

GreenStorm

Design and deployment of stormwater nature-based solutions for resilient and livable cities

Context

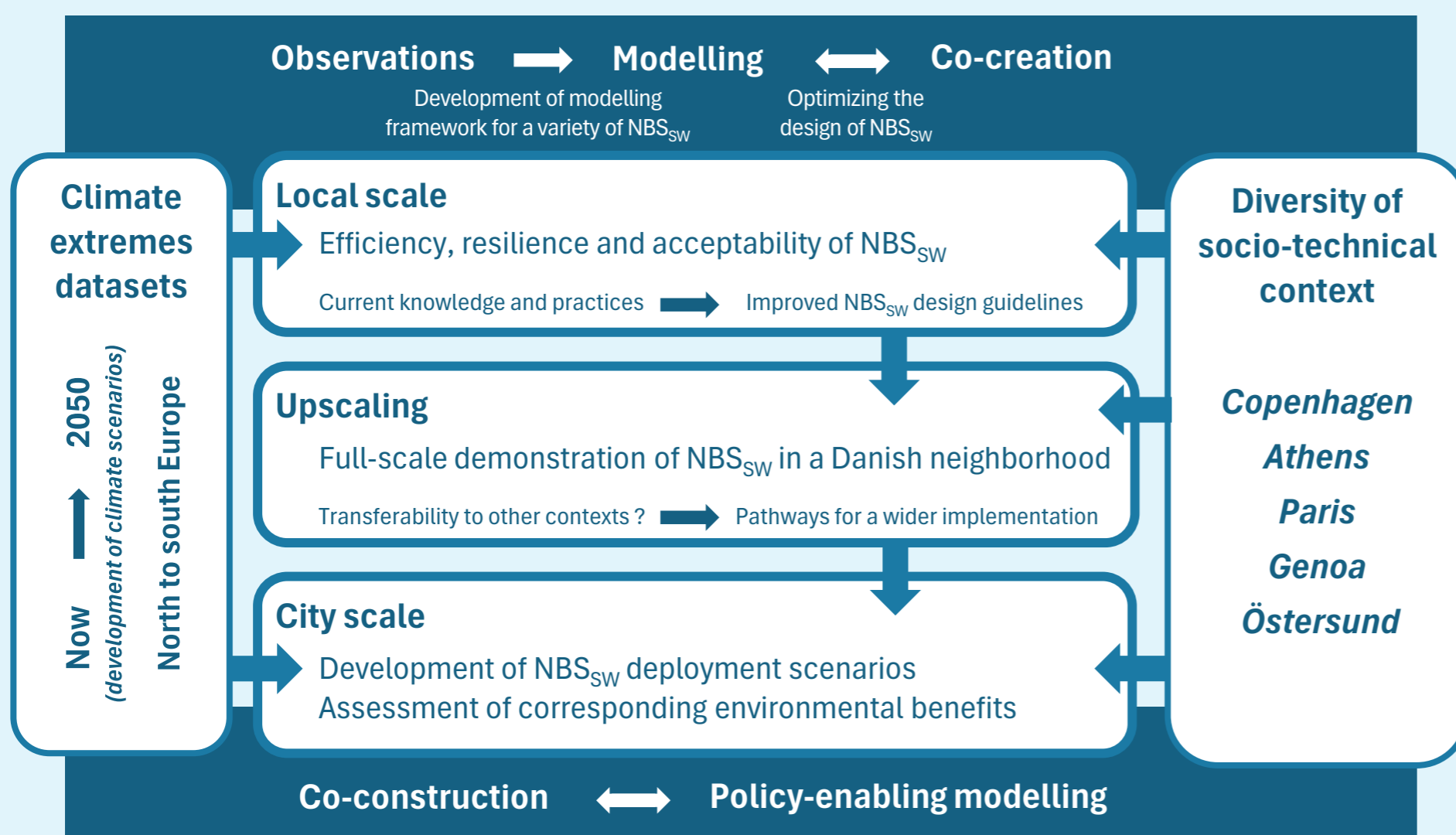
- **Nature-based solutions (NBS_{SW}) for the management of urban stormwater:** green-infrastructures to retain water close to where it falls and prevent floods or pollutant discharge to surface waters
- **A variety of potential benefits in addition to stormwater management functions:** attenuation of local temperatures; landscape improvement; support for urban biodiversity; other health or well being benefits...
- **Yet knowledge gaps:** performance & resilience for present and future climate extremes (e.g., droughts, heatwaves...) ? Acceptability for residents or municipal services ? Pathways for a city-scale implementation ? Benefits to be expected ?



Objectives

- Improve our understanding of the **functioning of NBS_{SW} under current and future climate extremes**, based on observations from different European countries and numerical modelling
- Engage stakeholders in a dialogue with researchers to **develop innovative NBS_{SW} designs**, to ensure their **performance and resilience** for future climate extremes, as well as their **acceptability** for residents or municipal services
- Identify drivers or tools for **city-scale implementation of NBS_{SW}** and assess corresponding hydrological and thermal benefits under current and future climate conditions

General approach



Consortium

- **14 partners from 5 European countries :** from the extreme North to the South of Europe, a variety of climate, urbanistic and socio-technical contexts
- **7 academic partners:** a diversity of disciplines (hydrology, ecophysiology, sustainability sciences, climatology...) and approaches (in-situ monitoring, field surveys, numerical modelling, co-creation workshops, action research...)
- **6 local authorities and 1 SME:** anchoring the research in the reality on the ground; facilitating the transferability of project results; showcasing successful NBS_{SW} implementation



Expected outcomes: directions for the design of efficient and resilient NBS_{SW} ; demonstration of the relevance of participatory approaches in NBS_{SW} projects ; strategies for successful implementation of NBS_{SW} depending on local context ; city-scale assessment of the benefits of NBS_{SW} to guide the intervention of public authorities

Partners: Ecole des Ponts Paristech; Cerema; Université Gustave Eiffel; Kobenhavns Universitet; Università Degli Studi di Genova; Geononiko Panepistimion Athinon; Lulea Tekniska Universitet; Kobenhavns Kommune; Athens Anaplis S.A.; Ville de Paris; Département de Seine Saint Denis; Comune di Genova; Östersund Kommun; Koordinat (SME)



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