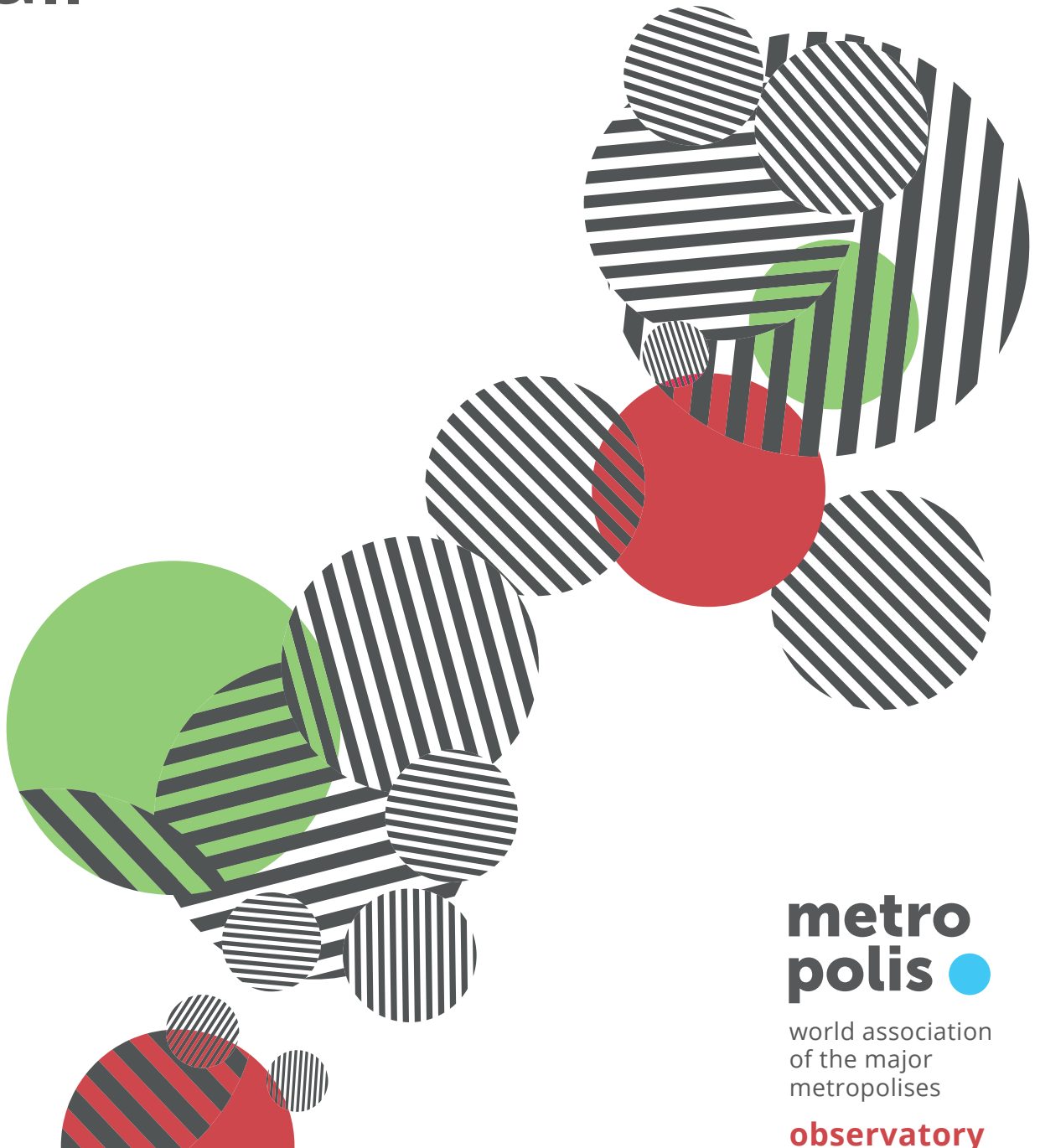**Metropolis Observatory**

Galia Shokry & Isabelle Anguelovski

12

Bringing nature back to the metropolis for all

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Contents

Introduction

As metropolitan spaces face increasing challenges from sea level rise and growing health inequity to environmental contamination and food insecurity, greening is seen as a remedy and a path to achieving UN Sustainable Development Goals (SDG11 in particular), while bringing nature back to urban areas. In this vein, greening has also become a tool for metropolitan policymakers to increase the attractiveness of long disinvested neighborhoods and municipalities and boost economic growth alongside ecosystem services. In peripheral metropolitan cities, nature-centered interventions can also serve to attract new residents in search of more affordable living space, greater access to both existing and new green space, and new connectivity to urban centers thanks to green corridors. Greening has joined new visions to create a more sustainable urban fabric by integrating nature-based solutions (NBS) and green infrastructure (GI) with concepts such as child-friendly and healthy cities, gender mainstreaming, green jobs and urban resilience.

However, as local and regional governments strive to renature metropolitan territories and improve access to green spaces, historic and ongoing uneven development and social inequalities across neighborhoods, districts and municipalities remain a formidable barrier to guaranteeing greening benefits for all. While some suburbs are able to offer ample access to nature due to historically privileged positions and investments, others – often working-class suburban communities – are dense, still host industrial land uses, and are deprived of much green space. Creating a more leveled green field across cities while ensuring green connectivity across metropolitan spaces with differing socio-economic and environmental conditions remains a formidable environmental justice challenge.

The release of this issue paper coincides with the ongoing COVID-19 pandemic and reinvigorated debates around green and healthy cities. Around the world, urban areas have become hotspots for the spread of disease, but most of all, the pandemic has highlighted urban socio-spatial inequalities not only between metropolitan spaces, but very much within them.

How can a greener metropolis also be a more just one for all its residents? In the 12th edition of our Metropolis Observatory issue papers, Galia Shokry and Isabelle Anguelovski, along with their colleagues from the Barcelona Lab for Urban Environmental Justice and Sustainability (BCNUEJ), address this question through an examination of the promises and social pitfalls of various greening agendas, using empirical and scholarly research to show how collaboration between governments and metropolitan residents can lead to more just and greener outcomes for all.

Octavi de la Varga
Metropolis Secretary General

Environmental injustice in perspective: from brown to green inequalities

Environmental justice fights against the impacts of environmental contamination and for equitable access to environmental goods for every person regardless of race, ethnicity, income, age or gender

Environmental justice (EJ) activists have struggled for decades to reduce the disproportionate level of impacts of environmental contamination on the health of lower-income residents and communities of color. The earliest scholarship on EJ – much of it from North America – examined distributional inequities in exposure to contamination and health risks, highlighting which groups lived closest to polluting facilities (holifield *et al.,* 2009). Statistical research on metropolitan regions (Schweitzer and Stephenson, 2007) revealed that minorities and low-income residents suffered from greater environmental harm and less protection from waste sites, disposal facilities, incinerators, refineries, and other contaminating industries – traditionally known as locally unwanted land uses (LULUs) – than white and wealthier communities.

Environmental injustices have existed and endure around the world. In Europe, the legacy of polluted land in many former industrial metropolises – where migrants and guest workers from southern and eastern Europe and former colonies were brought to work and continue to live – and recent attempts to site new socially and environmentally destructive facilities (e.g.

airports, dams, and waste incineration) represent significant environmental justice challenges (Mitchell et al., 2015). Today's sprawling manufacturing hubs in East and South Asia are where poorer and minority residents live near and directly on site with not only polluting industries but also transportation, waste exportation, and shipping zones, from airports and seaports to expansive highway interchanges (Martinez-Alier *et al.,* 2016). Poor and ethnic minorities throughout Sub-Saharan Africa are overwhelmingly resettling in informal neighborhoods whose disconnection from basic services, proximity to pollutants, and lack of quality open space exacerbates health inequalities (Rigolon et al., 2018). In South America and around the world, activists confront the deadly impacts of expanding mining, forestry and oil extractive industries often on indigenous people's lands, while wealthier citizens of metropolitan areas enjoy the benefits of these environmental harms done elsewhere (Temper *et al.*, 2018).

Over the past two decades, EJ studies and urban EJ activism have articulated a more comprehensive agenda which combines struggles against unequal environmental contamination and denounces unequal

access to environmental goods and amenities. This agenda builds on one of the core visions of the EJ movement: that every person regardless of race, ethnicity, income, age, and gender has the right to a decent and safe quality of life (Gauna, 2008). Environmental goods and amenities and urban green infrastructure in particular play an important role in safeguarding those rights.

And yet, not surprisingly lower-income and minority neighborhoods tend to be those less endowed (both in quality, quantity, and maintenance) with green amenities both in the Global North and South. In contrast, wealthier and white communities, with higher rates of homeownership, have historically enjoyed environmental privileges (Park and Pellow, 2011) through neighborhood access to nearby parks, waterfronts, and other open spaces. For example, studies in six Chinese cities (**Shanghai**, **Beijing**, Zhongshan, **Shenzhen**, **Wuhan**, Macau) showed that wealthier people tend to live closer to green spaces than low income residents, and studies in other Asian cities (Sheikhupura, **Tehran**, Hamadan) also found inequitable results for green space quantity, especially at the metropolitan scale for Tehran. Three studies in Latin American cities (**Santiago de Chile**, Hermosillo, **Bogotá**) and three studies in African cities (**Cairo** and Cape Town) found that wealthier people live closer to parks than low-SES people (Rigolon *et al.,* 2018) and street greenness was positively correlated with income in **Johannesburg** (Venter *et al.,* 2020). Results are similar in Europe: a recent study developed a Gini coefficient for green space inequality and found that the coefficient is highest (0.84) regarding the distribution of urban green space for immigrants (Kabisch and Haase, 2014).

In the Global North, green space inequities have often been linked with deindustrialization, suburbanization, and disinvestment (including environmental disinvestment) in metropolitan core areas. In the Global South, planning for improved access to green space is particularly important because informal settlements tend to have fewer quality green spaces, and rapidly growing metropolitan areas may lack the time, budget and capacity to coordinate greening between metropolitan cities and towns. In return, green inequalities deprive immigrants, minorities and working-class residents – and their neighborhoods – of the numerous co-benefits of greening such as improved health, reduced climate risks, social cohesion, women's empowerment, children's cognitive development, leisure and recreation, and even green jobs.

During 2020, metropolitan green inequalities have perhaps been experienced even more sharply in confinement conditions than ever before for those with nowhere else to go, lacking private green spaces or green street views, and suffering from the closure of public green spaces

The promises of urban greening

Greening has wide-spanning benefits for people's health, the mitigation of climate change impacts, the calming of traffic and the enhancement of gender equality, to name a few. It is crucial to ensure that the expansion of green infrastructure across linked municipalities accounts for the diversity and vulnerabilities of different territories

Numerous studies have shown that greening benefits residents' health and wellbeing through improved cardiovascular, respiratory and immunity-related health, birth outcomes, self-perceived general health – especially of women – and mental health (Markevych *et al.*, 2017). Contact with natural outdoor environments has also been linked with lower odds of prostate or breast cancer, and mortality. The quality of life of people with intellectual disabilities or mental health disorders has been reported to benefit from contact with green spaces (Triguero-Mas, 2020). Historically marginalized communities may especially benefit from living near such amenities and residents' shorter life expectancy in the Global South could be partially remediated by improved contact with nature (and the removal of toxic sites).

With urban areas increasingly at risk from more frequent and intensifying climate impacts, green resilient infrastructure (GRI), such as climate-proofed parks, green roofs, rain gardens, street **trees**, wetlands and bioswales, reduce stormwater runoff through greater permeability, help mitigate flooding and lessen urban heat island effect. For instance, in the greater metropolitan areas of <u>Manchester</u>, <u>Barcelona</u>, <u>Lyon</u>, <u>Medellín/Valle de Aburrá</u> and <u>Durban</u>,

significant strides have already been made regarding the implementation of GRI as part of climate adaptation and resilience planning (Shokry et al 2020). These more flexible and cost-efficient means of addressing climate change impacts are also hailed for improving access to waterfronts, reducing crime through a more cleaned up environment, and stimulating environmental stewardship and education. As greening is increasingly discussed and in some cases already integrated into planning practices at the metropolitan scale, it is crucial to ensure that the expansion of green infrastructure across linked municipalities accounts for the diversity and vulnerabilities of different territories (Shi, 2020).

From a social perspective, for children living in urban centers, school and other neighborhood play spaces may provide first introductions to nature, socialization, physical activity and play. Green play spaces contribute positively to early childhood development and reduced mortality, thereby supporting Sustainable Development Goals 3 (good health and well-being) and 4 (quality education). In the Barcelona neighborhood of Poblenou, new green play spaces are heavily used by families with children, playing an important role in building social cohesion (Oscilowicz *et al.*, 2020). In

The **Metropolitan Area of Barcelona** (AMB) has a comparably long tradition in the planning of metropolitan green spaces across different municipalities, such as the River Llobregat Park (photo), which has a length of 30 km and crosses 16 municipalities. Currently the AMB is developing a new Metropolitan Master Plan (PDU) that is putting even stronger emphasis on the social-ecological connectivity of metropolitan green infrastructure across municipalities, primarily through the creation of green corridors.

many cases, greening is associated with traffic pacification initiatives, which often precede it. In **Bogotá**, pedestrianization of areas surrounding school zones through the *Crezco con mi Barrio* project ('Growing with my Neighborhood') aims to reduce the incidence of injury and air pollution to improve children's wellbeing (Bernard van Leer Foundation, 2020).

Greening interventions planned with a gender and feminist perspective can also enhance gender equality, by centering everyday life experiences and the often feminized and undervalued activities related to care and reproductive labor in the city. Studies in Botswana, South Africa, and Zimbabwe have shown urban farming as not only a means of improving the economic status of women

but also providing a space of solace and empowerment from which they are able to develop social networks and find stability (Slater, 2001). In **Quito**, 86% of the 140 community gardens and 800 family gardens are headed by women, all of them integrated in the urban agriculture program of the Quito Metropolitan District which aims to decrease social vulnerability and increase their quality of life while addressing climate adaptation risks (Faraday, 2019). Green spaces can also support caring for others, by offering safe and healthy environments for recreation and play closer to home. **Barcelona** is emblematic for its stated commitments to create a more feminist and caring city as well as inclusive greening initiatives such as climate shelters in schools and superblocks.

Photo: AMB

Inequities and pitfalls

When once disinvested neighborhoods are redeveloped into new green neighborhoods catering to wealthier residents, long-term low-income and minority residents may be physically and culturally displaced

While bringing nature back to the city seems more critical than ever, the task of guaranteeing benefits for all is often easier said than done. Both struggles and hope for greater environmental equity and justice in metropolitan spaces have increasingly met with a wicked dilemma: as neighborhoods cleanup, environmental goods come in and cities envision greening as part of a new urban brand associated with new economic development. Private investors find financial value in this revitalization and spark redevelopment and displacement processes that potentially place vulnerable residents at even greater risk.

Exclusion and green gentrification in GI planning

As greening is increasingly pursued at the metropolitan scale, we also observe a steady "back to the city" movement of people and capital. In this process, planners sometimes incentivize the redevelopment of urban land in once disinvested neighborhoods into new green neighborhoods for largely wealthier (and whiter) residents. As this occurs, long-term low-income and minority residents may be physically and culturally displaced due to increasing unaffordability, political marginalization, and the erasure of local commerce, gathering places and services. This growing green planning

orthodoxy (Connolly, 2019), new city branding and transformation around the win-win benefits of greening (Garcia-Lamarca *et al.,* 2019) results in a green space paradox: those who could most benefit from environmental amenities become those most excluded from their long-term enjoyment, with deep health inequity considerations (Cole *et al.,* 2019). What we and others often call green or environmental gentrification – social exclusion that occurs through increases in land values and new demographic trends linked with environmental improvements (Gould and Lewis, 2017) – can also occur through the absence of land reparations or spatial arrangements for a more emancipatory greening practice. This is illustrated by the Cape Town Environmental Education Trust Fund and absence of post-apartheid land security for racialized residents (Tozer *et al.,* 2020).

Green gentrification trends are found in many globalizing metropolitan spaces in the North and South. In **Seoul**, the restoration of the Cheonggyecheon Stream and the creation of new green areas and walking paths did enhance livability and environmental quality for local neighborhoods, but also significantly raised real estate values, displaced traditional retail stores, and engendered gentrification (Lim *et al.,*
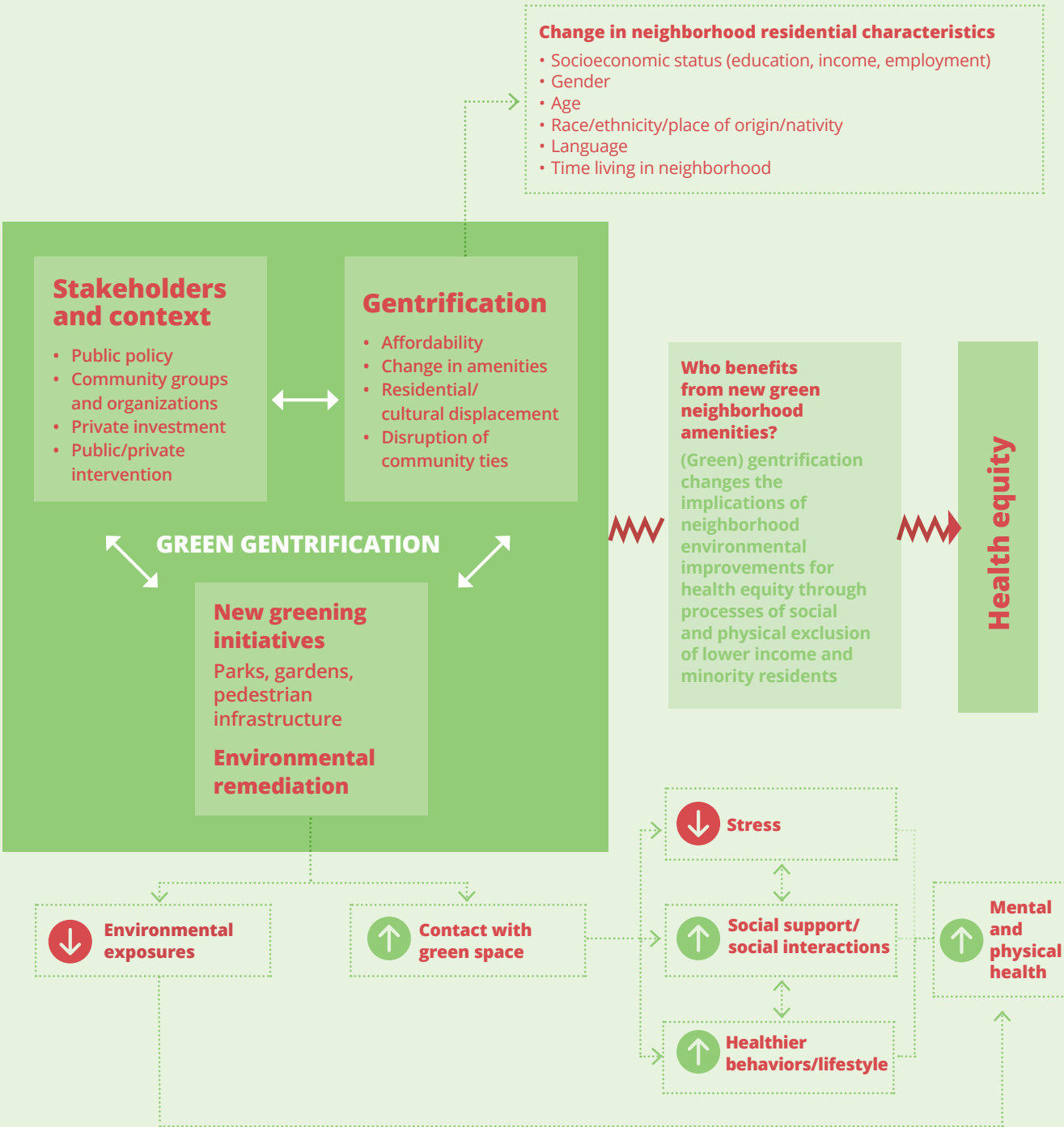
Shiraz's Green City project aims to reforest the city's periphery. One of its financing mechanisms is to give tax exemptions to private sector investors who intend to build tourist attractions that fit into the general plan of the project and are in accordance with the development plan of the city. Although there is a premise that greening leads to social inclusion, it would be key to integrate one of the already identified barriers of the project, which are peripheral settlements, in the design of the development plan itself (and thus in the conditions imposed on private investors), in order to guarantee the right to housing of the most marginalized residents.

2013). In **Rio de Janeiro**, the green upgrading of favelas such as Babylonia is perceived by residents as processes of securitization and restriction, combining environmental cleanup, public and green space redevelopment, property enclosure, and police violence that eventually control, drive out, and erase Afro-Brazilian residents and their identities (Comelli *et al.,* 2018). In **Medellín** (as in Rio de Janeiro as well) the concept of "public good" sidelines the traditional knowledges and desires of longtime residents, causing their displacement (Anguelovski *et al.,* 2019; Comelli *et al.,* 2018). Social or race-driven inequalities and structural violence may therefore be reproduced in the process of bringing nature back to the city and aggravated by racial, class and gender-blind spots, biases, and discrimination in green planning. Such risks seem to be particularly high when interventions do not make social justice, affordability, and the inclusion of current residents an explicit goal. Displacement for socially vulnerable groups often means a banishment to areas with those same conditions of health and social injustice that greening had intended to resolve (Shokry *et al.,* 2020).

Figure 1. The relationship between green gentrification and health equity

Source: adapted from "Are green cities healthy and equitable?
Unpacking the Relationship between health, green space and gentrification" (Cole et al. 2017).

Change in neighborhood residential characteristics
• Socioeconomic status (education, income, employment)
• Gender
• Age
• Race/ethnicity/place of origin/nativity
• Language
• Time living in neighborhood

Stakeholders and context
• Public policy
• Community groups and organizations
• Private investment
• Public/private intervention

Gentrification
• Affordability
• Change in amenities
• Residential/cultural displacement
• Disruption of community ties

Who benefits from new green neighborhood amenities?
(Green) gentrification changes the implications of neighborhood environmental improvements for health equity through processes of social and physical exclusion of lower income and minority residents

Health equity

GREEN GENTRIFICATION

New greening initiatives
Parks, gardens, pedestrian infrastructure

Environmental remediation

Stress

Social support/ social interactions

Mental and physical health

Environmental exposures

Contact with green space

Healthier behaviors/lifestyle

The political and social limits of urban green financing

As greening becomes increasingly important for a rising number of city and metropolitan governments, the question of how to finance new green interventions looms large. Several green finance tools have emerged in the past decade to raise external capital and thus enable action, with one of the most popular instruments being green bonds. For centuries, governments have financed infrastructure development through bonds, which act as low-risk debt investments to raise capital. Green bonds operate in the same fashion as traditional bonds, but the money is invested in environmental projects. Despite increased resources needed for reporting and portfolio management, the use of green bonds has risen from less than 11 billion USD in 2013 to 257 billion USD in 2019 ("Climate Bonds Initiative," 2020). Gothenburg was the first to issue green bonds in 2013 and dozens have since followed, including Cape Town and Mexico City.

Yet, green bond instruments and investment processes are increasingly confronted with political feasibility and social equity challenges. In **Mexico City**, the long-term stabilization of green bond infrastructures and the maintenance of political support beyond electoral cycles have proven difficult (Hilbrandt and Grubbauer, 2020). Bonds can also be more difficult to operate at the metropolitan scale since they tend to be issued for a central municipality. Furthermore, most green bonds do not consider questions of social justice or equity in their issuing or reporting frameworks. In the case of Gothenburg, city bond issuers found social justice or equity considerations to be too political, too complex, not a priority, or a de facto part of existing projects (García-Lamarca and Ullström, 2020). Research in New York and Cape Town has found green bonds ultimately reinscribe existing inequality, proving that sidelining justice and equity can be detrimental in the long term (Bigger and Millington, 2019). In other words, rather than making cities more resilient, green bonds can deepen racialized geographies of financial and environmental risk when only focusing on the "green" dimension of investments.

Inequalities in recent urban greening interventions

Health and well-being for all through natural outdoor environments?
The accessibility, quality and perception of safety of green spaces tends to follow patterns of residential segregation by class or race/ethnicity, where residents of neighborhoods with concentrated poverty and those with high percentages of ethnic or racial minority populations, have both worse access to green space and worse health outcomes. Complicating these patterns, greening may result in gentrification and in the physical displacement of marginalized residents, or in their social or cultural exclusion from neighborhood green spaces, preventing those residents from enjoying health benefits (see figure 1). (Cole et al., 2017).

Just climate adaptation through green resilient infrastructure?
Despite growing consensus on the need to protect urban areas from

> Urban planning and development have traditionally prioritized activities perceived as masculine (productive labor), giving less attention to uses of space and infrastructure for the care of children, sick people, and the elderly (reproductive labor) which are typecast as feminine

climate impacts, there has been much less attention to the undesirable impacts of climate adaptation planning for socially vulnerable groups. In the context of Medellín's Metropolitan Green Belt, for instance, the risk of landslides or flooding is believed to have been overinflated to justify the relocation and housing clearance of thousands of low-income residents in order to attract outside visitors and more privileged groups (Anguelovski *et al.,* 2018). In Philadelphia, green resilient infrastructure (GRI) has been linked with gentrification of the city center and the displacement of Black and Latinx residents to peripheral areas with higher climate risk and little environmental protection (Shokry *et al.,* 2020).

Greener play spaces for vulnerable children and families?

Recent trends have shown that young, highly-educated couples with higher incomes are especially attracted to neighborhoods with primary schools in proximity to quality green play spaces (Pérez del Pulgar *et al.,* 2020). With an influx of upwardly mobile families and increasing housing and other costs of living, existing lower-income and vulnerable families may be displaced to farther metropolitan towns (Oscilowicz *et al.,* 2020), leading to new financial and emotional stress due to longer commutes, a loss of parenting support networks and children's challenges in adapting to a new community of peers. Families in gentrifying neighborhoods may also experience conflicts with newcomer families and a loss of sense of place and belonging to newly greened child-friendly spaces.

Gender equality and greening?

Green inequalities serve as a reminder that the "making" of cities has been a historical process imbued with unequal power relations, in great part manifesting as gender imbalances. Urban planning and development have traditionally prioritized activities perceived as masculine (productive labor), giving less attention to uses of space and infrastructure for the care of children, sick people, and the elderly (reproductive labor) which are typecast as feminine. Gentrification itself often reinforces traditional gender roles and spatial developments (CURRAN, 2019). As a result, women must often adapt their caring labor to cities designed by and for (white, heterosexual, cis-) men, transforming how they experience planning interventions such as urban greening. Past experiences of violence might, for example, make enclosed parks, or other badly lit or unfrequented green/ blue infrastructure, unwelcoming, risky spaces. For some female residents of minority groups, such as Muslim women in European cities, green spaces might be places of heightened insecurity, where they might need, for instance, more sheltered amenities in which to feel comfortable and protected from Islamophobic and/or male aggression (Kabisch and Haase, 2014; Wagner and Peters, 2014). While several cities are incorporating gender issues into green planning, questions of for which women and where are rarely considered, falling shy of an intersectional approach which considers true representation and participation across axes of social differences, sectors and scales.

Advancing justice in urban greening

Environmental justice activists and community leaders mobilize to build green neighborhoods that can be long-time safe havens and refuges for socially vulnerable residents

Much of the research outlined above illustrates that greening plays an ambiguous and ambivalent role for historically marginalized groups. While lower-income and minority residents continue to be disproportionately exposed to environmental burdens and underexposed to amenities, at the same time, they may have a conflicted relationship with urban nature because natural spaces have not always been integrating, welcoming, and safe amenities for them, especially due to racist, homophobic and sexist discourses and practices that define for whom nature is – or is not (Finney, 2014; Kotsila *et al.,* 2020; Park and Pellow, 2011). In this way, green amenities become GreenLULUs – Green Locally Unwanted Land Uses – for socially vulnerable residents (Anguelovski *et al.,* 2018).

As a result, EJ activists and community leaders have mobilized to create environmentally just places and build green neighborhoods that can be long-time safe havens and refuges for socially vulnerable residents (Agyeman, 2013; Anguelovski, 2014; Anguelovski *et al.,* 2020). Their work aims at improving historically distressed neighborhoods and their long-term livability and environmental quality through new green and recreational spaces, community gardens, resilient housing, better waste management and an overall improved wellbeing (Anguelovski, 2016). Green organizing work around new green spaces, playgrounds, ecological corridors, or urban agriculture often consists in creating welcoming, protective, reparative, and nurturing environments and neighborhoods, while rebuilding underinvested urban communities and fighting against community and individual grief and loss. Their mobilization is rooted in memories, healing and resilience. The environmental spaces they foster often have restorative healing features, what some have conceived as green safe havens (Anguelovski, 2014), as pedagogical and social spaces to reclaim memories and strengthen residents' attachment and engagement in their place.

In **São Paulo**, a circular economy project called Connect the Dots, funded by Bloomberg Philanthropies, uses fresh organic produce from family vegetable farms in the southern peri-urban water springs area of the metropolis to provide food for local restaurants (add period start new sentence). They adapt their menu based on available produce, to create family food baskets, and to supply fresh ingredients transformed by female entrepreneurs. The city also works with five composting centers that return the compost to the farmers. In this process, the Instituto Feira Livre trains farmers in pesticide-free agriculture and establishes commercial relationships with the farming families.

Metropolitan stakeholders, particularly planners and policymakers, have a variety of tools and regulations they may implement toward an anti-gentrification, anti-displacement, and equitable greening agenda that can also achieve place-making, reparation, and emancipatory goals. Anti-displacement and just greening policies

Photo: Primăria Municipiului București

In **Bucharest**, the Ion Creangă park was designed to explicitly integrate the social needs of the community with environmental protection, as well as to increase accessibility and mobility and reduce neighborhood disparities in relation to more developed parts of the metropolitan territory. The aims of the project include creating new jobs for current residents, promoting non-discrimination and social inclusion as well as improving relations between the Roma community and other residents. The park has helped change public perceptions of the neighborhood but hopes of increasing property values by up to 15% must be balanced by anti-displacement policies to ensure benefits endure for current residents.

should always be implemented with meaningful participation from the communities affected. These tools, which address land use, financial schemes, and developer requirements, can be implemented at a variety of regulatory scales and have been effective in diverse economic, social and environmental contexts.

Recommendations

PRACTICES

1. Recognize urban greening as a non-isolated intervention from other urban planning interventions which may have negative long-term consequences – such as unaffordability and displacement – for lower-income and minority residents. These other initiatives may affect housing, transport, commerce, historic districts and waterfront redevelopment, schools, crime, and jobs, among others.

2. Direct funding to smaller metropolitan towns so that more socially deprived areas where long-term working-class residents live also benefit from greening.

3. Ensure metropolitan investment and coordination that strengthens green connectivity between towns and access to metropolitan greening by foot, bike and public transit for all.

4. Consider how greening interventions under the auspices of **improving health equity** may lead to unintended health consequences and burdens such as gentrification and displacement, not only to nearby neighborhoods but further metropolitan towns, creating new housing, transport and health services challenges.

5. Integrate the uses, preferences, knowledges and needs of vulnerable groups for green spaces and be willing to recognize and address historic legacies of trauma, violence, erasure, and displacement both at the community and individual level.

6. Adopt intersectional feminist planning approaches in urban greening to help recognize diverse representations and uses of space, especially for racialized minorities and women who move at length and frequency through metropolitan spaces for job and care responsibilities.

7. Expand inclusion and acknowledgement of LGTBIQ+ communities in green space planning, who have faced historical forms of oppression. Parks have historically served as meeting places for these marginalized groups.

8. Use innovative participatory methods that increase vulnerable residents' participation in urban planning, such as community mapping, neighborhood photovoice and exploratory walks.

9. Provide green spaces that can be both safe and secure from the points of view of socially vulnerable residents, especially racialized minorities, women, people with disabilities and LGTBQI+ communities without creating heavily surveilled or coercive places where these groups' uses and identities are erased or criminalized to defend the green privilege of a few.

10. Support grassroots and vulnerable community groups through funding and place-making opportunities that embrace community organization and local leadership.

11. Recognize power asymmetries within communities and in relation to government and non-governmental agencies. Self-assess preconceived notions of place and way of life, especially when life experiences differ from one's own.

POLICIES

1. Advocate for the preservation, improved maintenance and upgrading, and increased funding to public and truly affordable housing currently threatened by the increased commodification and neoliberalization of the housing market missing period.

2. Encourage housing stability through density bonuses or inclusionary zoning at the metropolitan level while coupling such developer-focused policies with metropolitan-wide regulations to prevent tenant displacement and ensure quality social and affordable housing, such as rent control, subsidies and use of land banks.

3. Ensure equal access to green space first through mapping and benchmarking, followed by implementation of policies that mandate a minimum area of green space per resident in order to achieve positive mental and physical health outcomes.

4. Enhance equitable metropolitan-scale climate change adaptation policies while preventing unjust outcomes for vulnerable groups by reframing green resilient infrastructure as a means to support community-led development, social-ecological security and sustained livelihoods through food production and living wage jobs.

5. Center social justice and equity concerns in municipal and metropolitan green bond issuing and reporting frameworks. Metropolitan strategies should aim to reduce municipal dependence on growth-based development frameworks and obligations to maximize land development.

6. Improve food security by making urban gardens and farms cornerstones of communities through policies and regulations that fund and provide urban green space and transform vacant lots for community-led and cooperative urban agriculture projects.

7. Design and fund new spatial arrangements at the metropolitan scale to ensure land reparations, controls, and security for vulnerable groups that can both integrate new greening and anti-displacement.

Overall, these recommendations aim at supporting greener, more just metropolitan spaces while preventing displacement that results from the upgrading of environmental amenities in socially vulnerable and long disinvested neighborhoods and towns. It is important to note that the measures also present some limits, and that most of all, their successful application relies greatly on political will and leadership.

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This publication contributes to the implementation of the
following Sustainable Development Goals:

3 GOOD HEALTH AND WELL-BEING	5 GENDER EQUALITY	11 SUSTAINABLE CITIES AND COMMUNITIES	13 CLIMATE ACTION	15 LIFE ON LAND

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