



Porto Municipality

About the City

Demography:

- ✓ Population of 248.769 inhabitants (INE 2023);
- ✓ Campanhã Parish is one of the most deprived areas of the city, with the higher percentage of vulnerable groups.

Landscape:

- ✓ Highly urbanized in the city centre;
- ✓ 69% of city urban territory is impermeable;
- ✓ Permeable areas are widespread through the city (gardens, parks, urban woodlands, farming areas);
- ✓ Variable hypsometry (ranging from 0-159m, although mostly below 90m of altitude);
- ✓ City has some steep areas gradually expanded along Douro river (slopes between 41°-79°);
- ✓ Campanhã parish has less access to quality green spaces although is the greenest socioeconomic strata (Graça et al 2018).

Climate:

- ✓ Warm-summer mediterranean (Csb - Köppen classification) with warm, dry summers and mild, rainy winters.



Ecological Structure of Porto city

Climate hazards and risk evaluation:

Climatic events	Risk level			Risk trend
	Present	Medium term (2041/2070)	Long term (2071/2100)	
Extreme heat (heatwaves)	Moderate	High	Critical	↑
Extreme cold (cold waves)	Moderate	Moderate	Low	↓
Storms	Moderate	High	High	↑
Droughts	Low	Moderate	High	↑
River Floods (heavy rainfall)	Moderate	High	Moderate	→
Urban Flooding (heavy rainfall)	Moderate	Moderate	Moderate	→
Mass movements (heavy rainfall)	Moderate	Moderate	Low	↓
Coastal gales	Moderate	High	Critical	↑
Coastal erosion	Low	Moderate	Critical	↑

Very low Moderate Critical

↑ Increasing risk
→ Maintaining risk
↓ Reducing risk

Demonstrator Quinta de Salgueiros:

- 6 ha plot located in Campanhã parish (~3 ha included in NBRACER)

Global aim: transform Quinta de Salgueiros into an urban park-laboratory – Biolab

Specific aims:

- Reclaim the area for city and its population;
- Restore ecosystems, enhance their services, and increase climate resilience;
- Test scalable NbS in an urban context;
- Create an open space for demonstrations, scientific experiments and learning;
- Consolidate the ecological corridor as outlined in the Municipal Master Plan (PDM).



Past 2 years:

- ✓ Demo site: preliminary study and licensing preparation;
- ✓ Citizens: pilot study on thermal comfort, public perception study, open presentation session, Quinta aberta open day;
- ✓ Institutional partners: 2 workshops;
- ✓ Monitoring (biodiversity, soil, water, air, noise, temperature and humidity);
- ✓ News on municipal and national channels;
- ✓ One art exposition (Urbanário – Bienal do Porto).

Future 2 years:

- ✓ Demo site: project finalization, licensing and construction;
- ✓ Implementation of an educational program (October 2025);
- ✓ Creation of an active research community network;
- ✓ Initiatives to engage citizens, private stakeholders and partners;
- ✓ Scientific monitoring.

Regional Partners:

Main partner: FCUP - Faculdade de Ciências da Universidade do Porto

Other partners: GO Porto, Águas e Energia do Porto, Domus Social, EMAP, Infraestruturas de Portugal, Porto Digital + BUILT CoLAB, Ágora, AGRUPA

Reference:
M.Graça, P. Alves, J. Gonçalves, D. J. Nowak, Robert Hoehn, P. Farinha-Marques, M. Cunha (2018) Assessing how green space types affect ecosystem services delivery in Porto, Portugal. Landscape and Urban Planning, 170, pp 195-208.

