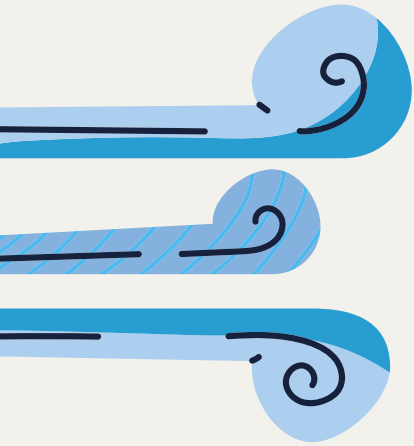


Sep 2023

# Policy Brief



# Creating Inclusive and Effective Climate Shelters

By Ana Terra Amorim-Maia  
BCNUEJ - Barcelona Urban  
Environmental Justice & Sustainability

Based on the article:  
Ana T. Amorim-Maia, Isabelle Anguelovski, James Connolly, Eric Chu  
[Seeking refuge? The potential of urban climate shelters to address intersecting vulnerabilities](#)

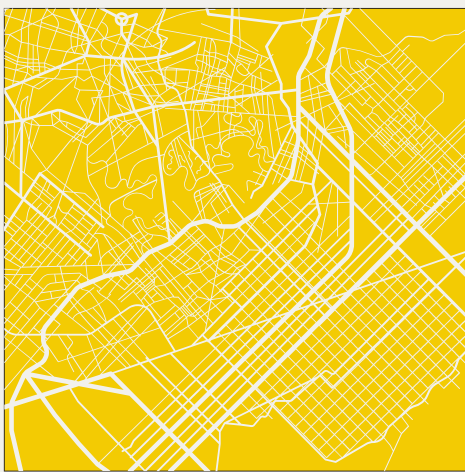


# Creating inclusive and effective climate shelters

A guide for policymakers and local representatives

## An urgent need

Climate shelters are spaces in public buildings or outdoors that offer **thermal comfort during periods of extreme temperatures**. As climate impacts intensify, cities around the world are recognizing the urgent need to create climate shelters.



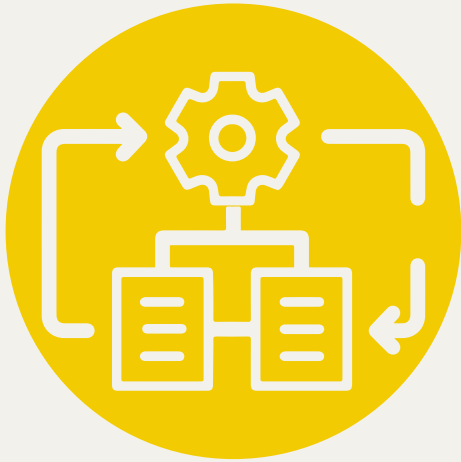
## Case study in Barcelona

This policy brief is based on a comprehensive study conducted in Barcelona, which focused on the intersectional vulnerabilities of **marginalized populations** in the context of climate change.

The study offers policymakers valuable insights to inform the design, implementation, and management of climate shelters in cities facing similar challenges.



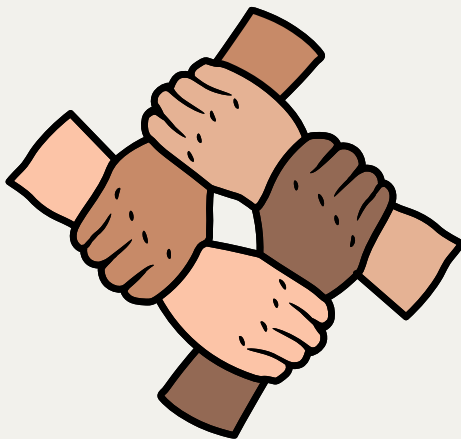
# Methodology



This study employed a **mixed-methods and citizen science** approach, combining archival analysis, a focus group, surveys, and interviews. The research took place between January 2021 and April 2022.



The survey was conducted with **380 residents of La Prosperitat** to assess their experiences and perceptions of climate change and the climate shelter network. The survey included a citizen science section, delving into the creation of an ideal climate shelter for residents. Additionally, 10 interviews were conducted with neighborhood residents and employees of nearby climate shelters.



The study employed an **intersectional perspective** to understand the complex social dynamics and listen to marginalized voices in understanding their climate vulnerabilities.

# Key findings

## Intersectional vulnerabilities

Vulnerable populations, including low-income residents and immigrants from the Global South, experience disproportionate impacts, primarily extreme cold and heat.



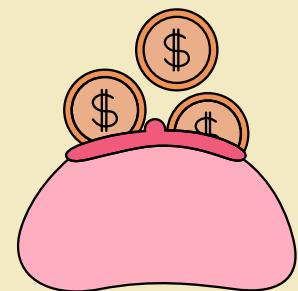
## Insufficient access and information

Many residents, especially those from marginalized backgrounds and immigrants from the Global South, are unaware of existing programs to address extreme heat and are less likely to use climate shelters.



## Gender and class differences

Women and low-income residents are more affected by climate risks and express higher levels of concern about climate change.



## Preference for green and multi-functional spaces

There is a strong preference for shelters integrated with nature and multifunctional spaces capable of hosting recreational, cultural, and social activities while protecting residents from extreme weather events.



# Recommendations

## 1 Equitable distribution

Ensure that climate shelters are strategically distributed to reach all neighborhoods, especially those with higher vulnerabilities. Prioritize areas with limited access to green spaces and areas identified as highly vulnerable to climate change impacts.

## 2 Cultural sensitivity

Develop outreach and education campaigns targeting marginalized communities to raise awareness about climate shelters. Use culturally sensitive communication strategies to engage diverse populations and overcome linguistic and cultural barriers.

## 3 Nature-based design

Design climate shelters as outdoor spaces that integrate nature, offering shade, vegetation, and water features. Such design elements provide natural thermal comfort while addressing residents' preferences for green spaces.

## 4 Multifunctional spaces

Create or adapt climate shelter spaces that are multifunctional, with the purpose of providing thermal comfort and meeting other local needs, such as recreational, cultural, and social activities. This strengthens community bonds and promotes social cohesion.

## 5 Community Participation

Involve residents, especially those from marginalized backgrounds, in co-creating climate shelters. Collaborative decision-making ensures that shelters meet local needs and priorities.

## 6 Training and protocols

Provide comprehensive training to climate shelter staff to effectively manage extreme weather events and address the unique needs of diverse populations. Develop clear protocols to ensure smooth shelter operation during emergencies.

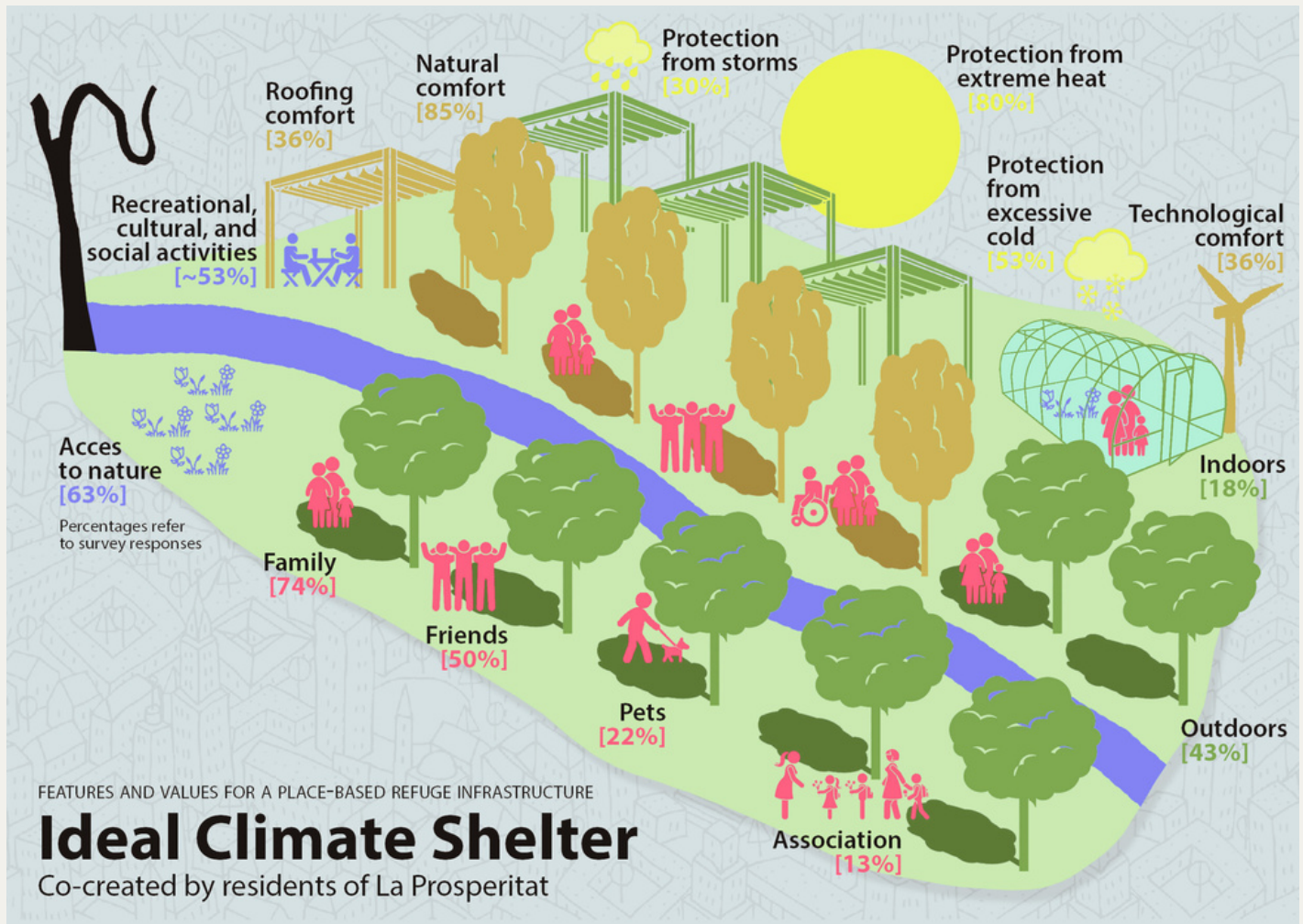
## 7 Flexible space typology

Explore creative solutions for locating new climate shelters, including utilizing existing community facilities, privately-owned spaces, and tactical urbanism initiatives. Adapt spaces to serve as temporary shelters during extreme weather events.

## 8 Integration into wider strategies

Recognize that climate shelters cannot be isolated measures. Their success and effectiveness depend on their integration into comprehensive climate change adaptation and mitigation strategies to address the causes and impacts of extreme heat and cold.

# The ideal climate shelter



This diagram is based on a survey of 380 residents of La Prosperitat to assess their experiences and perceptions of climate change and the climate shelter network.

The recommendations outlined in this document offer concrete steps to guide **policymakers, technicians, and local representatives** in creating climate shelters that serve and support all residents, especially those who need it most.

By taking an intersectional, community-centered approach, cities can ensure that climate shelters not only provide protection from extreme heat and cold, but also address the complex intersectional **vulnerabilities of marginalized populations**.



**This policy brief is based on the scientific article:**

Ana T. Amorim-Maia, Isabelle Anguelovski, James Connolly, Eric Chu,  
Seeking refuge? The potential of urban climate shelters to address  
intersecting vulnerabilities *Landscape and Urban Planning*, Volume 238,  
2023, 104836, ISSN 0169-2046

*This research received financial support from the Spanish Ministry of Science,  
Innovation and Universities, through the 'María de Maeztu' program for Units of  
Excellence (MDM-2015-0552: CEX2019-000940-M)*



**BCNUEJ**

Barcelona  
Laboratory for Urban  
Environmental Justice  
and Sustainability

ICTA



Institut de Ciència  
i Tecnologia Ambientals - UAB

For more information, visit [www.bcnej.org](http://www.bcnej.org)