate change mitigation solutions, another potential enabler is the significant number of scientific centres specialising in urban planning, social and environmental sciences. Starting from this knowledge legacy, NBSs could be improved in environmental, logistical and social terms. Finally, a potential enabler for all the NBSs is considered to be the geographical positioning of the city.

Solutions

I. Unleashing the creativity of grassroots

Policy recommendation: participative process to design an NBSs implementation plan

II. Increasing coordination between City Council and municipalities

Policy recommendation: City Coordination Office for NBS Management

III. Improving managerial and advocacy capacities of NBSs practitioners

Policy recommendation: inner managers and external representative body for NBSs practitioners

IV. Strengthening the dialogue between local stakeholders

Policy recommendation: taking the opportunity of European projects to bridge academics and practitioners on the NBS topic.

FUTURE COLLABORATIONS

Thanks to the stimulating and enriching work carried out within the STSM, we came up with the idea of deepening the investigation around urban gardening policies in Budapest. Together with my COST supervisor, Megyesi Boldizsar, we found that although the cities of Budapest and Turin (Italy) show some similarities in spatial, economic and social terms, City Councils are implementing very different policies to manage and boost urban gardening. Taking into account these conditions, we think it may be fascinating and scientifically relevant exploring which contextual factors are playing a pivotal role in establishing such different policy trajectories. The final outcome of this collaboration will be a scientific paper published in a highly indexed peer reviewed journal. Finally, it is envisaged to establish an ongoing dialogue between the Centre for Social Sciences and the Department of Culture, Politics and Society (University of Turin) to consider future collaborations for research projects in the field of NBSs.