

## Rain is also planted - in situ/ Benfica H2O

### Abstract

Co-designed to celebrate the water cycle using ecological design principles, in situ/ Benfica H2O is a collaborative project involving academia, local authorities, and the community. It aims to address urban water cycle issues in public space, regarding its scarcity and excess, by fostering collective intelligence about the territory. Located in Benfica near Monsanto Forest Park, Cortiçada's Garden is an underutilized public space with potential for community gathering as well as a place to combat climate change adversities.

In response to the climate urgency, the project emerged from the fusion of scientific and empirical knowledge. A community of practice was established to create a new proposal for an existing, underused public space. The integration of architecture, engineering, and landscape architecture with local spatial perception was crucial for this initiative. Moreover, the project engages in dialogue with the municipality and local schools to explore how public spaces can be designed to prioritize sustainability.



**Fig. 01:** Project Section -in situ/ Benfica H2O, Lisbon, 2023: Cynthia de Pinho

“Rain is also planted” is the motto of this intervention and is realized through a gravity-activated mechanism; when the water mirror reaches its maximum level, this water is conducted to the reservoir and then directed to a gravity-fed irrigation system that emulates artificial rain, thus watering the space renaturalized by the project.

The proposal will reuse materials and a set of plant species from municipal nurseries, and the redesign of the garden was done in close collaboration with the community in co-design sessions. This planting plan was designed as a way to retain rainwater, and the design and construction of an art gallery over the water repository aim to establish a social contract of urban pedagogy, where the project serves as a learning vehicle about the different stages of the water cycle in an urban environment.

**Keywords:** Co-design; Community engagement; Public Space; Academic Extension

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Beginning in 2007, José Caldas graduated in Architecture from the Universidade Autónoma de Lisboa. Following graduation, an internship was completed at João Pedro Falcão de Campos' office in Lisbon, Portugal, in 2008. In 2009/2010, collaboration at the office of Eugénio Castro Caldas in Lisbon, Portugal, ensued. In 2010, the Inov-Art scholarship was awarded, leading to work at the Adamo-Faiden office in Buenos Aires, Argentina. Collaboration with the NGO “Un Techo Para Mi País” occurred during this time. From 2011 to 2013, projects in the Sustainable Development Reserve of Rio Negro, supported by the Amazonas Sustainable Foundation, were executed in Brazil. From 2015 to 2020, José contributed to innovative projects at the FURO office. Since 2020, he has been working on his own design projects, ranging from cabinets to buildings. Additionally, José won the Best Fiction Award at ARQUITETURAS FILM FESTIVAL LISBOA 2019 for the short movie “Lá vem o dia”.

Cynthia Catheirne Fernandes De Pinho, Master in Landscape Architecture, born in Venezuela, emigrated to Portugal at the age of 17. Upon arriving in Portugal, she fell in love with the Landscape Architecture course, which she was completely unfamiliar with, but which quickly became a “new passion” and dedication. She learned to appreciate and understand landscapes, as well as their processes, both natural landscapes and those with human intervention. She believes that Landscape Architects are essential for designing and developing solutions for a harmonious relationship between humans and nature. She earned her Bachelor's and Master's degrees in Landscape Architecture in 2021 and 2024 from the Instituto Superior de Agronomia, University of Lisbon. In 2021, she participated in the conception and design of the Master Plan for the Odivelas Riverside Park during a summer internship, as part of the protocol between the Odivelas City Council and the Alumni of the Instituto Superior de Agronomia. In 2023, she participated in the In Situ/Benfica H2O edition of the In Situ/Laboratory of Intervention in Architecture project of CEACTIONAL - Centro de Estudos em Arquitectura, Cidade e Território da Universidade Autónoma de Lisboa. In 2021, she received the Santander Bank's incentive award for her master's degree.

Maria Matos Silva is Assistant Professor of Landscape Architecture at Instituto Superior de Agronomia (ISA), University of Lisbon (Bachelor, Master and PhD levels), and is currently coordinating the Master Programme in LA (2022-). She graduated in Landscape Architecture (University of Lisbon, 2007); has a master's degree in Urban Design (University of Barcelona, 2010); a PGDip in Urban and Regional Planning (University of Lisbon, 2011) and a PhD in Public Space Design (University of Barcelona, 2016). Since 2016, Maria is a Research Associate of the CIAUD Research Centre of Architecture, Urbanism and Design at the Faculty of Architecture, University of Lisbon, being part of URBinLAB's team (<http://urbinlab.fa.ulisboa.pt/>). She has been involved in R&D projects and has thus far published in various international peer-review journals and conferences. Her academic interests are focused on subjects related to landscape, design and management, urban planning, sustainability, urban flooding, public space design and adaptation to climate change. In 2019, she was awarded an Honourable Mention in the Scientific Prize of the University of Lisbon / Caixa Geral de Depósitos, in the area of Architecture, by the Rector of the University of Lisbon. Currently, Maria is the Co-PI of the research project "MetroPublicNet" (<http://metropublicnet.fa.ulisboa.pt/>) financed by the Portuguese Foundation for Science and Technology, and a board member of the Portuguese Association of Historic Gardens (AJH - Associação dos Jardins Históricos)

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