



D5.3 Publication and commenting of descriptions of demonstrations in Oppla portal

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Contents

1. Introduction.....	3
2. To Ally Technology, Nature and Society for integrated urban water management: ATENAS	4
3. Triple infiltration basin and greenery regeneration in the square of Oblęgorska / Widok Street in Łódź (Poland)	5
4. Amplification of the self-purification capacity of a small urban river using a natural solution to reduce the effect of urban stormwater degradation on its ecological status (France)	6
5. Multi-criteria decision analysis in an urban planning and storm water management case in the Kivistö case, City of Vantaa, Finland.....	7
6. Summary.....	8

1. Introduction

The ATENAS project is funded within European Union's Water JPI and the research is carried out by European Regional Centre for Ecohydrology of the Polish Academy of Sciences (ERCE PAS), Finnish Environment Institute (SYKE), FPP Enviro (Poland), and National Research Institute for Agriculture, Food and Environment (INRAE) (France). ATENAS is built around 3 demonstration sites, covering urban and periurban zones of Łódź, Lyon and Vantaa/Helsinki. The project aims to contribute to closing the water cycle gap through securing water cycling and the quality of urban runoff by using NBS, but also increasing the resilience of urban systems to dry periods. For that purpose, the project develops real scale demo-sites in a gradient of urban pressures and urban dynamics, to embrace a range of conditions for future applications.

ATENAS wants to capitalize on knowledge on NBS, and to make it available to professionals and non-professionals alike. ATENAS focuses on both experimental implementations of NBS based on co-design and living-lab approach, and tracing and learning from the process of community building. Therefore, it was assumed that information on the results of the project will be widely publicized on the project website, as well as on platforms dedicated to the collection of knowledge and information on NBS. One of this platform is **Oppla** (<https://oppla.eu/>), which is open the EU Repository of Nature-Based Solutions. Oppla is dedicated to the broader community, both those involved in science, policy and practice; the public and private sectors, as well as individuals. It provides a knowledge marketplace for information on natural capital, ecosystem services and nature-based solutions. Its goal is to be a space for sharing, acquiring and creating knowledge in the most simplified way possible.

This deliverable 5.3 presents the ATENAS cases published on the OPPLA website. One is a general description of the ATENAS project, two of them describe the NBS created during the project (Lyon and Lodz), and the last one is about approach to support multi-objective urban planning (Vantaa). Each description has a contact person listed and a link to the project website as well as the source of funding.

The created descriptions are available at the links below:

Łódź:

<https://oppla.eu/casestudy/29446>

Lyon:

<https://oppla.eu/casestudy/29492>

Vantaa:

<https://oppla.eu/casestudy/29496>

ATENAS project:

<https://oppla.eu/casestudy/29353>

2. To Ally Technology, Nature and Society for integrated urban water management: ATENAS

The first case described and published is about the ATENAS project, so that we can familiarize the wider community with the idea and achievements of the project. The purpose of the project, areas of implementation/research with key challenges, main activities and interventions undertaken, along with the impact on science, capacity building, and implementations were described (Figure 1).

LINK: <https://oppla.eu/casestudy/29353>

The screenshot shows the Oppla website interface. At the top, there is a navigation bar with the Oppla logo, social media icons (email, Twitter, LinkedIn, YouTube), a search bar, and buttons for 'ASK' and 'JOIN / LOG IN'. Below the navigation bar, there is a menu with categories: ABOUT, MARKETPLACE, COMMUNITY, CASE STUDIES, ASK OPPLA, and CONTACTS. The main content area displays the title 'To Ally Technology, Nature and Society for integrated urban water management: AteNas' and a large image of the ATENAS logo. To the right of the image, there is a sidebar with the following sections:

- Goal(s):**
 - Enhancing sustainable urbanization
 - Restoring ecosystems and their functions
 - Improving risk management and resilience
- NBS Actions:**
 - Urban regeneration through nature-based solutions
 - Nature-based solutions for improving well-being in urban areas
- Organisations:**

The ATENAS consortium consists of four partners: European Regional Centre for Ecohydrology of the Polish Academy of Sciences (ERCE PAS), FPP Enviro, French National Research Institute for Agriculture, Food and Environment (INRAE), and Finnish Environment Institute (SYKE).

Figure 1. Oppla page screenshot - ATENAS project description

3. Triple infiltration basin and greenery regeneration in the square of Oblęgorska / Widok Street in Łódź (Poland)

The case description includes information on the implementation of 3 infiltration basins along with the regeneration of the entire Widok / Oblęgorska / Wojska Polskiego square. The description includes a range of information on the activities undertaken in the process of NBS formation, a description of the specifics of the study area and related challenges. The role of various stakeholders during the project, the process of co-creation and co-creation is extensively discussed. The description is enriched with photos (Figure 2).

LINK: <https://oppla.eu/casestudy/29446>

The screenshot shows the Oppla website interface. At the top, there is a navigation menu with links for ABOUT, MARKETPLACE, COMMUNITY, CASE STUDIES, ASK OPPLA, and CONTACTS. Below the menu, the page title is "Triple infiltration basin and greenery regeneration in the square of Oblęgorska / Widok Street in Łódź (Poland)". To the right of the title, there is a search bar and buttons for ASK, JOIN / LOG IN, and a user profile icon. Below the title, there is an aerial photograph of the square, showing a green area with three infiltration basins. To the right of the photograph, there is a list of goals, NBS actions, and organizations.

Goal(s):

- Restoring ecosystems and their functions
- Developing climate change mitigation
- Improving risk management and resilience

NBS Actions:

- Urban regeneration through nature-based solutions
- Nature-based solutions for improving well-being in urban areas

Organisations:

1. European Regional Centre for Ecohydrology of the Polish Academy of Sciences (ERCE PAS) - project coordinator. Responsible for the implementation of the NBS and mobilising citizenship and community action in the square;
2. FPP Enviro© - project partner. Responsible for NBS project design and implementation based on environmental, technical conditions and opinions of residents and officials;
3. Citizens - residents of neighbouring blocks

Figure 2. Oppla page screenshot - Łódź demo site

4. Amplification of the self-purification capacity of a small urban river using a natural solution to reduce the effect of urban stormwater degradation on its ecological status (France)

Lyon demo site description include information about the NBS for enhancement the self-purification capacity of a small stream polluted by urban rainfall discharges. Its include undertaken activities, potential impact and benefits, and a description of the specifics of the case. The description is enriched with photos (Figure 3).

LINK: <https://oppla.eu/casestudy/29492>

The screenshot shows the Oppla website interface. At the top, there is a navigation menu with links for ABOUT, MARKETPLACE, COMMUNITY, CASE STUDIES, ASK OPPLA, and CONTACTS. A search bar is located on the right side of the header. The main content area displays the title of the case study: "Amplification of the self-purification capacity of a small urban river using a natural solution to reduce the effect of urban stormwater degradation on its ecological status (France)". Below the title is a photograph of a river with a rocky bed and some vegetation. To the right of the main content, there is a sidebar with the following sections:

- Goal(s):**
 - Restoring ecosystems and their functions
 - Improving risk management and resilience
- NBS Actions:**
 - Urban regeneration through nature-based solutions
 - Nature-based solutions for improving well-being in urban areas
- Organisations:**

National Research Agency, and local operational actors for water related-issues: Yzeron river union (Sagyrc) and the upper Yzeron valley sanitation union (SIAHVY).
- Design team:**

INRAE/RIVERLY-Hybv team & INRAE-ARA center communication team

Figure 3. Oppla page screenshot - Lyon demo site

5. Multi-criteria decision analysis in an urban planning and storm water management case in the Kivistö case, City of Vantaa, Finland

The description of the activities carried out in Vantaa differs from Lyon and Lodz in that no specific nature-based solutions were implemented during the project. The key objective of ATENAS in Vantaa was to support developing and evaluating alternatives for urban planning and decentralized stormwater management **in the planning phase**. Multi-criteria decision analysis (MCDA) were selected by the researchers to be a key tool for co-planning and support decision making. MCDA framework was described as Finish case study in OPPLA.

LINK: <https://oppla.eu/casestudy/29496>

The screenshot shows the OPPLA website interface. At the top, there is a navigation menu with links for ABOUT, MARKETPLACE, COMMUNITY, CASE STUDIES, ASK OPPLA, and CONTACTS. Below the menu, the page title is "Multi-criteria decision analysis in an urban planning and storm water management case in the Kivistö case, City of Vantaa, Finland". To the right of the title, there are sections for "Goal(s)", "NBS Actions", and "Organisations".

Goal(s):

- Enhancing sustainable urbanization
- Developing climate change mitigation
- Developing climate change adaptation

NBS Actions:

- Nature-based solutions for improving well-being in urban areas

Organisations:

Syke, Finnish Environment Institute
City of Vantaa

URBAN PLANNING - OBJECTIVES HIERARCHY: YARD-, BLOCK-, NEIGHBOURHOOD- AND CITY LEVEL

SOCIO-ECOLOGICAL	Recreational use and nature experience	Equal access to green spaces	Residents' opportunities to develop and utilize their own area	Communality	Environmental awareness, education and science
SOCIO-CULTURAL	Cultural cityscape and image, art	Development of place identity	Cultural richness and intercultural relations	Fair distribution of the advantages and disadvantages of the measures	
HEALTH	Mental health	Development and maintenance of immune defense	Physical health		Health risks
ENVIRONMENTAL	Stormwater quantity and quality, stormwater use as a positive resource	Status of urban streams, urban hydrology	Terrestrial biodiversity in urban nature	Air quality (e.g., microparticles, exhaust fumes, dust)	Noise (e.g., traffic, activities)
CLIMATE CHANGE: MITIGATION & ADAPTATION	Flood management and resilience (incl. flexibility of measures)	Microclimate	Reduction of greenhouse gas emissions (e.g., renewables, transportation)	Carbon sinks and carbon sequestration in soil and vegetation	
SUSTAINABLE USE OF RESOURCES	Renewable and recyclable materials (e.g., structures, growing media, utilisation of local soil masses and stone material)				
ECONOMIC	Costs (construction and maintenance of infrastructure, sewage treatment costs, social and health care)		Construction efficiency (floor square meters)	Jobs and investment opportunities	
FEASIBILITY	Technical feasibility	Legal feasibility	Social acceptability	Funding and schedule	Risks

Figure 3. Oppla page screenshot – Helsinki metropolitan region

6. Summary

Describing and publishing on open platforms information about the conducted research and obtained results is one of the important aspects of disseminating scientific knowledge and experience to a diverse community. This allows expanding the scope of the project's impact, not only to the direct beneficiaries of the project (i.e., the city's residents), but creates opportunities to replicate and apply such solutions elsewhere, drawing on others' experiences. Oppla gathers diversified community spread all over the world and is well recognized open platform, with access to guidance, software, data and other resources, where you can promote your own projects or network. It allows to fulfill WP5 objectives about enabling mutual learning, sharing of knowledge and showcasing good practices.

The diversity of the ATENAS project makes it possible to show wider community approaches taken by 3 partners facing different challenges:

- ❖ Finland (Vantaa/Helsinki): responsible planning for cities, MCDA,
- ❖ Poland (Łódź): making change in degraded landscape, infiltration basins and greenery regeneration,
- ❖ France (Lyon): focus action on the problem, enhance the self-purification capacity of a small stream polluted by urban rainfall discharges,

which together, include:

- ❖ improvement of environmental conditions,
- ❖ stakeholder engagement, improvement of space attractiveness,
- ❖ reducing the cost of dealing with water problems (quality and quantity).