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From Green Cities to  
Climate Justice in the  
Green City: Changing  
paradigm and  
practice



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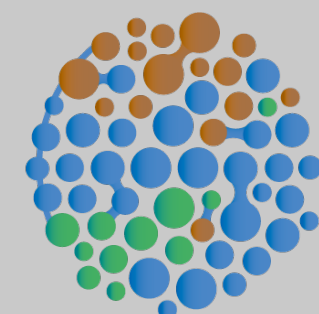
RESILIENT BOSTON HARBOR : SOUTH BOSTON

BCNUEJ

Barcelona  
Laboratory for Urban  
Environmental Justice  
and Sustainability

UAB  
Universitat Autònoma  
de Barcelona

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# BCNUEJ

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# BCNUEJ

*A Barcelona-Based Research Lab Focused On Urban Environmental Justice*

[WHAT WE DO](#)[OUR PROJECTS](#)





Environmental and  
Climate Gentrification



North and Souths Civic  
Mobilization and  
Engagement



Environmental  
Conflicts, Transitions,  
and Degrowth



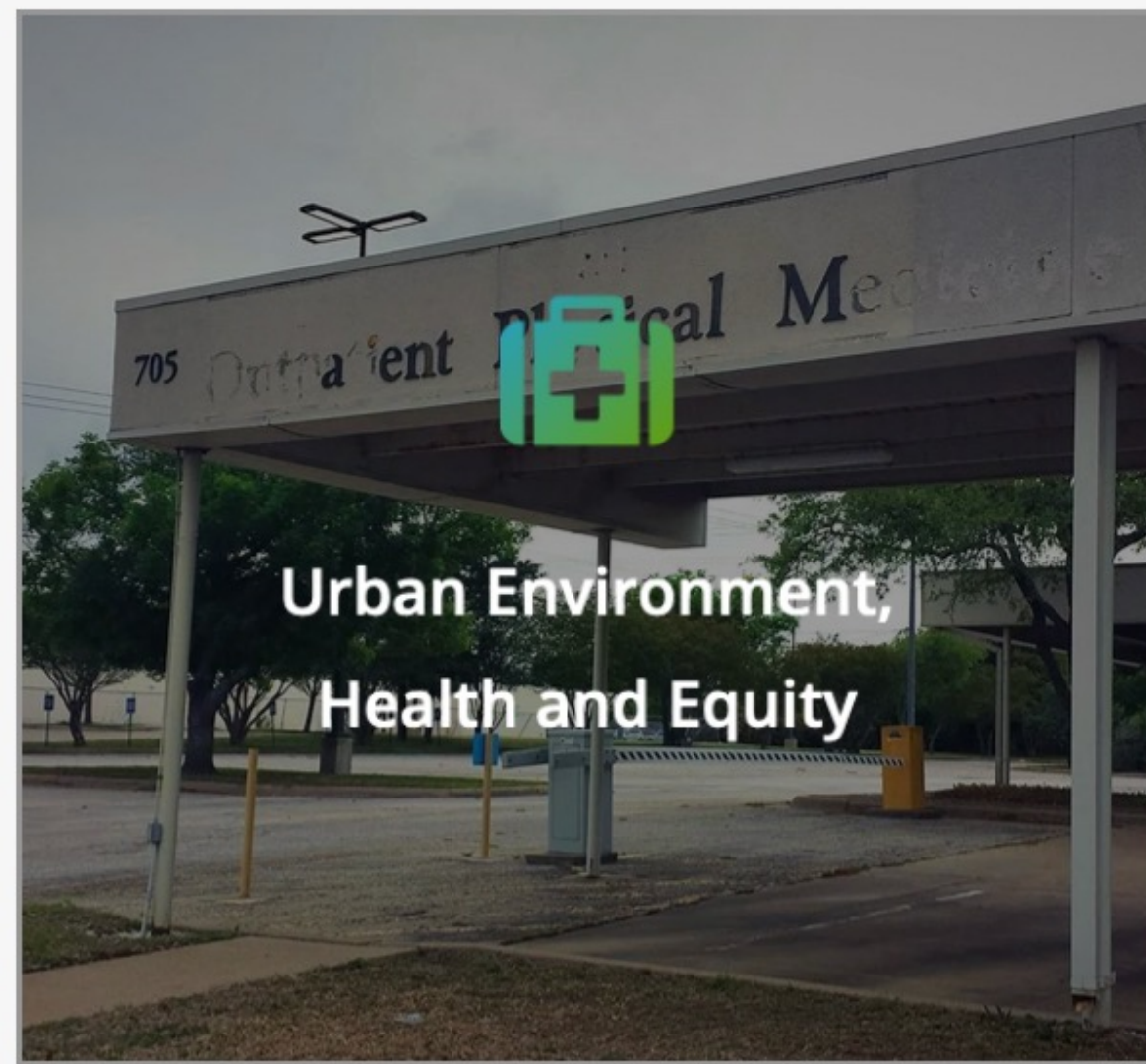
Urban Climate Risk,  
Infrastructures, and  
Justice



Urban and Feminist  
Political Ecologies



Financialization,  
Housing Justice and  
Climate Change



Urban Environment,  
Health and Equity



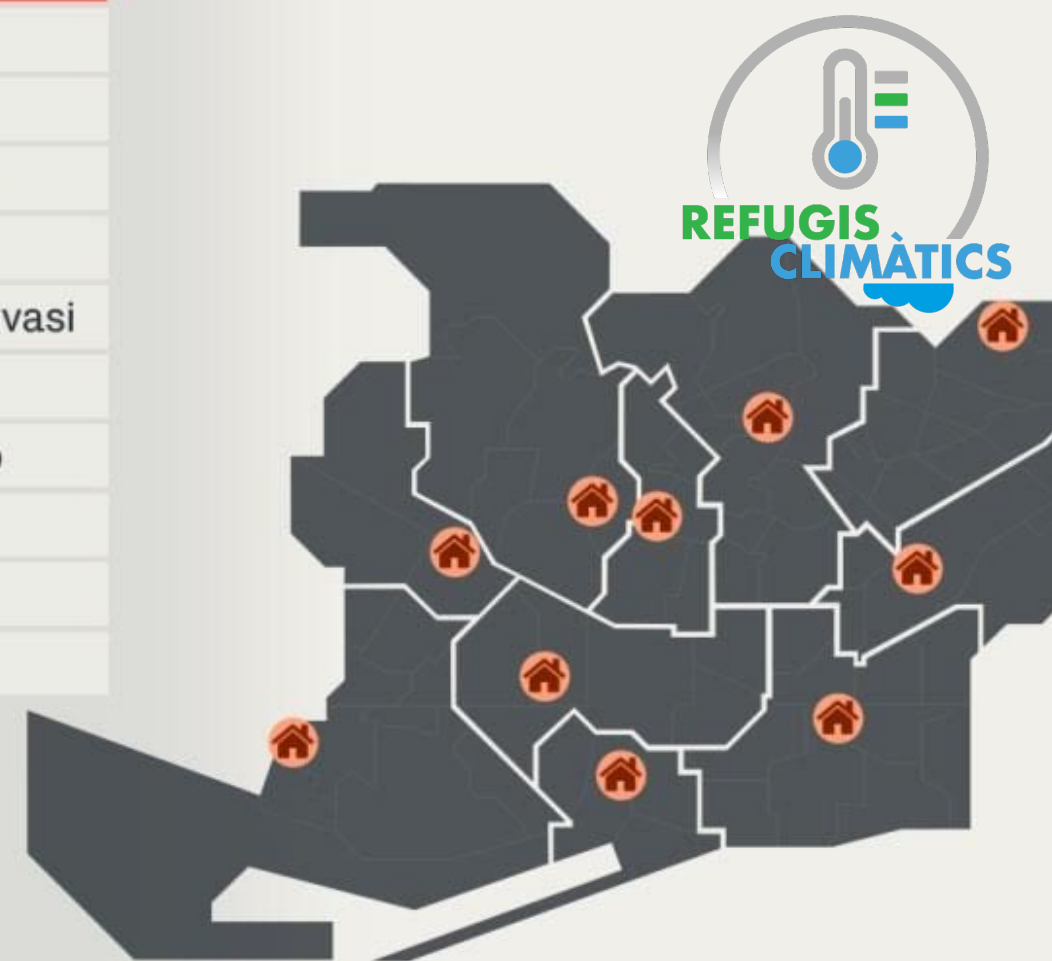
Planetary Urban  
Infrastructures





| Escola            | Districte           |
|-------------------|---------------------|
| Cervantes         | Ciutat Vella        |
| Els Llorers       | L'Eixample          |
| Ramon Casas       | Sants Montjuïc      |
| Ítaca             | Les Corts           |
| Poeta Foix        | Sarrià-Sant Gervasi |
| Rius i Taulet     | Gràcia              |
| Font d'en Fargues | Horta-Guinardó      |
| Antaviana         | Nou Barris          |
| Can Fabra         | Sant Andreu         |
| Poblenou          | Sant Martí          |

Les 10 escoles seleccionades



How can we use municipal responses to the climate emergency to build climate just cities?



# The Green Divide





GREEN SPACE  
+  
CLIMATE RISKS



# Quadruple urban climate injustice

Socially vulnerable groups

Have contributed least to CC

Are most exposed to impacts

Have fewer means to adapt

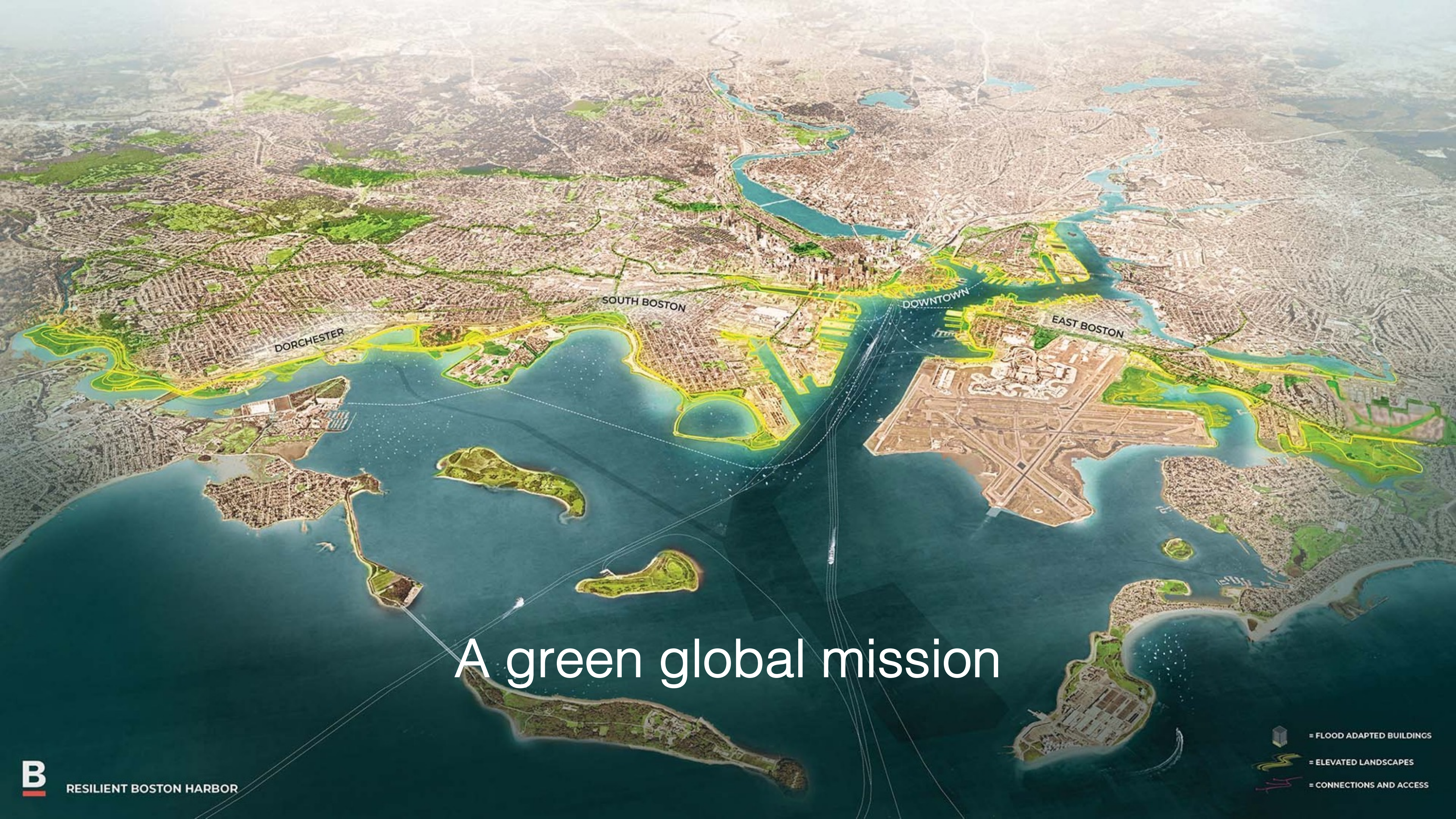
Are more displaced by climate resilient infrastructure











DORCHESTER

SOUTH BOSTON

DOWNTOWN

EAST BOSTON

# A green global mission



RESILIENT BOSTON HARBOR



= FLOOD ADAPTED BUILDINGS



= ELEVATED LANDSCAPES



= CONNECTIONS AND ACCESS





**GREEN CITIES  
EUROPE**



**AIPH**

The world's champion  
for the power of plants

**WORLD  
GREEN CITY  
AWARDS  
2022**



Nature-based solutions  
proposed as a win-win, lower  
cost, and no-regret strategy to  
respond to the climate  
emergency







17.000 m2 of  
new green  
space in  
Barcelona to  
respond to  
climate  
impacts





But for whom in the mid and long term?

To what extent are intersectional current and mid-term socio-climate vulnerabilities accounted for?





# From green privilege to environmental & climate gentrification

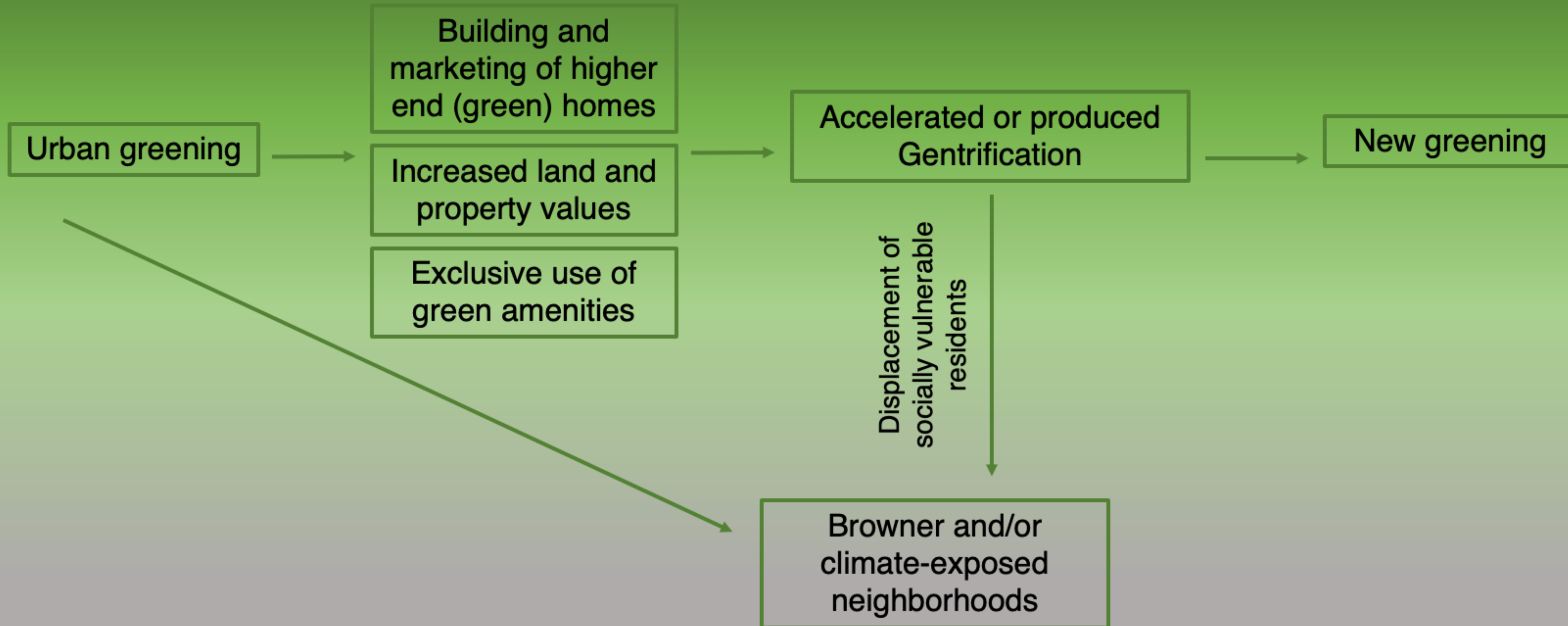




The unequal capture of green value

A green gap & grabbing





GREEN GENTRIFICATION OR GREENING BY SEGREGATING





## A Green Paradox

Dividing access to nature through displacement and segregation



The scope of green injustice, and green gentrification in  
particular



“

Displacement and dispossession are financial,  
physical, esthetical, and socio-cultural





Displacement of single-  
moms, elderly women,  
and racialized women

Infrastructure of  
care affected

Women and children are  
particularly affected by the social  
and health effects of (green)  
gentrification

Health vulnerabilities  
with impact on chronic  
stress and anxiety

Practices of cares  
affected





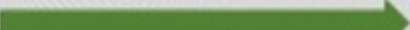




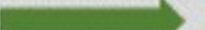
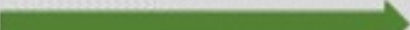




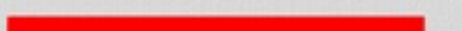
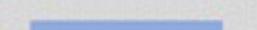
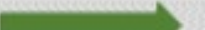




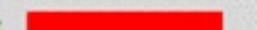
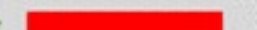






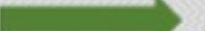









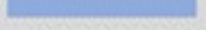
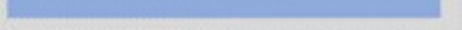

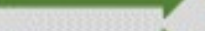
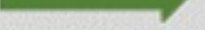
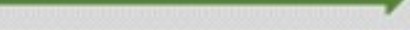
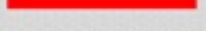




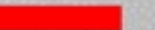
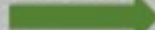







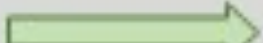


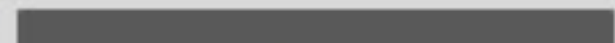
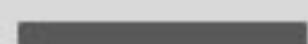
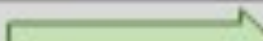
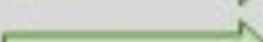
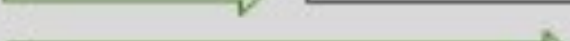
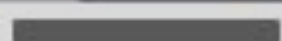

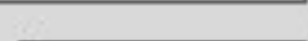


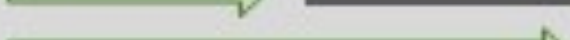
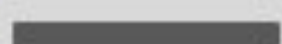

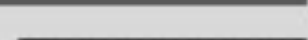







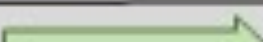

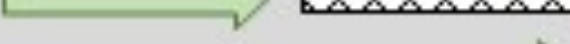

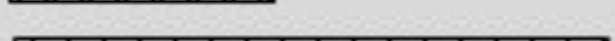









PHYSICAL





# Patterns of Gentrification in 28 cities

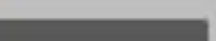

| Temporal Pattern of Green Gentrification   | 1990s   | 2000s   | 2010s  | Cities  |
|--|---|---|--|---|
| Sustained green gentrification throughout the study period   | <br><br>       | <br><br>       |  | Atlanta<br>Louisville<br>Seattle  |
| Sustained green gentrification throughout the study period with no impact on recent gentrification   | <br><br>       | <br><br>        | <br><br>   | Vancouver<br>San Francisco<br>Boston<br>Washington D.C.<br>Denver<br>Philadelphia |
| Sustained green gentrification throughout the study period with recent increasing trend  | <br><br>       | <br><br>       |    | Barcelona   |
| Sustained green gentrification throughout the study period, but broken into segments   | <br><br>     | <br><br>     |  | Milwaukee   |
| Green gentrification only in the later period  | <br><br> | <br><br> | <br><br><br><br><br><br> | Austin<br>Montreal<br>Nantes<br>Copenhagen<br>Detroit                             |
| Green gentrification in the earlier period only  | <br><br> | <br><br> |    | Edinburgh   |
| <b>Legend</b><br>  Greening positively explains gentrification<br>  Greening negatively explains gentrification<br>  Greening is not relevant in explaining gentrification<br> Insufficient data |   |   |  |   |

| Temporal Pattern of Green Gentrification    | 1990s   | 2000s   | 2010s   | Cities                             |
|---|---|---|---|------------------------------------|
| No clear indication of green gentrification | <br><br>       | <br><br>       |   | Baltimore, Portland, Amsterdam     |
|   | <br><br>       | <br><br>       |   | Bristol, Lyon, Sheffield, Valencia |
|   | <br><br>     | <br><br>     |   | Calgary                            |
|   | <br><br> | <br><br> |  | Cleveland                          |
|   | <br><br> | <br><br> |   | Dublin                             |
|   | <br><br> | <br><br> |   | Vienna                             |


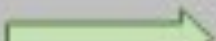
Legend




Greening positively explains gentrification



Greening negatively explains gentrification



Greening is not relevant in explaining gentrification



Insufficient data



# Types of Green Gentrification Cities





SOCIO-CULTURAL



# Green public space, gentrification, and young families in Barcelona

How does new green public space affect young families and children's use of these new spaces?

Interviews and surveys of caretakers, a large majority of them, women, from local schools

Poblenou and Ciutat Vella, Barcelona

Oscilowicz et al. 2020

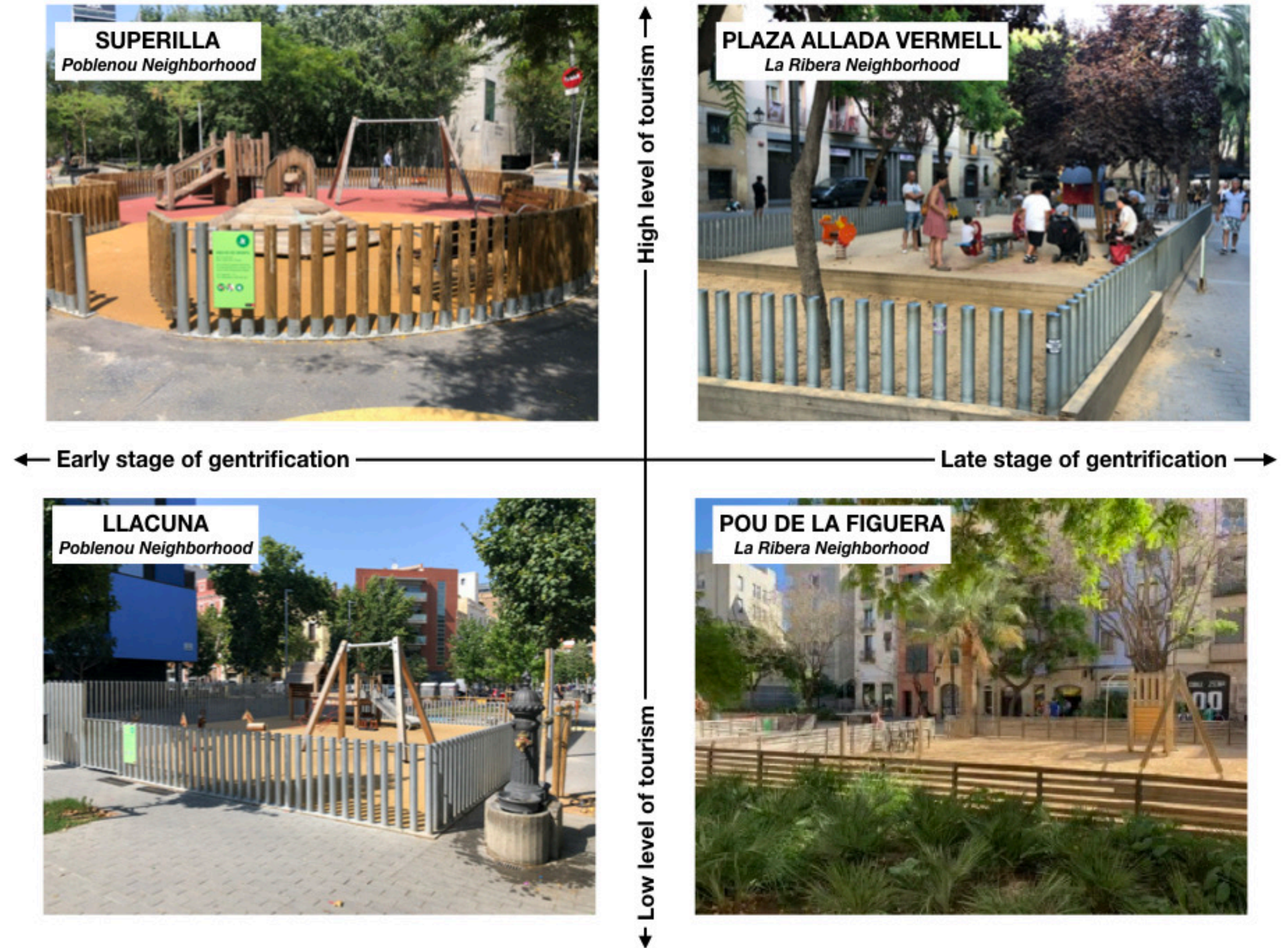




Lower use of green play spaces in advanced gentrification

Poorer perception of those spaces

Loss of community cohesion and place identity





# CLIMATE GENTRIFICATION



# "Green" climate gentrification

Working class and racialized minorities are among the social groups most likely to experience residential and social displacement—in the short and mid-term—from green climate infrastructure and its associated gentrification risks (Anguelovski et al, 2019)



# Philadelphia

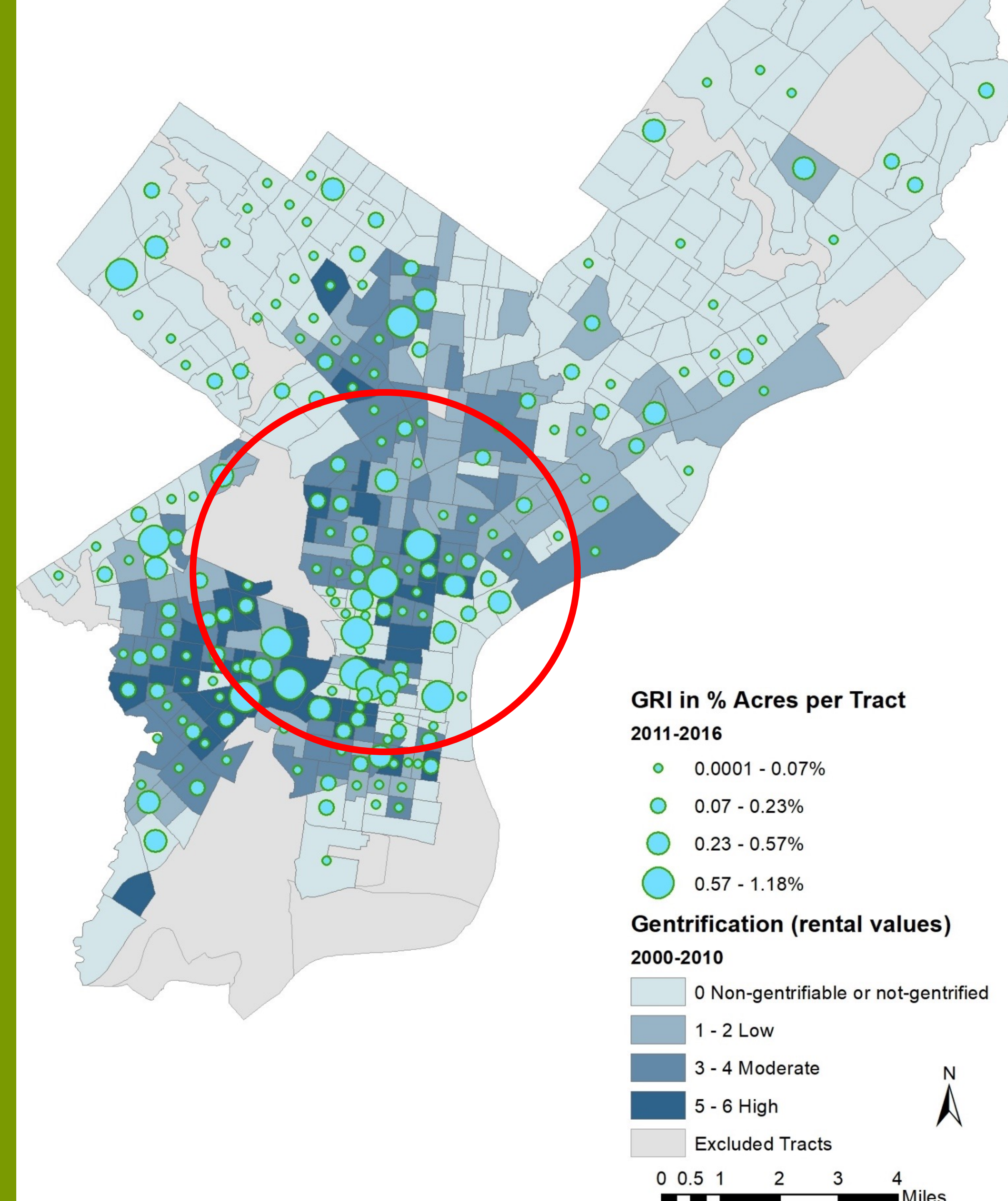
## Green Resilience Infrastructure and Gentrification (Shokry et al. 2019)



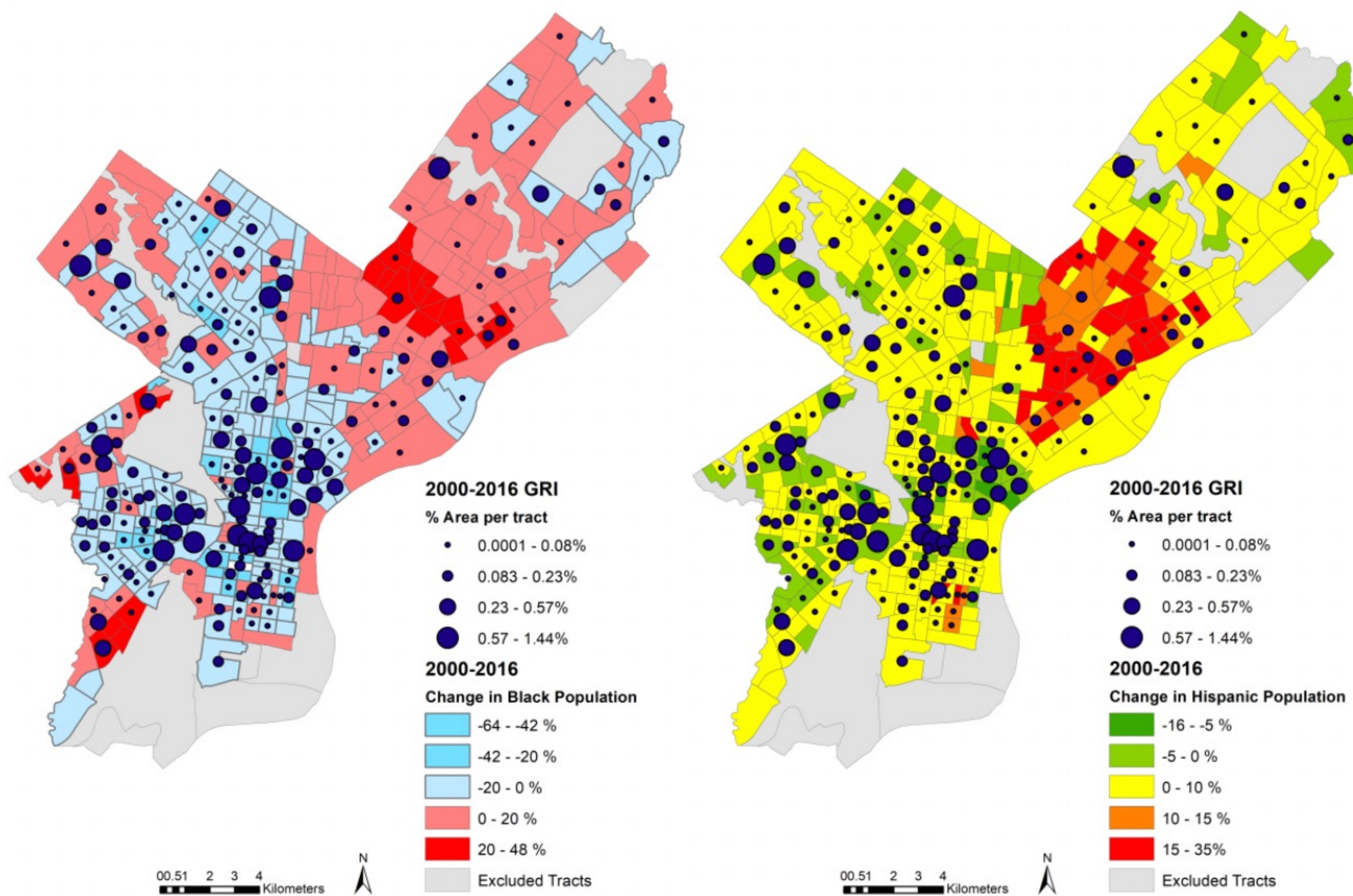


Philadelphia gentrification  
2000-2010

Green Resilient Infrastructure  
(GRI)  
2011-2016







GRI and Change in minority residents, Black (left) and Hispanic (right), 2000-2016 -



# Exclusive climate resilient infrastructure - Barcelona

- Residents share perceptions of benefits coming from green infrastructure
- They experience real estate pressures and displacement, with few options to stay due to high real estate prices
- Fear more displacement
- They perceive that green projects are not for them and that they will not benefit in the medium term
- They share the loss of informal green spaces

Planas-Carbonell et al. 2022





Equity-centered and feminist  
alternatives for just and climate-  
responsive cities cities





Amorim-Maia et al.  
2022



# Community-driven resilience -- Boston

- EJ movement connecting climate resilience to community protection from climate hazards and from multiple displacements
- Environmental educational and stewardship initiatives
- Cooperative development & solidary economy led by Latinx women
- Green walks organized by Latinx women









# Just climate resilience -- Portland

- Cully Ecodistrict with sustainability as anti-poverty strategy + community control over housing
- Green workforce for green infrastructure  
Las Adelitas: 141 units of affordable housing + community center with green features through *Verde*
- Living Cully weatherization + home repair project 2.0







Thomas Cully  
Park, 2018,  
includes native  
prairie habitat  
restoration,  
and a Native  
American inter-  
tribal gathering  
area

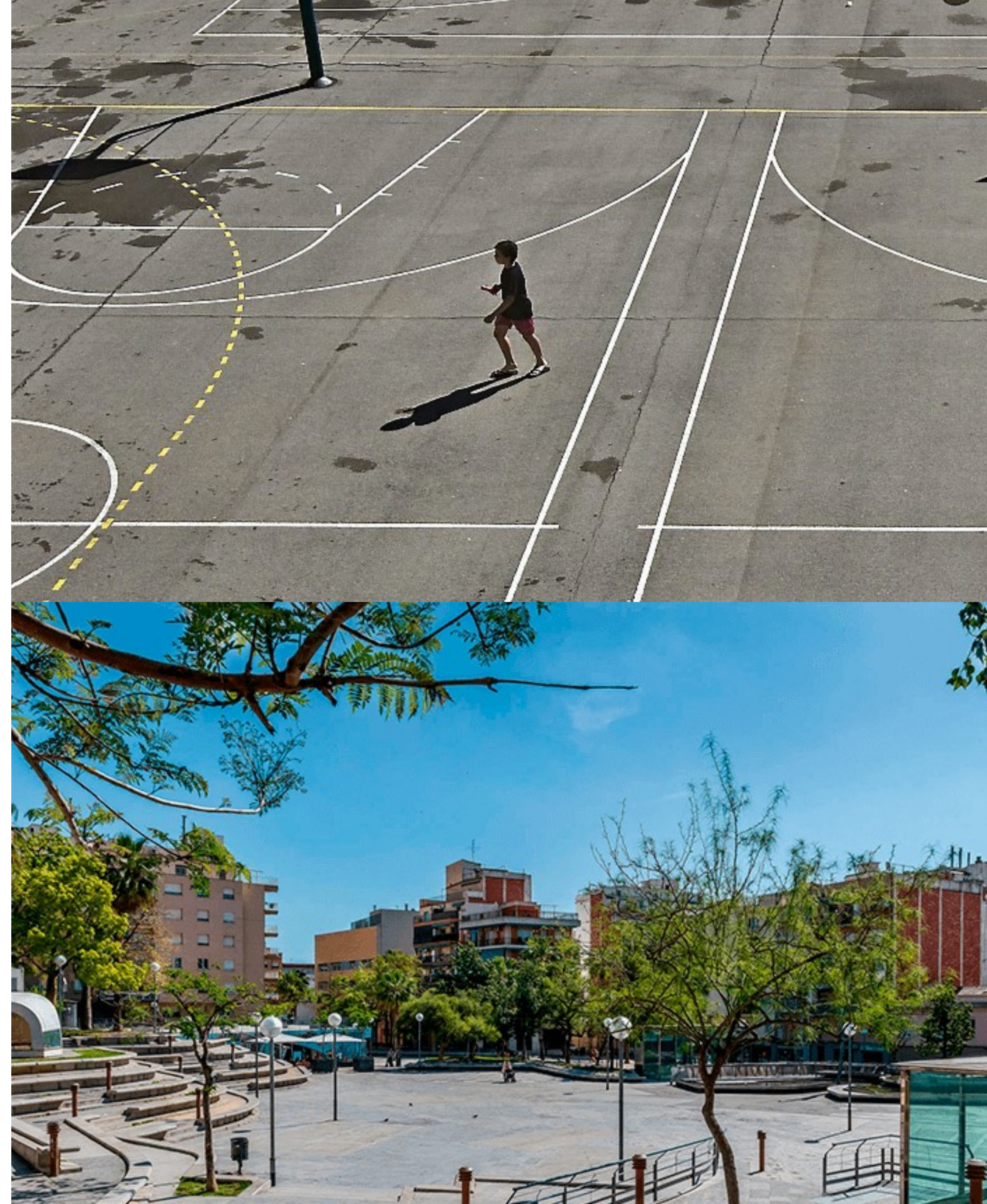


*Verde*  
advocacy and  
PPP building



# Climate refuges -- Barcelona

- 11 schools with climate vulnerability, high contamination, low access to green space and schools with socio-economic mixity
  - Accompanying pedagogy, co-creation of spaces, and social and solidarity economy
- 
- 200 refuges within the AMB as networks of green, grey, and social infrastructure
  - Climate refuge as networks of care





# Superblocks and Green Axes -- Barcelona





# Superilla Barcelona

Cap a una ciutat més sostenible i resilient: mapa de transformacions urbanes

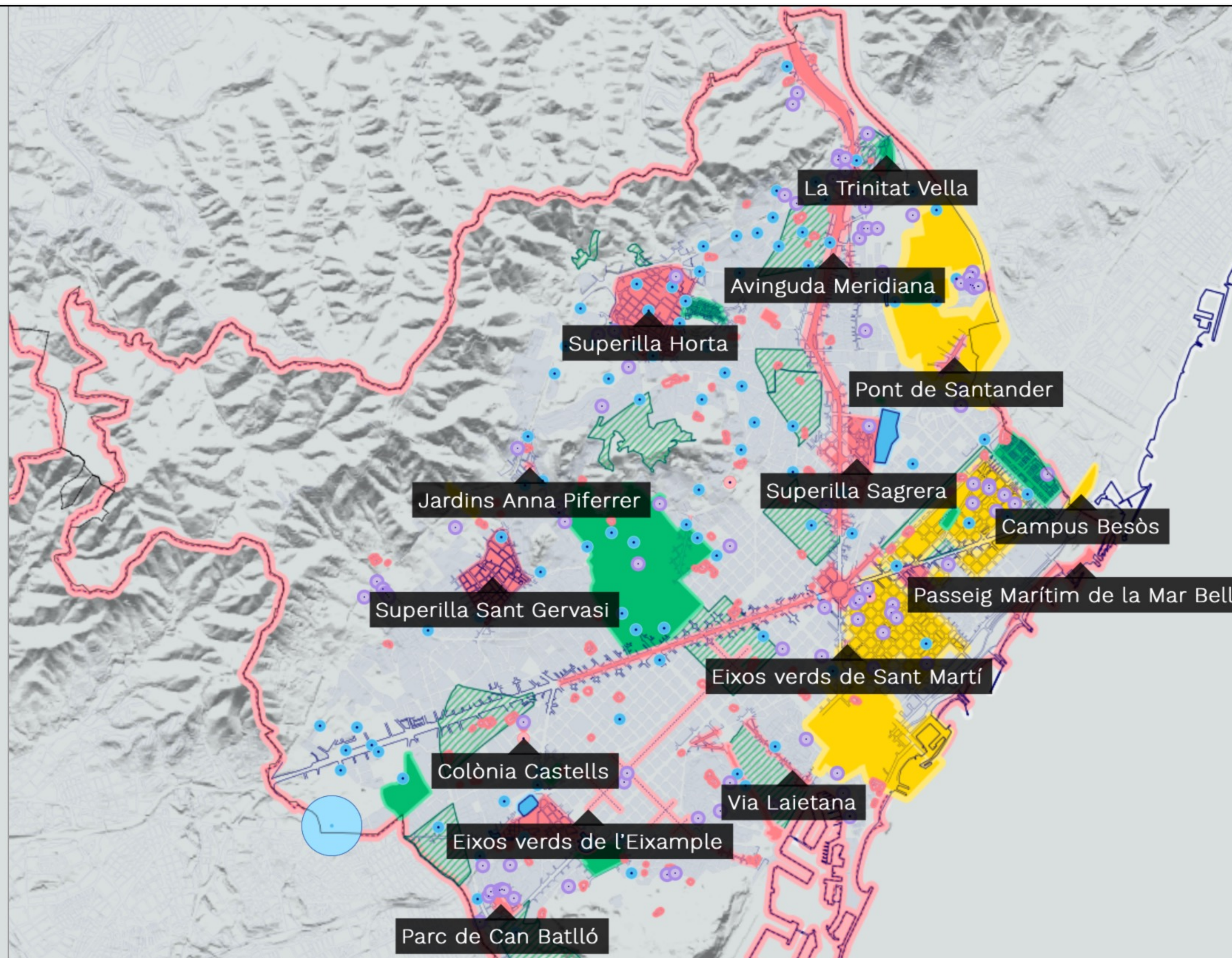


## Introducció

productiva.

Aquesta és la Barcelona que volem: una Barcelona regenerada, adequada als nous temps, amable i sostenible. Una Barcelona que marqui camí com a ciutat del segle XXI.

- Transformació de l'espai públic
- Millora de barris i recintes
- Reactivació de teixits econòmics
- Impuls de la mobilitat sostenible
- Augment del parc públic d'habitatges
- Llista totes les actuacions d'aquest mapa





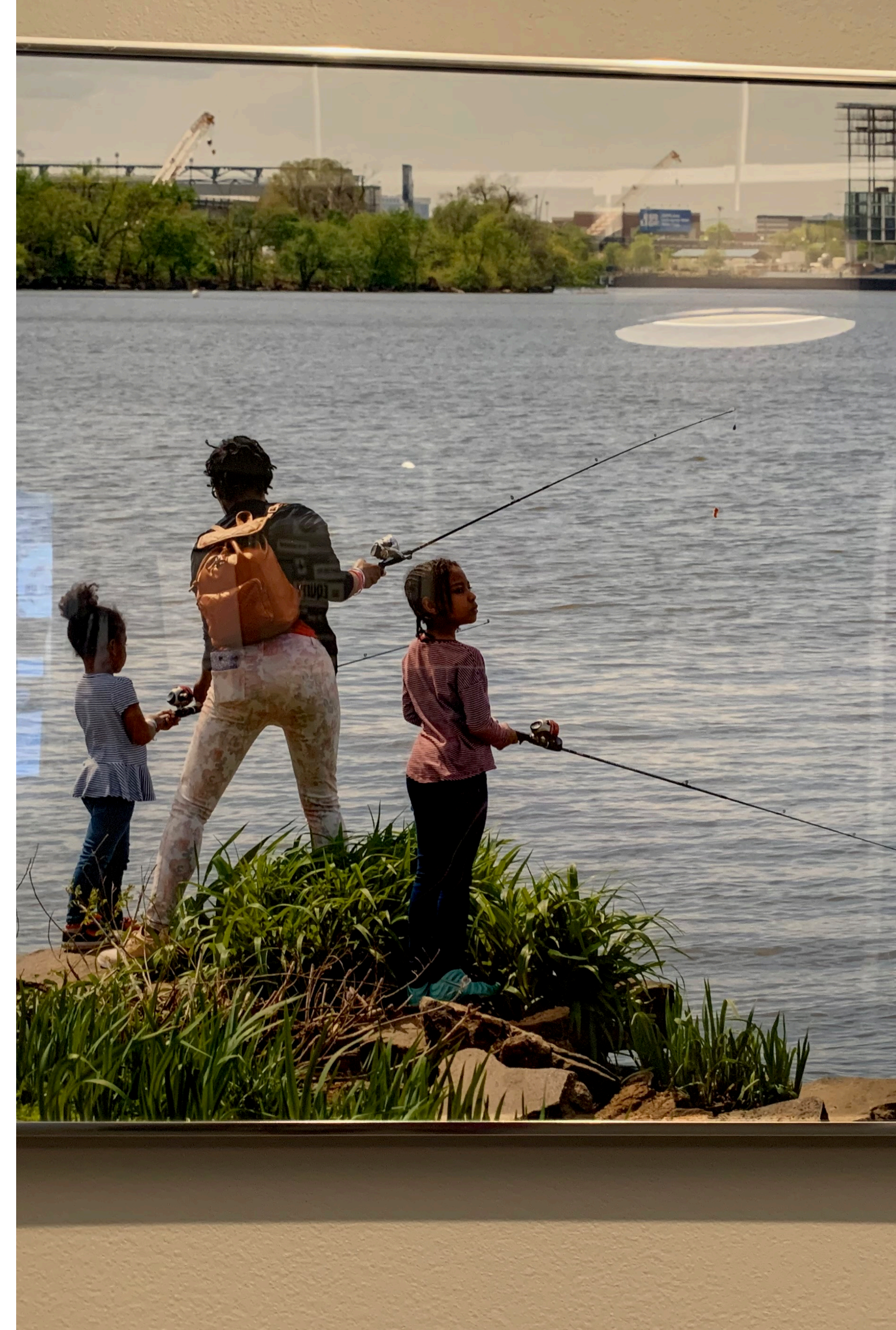
How can urban greening enact a more emancipatory green justice?





# Reparative & abolitionist greening -- Washington, DC

- Networks of care
- Recognition of histories of trauma, loss, and invisible practices of planning
- De-disciplining and de-commodifying landscapes
- Reimagining the river and reviving it from informal, hidden resident-driven practices
- Justice as abolition of carcerality, criminalization and environmental racism (Pellow 2021)







Source: BCNUEJ, 2017

# POLICY AND PLANNING TOOLS FOR URBAN GREEN JUSTICE

A review and analysis of policy and planning tools to fight displacement/gentrification and to improve inclusiveness and access to green amenities

February 2021



## Who is this report for?

This report is written with multiple audiences in mind. From tenants to homeowners, commercial developers to non-profit developers, and municipal planners to federal policy-makers, the tools in this kit involve a variety of stakeholders that contribute to building the urban realm. While this report aims to define the roles each stakeholder can hold and also contribute to an understanding of the language used in the discourse of anti-displacement/anti-gentrification and equitable urban greening, we ultimately aim to provide recommendations for action to three major urban actors — policy-makers, urban planners, and community activists. We direct the toolset analyses and recommendations at action-takers in the Global North geographical context, specifically in Europe, the United States, and Canada.

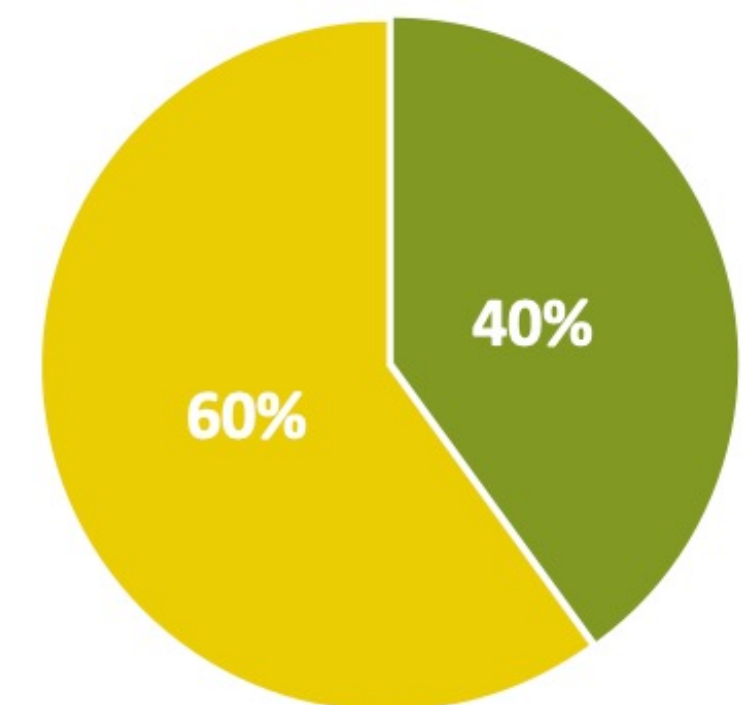


Boston. Source: BCNUEJ, 2019.

## How to engage with this report?

This report is organized into four parts:

1. Theoretical and contextual understanding of the current housing equity and greening landscape that exists in cities in the Global North;
2. Summary and overview of 50 tools that are available to planners and urban policy-makers to combat displacement impacts and pursue green investments and amenities in an equitable and just manner (see Figure 1);
3. Analyses of the policy tools through a lens of scenario and simulation to ground them in specific cultural, political, and growth contexts;
4. Recommendations directed towards urban policy-makers, planners, and community activists.



● Equitable green development tools  
● Anti-displacement and anti-gentrification tools

Figure 1: Breakdown of 50 tools summarized and analyzed in this report's toolkit.



## ANTI-GENTRIFICATION/ANTI-DISPLACEMENT

- Inclusionary zoning for more social housing
- Land Bank
- Density bonuses
- Limitations or freezes to property taxes
- Transfer or development tax on luxury housing
- Rent control, decrease, and/or rent vouchers
- Right to stay or Right to return policies

## IMPROVED AND OPEN GREEN AMENITIES

- Interim green space on vacant land
- Developer's fee and legal obligations towards green space
- Improved green space maintenance and funding
- Zoning for urban agriculture
- Green bonds for green space
- Green amenity planning in large scale developments
- Universal access to green space





Urban greening and green spaces are vital to climate, ecological and human health.

However, achieving equity requires questioning the exclusion embedded in the Green City planning orthodoxy and the poor attention given to intersectional needs and identities





For a different access to  
our case studies....



# The Green Divide

Our interactive web documentary allows viewers to explore cases of green inequalities across six cities in Europe, United States and Canada. Created by Alberto Bougleux, the platform is based on field research from BCNUEJ's GreenLULUs and Naturvation projects, Green and (Un)just Cities and documents the challenges of building greener and equitable cities in Portland, Washington D.C., Boston, Montreal, Nantes and Barcelona. Each city presents three stories of residents mobilizing for equity and inclusion around projects that aim to renature cities and improve access to green infrastructure, as well as brief geo-spatial analyses and relevant references to community groups and struggles.

VISIT





[Interactive](#)[Graphics](#)[Toolkits & Reports](#)[Gender in Academia](#)

## ArcGis StoryMaps Collections

Explore our ArcGis StoryMaps collections which document the adverse impacts of urban greening interventions in cities and highlight community struggles for equitable access to green space and housing in cities across N. America and Europe, including Barcelona, Nantes, Dublin, Atlanta and Washington D.C.

[SEE STORYMAPS](#)





## To Green or Not to Green

Our short documentary created by filmmaker Alberto Bougleux sheds light on the dilemma of greening cities. To Green or Not To Green: Four Stories of Urban (In)Justice in Barcelona showcases four neighborhood struggles against urban inequality in Barcelona, tracing how civic groups are mobilizing to demand better air quality, safe housing conditions, and access to health care facilities—all in relation to green space. Illustrated through the cases of La Fira, El Raval, Tres Turons, and Poblenou, the documentary addresses how issues of wealth, class, race, and unequal access to environmental amenities manifest in a city that has historically grown around a tourism and tech-based economy.





#1: Uneven Access to Benefits of Urban ...



## 10 Drivers of Urban Injustice

As part of the UrbanA project, a Horizon 2020 funded project that aims to translate knowledge on sustainable and just cities into action, this series of videos identifies the 10 main drivers of urban injustice, explained by Isabelle Anguelovski and Panagiota Kotsila, researchers from the Barcelona Lab for Urban Justice and Sustainability (BCNUEJ) at ICTA-UAB.

**FULL PLAYLIST**





# Research Summary

Research on urban justice in Barcelona  
2017-2021 for policymakers and planners

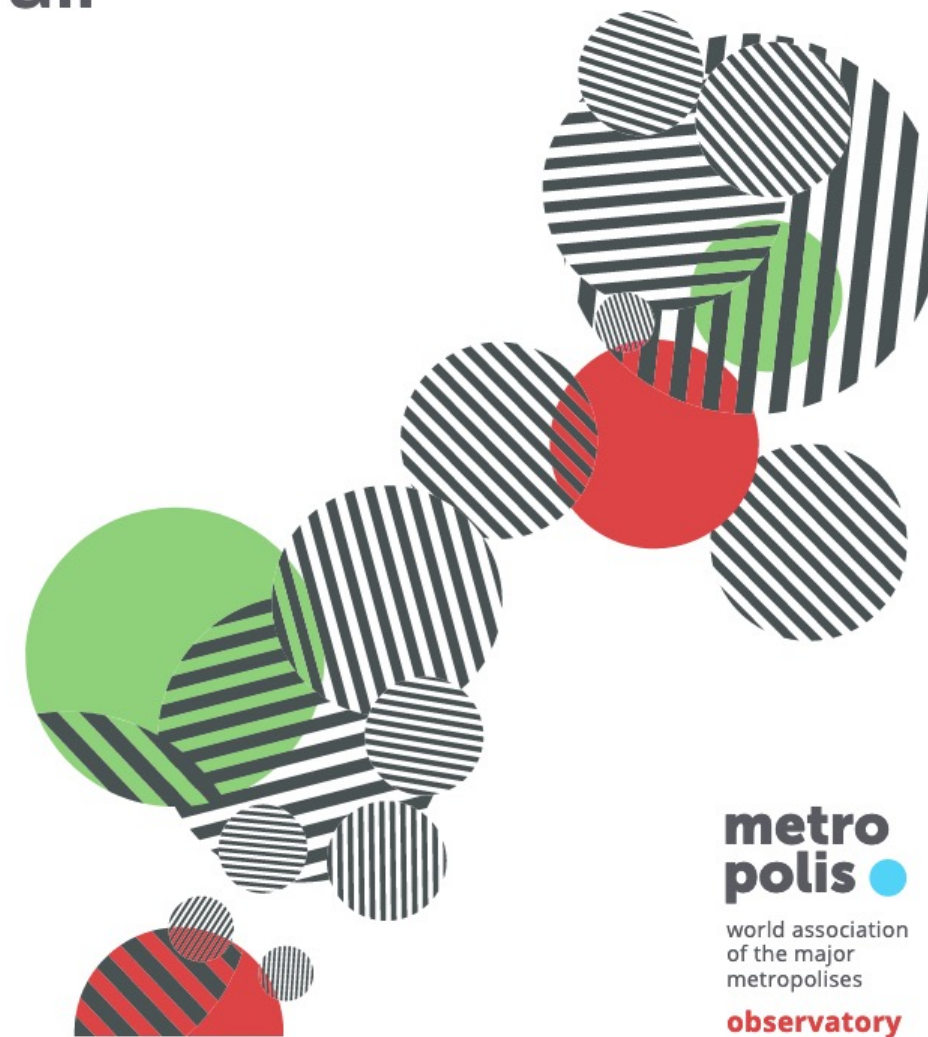
By BCNUEJ

**Metropolis Observatory**  
Galia Shokry & Isabelle Anguelovski

**12**

ISSUE PAPER

## Bringing nature back to the metropolis for all



**metro  
polis**  
world association  
of the major  
metropolises  
**observatory**



Source: BCNUEJ, 2019

## POLICY AND PLANNING TOOLS FOR URBAN GREEN JUSTICE

Fighting displacement and gentrification and improving  
accessibility and inclusiveness to green amenities

April 2021

**BCNUEJ** Barcelona  
Laboratory for Urban  
Environmental Justice  
and Sustainability

**ICLEI**  
Local Governments  
for Sustainability

**UAB**  
Universitat Autònoma  
de Barcelona

**icta**

**IMIM**  
Institut Municipal del Mar  
d'Investigacions Marítimes

**European  
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ROUTLEDGE EQUITY, JUSTICE AND THE SUSTAINABLE CITY SERIES

# THE GREEN CITY AND SOCIAL INJUSTICE

21 TALES FROM NORTH  
AMERICA AND EUROPE

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# GREEN INEQUALITIES

Welcome to our blog! Green Inequalities is a space in which our team members share their thoughts, experiences and research on topics of green gentrification and environmental justice in cities.



## How Green Gentrification Is Compromising Seattle's Last Affordable Neighborhood

By Helen Cole | Green Inequalities, Undisciplined Environments

In South Park, the fight for environmental justice is giving way to an affordable housing crisis. This post is part of a special series developed in collaboration with Undisciplined Environments...



## Are Nature-Based Solutions an Answer to Unsustainable Cities or a Tool for Furthering Nature's Neoliberalisation?

By Panagiota Kotsila | Green Inequalities, Undisciplined Environments

Nature-based Solutions (NBS) are broadly perceived as positive 'triple-win' strategies, though they have so far shown contradictions and limited transformatory potential for advancing environmental justice and sustainability in cities. We...



## What The Struggle For Copenhagen's Folkets Park Can Teach Us About Inclusive Planning

By Stephanie Loveless | Green Inequalities

In the last three decades, Copenhagen has shifted from an obscure Nordic capital to a leading global city. It is known for progressive environmental policies, an enviable public transportation and...





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