



## Workshop Report

<b>Organizing partner:</b>	<b>Aalto University</b>
<b>Workshop Place:</b>	<b>Online</b>
<b>Date:</b>	<b>2 April 2020</b>
<b>Number of invitees:</b>	<b>16</b>
<b>Number of registrations:</b>	<b>13</b>
<b>Number of guests attending:</b>	<b>14</b>

## Agenda for the workshop

### Programme:

- 13:00 Meeting opening & EviBAN introduction: Harri Koivusalo
- 13:15 Stormwater Management in Vantaa: Antti Auvinen
- 13:30 Stormwater Management in Espoo: Laura Karhumäki
- 13:45 Coffee Break
- 13:55 Sitowise Presentation: Nora Sillanpää
- 14:10 Stormwater Management in Finland: Harri Koivusalo
- 14:20 EviBan and Finland – Current and future works: Andrew Said
- 14:30 VTT and Stormwater Management: Ville Rinta-Hiiri, Laura Wendling, Maria Dubovik
- 14:45 Coffee Break
- 15:00 Introduction of Interactive task on EviBAN Tools: Herman Helness
- 15:30 Discussion: Governance Assessment Tool
- 15:40 Results of interactive task: Herman Helness
- 16:00 Meeting Closure

## Objectives

The EviBAN stakeholder meeting in Finland completed the series of stakeholder meetings in the participating countries of the project. The objective was to bring together the collaborating municipalities, research institutes and solutions providers to review on experiences and recommendations about current stormwater policies and activities in the light of sustainable development. The meeting focussed on presentation and discussion of goals, solutions and capabilities of the nature based solutions (NBS) through the practices and examples by the participants. A specific goal was to introduce the concept of integrated sustainability assessment (ISA) to the participants. A dissemination exercise was applied to identify the relevance and of the sustainability development goals (SDGs) and define the objectives and criteria of for measuring the contribution of the stormwater management solutions to progress towards the identified SDGs.



## Characterization of the participants

Table 1 shows the number of registrations and actual participants, and the respective sector of activity.

Table 1 Overview of stakeholders

Institution / sector	No. of participants (registrations) In total
<b>Authorities</b>	<b>3</b>
City of Vantaa	1
City of Espoo	2
<b>Representatives of companies, other sectors</b>	<b>2</b>
Sitowise	2
<b>Internal Stakeholders</b>	<b>9</b>
Sintef	2
Aalto University	5
VTT	3

## Short summary of the workshop's activities

### Local stakeholder and partner presentations: stormwater management solutions

Local Municipalities provided information about the stormwater management solutions on the current state of stormwater management solutions employed in their municipalities and identified examples in which nature based solutions were implemented. The municipalities also detailed their respective stormwater management strategies.

EviBan Partner presentations detailed the activities in EviBAN to date, both overall and in reference to the Finnish case studies, and informed of tasks to be undertaken in the future. The presentations also aimed at providing the municipalities and stakeholders with information regarding the next steps involving the Integrated Sustainability Analysis and Governance Assessment Tool.



### Group exercise: Input to measure the sustainability of the proposed NWRM

The group exercise to provide input to measure the sustainability of the proposed NWRM was introduced by Herman Helness with a short presentation of what an integrated sustainability assessment (ISA) is and what it may be used for. For the latter, some results from the previous SUWAM project were presented as an example.

Thereafter the questionnaire and objectives of the exercise were explained.

The questionnaire was distributed online using Forms to each participant who answered individually.

### Short summary of outcomes and results

#### Local stakeholder and partner presentations: stormwater management solutions

Design engineer Antti Auvinen presented the latest development in stormwater management in the city of Vantaa. Vantaa is an example of rapidly growing northern city being part of the Helsinki Capital area. The city also hosts the international Helsinki-Vantaa airport having specific stormwater issues related to vast impervious areas and wide use of de-icing control in winter. There are new residential area constructions and street and traffic area renovations exemplifying stormwater collection and treatment facilities based on nature-based solutions. The city of Vantaa has developed the Vantaa Stormwater Action Plan (2014), which guides the application of stormwater management methods, design guidelines and maintenance requirements, and planning, design and construction phases of stormwater infrastructure. Vantaa is actively searching for new solutions to be realised in city sites and has implemented several pilot biofiltration and bioretention systems throughout the municipality.

Project manager Laura Karhumäki from the city of Espoo reviewed the local construction activities, which included the new residential areas and traffic systems. Espoo is comprised of several local city centres with strong links to Helsinki and the city aims at sustainable economic, ecological, social and cultural development. Stormwater systems are challenged by the coastal sea level fluctuations, flooding of streams draining intensively constructed areas, and occasional spots of pluvial floods. Focused stormwater management projects have been directed to Gräsanoja catchment in the southern part of the city. Both Espoo and Vantaa see preparation against changing climate with regard to increasing wintertime rainfalls and decreasing snowfalls to be a future issue.

Service manager Nora Sillanpää from Sitowise reviewed the state-of-the-art of the solution provider toolbox. Sitowise as a consultant company is prepared to support local construction activities with planning sustainable stormwater solutions. Multi-purpose planning of urban waters offers opportunities for rethinking the role of stormwater systems in flood protection, water treatment, and recreation.

Research Scientists Ville Rinta-Hiiro and Maria Dubovik detailed VTT's involvement in stormwater management projects and implementation of nature-based solutions in Finland. VTT has been involved in flood forecasting, decision support tools, ICT tools for integration, and implementation of nature-based solutions for urban water and climate resilience. VTT



detailed expertise in the application of nature-based solutions through their involvement and coordination of projects such as Climate Adaptive Services, StormFilter, and Urban Nature Labs.

The project partners provided an update of EviBAN. In Finnish case studies the project has so far focused on examination of roadside filter system in the city of Vantaa and the next step is to launch modelling study within the Espoo Gräsanoja catchment. The participants were then motivated to provide feedback about the relevance of SDGs in the group work detailed below.

### Group exercise: Input to measure the sustainability of the proposed NWRM

The results from the exercise were compiled and the average scores for each SDG and criterion were calculated.

The average scores were highest for SDG6 "Ensure availability and sustainable management of water and sanitation for all", SDG11 "Make cities and human settlements inclusive, safe, resilient and sustainable" and SDG13 "Take urgent action to combat climate change".

Interestingly, SDG6 and SDG11 were also among the top three SDGs that received the highest scores in the French workshop in December 2019 and the South African workshop in February 2020 although the case studies in those countries are focused on Managed Aquifer Recharge (MAR).

In the French and South African workshops, SDG14 "Conserve and sustainably use the oceans, seas and marine resources for sustainable development" was also among the three highest ranked goals. This probably reflected that protection of marine ecosystems was important in the two case studies.

In the Norwegian workshop in March 2020, SDG6 and SDG11 were also the two highest ranked goals. SDG9 "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation" was the third of the top three goals, which probably reflected the focus on innovations and technical solutions for stormwater management in the Norwegian case.

In the Finnish case, SDG13 "Take urgent action to combat climate change" was the third highest ranked SDG, which may reflect the focus on stormwater management as an adaptation measure for climate change in the Finnish case. SDG9, 15, 3, 14, 17, 8 and 12 (in descending order of average score) were also indicated to be of high relevance with average scores higher than 1 in the Finnish workshop. These results are the same as in the Norwegian workshop, with the exception of SDG9 (third highest score in the Norwegian workshop, where SDG13 had the fourth highest score).

For further details on the scoring of the NWRM-specific objectives and criteria to be used in the ISA, the spreadsheet with the compiled results should be consulted.