URBAN ARENAS
FOR SUSTAINABLE
AND JUST CITIES

DRIVERS OF INJUSTICE IN THE CONTEXT OF URBAN SUSTAINABILITY

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BCNUEJ Barcelona Laboratory for Urban Environmental Justice and Sustainability

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UAB Universitat Autònoma de Barcelona

URBAN ARENAS
FOR SUSTAINABLE
AND JUST CITIES

Booklet

Drivers of injustice in the context of urban sustainability

We here identify the following ten drivers of injustice manifested and operating in the context of urban sustainability efforts, as this has been researched and implemented in cities in Europe.

1. Exclusive Access to the Benefits of Sustainability Infrastructure
2. Material and Livelihood Inequalities
3. Racialized or Ethnically Exclusionary Urbanization
4. Uneven and Excluding Urban Intensification and Regeneration
5. Uneven Environmental Health and Pollution Patterns
6. Unfit Institutional Structures
7. Limited Citizen Participation in Urban Planning
8. Lack of Effective Knowledge Brokerage and Stewardship Opportunities
9. Unquestioned Neoliberal Growth and Austerity Urbanism
10. Weak(ened) Civil Society

This document
The present analysis summarizes recent academic research on the drivers of injustice in the context of urban sustainability. The research we examined derives from the 43 most relevant EU funded projects we identified and that were led by EU-based institutions since the middle of the 2000s. Thanks to a comprehensive meta-analysis of projects, we present here how justice is conceptualized, studied and understood in different inter-disciplinary research projects linked to urban sustainability.

UrbanA
Urban Arenas for Sustainable and Just Cities is a 3-year H2020 EU-funded project to map, assess, distil and communicate a portfolio of approaches and tools to city-makers, in order to support them in transforming their cities into sustainable, just, and thriving urban and peri-urban environments. Our goal is to synthesize and transfer knowledge, breaking silos and building new networks for transformative change.

Introduction

This booklet consists of the summaries of results of an in-depth study on the drivers and manifestations of urban injustice related to sustainability. This study consisted of the meta-analysis of 43 selected EU-funded research projects, which in turn built on an extensive mapping of different approaches towards sustainability and justice, evidenced and studied in Europe through a broader sample of 350 EU-funded research projects (Methodology note in Annex). Data used to develop this document included: deliverables; policy briefs; reports on events; academic and non-academic publications together with targeted interviews of core researchers in those projects. Data was analyzed using a qualitative data analysis software (NVivo) and organizing results into thematic findings around the main drivers of urban injustice in the context of sustainability.

The results here presented serve as a reference source for further discussion and development via the rest of the activities developed in UrbanA, especially so in Work Package 4 and in the further development of our Community of Practice. These insights will eventually inform effective strategies for strengthening just sustainability in cities. By sharing these results, we further aim to engage in a process of co-creation of a knowledge-commons on the drivers of injustice in the context of urban sustainability efforts.

Justice is understood here as a variegated set of conditions — substantially concerned with distribution of resources, political processes, and social recognition — that allows for full human flourishing. If conditions within a given society systematically support some, but hinder other individuals or groups with regard to basic flourishing (i.e. thriving within reasonable limits) according to achievable outcomes that they value in order to live a healthy and fulfilled life, then that society is to some degree unjust (Fraser, 2005; Nussbaum, 2000; Schlosberg, 2013).

Justice is fundamentally about how societies mend (or exacerbate) social inequities that stop some people from flourishing, and the fundamental threads of justice are formed by the different types of inclusions and equalities, or exclusions and inequalities, that might affect the capacity to ensure equity.

In this document we often refer to different types of justice, briefly explained in the table below. Our purpose is not to elevate one approach to justice over another, but rather to show that it is precisely through engagement with the full diversity of meanings attached to justice that the concept becomes meaningful to elucidate what is still lacking to generate sustainable urbanism.

In the following sections, we summarize our findings for each of the ten drivers of injustice, using some specific case examples documented in the EU projects we examined. For each of our drivers, we include core academic citations for readers interested in deepening knowledge about the drivers, as well as references to specific projects. We

also note that drivers are related to one another, which we point at specifically through our analysis.

Types of justice	*Explanation*
Distributive justice	The classic liberal foundational concept of justice, which highlights inequities in the distribution of (material) goods.
Procedural justice	A well-established aspect of the social justice concept, which focuses on who is involved, and how, in decision-making processes concerned with the use of a society's resources.
Recognition justice	A more recent, but well-established, notion of justice based on the notion that there are many ways that certain individuals and social groups can be included or marginalized due to their identities (i.e. ethnicity, race, gender, sexuality). Being able to counteract such systemic exclusion, generates recognition justice.
Hermeneutical justice	When vulnerable residents are engaged in re-imagining safe/healthy/welcoming spaces, allowing their experiences of place to be expressed and accounted for (even if they go beyond traditional scientific, political, or social language).
Epistemic justice	When local knowledge and perceptions are validated and taken into account (i.e. of space, local ecology, social relations, or of factors that affect health -otherwise known as popular epidemiology).
Testimonial justice	When past, historical experiences (of violence, racism, exclusion) in a specific neighbourhood or place are taken into account.
Responsibility justice	Recognizes and addresses the restrictions of access to "urban stewardship" projects, due to their potentially intersectional (economic, cultural, racial, gender) realities.
Imaginary and historical (in)justice	When new urban imaginaries are erasing values (about) and spaces cared for by long-term residents, potentially making invisible past injustices while causing new exclusions.
Intersectional justice	Recognize the multiple (gender, class, ethnicity, etc.) identities and challenges lived and interpreted in space, through time, and while making sense of place (processes).
Relationality-inspired justice	Spaces of care and connection, with attention to gender-specific social needs, but also different types of connections and care for nature.

*From our analysis, we found that manifestations and drivers of injustice are not only seen as a **challenge** to be addressed by urban sustainability, but also – in certain circumstances – as a potential **undesirable outcome** of efforts meant to accomplish urban sustainability.*

These findings by no means constitute a complete analysis around each driver of injustice. Rather, this analysis describes how justice is conceptualised, studied and understood through EU-funded inter-disciplinary research linked to urban sustainability.

1 Exclusive Access to Benefits of Urban Sustainability Infrastructure

This driver refers to the ways in which territory, identity, education, knowledge, and information are used to draw lines, privileges, and hierarchies between social groups, and especially to how this leads to an uneven distribution of benefits from urban sustainability efforts.

Exclusive access to the benefits of urban sustainability infrastructure is often the result of underlying conditions of inequality. The implementation of sustainability initiatives may expand, reinforce, or express these inequalities. This often refers to the vicious circle of socio-economically disadvantaged neighbourhoods being left behind in terms of access to (the benefits of) sustainable infrastructure. An issue of *distributive justice*, for example, is the restricted access to green and safe public spaces of quality for lower income areas

and minority communities. In such inner-city neighbourhoods, green has historically been more often under-maintained, of lower quality, less numerous, and smaller in comparison to more affluent neighbourhoods (Heynen et al., 2006; Wolch et al., 2014). In contrast, wealthier and white communities have historically enjoyed environmental privileges through the greater presence of nearby parks, coasts, and other open spaces in their neighbourhood (Landry & Chakraborty, 2009).

Access is not understood as necessarily defined by proximity to such infrastructure, but by the actual usage and benefits that sustainability initiatives are allowing people with different socio-economic, racial, gender, age, or ethnic characteristics. Access might thus depend on the (semi)private status of some space (e.g. a park, a garden, a green roof), or the on socio-cultural norms that create psychological accessibility barriers when certain groups feel unwelcome or uncomfortable in certain (physical or participatory) spaces. Exclusion, as restricted or no access, can be further related to (recent or historical) testimonies and experiences of verbal or physical violence against particular groups (e.g. women, minorities, immigrants). Several outputs point toward the importance of considering the intersectionality of such exclusions for vulnerable citizen groups. Women, for example, might suffer a combination of exclusions (based on class, race, or ethnicity) and with their continued status as the principal caregivers in society enforcing its own form of exclusion (*intersectional justice*).

It is often the case that these exclusionary patterns lead to further injustices, when, for example, less privileged and stigmatized areas become the target of urban regeneration programs that end up changing their demographic composition (i.e. gentrification). In many cases we see processes of greening and sustainability innovation spurring gentrification, increasing the appeal of neighbourhoods but also property/rent costs (Wittmayer et al., 2015). Gentrification is thus built upon and reinforces historical patterns of injustice, by directing the flow of benefits away from socially disadvantaged groups even when initiatives are targeted toward their neighbourhoods (Cole et al., 2017).

Unequal access is not always spatially-bound, but can also refer to access to knowledge and information concerning decisions and processes that define the design, implementation, and assessment of success around sustainability interventions (*epistemic/hermeneutical justice*) (Janoušková, 2013; Paris, 2013). Some groups might in fact not be allowed to participate in design processes because their knowledge is not considered as valid of expert to contribute to projections of ideas or decisions. Last but not least, access is also closely associated with participation processes and dynamics (*procedural justice*) (Anguelovski et al., 2018, p. 431). This applies both to centrally designed interventions with limited input from citizens, and to community-led initiatives which might require time, energy, or financial resources that disadvantaged groups often lack.

CASE STUDY EXAMPLE: Manchester's cycling infrastructure

In the city centre of Manchester, cycling infrastructure has been upgraded and expanded since 2014 with dedicated cycle lanes which are segregated from buses including in Oxford Road. This, however, has been criticized for being so far built mainly around the university campus and through a middle-class suburb, thus neglecting peripheral areas.

Although the cycling infrastructure was celebrated by many for its dedication to health and sustainability, it was proved to be designed for specific demographics, catering to the more affluent classes, including academics and young professionals. Since 2018, the municipality has claimed that its long-term plan is to create a more comprehensive cycling network across the metropolitan area, to get more people on bikes and on foot.

"The cycle path did not necessarily become the symbolism of gentrification and house prices and so on, but it did become kind of seen as this cycle line known through the knowledge quarter of the university and down through the urban suburb where the kind of cappuccino drinking liberals of Greater Manchester resided."

Source: PATHWAYS project; Personal communication.

Photo by Manchester city council: A proposed cycle route of Greater Manchester, part of its £137m cycling/walking project.

This driver links to the following research projects: URBAN GREENUP, GREENLULUS, ROCK, NATURVATION, GRAGE, TRANSIT, RELOCAL, ROCK, UNALAB, BRAINPOOL, TESS.

2 Material and Livelihood Inequalities

This driver refers to the ways that the underlying distribution of economic resources gets expressed within urban sustainability efforts, reinforcing or exacerbating unjust outcomes.

Historical processes of oppression and marginalization often leave socio-economically vulnerable groups without the necessary resources to achieve a just level of wellbeing. Lower-income populations, specifically, often suffer from worse quality living environments and exposure to pollutants because they are seen as less able to mobilize political resistance or because of their land is often cheaper , easing “access” for industry to locate facilities in their vicinity (Mohai & Saha, 2015), in turn challenging the assumption of equal or just distribution of sustainability interventions and their benefits (Foster, 1998; Maantay & Maroko, 2018; Taylor, 2014).

Low incomes and wages

The problem of persistent low incomes and wages amongst working class residents and other marginalized groups is both a manifestation and a driver of injustice (*distributive justice*). Research has shown that income inequalities are growing in cities, with higher income neighbourhoods having economically prospered over the last twenty years while lower-income ones have stagnated or lost economic power (Bailey et al., 2017; Chen et al., 2012). Income inequalities can restrict the efficacy of urban sustainability initiatives, for example by restricting mobility/transportation capabilities, reducing access to sustainable amenities like redeveloped, retrofitted, and/or more energy efficient housing (Malmusi & Borrel, 2015; Thomson et al., 2017). In the case of energy retrofitting, increasing real estate prices can even force the displacement of low income residents (Ahas et al., 2019).

Uneven consumption and purchasing capabilities are a driver and manifestation of injustice and a dysfunction in the economic system: they create inequalities for consumers, while also limiting the potential for small-scale local producers. Small-scale urban food producers, for example, struggle to compete in a globalized food market, and farmers specifically are not able to access and secure land for cultivation. These constraints limit both their own livelihood and the accessibility to fresh, locally produced, healthy food in cities (do Rosário Oliveira, 2014; Säumel et al., 2019; Wascher et al., 2015).

Unaffordable housing

Unaffordable housing/real estate is a central element of the struggles contained within urban sustainability initiatives. As a result of unregulated market prices in the sector, some more attractive (often green or sustainability-inspired) neighbourhoods can become exclusive. Previous research in real estate economics has already indicated that the creation of gardens and parks enhances the desirability of a neighbourhood – even before their construction – and eventually contributes to increases in property values and luxury housing constructions (Gould & Lewis, 2016; Immergluck, 2009).

The proliferation of more expensive neighbourhoods often comes hand to hand with the deterioration of lower-class and marginalized areas, as part of urban densification and exclusionary urbanization processes (URBAN GreenUP, 2017b). The financialization of housing as a means of accumulating capital is seen as core contributor to housing unaffordability, shaping inequalities and injustices in cities today and exacerbating the challenges for sustainability derived from housing costs (Säumel et al., 2019).

CASE STUDY EXAMPLE: Scarcity of green space and affordable housing in The Liberties, Dublin.

The Liberties, an historic, densely populated working-class neighborhood in Dublin, endures environmental inequalities when it comes to the availability and quality of green space as the least green neighborhood in the capital city, while also experiencing a severe housing shortage. The need for green spaces and adequate housing are two ‘crises’ that impact long-term, vulnerable residents, and have also been at odds with each other when prioritizing development strategies. In response, in 2015, the Dublin City Council (DCC) published the Liberties Greening Strategy to increase access to green infrastructure

and address residential needs. Although the Strategy is not legally binding, it spurred the development of two parks: Weaver Square Park and Bridgefoot Park.

Weaver Park was the first 'successful' new park inaugurated in 2017, but social conflict arose when developers wanted to build new housing units on adjacent land occupied by community gardens. Activists claimed that the gardens had high communal value and that the number of units would not be enough to address deeper housing problems; however, DCC called it an "emergency situation" and proceeded with the construction of housing.

The plan for Bridgefoot park, on the other hand, includes space for gardening and claims to be inclusive in its design and implementation. However, it has repeatedly disrupted community gardening activities and the plan has been delayed, with construction only recently started in early 2020.

In sum, despite the communal benefits of new green spaces promoted by the Green Strategy, the latter has been linked to a rapid rise in high-end construction, increasing the value and desirability of the neighborhood, especially so for tourists and international students, thus leading to an acceleration of gentrification and the ensuing displacement of residents.

Source: NATURVATION and GREENLULUS projects; including personal communication.

Photo by BCNUEJ (www.bcnuej.com). Adjacent to Weaver Square Park, the Libertines, a city-backed development project was proposed to build new housing units on land occupied by community gardens. Despite the communal value of the space, Dublin City Council called it an "emergency situation" and proceeded with the construction of council housing.

This driver links to the following research projects: SMARTENCITY, SOPHIE, HIREACH, EVALUATE, FOODMETERS, TESS, FOODLINKS, GREENLULUS, NATURVATION, SEISMIC, EDICITNET, CONVERGE.

3 Racialized or Ethnically Exclusionary Urbanization

This driver refers to the ways that historic patterns of segregation, based on race, ethnicity, religion or other identity characteristics, shape the outcomes of urban sustainability efforts.

Racial or ethnic injustices and inequalities are territorially experienced and expressed in spatial segregation[1] patterns (distributional justice) (Arapoglou & Sayas, 2009; Kundu & Saraswati, 2012; Musterd, 2005). Race, ethnicity, and immigration status are often used as markers for generating unequal integration of people into urban society. This may occur through spatial segregation, cultural norms, financial rules, and infrastructure provision. In Europe, this process is marked by the isolation, ghettoization, territorial stigmatization, advanced marginality, and increased legal targeting of immigrants along a race-class axis (Wacquant et al., 2014).

[1] The systemic and at least partially non-voluntary separation of people in space according to racial or other ethnic group identity, and as a consequence, the creation of distinct versions of daily life.

Neglect of and underinvestment in minority neighbourhoods holds the risk of translating into the deterioration of social welfare (e.g. in terms of uncontrolled crime, low quality of education facilities, low quality of public transportation infrastructure) as well as the increase of environmental health risks. Minority neighbourhoods often suffer from proximity to freeways, incinerators, or waste sites, in and around cities (Pulido, 2000; Schively, 2007) Access to sustainability and green amenities is also often racialised in cities. Racial composition often correlates with historical contamination and waste dumping, as well as the percentage of active green space available per resident (Anguelovski et al., 2018; Cole et al., 2019). Although accessible greening can act as an enabling factor for social cohesion (URBAN GreenUP, 2017a) it is arguably not given enough priority in historically deprived areas, where newly arrived immigrants and refugees usually first settle as they are seeking cheap rental conditions and proximity to jobs.

Affordable, efficient, and sustainable urban mobility may also be unequally accessible to racial or ethnic groups, due to lack of infrastructure, high cost, or poor access to information (*distributive justice)* (Wirtz et al., 2019). Inequality may often also result in exclusion from sustainability initiatives due to structural or participatory injustices that these groups are often subject to. In Berlin, for example, refugees were hesitant to participate in a programme that 'saved' food from becoming waste because it reflected stigma on them.

In contrast, some grassroots sustainability initiatives that aim explicitly at inclusion (such as creating art from recycled materials to promote refugee self-sufficiency in Rome [PATHWAYS], or developing community gardening initiatives in Boston have helped to meaningfully involve racial and ethnic marginalized minorities (*procedural justice, hermeneutical* & *recognition justice*) (Anguelovski, 2013b; Annunziata & Rivas-Alonso, 2020).

CASE STUDY EXAMPLE: Housing and energy poverty in Santa Maria/Santa Anna–Tió neighborhood, Premià de Dalt, Spain.

Santa Maria/Santa Anna–Tió is a working-class neighbourhood in Premià de Dalt, an otherwise high-income municipality in the vicinity of Barcelona. The neighbourhood residents, 17% of which are of African or Latin-American origin, have low professional training and young residents tend to not be integrated in the educational environment or the labour market. Immigrant women face serious problems in finding employment. The neighbourhood also suffers from housing deficiencies as houses are too small and have structural problems due to precarious conditions of construction. The unemployment rate in the Santa Maria/Santa Anna–Tió neighbourhood is around 16%, higher than the overall municipality and county rates.

The neighbourhood urbanized between 1960 and 1970, isolated from the urban centers and with little infrastructural planning, and today its residents suffer from housing deficiencies and energy poverty; houses are often too small, and many have structural problems due to precarious conditions of construction. The housing that is available is unaffordable, especially given the low wages of many of the neighborhood's residents. Those who suffer from energy/water poverty are predominantly immigrant populations, with many families unable to pay electricity and water supplies, especially during and in the aftermath of the 2007 economic crisis.

Since 2012, A “Pla de Barris” has been proposed in order to improve public space, buildings, new technologies, urban sustainability aspects, gender equality, urban planning improvements, among others (Ajuntament de Premia de Dalt; Ajuntament de Premia de Mar, 2012). Although the financial difficulties were a limitation, the action has contributed to the reinforcement of identity and kindled a sense of belonging to the neighbourhood.

Source: RELOCAL project, (Ulied et al., 2019)

A man protests at an energy supply company in Catalonia. Racial and ethnic exclusion are core social markers of low wages, lack of access to affordable housing, and energy poverty.

This driver links to the following research projects: URBLIV, GREENLULUS HiReach, TESS.

4 Uneven and Excluding Urban Intensification and Regeneration

This driver refers to the ways in which new urban developments might force trade-offs between the social and environmental goals of urban sustainability projects. It involves public efforts to improve a neighbourhood's physical structure and boost its economy by attracting investment, usually in the sectors of real estate and tourism.

Increased intensification, including through the re-development/re-generation of existing urban spaces, can drive injustice when land, housing, and open or green space compete with one another and get reconfigured in ways that have negative impacts on vulnerable residents (Anguelovski et al., 2018; Checker, 2011; Goodling, 2017; K. A. Gould & Lewis, 2016; Knuth, 2016; Shokry et al., 2020). This has been observed in a variety of urban

sustainability interventions, like eco-districts, transit-oriented development, green building, greenways, or other 'resilient' infrastructure. These processes do not stand alone as drivers of injustice, but are linked to income inequalities, neoliberal development and growth, and the limitations of existing forms of civil participation.

Urban densification and expansion

Pressures from urban intensification and expansion are entangled with housing inequality and real estate speculation, as land becomes more valuable and neighbourhoods gentrify. Denser urban centres for business and entertainment can shrink the availability of public space for residents, often in a deeply unequal way (*distributional justice)* (Anguelovski, 2013a; Certomà & Martellozzo, 2019; Säumel et al., 2019). In the US, while urban densification has been associated with reducing sprawl and smart growth approaches, it is also often linked to the gentrification of previously 'undesirable' areas, as is the case of East Austin, Texas, where densification is pushing Black and Latino residents out (Garcia-Lamarca et al., 2019).

Concurrently, urban densification limits the options for more sustainable or nature-based infrastructure, and this increases the environmental impact of cities (through the of use of materials, waste production, and overall pollution). Densely populated housing estates, for example, limit the possibility of making major changes to the surrounding physical environment (Ahas et al., 2019). This "space scarcity" has to be understood through the lens of inequality, as it is often the poorest residents who inhabit those overly dense neighbourhoods with crowded homes in poor physical conditions, and grey-dominated or limited public spaces. Many times, also, bottom-up green initiatives (e.g. community gardens) have to compete with real estate speculation or/and tourist-oriented developments, and thus densification goals and the associated efficiency and sustainability claims can undermine local social benefits and bottom-up sustainability initiatives (*imaginary justice*) (BCNUEJ Lab, 2019; SHARECITY, 2019).

Urban regeneration and revitalisation

Neighbourhood revitalisation/regeneration is often exclusionary, especially in historic urban centres, when it takes place without taking into account the vulnerability of long-term residents in a context of free-market rentals and real estate. Although urban revitalisation is often articulated around sustainability and justice objectives, through the creation of denser, more efficient cities and "trickle-down effects" of benefits (Anguelovski, 2013b; URBAN GreenUP, 2017b), it can drive inequality when interventions are centrally planned character, ignoring the needs and demands of long-term residents (*procedural injustice*) (Annunziata & Rivas-Alonso, 2020).

Participation in regeneration and sustainability projects can be a challenge, and the effect of regeneration may be that certain neighbourhoods are radically altered toward a new vision and attractiveness defined by and for non-residents (Caiati et al., 2019). While participation processes might be able to prevent or alleviate exclusion and gentrification, through the active consideration of demands for affordable housing and protection of local business, more participatory processes might not be protective against market forces that

generate injustices.

CASE STUDY EXAMPLE: The regeneration of Marvila old docks neighbourhood, Lisbon

Lisbon, one of the cities under study, is currently facing "a massive set of transformation" in terms of investment, development, tourism and gentrification. It was recently labelled "The new capital of gentrification and evictions" (Ara.cat 2019), as large parts of the city centre have been converted into housing and venues for tourists. The Marvila old docks neighbourhood is one of the areas facing the strongest gentrification impulse, undergoing a 'boom' phase of development due to economic, real estate and cultural expansion that are transforming it into a new pole of the creative economy, centred around star architect Renzo Piano's "Prata Riverside Village" on the old weapons factory site. The territory is geographically divided by two train lines and while the riverside area receives major investments, the upper side, which consists of fragmented social housing blocks amidst vast empty voids, where the city's biggest slum, "the Chinese Neighbourhood" once stood, seems a world away from the river.

The creation of the council's BIP/ZIP programme (starting in 2010, see: http://bipzip.cm-lisboa.pt/) and a public library in the upper side of Marvila (2016) have allowed new citizen movements to organise. With the support of ROCK and similar partners, in December 2018 these movements proposed a plan to "Transform Marvila with gardens and bikeways", that was accepted by the council.

Source: ROCK project, Lisbon (Martins et al., 2018)

Photo by Ana Naomi de Sousa/The Guardian: Abel Fonseca factory, in Marvila, Lisbon, was transformed into a co-working space and bar. It is across the street from Santos Lima, an apartment block that received media attention after it was sold to developers without informing the residents who had occupied the building for decades.

This driver links to the following research projects: CROWD_USG, GREENLULUS, NATURVATION, EDICITNET, URBLIV SMARTENCITY, TRANSIT, AGAPE, SMARTEES, ROCK.

5 Uneven Environmental Health and Pollution Patterns

This driver refers to unequal exposure to harmful and health-impairing pollutants, conditions and urban environments and/or unequal access to safe and healthy environments.

In cities, environmental health concerns manifest as an injustice where lower income, marginalised, and/or racialized groups are unequally exposed to pollution, climate-vulnerable infrastructure, or otherwise unequally exposed to conditions of climate-health risk (Collins, 2010; Kabisch & van den Bosch, 2017; Morello-Frosch et al., 2001; Pearsall & Pierce, 2010). Access to healthy environments and choices thus largely coincides with privilege (*distributive justice*).

In many cases the production of hazardous environments inhabited by vulnerable people is the consequence of exclusive urbanisation (Driver 1) and urban intensification or re-generation (Driver 4), whereby privileged groups tend to move to neighbourhoods characterised by healthier, greener, and safer environments while other areas become "social dumps" characterised by pollution, crime, unwelcoming public space, and disease where marginalized residents are displaced (Anguelovski, 2016; Armiero & D'Alisa, 2012). Apart from a manifestation of injustice in cities, these neighbourhoods and their inhabitants can become stigmatised, "ghetto-ised", and systematically unrecognized and excluded from conversations about urban sustainability and health (*participatory & recognition justice*).

In addition, in the case of urban energy poverty, poor households in Europe have adjusted their daily behaviours by resorting to burning unsuitable and unsafe materials in their houses in order to keep warm or by turning on their stoves as a source of heat, which contributes to new health and household hazards. This behaviour has come as a response to rising fuel prices and austerity policies, leading to intense air pollution inside homes and all around entire neighbourhoods (Thomson et al., 2017).

Access to food is yet another driver of health injustice, impacting consumer choice and eventually the health of those who cannot afford to buy (or do not know where/how to find or cannot physical access) good quality, healthy and fresh food. Here, providing access to healthy food in under-privileged neighbourhoods, through support of urban agriculture/community gardens, as well as through the set-up of local and healthy school canteen programs, can have many positive effects for vulnerable families and address food deserts and other markers of poor access to food (Anguelovski, 2015).

Uneven environmental health is not only an issue of justice in distribution terms (who has access to healthy environments or infrastructure) but also in terms of whether or not local knowledge of pollution patterns, disease and the relationship of those, is (or is not) acknowledged and taken into account by urban planners and decision-makers (*hermeneutical justice*). Exclusionary practices, imaginaries and discourses of local food activists embedded in "alternative" projects can also reproduce or exacerbate the exclusion of groups who do not feel represented or included in such projects (Argüelles et al., 2017).

In sum, underlying inequities in terms of environmental health are both a target of urban sustainability initiatives and a structuring element of those. As health environments of cities are altered, direct changes in the socio-physical makeup of the city inevitably follow. Several dimensions of justice are at stake in the process of sorting out these interactions.

CASE STUDY EXAMPLE: Waste dumping in Campania

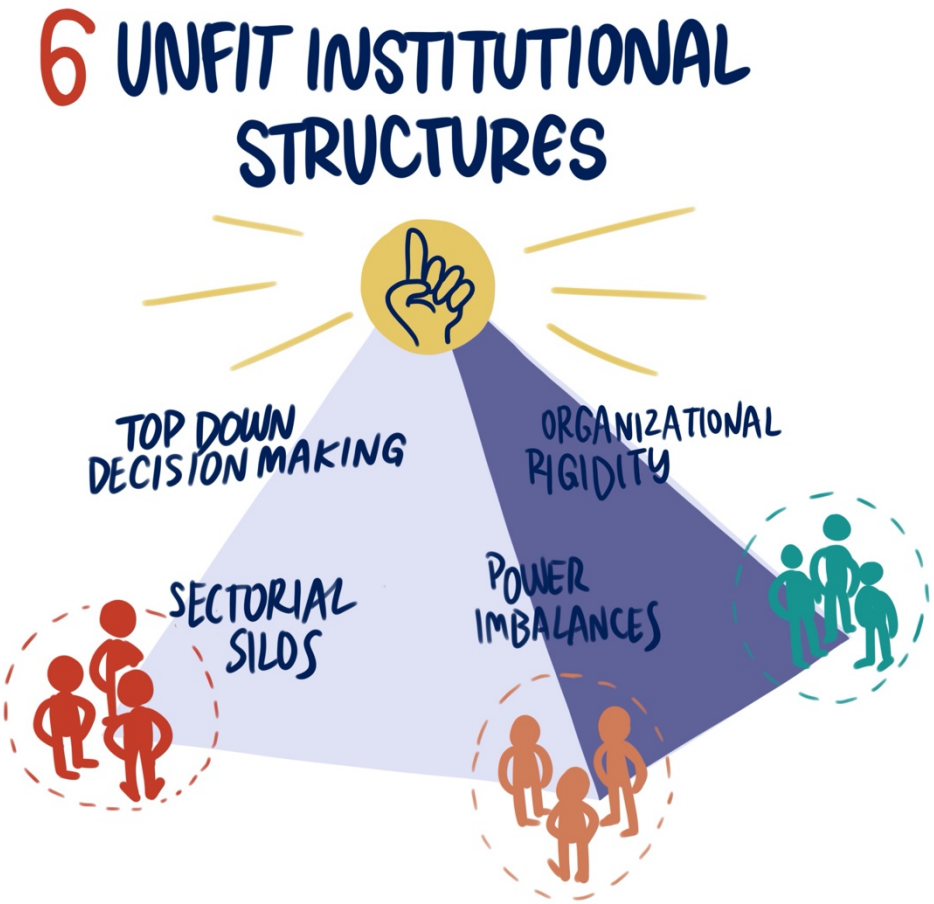
Campania, where Naples is located, is among the poorest and most densely populated regions in Italy. Beginning in the 1980s, the region has been facing a series of events surrounding the lack of waste collection and illegal toxic waste dumping. During 1994-2009, the northern part of Campania was even living in an "urban waste emergency" and the illegal disposal of hazardous waste has been continuous until the present (De Rosa, 2014). In 2008, residents from the working-class neighbourhood of Pianura fiercely resisted the reopening of a landfill that would further expose them to toxic pollution. However, with no regional waste management plan in place, this region's main landfill became overfilled with both hazardous and non-hazardous waste, with waste also exported to Campania from northern Italy.

This case speaks to uneven patterns of environmental pollution through waste dumping activities facilitated by and organized by the local mafia. It also attests to the historical and continued dumping of garbage near inhabited but marginalized areas of the South of Italy, causing high rates of cancer and other (unrecognized and often denied) health problems to the local communities. Findings also describe how "the explosion of violence was the result of making peripheries into ''social dumps'' as a consequence of the gentrification of the inner city".

Source: LARES project, (Armiero & D'Alisa, 2012; De Rosa, 2014)

Photo by Chris Beckett/Flickr. The Naples waste management crisis has lasted nearly 40 years and threatens public and environmental health throughout the Northeastern part of the Campania region, earning it the nickname, the 'triangle of death'.

This driver link to the following research projects: LARES, EVALUATE, TESS, URBLIV.



6 Unfit Institutional Structures

This driver refers to those aspects or functions of organizations, public offices, administrations and authorities that deal with urban governance and stand in the way of achieving just outcomes in urban sustainability.

Urban sustainability depends largely on coordinated policy and effective decision-making by urban governance institutions within cities and in regional, national and inter/trans-national bodies. A core observation in this regard is that strict top-down approaches limit knowledge generation and exchange, and that regulatory barriers posed by rigid bureaucracies often result in sustainability policies that fail to address the realities of vulnerable residents. Institutional dissonance is observed between the priorities of local (municipal/regional) authorities and those of central (national) government institutions. It is, for example, often the case that national regulating bodies stand in the way of transformative change at the city/town level (Janoušková, 2013; Ulied et al., 2019).

Within the city level, also, organizational networks consisting of long-term coalitions between local government agencies and private development groups can have priorities that conflict with those of local communities. This can be especially true when dealing with so-called targeted "problematic" neighbourhoods, or districts that become subject to urban regeneration/revitalisation (Ulied et al., 2019) (Driver 4). In these scenarios, it is commonly found that while global/city actors tend to focus on large scale developments (e.g. attractive spaces for residents and activities), local actors claim that both physical and social changes stemming from interventions should benefit the existing residents and interventions should be driven more by community groups (*distributive* & *imaginary justice*).

Such conflicts are shaped by pre-existing power imbalances which result in the lack of consideration of marginalized residents' needs and demands in municipal decisions (*procedural justice*) (Wascher et al., 2015). Even when participatory processes exist, they are often characterized by exclusive outcomes (Driver 7) (Anguelovski, 2013a; Fainstein, 2014). In the end, what is allowed within participation processes is often a reflection of efforts to maintain existing and durable organizational alignments that make it difficult for new interests to be represented.

Due to the inter- and trans- disciplinarity that issues of sustainability and justice often require, urban governments can be limited by their own adoption capabilities. Organizational rigidity, for example, expressed through an unwillingness to change methods, metrics or objectives, can play an important role in holding back initiatives and practices that could act to the benefit of vulnerable groups and enhance social/environmental sustainability (*testimonial justice*) (SHARECITY, 2019). It is not always the rigidity of institutions that produce injustice, but the overly quick reactions by authorities and private organizations, whereby decision-making bypasses democratic processes of public debate.

CASE STUDY EXAMPLE: A framework of "convergence": challenges of scale and discipline.

The concept of "convergence", was proposed to bring together the dual concepts of equality and planetary limits, seeking to examine relationships between sustainability and equity at multiple scales (global to local) and in multiple domains of activity (natural resources, energy, trade, governance, well-being). In this sense, the concept reveals a translocal dimension of justice in the city, the defining processes of which transcend the urban limits and expand to global connected networks of material/resource production, extraction, accumulation, waste, and labour/people's exploitation, exclusion and marginalization.

According to interviewees from the CONVERGE project, efforts to bring such a multiple-scale perspective to urban sustainability was very challenging within the limits of existing institutions. Great divisions between sectors of environmental policy and development, and those broadly concerned with issues of (social and environmental) justice, make these connections hard to be institutionalised formally and in society.

"In relation to food, for example, Bristol can't be self-sufficient, or even rely on its hinterland, nor reliant solely on the UK. So, from this perspective, convergence includes looking after the other parts of the world on which we depend for food, or other purposes. It was very difficult to get that into either practice or policy

at city level, because it meant compromising immediate goals at city level and trading off with the needs of the global perspective".

Source: (Vadovics et al., 2012) (CONVERGE, personal communication)

Photo by Bristol Food Policy Council. Bristol, like many cities in Europe, depends on strong institutional bodies to coordinate policies related to food security and imports. Unable to achieve full self-sufficiency, access is dependent on a globalized network and transparent collaboration.

This driver links to the following projects: BRAINPOOL, WWWforEurope, RELOCAL FOODMETERS, CLEVER CITIES, GREENLULUS NATURE4CITIES, CLEVERCITIES, SHARECITY, LARES.

7 Limited Citizen Participation in Urban Planning

This driver refers to the limited involvement and engagement of citizens and citizens' initiatives in decision-making around the planning, design, implementation and/or evaluation of urban sustainability-oriented interventions.

When citizen participation is not encouraged, supported and sought out in a meaningful way, sustainability planning interventions risk being a reflection of top-down priorities that represent and enhance the status quo in terms of both sustainability and injustice. The question of participation does not only concern the availability of structures in place to accommodate input from local communities and stakeholders, but also the openness and potential of these structures with regard to inclusivity and impact (i.e. what are the different collectives represented, what is the depth of participation and how much are participation outcomes taken into account?) (Anguelovski et al., 2018; Fainstein, 2014; Kotsila et al., 2020)

Inclusive participation can be hindered in both centrally/state-managed projects and in community-based initiatives around urban sustainability, when, for example, existing

inequalities are not acknowledged in their design. One of the most common observations in this regard is that people cannot afford to "pay into" bottom-up projects or cannot dedicate time away from work or their dependents. Direct participation processes demand commitment and time, so a diversification of participation options, including monetary compensations and childcare options to facilitate participation, can achieve more inclusive outcomes (*procedural & representational justice*) (i.e. through email, in organized workshops, and digitally through participation apps).

It is often the case that the most vulnerable groups are those excluded from processes that will dictate their outcome upon them and without accounting for their needs, vulnerabilities, identities, or preferences (*recognition justice*). In the fight for social justice and anti-gentrification, those involved in grassroots movements are often "low income, marginalized people struggling to survive day to day," making bottom-up efforts potentially "exhausting personally for individuals with other everyday life commitments to take care of" (*responsibility* and *intersectional justice*).

Participation is often cast in terms of stewardship and volunteerism around urban sustainability (Connolly et al.2013). Community-initiated projects (e.g. urban gardens, repair shops, food sharing networks) support urban sustainability objectives in different ways but count on the long-term unpaid work of activists and engaged individuals. Although many of such initiatives strive for expanding the sphere of the commons, and thus produce a counter-narrative to neoliberal ideologies, reliance on such participation might run the risk of shifting responsibility from the public sector to the people, and of privileging the participation of some (more available, more accessible) groups over others. Limited participation and citizen engagement or stewardship with urban planning processes is also observed to be an issue in research and innovation projects that aim to enhance or promote co-creation through inclusive processes of knowledge sharing. Some of these challenges and obstacles include the short timelines of research projects and the pre-defined methods and processes that these will follow.

CASE STUDY EXAMPLE: Participatory budgeting in Amsterdam Indische Buurt

In 2011, after an exchange program with an NGO in Brazil, the Centre for Budget monitoring and Citizen participation (CBB) was founded in the Indische Buurt, in the Eastern district of Amsterdam. This consists of 1) a community-initiated stream that practices budget monitoring and formulates its own priorities, and 2) a municipality-initiated stream which uses an online application that provides financial data information to the public, at the level of the neighbourhood. As the TRANSIT project reports, these contribute to budget transparency and accountability at local level as well as participatory decisions on which neighbourhood projects to prioritize.

However, in 2013, according to one of the project interviewees the CBB decided to let go of the "human rights" perspective in their discourse and aims (see this interview).It meant that city authorities had more flexibility in adapting the participatory budgeting initiative in the context of austerity policies. This, arguably, stripped the initiative of its more radical potential for making social and environmental justice a priority. Linking also with issues of unfit institutions, this removal of "human rights" approach was claimed to have worked in favour of upscaling of the initiative in cities across the country.

In the case of the Indische Buurt budget monitoring has changed the way the district plan was developed: in co-creation with citizens. In 2015 a resolution was accepted in the local district council stating that in 2017 20% of the local budget should fall under the responsibility of residents (see this interview). In terms

of procedural justice, concerning the initiative itself, involved stakeholders mentioned that participation in the activities was characterized by only a few people who had the time to engage in the process and persevered in understanding financial documents. Even though efforts were made to make the reading and understanding of the budget as easy as possible, it still seemed to be an 'elite' that participated. This raised questions whether the group was or should be representative. Someone feared this process was used as a legitimization for already made decisions, while another felt that s/he contributed to decision making.

Source: TRANSIT project

Photo by The Hague Academy for Local Governance. Inclusive citizen participation in decision-making processes promotes democracy and is crucial to the success of sustainability initiatives. Above, a diverse group of participants from different countries, sectors, and levels of government, discuss experiences and challenges at the Citizen Participation and Inclusive Governance course in the Hague.

This driver links to the following projects: TRANSIT, TESS, CROWD_USG, AGAPE, WWWforEurope, NATURVATION, CONVERGE, GREENSURGE, ROCK, UNALAB.

8 Lack of Effective Knowledge Brokerage and Stewardship Opportunities

This driver refers to the ways in which (access to) useful information and know-how around sustainable urban interventions and their benefits is not shared effectively or equally among disciplines, sectors or social groups, and thus constrain the potential for both sustainability and justice.

Effective, inclusive and socially considerate knowledge brokerage[2] can enhance the justice aspect of urban sustainability interventions, especially when it includes and brings benefits to under-privileged and vulnerable groups (Partidario & Sheate, 2013; van der Velden, 2004). To know of and about sustainable infrastructures (e.g. urban green areas, healthy food, or social innovation projects), including how they are governed, why they are beneficial, and how they can be accessed, can be in itself an enabling factor for their

[2] By knowledge brokerage here we refer to the processes that include facilitating knowledge exchange or sharing between and among various stakeholders, including researchers, practitioners, and policy makers.

implementation, accessibility and benefit received (Trencher et al., 2013). When, on the other hand, knowledge production and communication is exclusive, it can become a driver of injustice by limiting the potential for participation, stewardship or uptake of innovations.

Access to knowledge can thus be seen as a *distributive justice* concern that in turn impacts *procedural justice*, given that environmental and sustainability awareness and education will presumably animate more informed and meaningful, and thus more inclusive, participation. The extent to which people not only access, but also internalize the innovations being undertaken can to a great extent determine the benefits perceived. In Ljubljana, for example, it was found that farmers had low awareness of existing food-related producers' networks, and little overall knowledge of better practices to reach the consuming public. This was seen to be both hampering the producers' potential of surviving financially against industrialized agricultural businesses and limiting the availability of fresh food locally produced for consumers (Wascher et al., 2015).

In a wider sense, a lack of environmental awareness/education that might stem from lack of adequate information campaigns or lack of policy that would popularize sustainability-oriented initiatives, can further hinder the development of inclusive innovation in cities (e.g. nature-based solutions, or energy transitions) (Nature4Cities, 2018a, 2018b; Valkenburg & Cotella, 2016). Exclusivity of access in relation to urban sustainability and its benefits can also be the result of miscommunication, or obstacles in collaboration and knowledge brokerage, between the scientific community and civil society – including activists, NGOs and the wider public. Difficult terminology, unwelcoming communication platforms, and a lack of "translating" insights to useful materials for policy-makers, practitioners or citizens can hinder the uptake of innovations (Morrow, 2019). If relying on digital means, for example, a gap could arise between those with access to technological literacy on digital technologies, and those without.

In short, knowledge brokerage is related to justice in urban sustainability because those who can best leverage knowledge produced or required to make sustainability transitions happen are those best positioned to benefit from them.

CASE STUDY EXAMPLE: Crowdsourcing for urban governance in Ghent, Belgium

The city of Ghent, Belgium, is committed to achieving urban sustainability (e.g. making the city's food system more local, sustainable, and resilient through their project 'Gent en Garde'; and having the largest designated cyclist area in Europe). The city has dedicated a department to increasing citizen participation. Their strategy includes the use of technology-based tools and face-to-face processes, as those tools are meant to give access to urban governance decision-making to as many people as possible. However, a too heavy a reliance on digital participation can neglect certain populations, such as those who do not have access to or knowledge of digital platforms or simply those who don't have access to smart phones or tablets with reliable and ample data plans.

While a 'smart city' approach is often connected to sustainability and innovation, there is a need for policies, including participation tools, to be relevant in the everyday lives of its inhabitants, how they experience the city, and what they need from and in the city and its assets or resources. While it can be difficult to achieve

inclusive stakeholder involvement within normative decision-making procedures, doing so can promote justice and the long-term success of sustainability goals.

"We have a smart city imaginary but it is very different from what happens at the local levels because organizations and administrators need to deal with a number of problems that have to do with participation, the meaning of participation (it can be also non-leading to greater democracy) and the issue of access and opportunities."

Source: (Certomà et al., 2020), CROWD_USG project

Photo by Veronica Vitale/crowdusg.net. Digital and social technologies can enhance the participatory process and improve knowledge brokerage, leading to more inclusive and representative urban governance. It can also become another form of exclusion, however, if only the technologically literate have access to digital platforms (CROWD_USG).

This driver links to the following projects: FOODMETERS NATURE FOR CITIES; CLEVER CITIES, MILESECURE, SEISMIC, SHARECITY

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9 Unquestioned Neoliberal Growth and Austerity Urbanism

This driver refers to processes of privatization, commercialization, budget cuts and state withdrawal from various sectors and how they can undermine urban sustainability, guided by an ideology of unfettered economic growth which often aligns with austerity policies.

Unquestioned neoliberal growth and austerity urbanism expresses itself both in blatant, often large-scale, deregulation, privatisation and/or commodification of natural resources, public assets or services, common-pool resources or life aspects, and through more subtle processes of downscaling the responsibility of (collective) welfare onto individuals and non-governmental organisations (Castree, 2008; Heynen et al., 2006; Kotsila et al., 2020). Both processes result in the replacement of the oversight of the public sector by democratically accountable entities through new the private sphere management (Swyngedouw et al., 2002).

In the realm of urban sustainability, it is not seldom that neoliberal growth imperatives and austerity narratives of “there is no alternative”, accompany a number of policy changes and interventions. This is evidenced both as an identified element of injustice that stands

in the way of sustainability efforts, but also as part of the politics and discourse in which projects themselves are embedded. This applies to, and impacts, both existing green/blue urban nature and the future creation, protection or management of sustainability infrastructure. When, for example, responsibility for sustainability is left to civil actors and non-governmental initiatives, it may also escape the democratic sphere and limit participation. Therefore, and relatedly, it is often the case that "alternative" imaginaries of change, transition and transformation are inhabited by a limited fraction of few (privileged) groups (*imaginary*, *hermeneutical* and *recognition justice*) (Argüelles et al., 2017).

Neoliberalism is exemplified through the privatization/commodification of public space for the creation and/or maintenance of environmental amenities like parks, riversides, docks and beach fronts (*distributive justice*). Since green spaces are costly to maintain, cities with limited budgets may outsource their maintenance to private companies, citizen/inhabitant associations, or gardening groups, as has been seen in UK cities such as Bristol or Manchester. In another example, when urban sustainability initiatives are tied to private development, it is commonly the case that the logic of privatisation short-circuits the potential for just outcomes: new developments are directed mostly to elite buyers and green space becomes an enclave. In distributive terms, public space can be taken away from the working classes for private leisure purposes (Kiss et al., 2019; Prentou, 2012).

Neoliberal austerity urbanism also often impacts institutions of different scale in distinct ways, hampering the potential of city-level sustainability initiatives. A few years back, for example, the city of Amsterdam performed a municipal reorganisation, which meant that budget authority became more centralised and districts lost budget and substantial policy-making power (Wittmayer & Rach, 2016). One of the main problems relating to the neoliberal growth imperative is the way in which economic growth, in terms of GDP, is prioritized over other goals within sustainability, especially in times of crisis. In contrast, proponents of degrowth argue that obsession with growth is the problem within sustainability, and that only a planned slowing down and equitable transformation of the economy can bring about the desired social and environmental change (Kallis, 2011).

CASE STUDY EXAMPLE: Neoliberal austerity versus community gardening in Carnisse, Rotterdam, the Netherlands

The southern neighbourhood of Carnisse in Rotterdam with 11,000 inhabitants, many of which immigrants and newcomers, is one of the forty most 'disadvantaged neighbourhoods' in the Netherlands. There, an urban garden was initiated in 2011 as part of a regeneration initiative (the Resilience Lab) to achieve urban sustainability and place-making. Although the garden was shut down in 2012 by the Municipality due to budgetary cuts, it revived later as a community garden after continued efforts from below. As one respondent of research conducted within the GUST project:

"Crops, herbs and flowers were cultivated by and for the residents. These were traded to those who helped out with the garden (guiding principle of reciprocity) and were given away to people in need (in shelters, food banks, etc.). Primary schools organized educational activities, elderly homes organized activities in the garden, and ex-addicts were helping in the garden and in return, got vegetables to cook with for their shelters."

Nevertheless, again, in 2015, the garden was shut down and the land where it was standing got sold by the municipality to a private developer. An issue of distributive, as well as intersectional and relationality-inspired injustice, vulnerable residents of the Carnisse neighbourhood lost not only access to a green space but also the sense of community and place, and the multiple (physical and mental) health benefits that involvement with food cultivation in cities is known to bring.

Source: GUST, (Frantzeskaki et al., 2018)

Photo by Peter Elenbaas/HH, www.groene.nl. An aerial shot showing new construction in the Carnisse neighborhood, in Rotterdam, the Netherlands. Dubbed one of the worst neighbourhoods in the country, it has been targeted for numerous redevelopment and community improvement programs, including a community garden project that closed down due largely to budget cuts and state withdrawal.

This driver links to the following projects: GREENSURGE, GREENLULUS NATURVATION, ESDINDS, WWWFOREUROPE

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10 Weak(ened) Civil Society

This driver refers to the ways in which collective civic groups that share common interests (other than the state, the market, or the family) are either not constituted and impactful enough to influence and benefit from sustainability efforts or are indeed constrained by interventions that carry sustainability objectives.

Weak civil society can lead to the systematic exclusion of certain groups or individuals from sustainability-oriented initiatives, reflecting into a decreased capacity for uptake and just implementation of such initiatives (Morrow, 2019). Lack of existing community organisation can be an obstacle for meaningful participatory processes, both because citizens are less informed and prepared to enter into such dialogues, and because input is not “digested" through the different levels of organization and representation that a rich civil society network can offer. Issues of race or ethnicity and participatory processes can

here intersect, as often multilingual societies (or neighbourhoods) may fail to meaningfully include linguistic minorities (and disadvantaged groups) in deliberation processes (*procedural* and *representative injustice*). Language restrictions may also limit access and the feeling of ownership to such programs.

A current trend in urban governance as well as in research on urban sustainability, is seeking participation and the transmission of ideas through co-creation processes, innovation/experimentation/living labs, and similar ways that facilitate the formation of 'communities of practice' and 'rootedness' in existing place-based communities, as a form of advancing a more plural civil society for sustainability (SmartEnCity, n.d.).

However, it is also often observed that sustainability-related practices of civil society end up being exclusive, because they are embedded in wider systems of structural inequality. Even, for example, in explicit social justice movements organization, participation can be challenging for low income and marginalized communities with more pressing daily struggles (*responsibility justice*). Furthermore, strong emphasis on individual or community organising and stewardship for sustainability risks falling into the trap of so-called "roll-out" neoliberalisation processes, whereby the state withdraws from essential provisioning functions and this responsibility falls on the shoulders of citizens (Driver 9).

A common issue faced by many civil society led projects is the short time frame of support they receive from formal institutions. This poses serious obstacles to their longevity, as people lose motivation and interest in continuing to participate (Argüelles et al., 2017). A typical example of such short-lived civil society initiatives are urban gardens (although some of them have remained for many years), as their need for land and temporary occupation of empty plots, puts them in a particularly vulnerable position when grey urban development becomes economically feasible and/or profitable.

In sum, the status of, and challenges faced by, civil society are often a good barometer of the extent to which justice issues can be incorporated into urban sustainability initiatives in the context of a wider institutional structure premised on democracy.

CASE STUDY EXAMPLE: Food-sharing in Berlin, Germany

SHARECITY is a research project that explores food sharing initiatives in cities around the world. The project's findings are documented in a database, SHARECITY100, with the goal to make food sharing initiatives more visible and accessible.

Successful sharing initiatives require a strong and organized civil society, and it is not uncommon that governance practices, "informed by different risk ontologies and understandings of the common good/hazard of food", are at odds with the everyday food sharing practices. In Berlin, for example, a decentralized, volunteer-led organization came into conflict with the Berlin Food Safety Authority over the possible health risks of public fridges. The collective ownership framework of the initiative was also an obstacle, given that German regulations do not legally recognize a status of shared responsibility.

The conflicts revolving around food sharing have highlighted the contradictions of governing food as a "privately owned public good" and the failure to develop commons-based strategies for risk management

(Morrow, 2019, p. 210). With threats of "privatization and individualization of responsibility", the future of food-sharing is dependent on communal persistence and participation.

The principal investigator of the SHARECITY project, describes how communities can come together and reclaim urban spaces for food production:

"In a world where it can sometimes feel like we are increasingly being pitted against each other—individual against individual, community against community, nation against nation, people against the planet—food sharing initiatives demonstrate that there are other ways of acting and of being together."

Source: https://foodtank.com/news/2019/07/connecting-global-food-sharing-initiatives/,SHARECITY(02)

Photo by Ferne Edwards/SHARECITY. Community-based initiatives that link to sustainability efforts, such as the food-sharing program shown above, may engage with radical claims and enhance social justice, but can also be difficult to implement and sustain, thus limiting the overall impact.

This driver links to the following projects: GUST, SMARTENCITY, GUST, UNALAB, TRANSIT, AGAPE, TESS, CROWD_USG, NATURVATION.

Epilogue

Urban sustainability efforts aspire to address the current and future needs of society. Seeing how those needs are being shaped by deeply political processes and differential access to resources while also being unequally recognised in society, justice becomes a central concern for urban sustainability.

A first observation is that a significant number of the projects we studied call for urban sustainability interventions utilizing the language of ´justice´ as an assumed and automatic outcome of sustainability without critically assessing whether, to which extent, and how justice and equity considerations were given appropriate attention in urban sustainability efforts. This practice, however, risks of detaching the concept of justice from its historical emphasis on the most-vulnerable populations.

Second, it is becoming evident from this initial analysis that challenges of distributive and procedural justice are more commonly pronounced even in cases where the drivers of other, more refined types of injustice, are also present. We thus see the need for both an explicit focus on justice and a deeper discussion of what defines it in the context of urban sustainability interventions.

Whereas climate change and environmental degradation and pollution are “global threats”, they are not experienced equally by all fragments of the population, with

differentiations in this regard being shaped by class, gender, ethnicity or race, among others. In other words, there are inequalities in how the costs and benefits of interventions that seek to address multifaceted problems of environmental, social and economic concerns are distributed.

In order to avoid downplaying this inequality, the needs and perspectives of the most socially and environmentally vulnerable groups need to be considered, examined and addressed in greater depth and detail, and at different points in time of sustainability interventions: from initial design and planning to mid-term impact evaluation and risk mitigation strategies. This includes consideration of how (with whom and for whom) such interventions are being envisaged, designed and implemented.

The challenge remains in how to make neighbourhoods greener, healthier, more sustainable and more liveable, while protecting the right to housing, public space, and healthy amenities, for all.

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Annex

Methodology

After identifying 43 projects from an initial sample of 350 EU-funded research projects (WP3), UrbanA developed a database of documents (including academic publications and reports) associated with these projects that contained insights on justice.

A coding list/protocol was built after a first scanning of those documents. The steps we followed were of gradual clustering: from 140 individual instances of research objectives or outcomes that pointed toward (in)justice, to an initial list of 27 drivers of injustice (e.g. gentrification; income inequality/low incomes; lack of access to healthy food; neoliberal urbanism), and a final coding list of 10 aggregated drivers of injustice related to, or relevant for, sustainability efforts in cities.

We then used this coding list to systematically code all materials gathered while also conceptualizing the theoretical types of justice that these drivers point toward (these justice types are highlighted throughout the text under each driver). In addition to the materials/documents associated with the projects, we also conducted and coded 14 qualitative interviews with involved researchers and key informants.