COOLSCHOOLS Realizing potentials of nature-based climate shelters in school environments for urban transformation

Isabel Ruiz Mallén
Faculty of Psychology and Education Sciences
Urban Transformation and Global Change Lab (TURBA)
Universitat Oberta de Catalunya (UOC)

Nature-based climate action from schools to cities

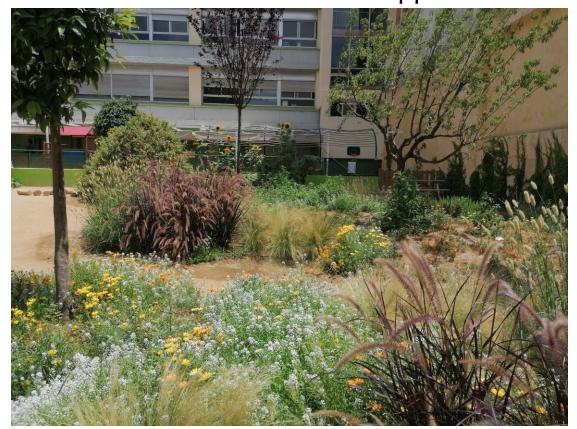
Nature-based solutions (NBS) are defined as actions supported by nature that simultaneously provide environmental and socio-economic benefits in sustainable and resilient ways, and can play an important role towards systemic transitions leading to climate resilient cities.

When incorporated in **school environments**, NBS interventions seem a promising path for boosting **climate change adaptation and multiple co-benefits**.



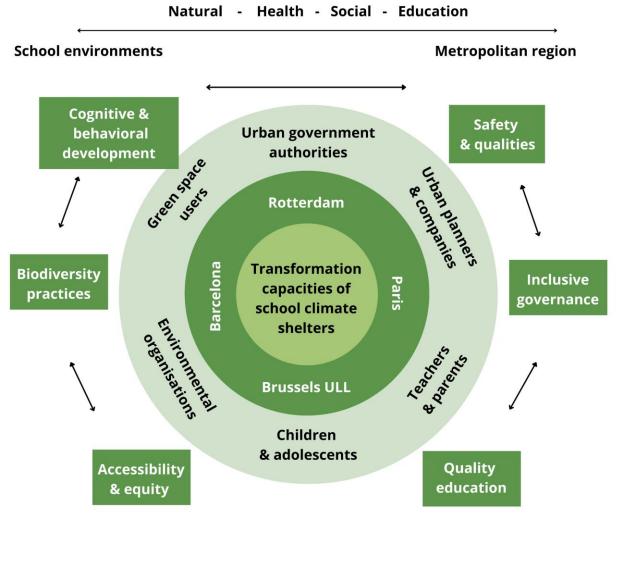
COOLSCHOOLS examines the transformative potential of **NBS for climate adaptation** in school environments towards urban sustainability, climate resilience, social justice and quality education in school settings and beyond.

COOLSCHOOLS aims to support the creation of nature-based climate school shelters





COOLSCHOOLS combines **natural**, **bio-medical**, **soc and education sciences** and rely on participatory ar co-creation methodologies.



The **cross-sectoral composition** of our consortium (e.g., universities and research centers, city governments, international agencies, local organizations) and the creation of an Urban Living Lab (in Brussels), ensures the active involvement of different key stakeholders and final users.

































COOLSCHOOLS builds and expands on the experience of four pioneer European cities in the implementation of NBS for climate change adaptation in school environments to unravel the specificities of each context and to find common patterns related to the transformation capacities of nature-based climate school shelters.

PARIS

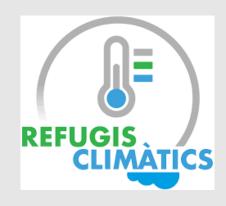
.

BARCELONA

ROTTERDAM

- BRUSSELS











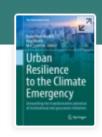
In the first year of the project: 33 schools engaged → 13 in Brussels, 9 in Paris, and 11 in Barcelona (more schools will be engaged, e.g., up to 20 in Rotterdam, 25 in Brussels).

Data collection through GIS, literature reviews, interviews and biodiversity monitoring (health studies starting in year 2)

Organisation and participation in dissemination and networking activities

Starting with the creation of the ULL in Brussels





<u>Urban Resilience to the Climate Emergency</u> pp 125–146 | <u>Cite as</u>

Home > Urban Resilience to the Climate Emergency > Chapter

Nature-Based Climate Solutions in European Schools: A Pioneering Co-designed Strategy Towards Urban Resilience

Chapter | Open Access | First Online: 01 October 2022

Main school NBS elements include: natural and permeable pavements with diverse play structures, gardens with native species, green walls and vegetated pergolas, increased tree canopy cover, rain gardens, singular water elements.

Main challenges and strategies to mitigate them: reluctance to change and safety issues by some stakeholders (co-design process); tight implementation timeframe and other bureaucratic barriers (high political support); maintenance problems (monitoring plan and specific maintenance funds).

Ruiz-Mallén et al. Nature-based solutions for climate adaptation in school environments: an interdisciplinary framework for analysis. Springer (2023 in press)



COOLSCHOOLS' practices and results will generate opportunities for **city uptake of the nature-based climate school shelters** approach by other schools, neighborhoods and

cities.



https://coolschools.eu

COOLSCHOOLS is an applied-research project aiming to analyze the multiple co-benefits of implementing nature-based solutions (NbS) for climate adaptation in school environments. We will explore how these nature-based climate school



Segueix

CoolSchools Project

@P_Coolschools







ASD Publics aims to re-vision public space for children with Autism Spectrum Disorder (ASD) and their families.



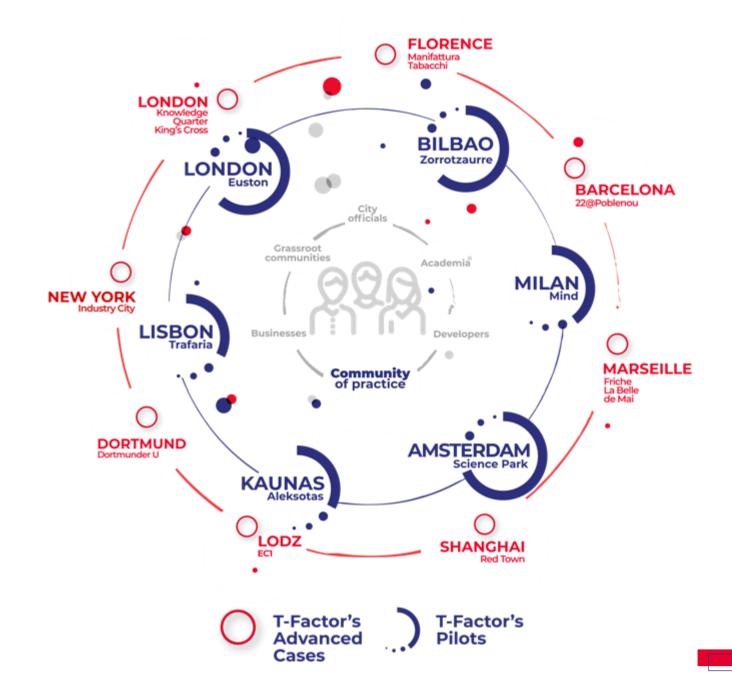
ASD Publics: pilot a co-creation **performative methodology** that provides an embodied experience of space through **experiments with the body**, play and other creative ways of exploring multi-sensoriality and connectivity with space through aesthetic appreciation.





MEANWHILE SPACES

Intervening over the 'in-between' masterplanning and space delivery to raise ambitions, quality, value and impact for all







This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No [number] 101003758