

NEWS

PROJECT

UPPER - Urban
Productive Parks for the
development of NBS
related technologies
and services

📍 Latina, Italy

TOPIC

Sustainable use of land
and nature based
solutions

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EXPERT

Journal 2 UPPER project

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The Journal is aimed to describe the activities of the UPPER project and the results achieved during the second period of implementation including the challenges faced up during 2021 till November 2022.

The period from November 2021 represented a new start for the UPPER project after the difficulties associated with the COVID emergency.

During the period covered by this journal, significant administrative problems emerge, after the pandemic they included the difficulty in finding designers, that have slowed down the whole process linked to the planned investments. As a result, the start of the works was also delayed, despite the search for solutions that would lead to the shortest possible construction times.

The political election of the new major of the Municipality of Latina and the consequent commissioner caused further delays in the project implementation. At present, these problems seem to have been overcome and the project is proceeding according to the approved remodelling.

The financial resources available from the Municipality of Latina, also taking into account price increases in public works, and the delay in the implementation of the entire Upper project, made it necessary to reduce the number of demonstration sites. The six sites with the best conditions for the experimentation of Nature Based Solutions were chosen, both for the environmental aspects concerning the urban heat island and ecological connectivity, and for the social issues concerning the citizen participation in the management of the areas.

The final project to be approved by the City Council is being delivered. Subsequently, an executive project will be drafted on the basis of which the tender for the works will be carried out.

Almost all the activities foreseen for the period have been successfully finalized. The UPPER project shows how Nature Based Solutions (NBS) can help address broader societal challenges, including social and economic challenges within the paradigm of sustainable development.

This Journal describes the processes, tools and methods used for the implementation of the activities and all the future ones till the project conclusion.

1 - THE UPPER PROJECT

UPPER project aims at transforming misused and abandoned green and concrete areas of the urban and peri-urban space into Productive Parks (PP) devoted to research, technological development and self-production of advanced NBS and innovative nature based services to tackle the identified environmental, socio-economic and governance challenges. The existing city parks are mainly located in the city center and are underused due to lack of security, adequacy and maintenance. The availability of accessible green areas per inhabitant is 12.6 sqm per person (well below the national average of 31 sqm), while an estimated 500.000 sqm of wasteland could be reconverted.

The city is also facing rising temperatures as a consequence of climate change, leading to extreme weather events, such as heat waves that exacerbate the heat island effect in the most urbanized districts, where the perceived temperature raised 49 degrees Celsius in 2018.

The UPPER project shows how Nature Based Solutions (NBS) can help address broader societal challenges, including social and economic challenges within the paradigm of sustainable development.

The solution foresees the regeneration of three urban areas which will serve as Productive Parks (PP), plus eight Demonstration Sites (DS) for the deployment and testing of the self-produced NBS. These productive and demonstration sites are located in different districts, characterized by specific challenges, like the concentration of Roma community, neglect, fast and unregulated urbanization, absence of public and accessible green spaces, flash floods risks, air pollution and heat island effect. The developed NBS will be applied to the local landscape (DS 1-8) to tackle context specific environmental challenges.

PP1 will act as a one stop shop to meet the demand of nature based interventions and services from the city and other local stakeholders with the need of vocational training, social inclusion and employment from most vulnerable citizens. PP1 and PP2 will involve these citizens to deliver innovative nature based services in collaboration with the wider group of stakeholders.

Urban parks and forests also provide additional benefits such as improved air quality, biodiversity conservation and recreation opportunities, which are important for human health.



2 - UPDATE OF THE PROJECT

Because of COVID emergency a project extension was requested and accepted, which moved the project deadline to 31/08/2023.

Political elections were held on 2022 but after these the municipality was a commissioned. Following the commissioning, an active relationship was created with the Prefectural Commissioner which allowed for a smooth flow of activities and new vigour was given to the partnership with a series of meetings with the political administration which took place at the end of 2021.

The design of the demonstration sites was developed by the MUA with the involvement of Ce.R.S.I.Te.S., Roffredo Caetani Foundation, Circeo National Park, Tesseræ and Labirinto. Among the demonstration sites, six were chosen where the planned interventions are being implemented and will be completed by the end of the Upper project. A project sheet was produced for each chosen demonstration site, describing the green and blue infrastructure already present before the intervention, the plant species and green infrastructure that will be installed, and the expected environmental results.

Some activities have been rescheduled in the light of the contingent situation and the national legislation on the subject of tenders for services and works. The sharp increase of prices recorded in the construction sector has lead to the impossibility to complete all the Productive Parks as previously planned, only PP1 (Campo Boario) and PP2 (Roccagorga) will be delivered while PP3 (Via Massaro) has been removed.

Other activities lagged behind due to the postponement of the implementation of the productive parks and the realization of the demonstration sites.

New demonstration sites located along the banks of the Canale Acque Medie have been included with a planning hypothesis called "Progetto Canale Acque Medie", which is linked to the Productive Park 1 and the demonstration site in Piazza Ilaria Alpi. The project constitutes a reference for further interventions that the MUA may develop in the future by finding new funding and provides an example for citizens, policymakers, and local stakeholders of how to design green areas using NBS to tackle environmental challenges and restore local ecosystems in the Pontine plain area.

During the period covered by the journal (January 2021 – October 2022), 150-hours (Sep-Nov 2021) training of the first group of participants was run by Fondazione Caetani who carried out the training activities and managed the logistical organization, while Labirinto carried out the monitoring and evaluation of the programme, providing psychological support to the participants while reporting problems and risks. 14 participants completed the training programme and were admitted to the internship. The second group of participants was selected by Labirinto through a public call drafted in close collaboration with the MUA following the Regional law on training internships. A group of 9 participants was selected and started its training period of 150 hours (Apr–Jun 2022) delivered by Fondazione Caetani. Only 3 participants completed the training.

The participants admitted to the job period were merged into a single group of 14 people which signed the temporary job contract and started the internship in Sep 2022 with the administrative support of the external service providers "Latina Formazione e Lavoro". During this internship MUA organized the work of the participants within public green areas, with specific regard to the implementation of the NBA in the demonstration sites of the Upper project, also making use of the support of the external service providers "Nemesi Aces" for the tutoring. During the internship, Labirinto continued its monitoring and support activity to the participants.

The internship activities for both courses are about to end and the communication and territorial animation activities are also proceeding regularly. During this internship MUA organized the work of the participants within public green areas, with specific regard to the implementation of the NBA in the demonstration sites of the Upper project.

During the last period the programme of nature based social services and edutainment activities "Upper Seeds" was carried out and completed by Labirinto in collaboration with the wider group of stakeholders. The activities were run in the green areas through the Pacts of Collaboration as well as in the area of the Productive Park 1. In particular, the second edition of Upper Seeds for schools was implemented with the involvement of three schools (Sept-June 2022) and the second edition of Upper Seeds Estate was run in the Summer period (June – September 2022) to involve adults, children and families from the whole city, with a focus on two neighbourhoods of interest for the Upper project, namely Piazza Ilaria Alpi and Area Mercato.

At the end of the activity, it was delivered: 20 hours a week of free activities on average; 15 types of activities addressed to schools; 9 types of activities for citizens during the summer period (considering also two types of laboratories organized with the support of the wider group of stakeholder "Rugby in Piazza" and "Musileggiamo").

The activity involved: 1641 direct participating students, including children with disabilities; 253 direct participating citizens outside the schools (of which 183 minors, 12 elderly); 5000 indirect beneficiaries (minimum estimated). A detailed report of the activities and results obtained was produced by Labirinto.



Ce.R.S.I.Te.S., in cooperation with the MUA and partners Labirinto and Tesserae, organized the second face-to-face information meeting with citizens, policymakers and local stakeholders to provide advice and guidance in the design of green areas through the use of NBS.

The partners have consulted entrepreneurs, managers and representatives of the floriculture sector and are currently defining together with the MUA (Public Works Service and Tender Office) business models and PPPP scheme design for the sustainability of the productive parks. In particular, in the course of 2022, Innovaction Europe carried out the first phase of the project by meeting in virtual form potential entrepreneurs interested in developing business ideas in the NBS sector. A data set was collected to provide description of the proposed business ideas. Moreover Cersites together with Innovaction Europe organize on line meeting with a wide participation of companies, entrepreneurs and experts potentially interested in the NBS venture.

All the partners continued the study on the main characteristics of the floriculture sector, namely: the main actors, the needs and behaviours of the markets, the business models, the supply chain model and its strengths and weaknesses.

In order to know the needs of the entrepreneurs operating in the NBS sector, virtual meetings were organized. This made it possible to align the new design phases with the needs that emerged, in order to make the challenge between business ideas more interesting and participatory.

The relative regulation is being elaborated and will be contained in deliverable D6.3.1 which will include the definition of the selection criteria, the preparation of the call and all the promotional material necessary to launch the challenge. It will be provided by Ce.R.Si.Te.S in collaboration with Innovaction Europe and Lazio innova by 28/2/2023. The lengthening of the completion time for this deliverable is motivated by the need to carry out the challenge when the works in the three productive parks are advanced.

The procedure of Parks construction is divided into a first phase of research and procurement of engineering and architectural services for the design, construction supervision services and testing services, as well as a second phase for works procurement.

The final project to be approved by the City Council is being delivered. Subsequently, an executive project will be drafted on the basis of which the tender for the works will be carried out.

Regarding the first installation of the plants in the demonstration sites activities are proceeding with the installation of the plant species purchased to implement in the five demonstration sites what was established in Deliverable D4.2.2 Design of Demonstration Sites.

3 - OVERVIEW OF THE OPERATIONAL CHALLENGES

The implementation of the project encountered some problems which are described below, which led to delaying some actions, but the work team was able to achieve most of the objectives foreseen for the period in time.

3.1 - Leadership

Despite the fact that the municipality has been lacking of a stable political leadership, the municipality staff has been able to manage the project and effectively collaborate with the commissioner who is temporally replacing the mayor.

Project coordination is proceeding according to work plan, all the partners are constantly in contact, especially through e-mails, calls and web meetings to address the activities as planned, 10 Project Coordination Team Meetings have been hold.

During the pandemic period there was a slowdown in the performance of the activities of the MUA, which was able to accelerate with the waning of the Covid emergency.

There has been some delays due to political instability inside the Municipal Authority. In particular, due to administrative appeals that followed municipal elections, starting from July 2022 the elected mayor has been substituted by a commissioner. After a short period of uncertainty the project management has resumed and continued effectively.

The change in the components of the political body (Giunta municipale) as well as to the turnover of the staff members caused difficulties in following up on the requests/intensions of the local stakeholders to establish two pacts of collaboration in the neighbourhood of Piazza Ilaria Alpi (Via degli Osci e Via dei Romani) as well as to provide the necessary support to Labirinto for the formilization of the informal agreements and interests collected among local citizens and associations.

Concerning the traineeship activities, it was shown delay in starting the job period due to the difficulties encountered by the MUA in identifying skilled tutors to support the trainees as well as in aligning with the requirements of the Regional Law on Internships. Indeed in order to frame the figure of the "Borsa Lavoro" in the regional legislation (D.G. Regione Lazio 576/2019), the adjustments made took a longer time than what expected. First of all, it was necessary to identify an external third party who would play the role of Promoter under a specific agreement to be stipulated with the MUA. Secondly the MUA launched a public procurement to find private Bodies interested in carrying out the tutoring service. Therefore, since it wasn't possible to start the internship in the summer months and given the smaller number of participants (15 first edition + 3 second edition), of which 4 gave up, it was planned to combine the trainees of the first edition of Upper Job with those of the second and to have them carry out the traineeship from September 2022 to February 2023.

In order to keep the interest and involvement of aspiring trainees, in the face of a more dynamic job market, an additional activity was run by Labirinto in collaboration with Cersites and Innovaction Europe offering a series of workshops (4 meetings in the period July-September 2022) to support the birth of business ideas and enterprises (including social enterprises) among the participants of Upper Job.

Parco Nazionale del Circeo is facing problems in managing the activities due to the turnover of the persons involved in the project as well as to other internal organizational issues. In order to reduce the impact of such problems on the project implementation, other project partners, particularly Cersites, have supported the implementation of the activities managed by PNC in order to partially reduce the accumulated delay.

The MUA (Public Works Service) in cooperation with UPPER partners is proceeding to define the management objectives, the criteria for the selection of private actors and the mechanism to guarantee the involvement of local stakeholders in the co-management process of the PPs and DSs. In particular, it is defining the rules for hosting the programme of nature-based social services and educational activities mentioned, as well as the aspects related to the involvement of start-ups and the commercial exploitation of the parks.

3.2 Public procurement

Although a shortage of companies willing to participate in public works tenders was created, the activities of public procurement are those on which there has been the greatest effort by the Urban Planning Authority. Towards the end of 2021, having overcome the covid emergency, the first effort was to review the activities envisaged by the application form according to current legislation, with particular reference to the assignment of tenders relating to the design and construction of productive parks, leading to a redefinition of the terms and times of the activities envisaged for the two investments. In particular, the activities for awarding design services and awarding works have been redefined. In addition, the time needed to implement the activities was also evaluated.

At the same time, the costs of raw materials and energy seriously increased, asking for limitation of the works

(interventions in productive parks and demonstrative sites) that could be realised accordingly with the Upper project budget. Consequently, further remodelling became necessary of both activities to define business models and management schemes for the long-term sustainability of urban productive parks, and activities for the business challenge.

The feasibility project approved in 2020 was updated in 2021 on the basis of an analysis document on the results of the discussion with the stakeholders, produced by the involved partners.

The tender procedures for awarding the design of the Production Parks were reassessed. With regard to the assignment of the design of the production parks, the first two tenders were deserted before being able to entrust the service and this caused a slowdown in the implementation. The problem arose from the fact that in Italy, due to a national incentive (110% bonus), there was a strong demand for works, so most of the designers were engaged with private clients. The new national incentive has substantially changed the market for technical services for the public administration, making it difficult to find the designers to whom entrust the design of the production parks. Therefore the assignment of the services was made in July 2022, with delay.

As a result, the award procedure was characterized by the lack of designers interested in providing the service. For which it was needed to the direct entrustment of the services of planning of the productive parks to the ATP (temporary association of professionals) composed by ADLM Architetti e Orizzontale. They outlined the first project ideas on the basis of the feasibility project approved by the Municipal Council.

This also contributed to the sharp increase in prices of building materials which led in July 2022 to the update of the price list of the Lazio Region. This made it impossible to build all the 3 PP as previously planned. Therefore, the MUA will proceed with the construction and delivery of PP1 (Campo Boario) and PP2 (Roccagorga), providing for PP3 the preparation of definitive project and the consequent commitment to build it with future appropriately dedicated funding by insert it in the Three-Year Plan of Public Works to be approved by the City Council.

The delay in the design activity was partially recovered and the final design is currently being drawn up. Indeed the design service for Demonstration Sites was entrusted to the Environment Service of the MUA with a significant reduction in the time required to implement the investment. The feasibility project was approved with Resolution no. 41/2022. The "Environmental Service" of the Municipality of Latina will make use of the "Contract Service" for the completion of the tender of Demo Sites and for this purpose the project documentation is being delivered.



3.3 Organizational arrangements within the urban authority

The UPPER team, by investing significant time, was able to build connections between various sectors and departments, also establishing better communication and promoting collaboration, that was one of the initial project challenge.

Due to the multidisciplinary nature of the action, the team involved almost all the municipality departments.

All the actors of the UPPER management structures showed to cooperate in a proactive and effective way namely: the Project Coordination Team (PCT), the Steering Committee (SC), and the Quality Assurance Team (QAT).

During the previous implementation period, it was necessary to replace the internal professional technician appointed to manage the call for tenders for the construction of the parks. Now he started to work and deepen the many crucial aspects of the project.

Also during the implementation period covered by the journal, the project team showed a cross-sector and cross-department way of thinking and acting, at all administrative levels, together with mixed and integrated resources.



3.4 - Participative approach for co-implementation

One of UPPER strength is the involvement of citizens and stakeholders in a co-designed and co-managed approach.

Local associations and groups of stakeholders, including local schools' representatives, cultural or community centers, private landlords have been involved in all the activities carried out in the period.

In particular, co-design activities focused on Green Areas Bank, in collaboration with Labirinto and the school IC Giuliano, related to PP2. One workshop with children was facilitated by Tesserae in order to collect ideas on define possible connections to PP2 with focus meetings and developed the project as result of the activities.

Co-design activities have been also implemented on demo site Goya, two workshops targeted operators in training and have been facilitated by Tesserae: online kick off meeting, introduced the subject and collected expectations and first contributions coming from participants; urban exploration and site visit that aimed to focus on spatial design and application of nature based solutions in demo site Goya.

Co-design activities included PP1 too, Canale Acque medie and Piazza Ilaria Alpi, and related future urban connections through the canal infrastructure, in collaboration with Cersites. Tesserae coordinated the co-design workshop in collaboration with Cersites, with the participation of citizens and stakeholders from Comitato Piazza Ilaria Alpi and Comitato Parco Acque Medie.

The remaining co-design workshops were readapted to better respond to the project needs and requests in the design of demo sites, supporting activities A 5.1 - Promoting NBS knowledge and A 5.3 - Job & Skills program.

In the period concerned, the MUA explored the possibility to establish other pacts of collaboration in order to include other public green areas in the Bank, more specifically the green areas along the banks of the Rio Martino canal, between the PP1 and the DS of Piazza Ilaria Alpi.

Informal consultations were run by PP Labirinto involving the Wider group of Stakeholders, in particular Associazione Bici X Umanità and Associazione Ringrazio Prego e Dono to explore their availability to participate in the co-management of these public green areas and a first interest was raised.

Other informal contacts were run by Labirinto and the MUA with the recently established citizens committee for the promotion of the Canale Rio Martino Park as well as with the Association “Circe” in order to include their action in one or more Pacts of Collaboration related to the UPPER project.

Additionally, the programme of nature based social services and edutainment activities “Upper Seeds” was carried out and completed by Labirinto in collaboration with the wider group of stakeholders. In particular, these activities involved three schools and the associations Ringrazio prego e Dono, Bici X Umanità, Botteghe Invisibili, Rugby Latina, Dimensioni Musicali, Comitato Ilaria Alpi. The activities were run in the green areas included in the Pacts of Collaboration as well as in the area of the Productive Park 2.

The activity of supporting the creation of a business and supporting potential new entrepreneurs continued in virtual mode and allowed a widespread dissemination of knowledge of the project, resulting in widespread interest and effective collaboration.



3.5 - Monitoring and evaluation

Project monitoring and evaluation are proceeding as planned. The third monitoring report has been completed as well as the Annual Progress Report n.3.

CeRSITeS and ENGIE completed the ex-ante data collection in the PP, selected DS and surrounding areas.

ENGIE monitored air quality and meteorological parameters through the UPPER ENGIE platform and the network of sensors specifically installed in the area. In the period between 15 Jul - 16 Sept 2021 and 2022, the perceived temperature was monitored and recorded for creating a reference benchmark for the next project phases. From Sept. 2021 to Oct. 2022 ENGIE has sent monthly data extracted from the monitoring platform to CeRSITeS. During the first year of monitoring ENGIE has carried out periodic maintenance activities of the control units in order to guarantee continuity for the data acquisition process.

CeRSITeS implemented a method for simulating environmental scenarios based on the atmospheric conditions of temperature, velocity, pressure and atmospheric turbulence, as well as the consideration of asphalt covered surfaces as heat sources.

In the GIS WHiP web platform CeRSITeS continued to upload the documentation produced for the Upper project

and to publish it by making it available to citizens. The WHiP web interface has been progressively customized in its main components through Javascript plugins.

Basic information was also acquired on the most representative plant communities, in their natural environment, to be used for the interventions in the productive parks, and the six selected demonstration sites, in order to assume them as a reference to evaluate the effect of requalification actions. In this perspective the analyses of vegetational indexes from satellite maps have been carried out and the non-invasive and non-destructive analyses of vegetation continued, through NIRS (Near Infrared Spectroscopy) surveys, and the IR images acquisition by a FLIR Ex camera. A new, specifically acquired, Bruker S1 Titan Handheld XRF Mod-800 was also utilized to perform soils analysis. As in the previous years, NIRS analyses were carried out in the field using a portable spectrometer JDSU MicroNIR™ working in the 950-1650 nm range. The detail of the different detection approaches, together with identification and location of plants and soils, were organized into reports, specific to each investigated area.

However, the activity related to monitoring actions, to evaluate the requalification actions, is delayed, in respect of the pre-established schedule, due to the much longer lead times involving the conversion and planting of the productive parks and demonstration sites.

In period covered by the journal Labirinto also run the Ongoing social impact assessment. This evaluation phase focused on the intermediate effects of the nature based social and edutainment activities Upper Seeds on the direct beneficiaries, namely school students and citizens in the intervention neighbourhood of Piazza Ilaria Alpi.

This ongoing social impact evaluation is focused on the following indicators: social inclusion; relational well-being; spatial well-being, sense of belonging, healthy lifestyles; civic and environmental awareness.

The analysis of these ongoing effects does not show the progress compared to the baseline.

The evaluation was run by means of:

- a structured survey in both CAWI and paper versions addressed to the citizens residing or attending Piazza Ilaria Alpi
- a focus group with the teachers of the kindergartens
- a group discussion track for students aged 6 – 13 years
- a structured survey in CAWI version for high school's students (aged 14 – 18)

The data were collected in the period September 2021 – April 2022 and analyzed. An Ongoing social impact evaluation report was produced by the end of May 2022.

The assessment tools initially foreseen for this activity were changed since it was not possible to use the storytelling collected by Tesseræ for impact assessment purposes. Labirinto adopted a combination of different quantitative and qualitative research tools that were judged as more adequate to the target groups of this ongoing study. This is therefore an improvement to the initial work plan, as additional and diversified data collection tools have been used to replace the content analysis from storytelling.

3.6 Communication

The project website that is the main communication channel, is fully operational. On the website have been published 7 new articles, 12 new Upper Stories. The latter were produced by Tesseræ with support of an external expert for photo and videomaking; the stories focus on places and activities related to the project. A set of stories has been dedicated to the main local stakeholders involved in the project and in particular with edutainment activities with video interviews. All the stories are online and accessible from the project website.

<https://www.upperlatina.eu/storie/>

3 more newsletters prepared by Tesseræ reached the general public disseminating activities and results, updates from partners and opportunities for citizens.

2 interactive platforms have also been created: Upper Whip (in collaboration with Cersites Sapienza) and Upper Engie (in collaboration with Engie S.p.A.), now fully accessible from Upper website.

<https://www.upperlatina.eu/observatory/>

Social media channels managed by Tesseræ are active and have reached the general public with project news, opportunities and public calls, events and activities, in collaboration with Labirinto who has also successfully carried out the local promotional campaigns.

In the period covered by the journal, three local communication campaigns were organized according to the revised version of the D3.5.1 Media Plan for local promotional campaigns. The first was devoted to the promotion of the second edition of the socio-educational activities Upper Seeds for schools (September 2021 – June 2022); the second campaign was dedicated to the promotion of the second edition of the call for participants to Upper Jobs (December 2021 – January 2022); the third campaign was about the promotion of the social and entertainment activities Upper Seeds Estate 2022 (June -September 2022). The promotional campaigns included different communication tools and channels like: paid advertising campaigns on Facebook; publication of posts, events and stories on social media (Instagram, Facebook, Twitter), dissemination of postcards and flyers; publication of articles and press releases; production and dissemination of video stories; organization of public promotional events. The deliverable “Local Advertising package” was produced, including all the digital version of all the communication materials produced during the activity.

General public of citizens is constantly informed of the progress of the project through website, newsletter, social media, and local newspapers affiliated to the project.

One-to-one and public meetings have been used to constantly involved neighborhood associations and representatives of the third sector in the project activities.

Specific activities and means of communication are targeted to teenagers, students and young adults (Instagram campaigns) and sectorial meetings with schools, associations, neighborhood groups, startups and enterprises from the business sector aimed at involving them in contributing to the project and spreading the project activities to potential users of the productive parks.

A conference report of the third policy conference “Innesti”, focused on nature based solutions and a report on seminars for the business sector have been produced by Tessere and Innovaction Europe.

Ce.R.S.I.Te.S., in cooperation with the MUA and partners Labirinto and Tesserae organized the second face-to-face information meeting with citizens, policymakers and local stakeholders to provide advice and guidance in the design of green areas through the use of plant species as Nature Based Solutions to tackle environmental challenges and restoring local ecosystems in the Pontine plain territory. The meeting focused on: the description of the “Canale delle Acque Medie Project” developed by Ce.R.S.I.Te.S. from the Upper project demonstration sites along the canal banks; the social impact of NBS by Labirinto; the co-design workshops by Tesserae; progress of the UPPER project by MUA.

3.7 - Up-scaling

In order to upscale the activities of the project, local promotional campaigns were organized by the partner Labirinto in collaboration also with the external service provider Il Sandalo.

In the period covered by this journal, the MUA explored the possibility to establish other pacts of collaboration in order to include other public green areas in the Bank, more specifically the green areas along the banks of the Rio Martino canal, between the PPI and the DS of Piazza Ilaria Alpi.

Informal consultations were run by Labirinto involving wider group of Stakeholders, in particular Associazione Bici X Umanità and Associazione Ringrazio Prego e Dono to explore their availability to participate in the co-management of these public green areas and a first interest was raised.

Other informal contacts were run with the recently established citizens committee for the promotion of the Canale Rio Martino Park as well as with the Association “Circe” in order to include their action in the Pacts of Collaboration related to the UPPER project even if no new pacts have been signed so far.

Upscaling opportunities arise by the fact that in 2021, the Upper Project was included in the ISPRA (Higher Institute for Environmental Protection and Research) database: GELSO - Local Management of Environmental Sustainability (isprambiente.it). Moreover, in July 2022 UPPER was presented by Municipality of Latina and C.eR.S.I.T.eS at the fourth water table organized by the Province of Latina as part of the NAWAMED Project (Nature Based Solutions for Domestic Water Reuse in Mediterranean Countries), funded by the ENI Program.

<https://www.enicbcmcd.eu/nawamed-workshop-dealing-technical-tools-start-non-conventional-water-reuse-projects-mainly-through>.

Synergies with other projects and initiatives have also been developed during this reporting period, these include:

- "Strategic Plan for the Latina Municipality"- to set up a new style of territorial governance, triggering mechanisms of interaction, participation and cooperation, but also of communication and information. Its aim is to define a reference framework for territorial development strategies and objectives and intervention actions, a real city plan.

- "La Macchina dell'Acqua - MEDIAREE" – that deals with the theme of sustainable development based on natural networks, starting from water, as a tool for connection, sharing and co-planning. The Water Machine rests firmly on the methodological foundations of Upper.

- "Innovative implementation of the partnership principle in cohesion " - for the innovative implementation of the partnership principle in the cohesion policy with the aim of drawing up a territorial strategy for Latina. The operating model is the one already applied in UPPER and based on the involvement of citizens in the decision-making process.

The municipality of Latina is already involved in the URBACT net and activities this funding programmes together with other EU ones i.e. INTERREG or URBACT will be followed for the project up-scaling. Structural funds could be used for implementing nature based solutions too. All these opportunities will be studied in detail during the last project implementation period when up-scaling activities will be designed.

4 - LESSONS LEARNT AND CONCLUSIONS

UPPER aims to create an urban park using Nature Based Solutions, to test the validity of an innovative design approach seeking a new balance and a new harmony between three elements: the urban environment, the human action and the atmospheric phenomena that are changing the face of our cities, making them less safe, especially in contexts strongly transformed by man.

Some of the difficulties previously mentioned caused the delay in producing the final design of the three productive parks that has brought to postpone the delivery of some deliverables e.g. D6.2.1 (Business models definition for the sustainability of the productive parks) and D6.2.2 (PPPP scheme design for the future sustainability of the urban productive parks).

First the pandemic and then the difficulty in finding designers, have slowed down the whole process linked to the planned investments. As a result, the start of the works was also delayed, but in order to ensure the shortest possible construction times, the tender for the assignment of the works has been divided in two lots concerning the 2 Productive Parks to have two companies that will simultaneously work on building the parks.

Therefore, a key lesson learnt was that in order to meet different types of needs, to include very technical specifications in the procurement process and in parallel, ensure compliance with public administration procedures and public procurement legislation, a lengthy consultation process had to be followed between the involved parties.

Moreover, in order to know the needs of the entrepreneurs operating in the NBS sector, virtual meetings were organized and this made it possible to align the new design phases with the needs that emerged and to make the challenge between business ideas more interesting and participatory.

One of the main objectives of contemporary cities is their sustainable development, which involves economic growth, social inclusion, and protection of ecosystems. Urban landscapes play a key-role in such a complex challenge, UPPER project shows how Nature-Based Solutions offer the opportunity to tackle the issues generated by the increase of events associated with climate change.

Nature based solutions

See on UIA website

