Green Urban Space Inequalities

Approaches, issues and examples

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BCNUEJ Barcelona Laboratory for Urban Environmental Justice and Sustainability
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icta
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Institut Hospital del Mar d'Investigacions Mèdiques

BCNUEJ examines how we can create more just, resilient, healthy, and sustainable cities.

What is BCNUEJ?

The Barcelona Lab for Urban Environmental Justice and Sustainability was founded in partnership with the Institute of Environmental Science and Technology (ICTA) at the Universitat Autonoma de Barcelona (UAB) and a research group from the Hospital del Mar Medical Research Institute (IMIM) in Barcelona. The lab develops novel research that builds on urban planning and policy, social inequality, and development studies. Our main emphasis is on the opportunities and challenges created by urban municipal, community, or private initiatives that enhance sustainability, equity, and health in cities.

Our Research

Our research examines processes and dynamics that lead to more just, resilient, healthy, and sustainable cities, bringing together theory and methods from urban planning, public policy, urban and environmental sociology, urban geography and public health. Our studies analyze the extent to which urban plans and policy decisions contribute to more just, resilient, healthy, and sustainable cities, and how community groups in distressed neighborhoods contest the existence, creation, or exacerbation of environmental inequities as a result of urban (re)development processes and policies.

€ 2,400,000
5-Year Budget

12
Researchers

8
Nationalities

7
Disciplines

Team

- ICTA faculty, research scientists, postdoctoral fellows, PhD students, and Master's students

- Focus on green urban planning, environmental equity, and health

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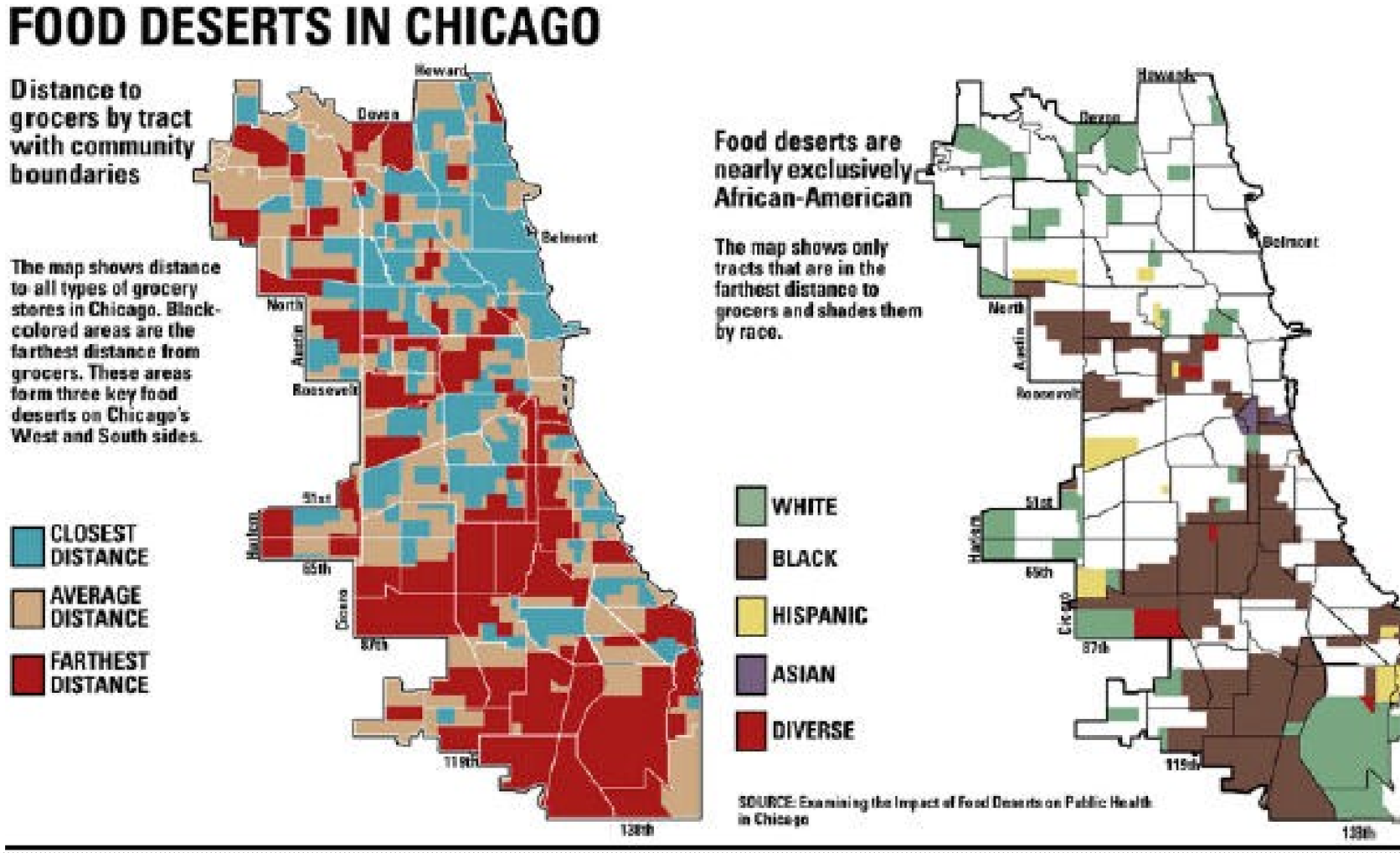
THINK GREEN CITIES 2012

Can green cities be healthy and just?

Health Inequity

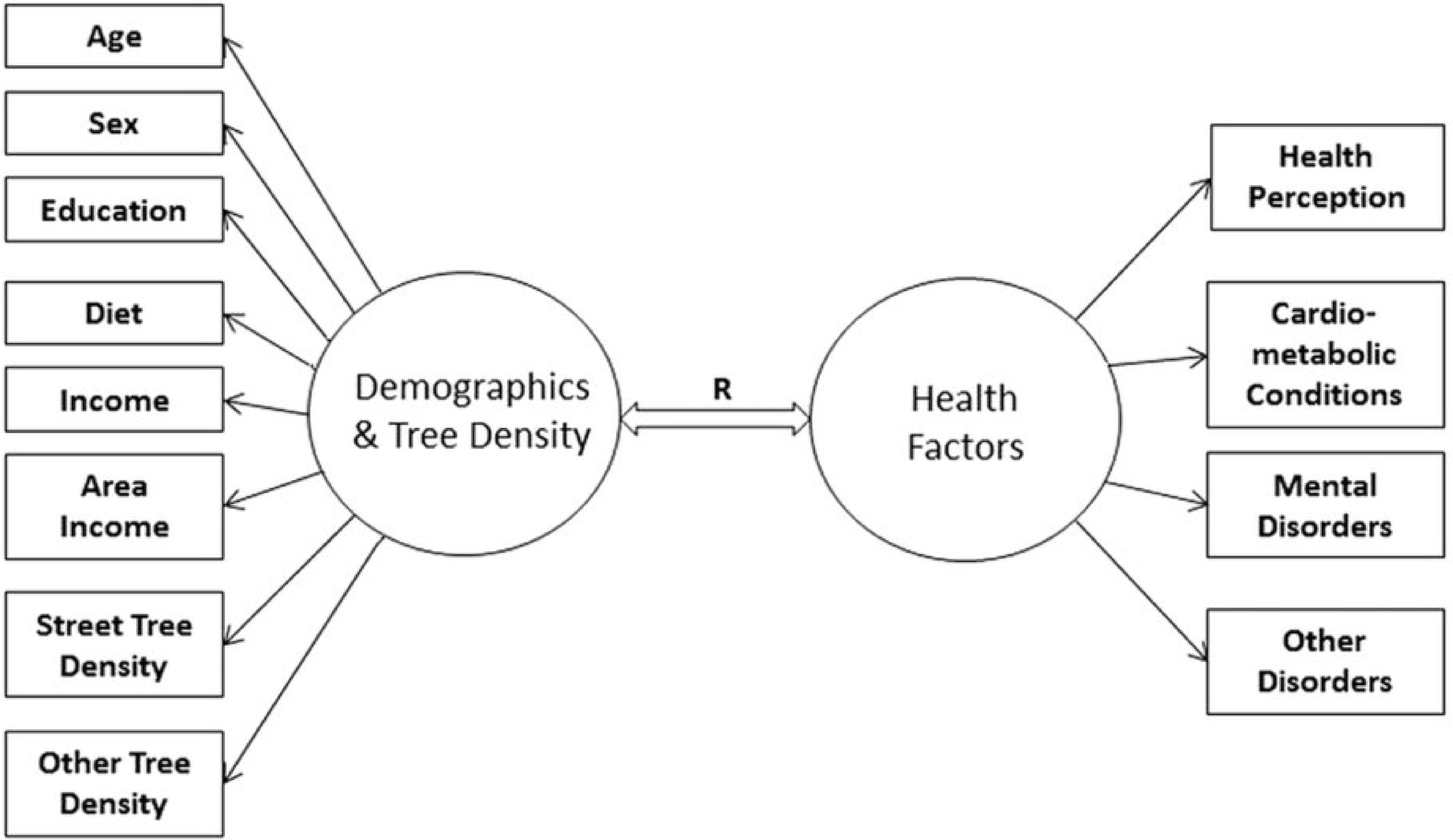
"A difference or disparity in health outcomes that is systematic, avoidable, and **unjust**"

(Whitehead and Whitehead, 1991; Braveman, 2003)



From: Neighborhood greenspace and health in a large urban center

Kardan & al. 2015



OUTLINE

1. Environmental (in)justice, environmental gentrification…What and why?
2. Recent trends and activism in environmental gentrification
3. Green gentrification in Barcelona?

So-called “green” amenities and projects create conditions for the socio-spatial exclusion and invisibilization of the most socially and racially vulnerable residents, their livelihoods, and practices

Parks, greenways, or climate-proofing infrastructure can become GREENLULUS in racially mixed and low-income neighborhoods

1

Environmental (in)justice, environmental gentrification

What are they and why are they important?

Environmental (in)justice:

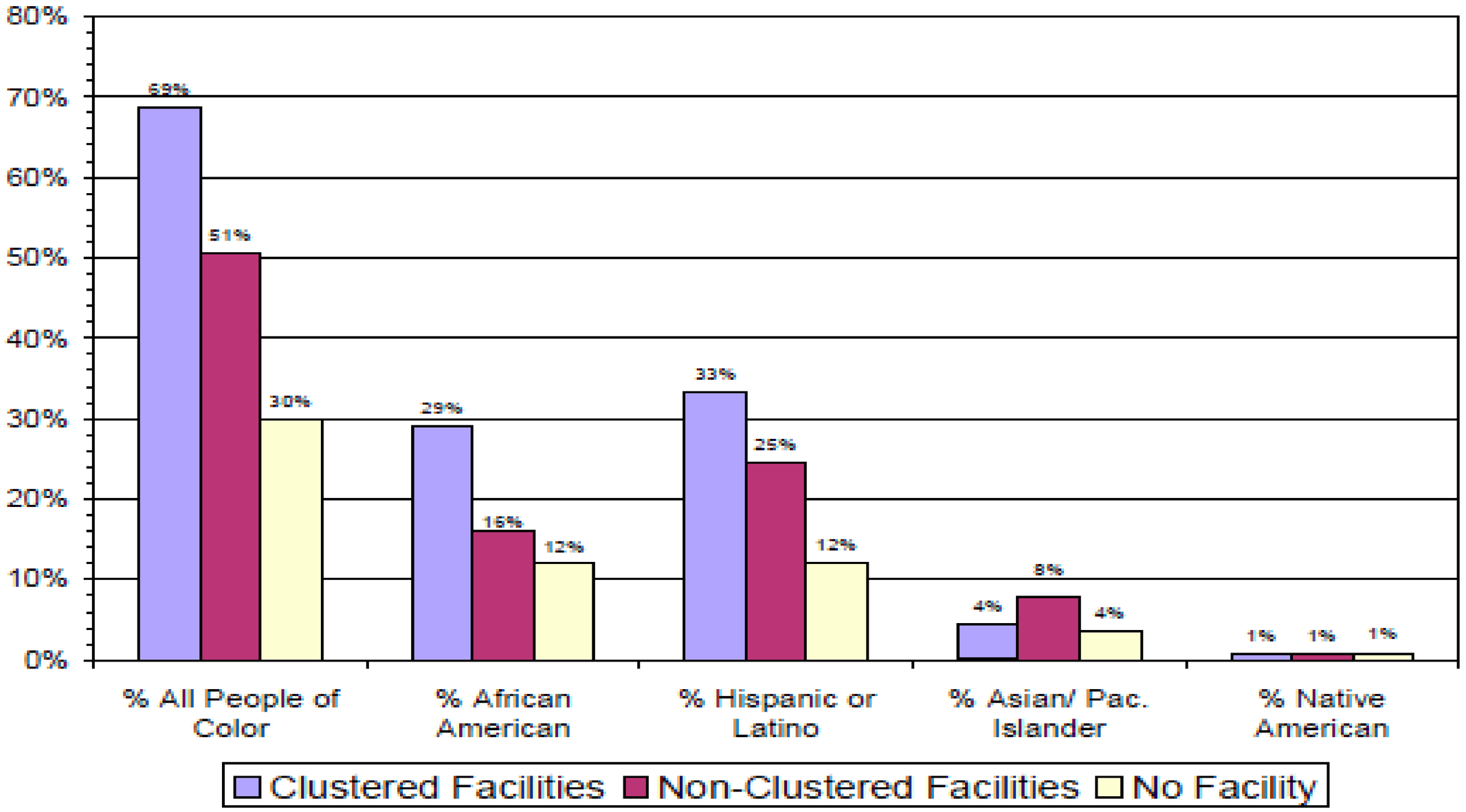
Poor and minority residents tend to suffer to a greater extent from environmental toxics, unsafe working conditions, or climate risks

US, 1980s: EJ Movement

Copyrighted Photo taken by Jenny Labalme
Permission granted to Saira Butt for her website

Flint, 2017:
Lead
contamination
SAFE WATER!
THAT'S ALL
WE WANT!
DADDY DIDN'T
RAISE
A DUMMY
FLINT

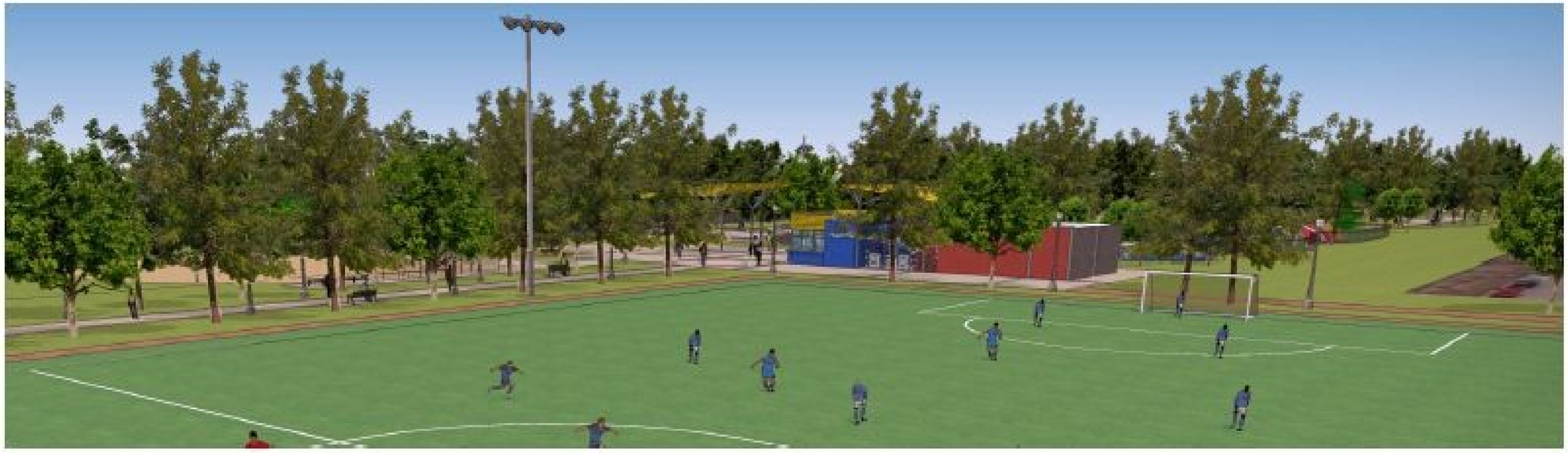
Figure 4.1 – People of Color Percentages in Neighborhoods with Clustered Facilities, Non-Clustered Facilities and No Facility



2000 Census Data

Source: Toxic Wastes at Twenty (Bullard et al. 2007)

Recent agendas



Place-based urban environmental justice

Physical Health (tangible and concrete outcomes)

- Clean air and soil
- Nutrition
- Safe play, recreation, & education
- Physical activity
- Healthy home and habitat

Robustness and Resilience

Demand in Space and Demand for Space

Mental Health

- Nurturing
- Healing
- Protecting
- Wellness

Revitalization and gentrification

- “**Rent gap:**” Difference between “the actual capitalized ground rent of a plot of land given its present use AND the potential ground rent that might be gleaned under a 'higher and better' use” (Smith, 1986)

- Inner city neighborhoods are being rebranded by developers, real estate agents, public officials, and new residents: From urban abandoned ghettos to cultural artifacts and sites for revitalization

- Gentrification characterized by changes in demographic and real estate characteristics, with a combined effect, and by new neighborhood cultural and commercial offerings

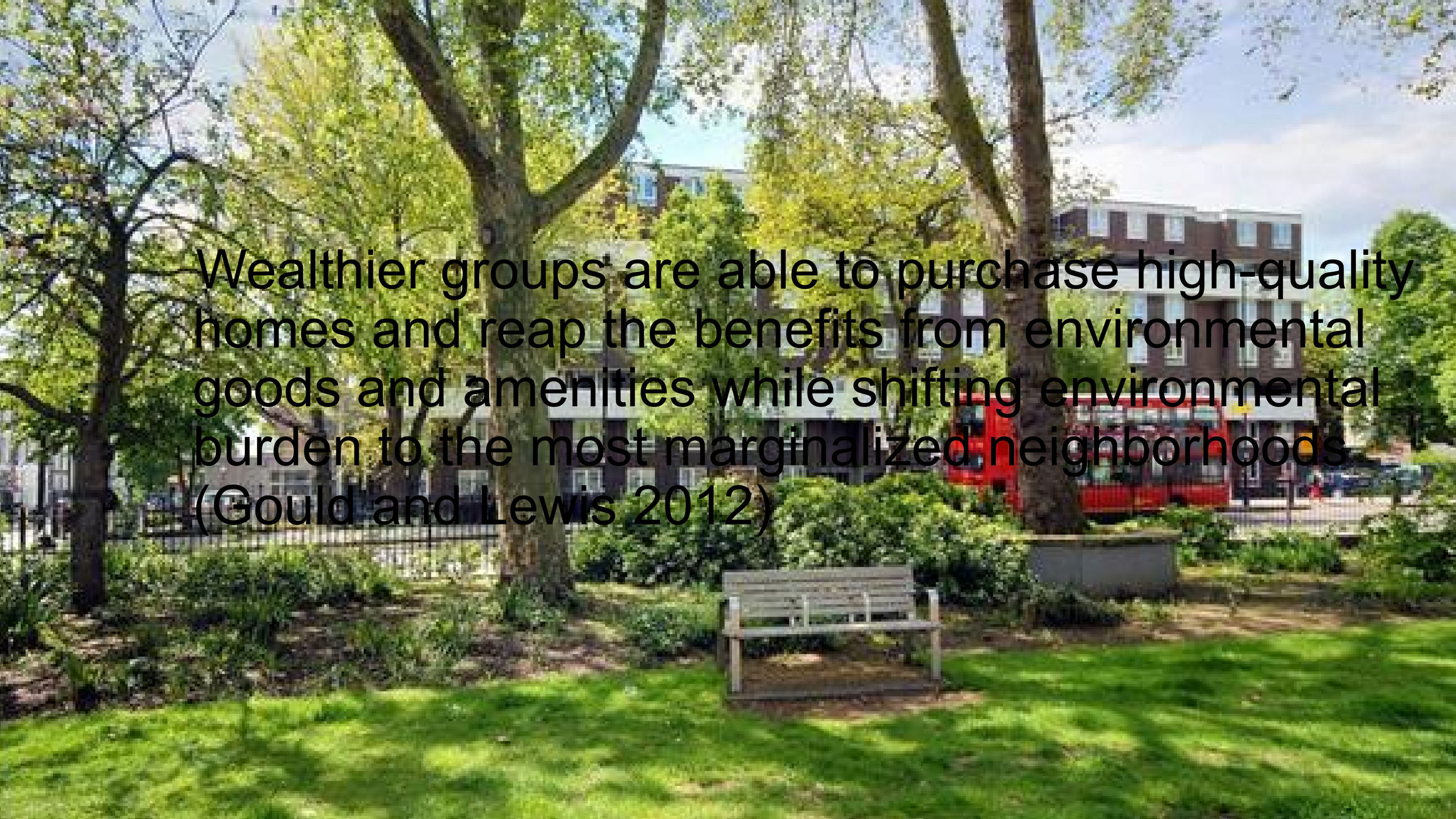
Gentrification and green gentrification

- New urban environmental transformations and improvements are intertwined with inequality (re)formation and gentrification

- Contaminated land creates a new rent gap

- Removal of sites from the Superfund list results in an increase of 26% in mean household income (Gamper-Rabindran and Timmins 2011)

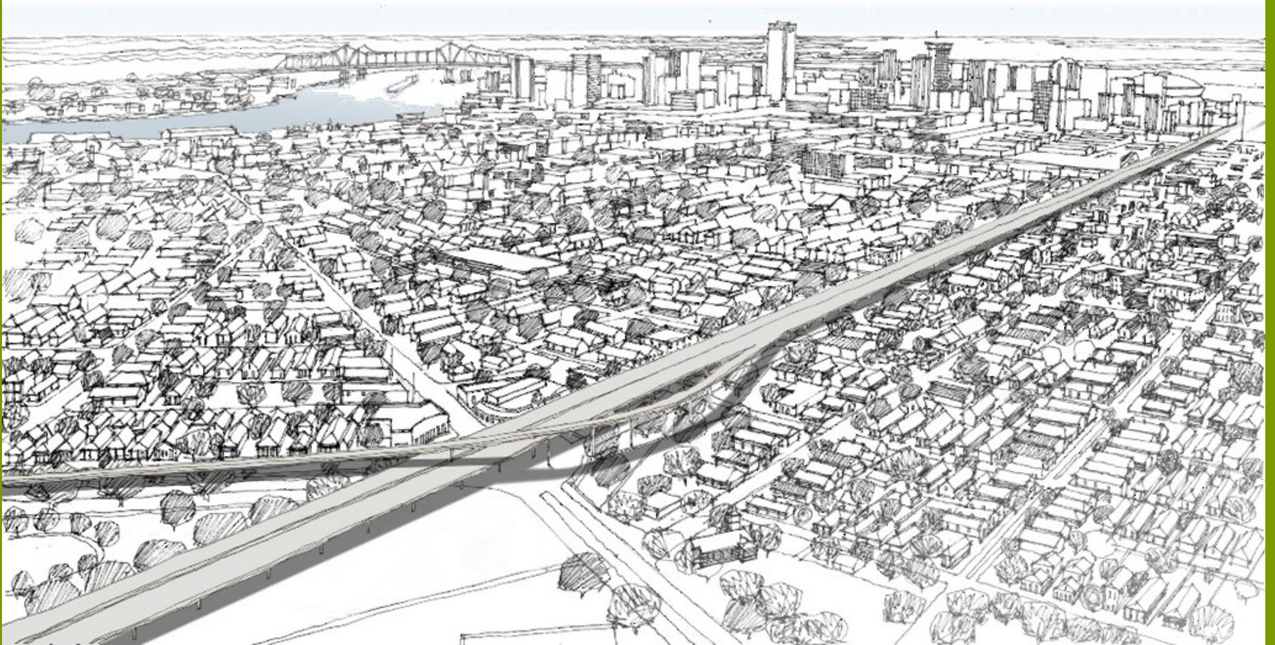
- Housing values within 400m of a green infrastructure can spike by 30% in comparison with similar properties 1.6km away (Immergluck, 2009)

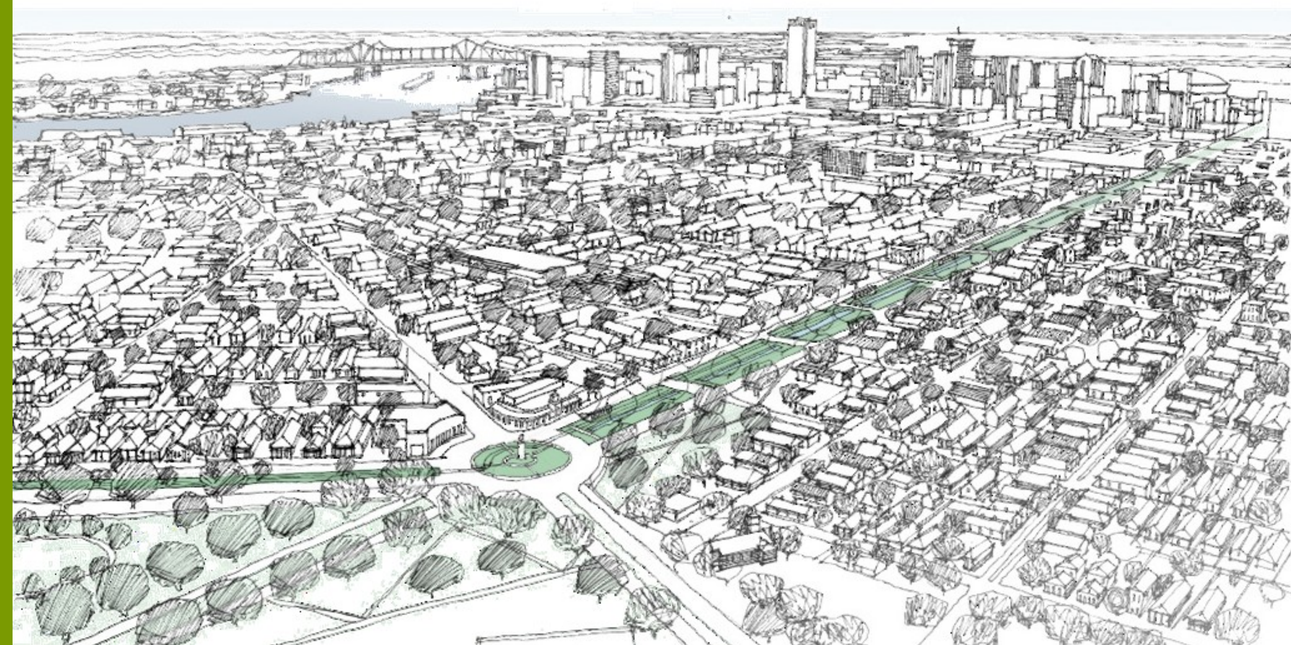


Wealthier groups are able to purchase high-quality homes and reap the benefits from environmental goods and amenities while shifting environmental burden to the most marginalized neighborhoods (Gould and Lewis 2012)

“A restored Claiborne Avenue would be very attractive and would enhance the economic potential of the immediate Claiborne Avenue corridor.

A Report to the Claiborne Corridor Improvement Coalition and Congress for New Urbanism by Smart Mobility Inc. and Waggonner & Ball Architects, New Orleans





Council of New
Orleans

ocial vulnerability in greening, risk reduction, and growth ontainment initiatives: Medellin, Columbia

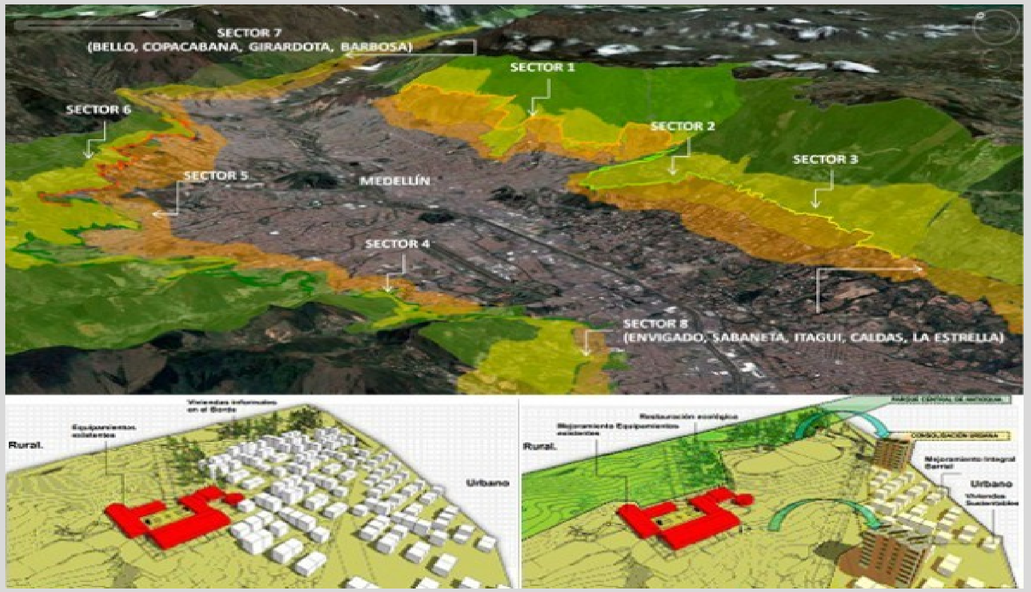
How does city rebranding around “green” and “resilience” discourses and initiatives create displacement and exclusion?

The Green Belt: A Flagship Project

- The most ambitious project of the Mayor's Office for the "most innovative city in the world" : 74 km2 park on the slopes of the Aburra Valley

- Urban sprawl and land slide control with natural reserve

"Given the landscape we have and the infrastructure we have, we cannot keep growing into the mountains" (Urban Development Company)



Inequities in controlling urban growth and managing climate risks

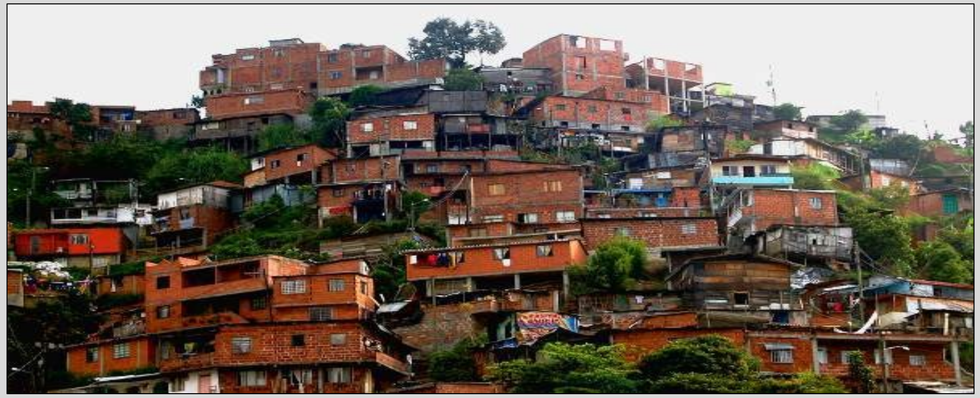
- Relocation controversies
- Overestimating of risks
- Selective displacement
- Military and construction growth machine
- Lack of meaningful community engagement

Public green space enclosure, privatization, and exploitation

- A built-up and manicured “natural” space
- Disciplining nature to create landscapes of privilege and pleasure
- Invisibilization of residents’ relationship to nature
- Professionalization and enclosure of urban agriculture

A new Medellin

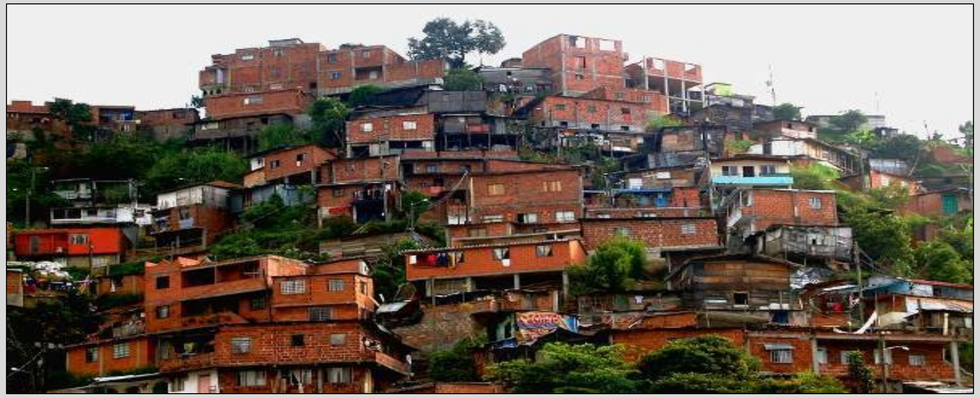
For [the municipality], the Jardín Circunvalar is the “redemption of Medellín” and it is created for skilled and prepared residents – residents able to professionally compete – and for tourists who consume in the new spaces. The JC is not built for the people with little education and little ability to survive in the urban capitalist economy. Those are the ones who end up being expelled from their houses, and facing again multiple forms of social and health and food risks. There is now this idea of false and impossible competition between residents of comunas and higher classes/visitors that are now the emblem of a new Medellín (Community leader 2016)



Double Trauma

- Memory is not only connected to ongoing, hard work and to community-building practices in their territory. It is also connected to traumatic experiences regarding land dispossession and the memories of loved ones lost to violence in previous lands and this new territory. (Community leader, 2016)

- “If they negotiate with armed actors at the national level, why can't they do it with us? We are not occupying these slopes because we want to, but because the conflict forced us to move there. We don't need a green belt, nor a encircling garden, we want the right to live in a dignified way in our territories. We demand the reparation to the



- Green infrastructure emphasizes resilience and growth containment to the exclusion of other elements of well-being and health and of a consideration of environmental equity

- Containment and beautification through greening of poor areas and through land grabbing is transforming them into landscapes of pleasure

- Dispossession of community assets for the “greatest public good”

- Low-income residents are not only replaced by wealthy newcomers but by greenery and by the visitors who come to enjoy it

3

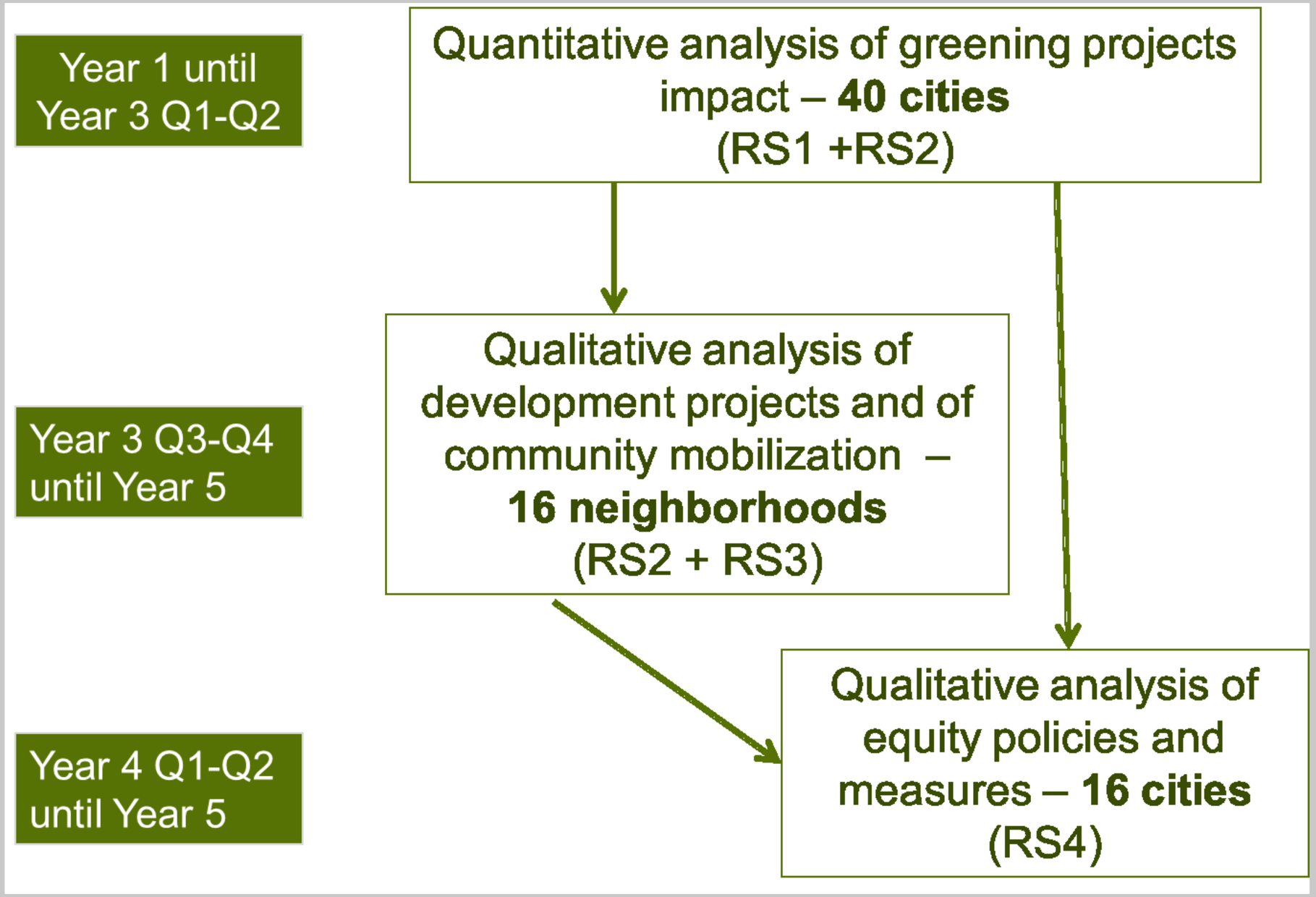
GREENLULUS

Motivating questions

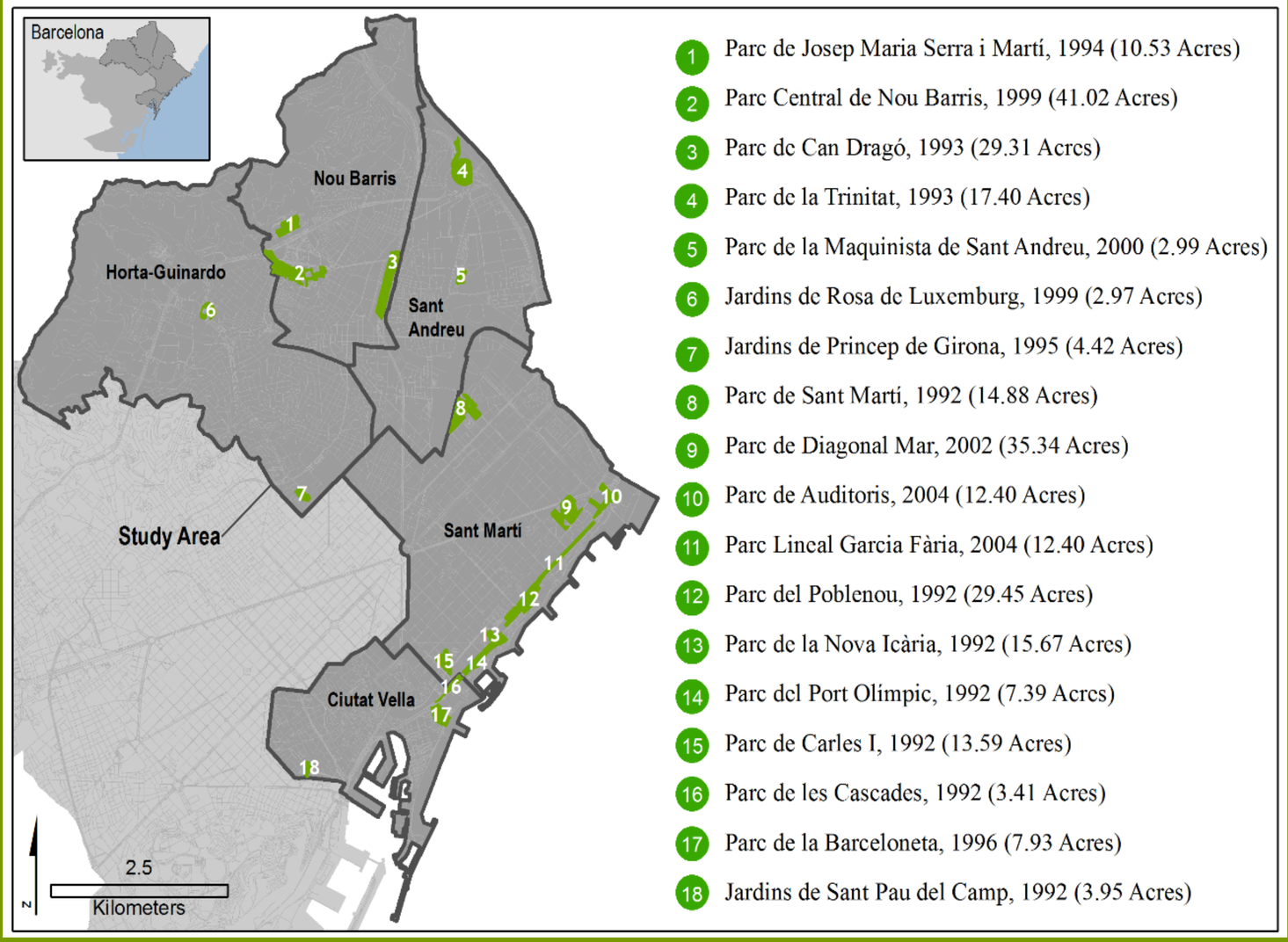
Under which conditions do urban greening projects in distressed neighborhoods positively redistribute access to environmental amenities?

Do new green spaces provide amenities for marginalized residents or do they contribute to their displacement?

TIMELINE


Year 1 until Year 3 Q1-Q2
Quantitative analysis of greening projects impact – **40 cities** (RS1 +RS2)
Year 3 Q3-Q4 until Year 5
Qualitative analysis of development projects and of community mobilization – **16 neighborhoods** (RS2 + RS3)
Year 4 Q1-Q2 until Year 5
Qualitative analysis of equity policies and measures – **16 cities** (RS4)

Barcelona Pilot study



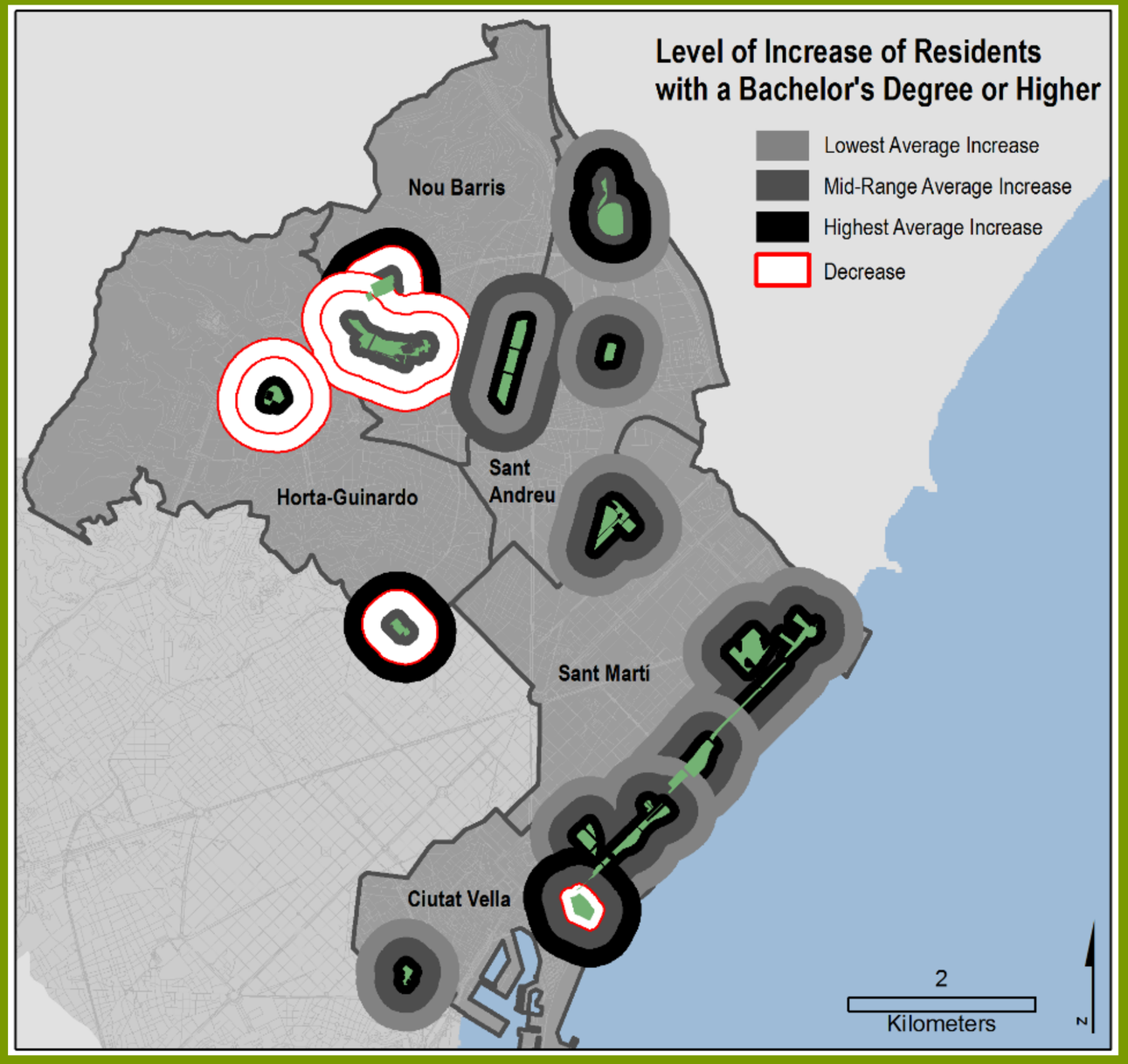
1. Parc de Josep Maria Serra i Martí, 1994 (10.53 Acres)
2. Parc Central de Nou Barris, 1999 (41.02 Acres)
3. Parc de Can Dragó, 1993 (29.31 Acres)
4. Parc de la Trinitat, 1993 (17.40 Acres)
5. Parc de la Maquinista de Sant Andreu, 2000 (2.99 Acres)
6. Jardins de Rosa de Luxemburg, 1999 (2.97 Acres)
7. Jardins de Princep de Girona, 1995 (4.42 Acres)
8. Parc de Sant Martí, 1992 (14.88 Acres)
9. Parc de Diagonal Mar, 2002 (35.34 Acres)
10. Parc de Auditoris, 2004 (12.40 Acres)
11. Parc Lineal Garcia Fària, 2004 (12.40 Acres)
12. Parc del Poblenou, 1992 (29.45 Acres)
13. Parc de la Nova Icària, 1992 (15.67 Acres)
14. Parc del Port Olímpic, 1992 (7.39 Acres)
15. Parc de Carles I, 1992 (13.59 Acres)
16. Parc de les Cascades, 1992 (3.41 Acres)
17. Parc de la Barceloneta, 1996 (7.93 Acres)
18. Jardins de Sant Pau del Camp, 1992 (3.95 Acres)

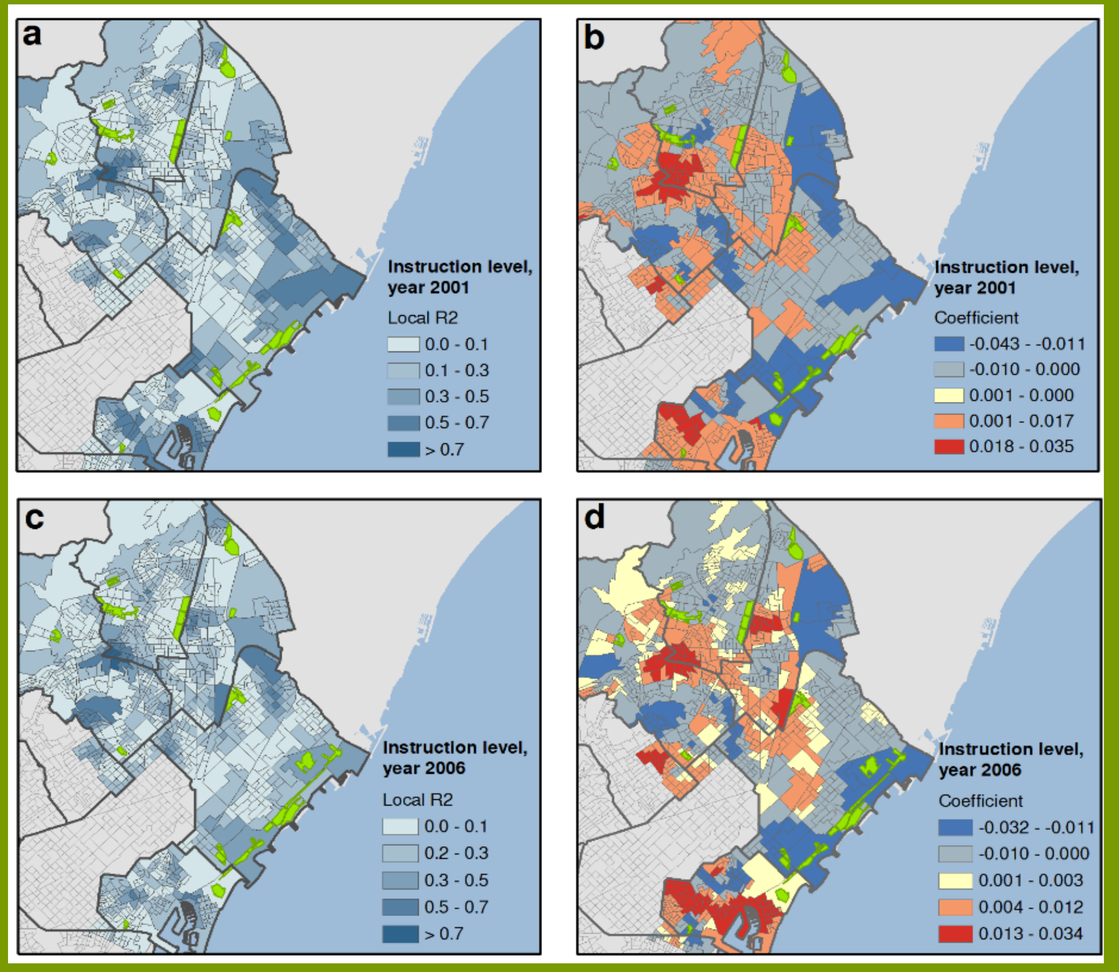
Data & Methods

- Mapping of 18 parks in 5 contiguous districts

- Baseline data from 1990:
  - % of residents with college degree
  - % of residents whose nationality is from the Global North/Global South
  - % of residents over 65 living alone
  - Home sale values
  - Household income

- Analysis of changes in 100m, 300, and 500m buffer areas vs. entire district over a period of 4-12 years upon green space construction
- OLS and GWR analysis

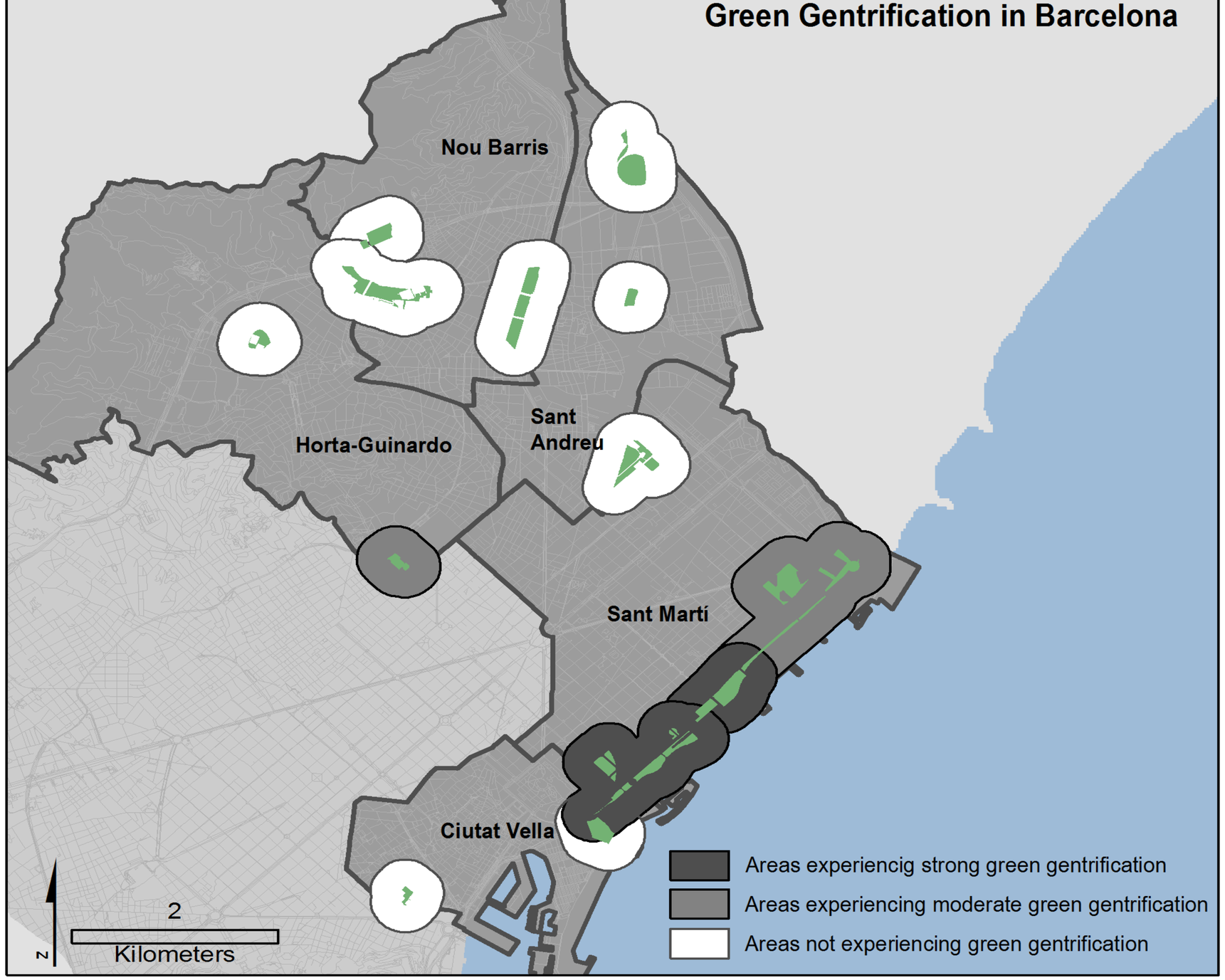

Level of Increase of Residents with a Bachelor's Degree or Higher
Lowest Average Increase
Mid-Range Average Increase
Highest Average Increase
Decrease
Nou Barris
Horta-Guinardo
Sant Andreu
Sant Martí
Ciutat Vella
2
Kilometers
N


a
Instruction level, year 2001
Local R2
0.0 - 0.1
0.1 - 0.3
0.3 - 0.5
0.5 - 0.7
> 0.7
b
Instruction level, year 2001
Coefficient
-0.043 - -0.011
-0.010 - 0.000
0.001 - 0.000
0.001 - 0.017
0.018 - 0.035
c
Instruction level, year 2006
Local R2
0.0 - 0.1
0.2 - 0.3
0.3 - 0.5
0.5 - 0.7
> 0.7
d
Instruction level, year 2006
Coefficient
-0.032 - -0.011
-0.010 - 0.000
0.001 - 0.003
0.004 - 0.012
0.013 - 0.034

Park Name (Year Built)	District	Bachelor's Degree	65 or Older Living Alone	Global North	Income	Home Sales	Total
Jardins de Sant Pau del Camp (1992)	Ciutat Vella	0	0	0	1	0	1
Parc de la Barceloneta (1996)	Ciutat Vella	1	1	0	0	0	2
Jardins Princep de Girona (1995)	Horta-Guinardó	0	1	1	0	1	**3**
Jardins de Rosa de Luxemburg (1999)	Horta-Guinardó	1	0	0	0	0	1
Parc de Can Dragó (1993)	Nou Barris	1	0	0	0	1	2
Parc Josep M. Serra i Martí (1994)	Nou Barris	0	0	0	0	1	1
Parc de Nou Barris (1999)	Nou Barris	1	0	0	1	0	2
Parc de la Trinitat (1993)	Sant Andreu	1	0	0	1	1	2
Parc de la Maquinista (2000)	Sant Andreu	1	1	0	0	0	2
Parc de Sant Martí (1992)	Sant Martí	0	0	0	0	0	0
Parc del Poblenou (1992)	Sant Martí	1	1	1	1	0	**4**
Parc de Diagonal Mar (2002)	Sant Martí	1	1	0	1	0	**3**
Parc del Port Olimpic[1] (1992)	Sant Martí	1	1	1	1	0	**4**

Overall green gentrification indicator scores for parks within the study area

Results


Green Gentrification in Barcelona
Nou Barris
Horta-Guinardo
Sant Andreu
Sant Martí
Ciutat Vella
Areas experiencig strong green gentrification
Areas experiencing moderate green gentrification
Areas not experiencing green gentrification
2
Kilometers
N

Barcelona Discussion

- Sant Martí experienced strong environmental gentrification
  - Changes have been accompanied or followed by revitalization projects
- Northwestern Barcelona has not experienced green gentrification
- Mixed results for Ciutat Vella

Barcelona Conclusion

- Impacts of new parks in vulnerable neighborhoods depend on their context of creation, setting, and built environment
- Green gentrification has NOT occurred in dense distressed neighborhoods or in neighborhoods with a semi-old building stock associated with dictatorship or transition projects
- Some areas have gained vulnerable residents, which points to new forms of socio-spatial segregation

Les cinc superilles pilot

Maternitat de Sant Ramon
Àmbit pilot les Corts

Àmbit pilot Eixample

Sants
Àmbit pilot Sants-Montjuïc

Hostafrancs

Nova Esquerra de l'Eixample

Antiga Esquerra de l'Eixample

la Sagrada Família

Àmbit pilot Plaça de les Glòries

el Clot

el Fort Pienc

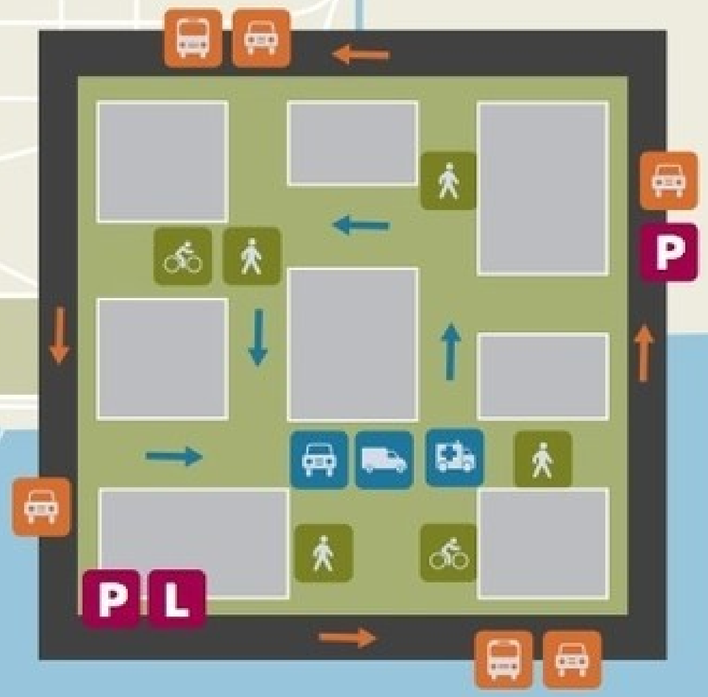
el Poblenou
Àmbit pilot St. Martí

- Vehicles de pas i transport públic
- Trànsit de vianants i de bicicletes
- Vehicles de residents, càrrega i descàrrega, emergències
- Aparcaments i plataforma logística
- Xarxa bàsica
- Xarxa secundària interna
- Eix viari per al vianant i altres usos de l'espai públic
- Eis viari per al transport motoritzat

Font: Ajuntament de Barcelona / Gràfic: X. Laborda

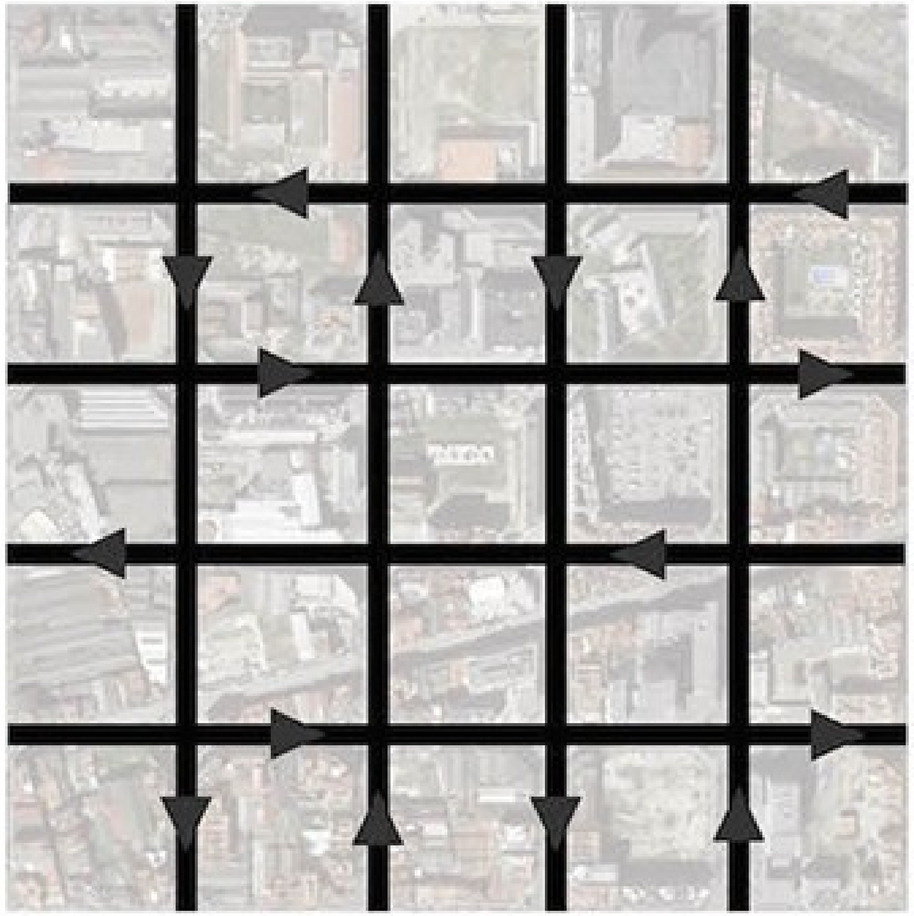
Esquema original de superilla de l'Agència d'Ecologia Urbana de Barcelona

(No directament aplicable a les cinc superilles pilot)



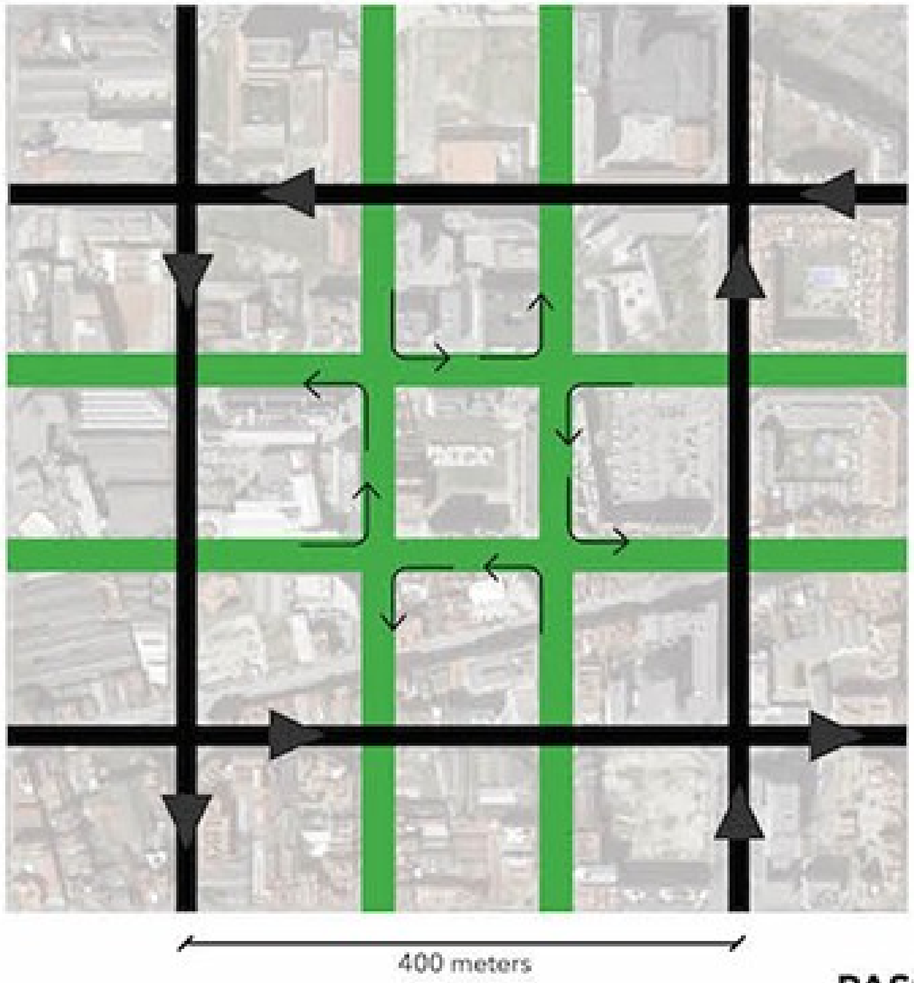
Road hierarchy in a Superblock model

CURRENT SITUATION



Basic network: **50 km/h**

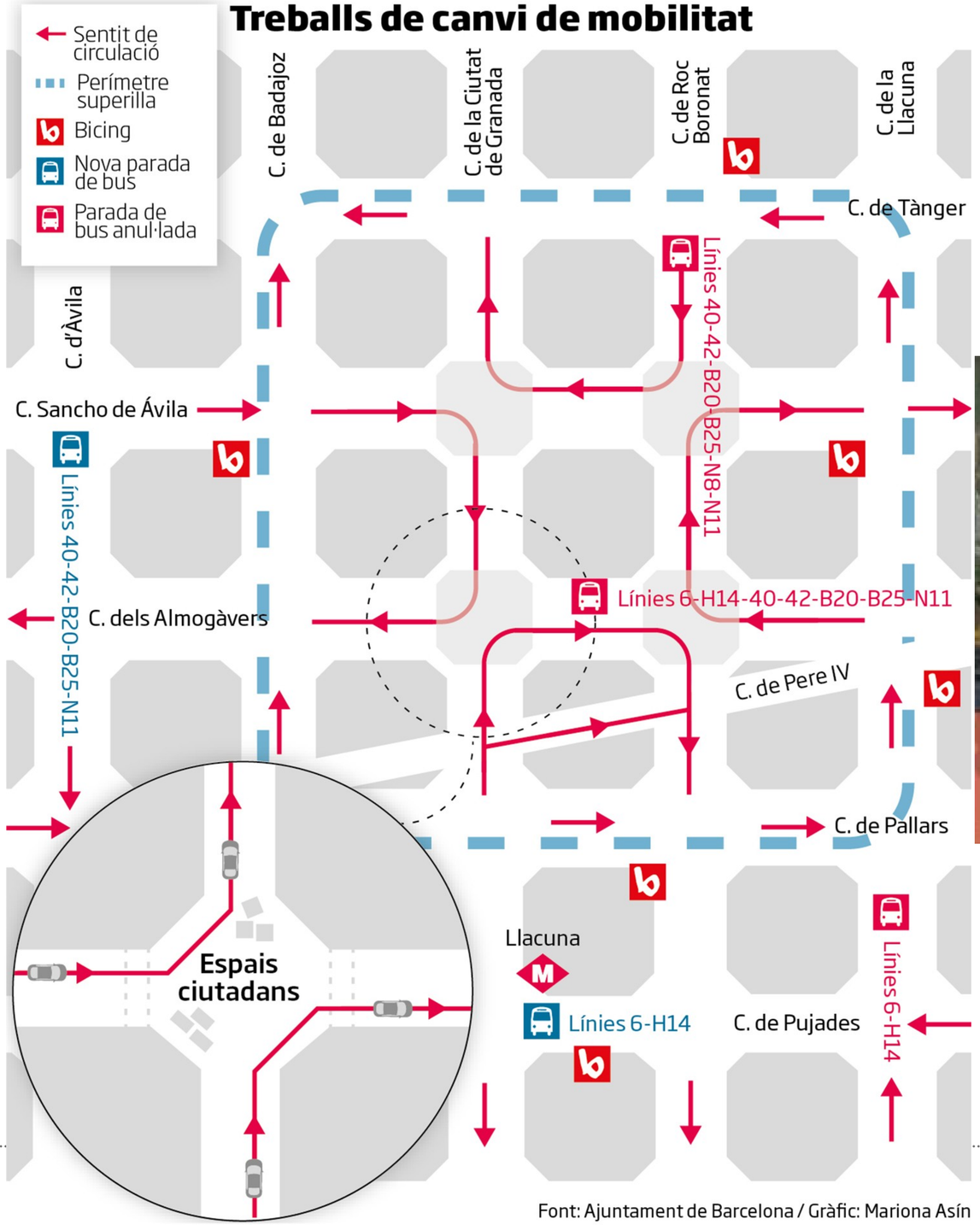
SUPERBLOCK



Local network: **10 km/h**

PASSING VEHICLES DO NOT GO THROUGH

Treballs de canvi de mobilitat



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To what extent will the Superilles project exacerbate or create new socio-spatial inequities in the city?

What types of inequities or tensions might some of the sustainability or greening projects you know of create or exacerbate?

What is the role of planners, community groups, architects, and policy makers in addressing these inequities?

CONTACT

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