Meta-analysis of EU-funded projects

Drivers and manifestations of injustice

M16 /April 2020

Project full title	Urban Arena for sustainable and equitable solutions
Project acronym	UrbanA
Grant Agreement No.	822357
Coordinator	ICLEI European Secretariat Gmbh
Project duration	1 January 2019 – Dec 2021 (36 months)
Project website	www.urban-arena.eu
Work Package	4. Identifying Drivers of Urban Social Inequality & Exclusion and Interventions
Deliverable	4.1 Meta-analysis of EU research publications and qualitative study of drivers and manifestations of urban injustice related to sustainability challenges and approaches
Delivery Date	25.04.2020 (Month 16)
Author(s)	Panagiota Kotsila, Austin Matheney, James Connolly, Isabelle Anguelovski and Taliah Dommerholt (ICTA-UAB).
Contributor(s)	Sara de Maio and Lucia di Paola (ICLEI); Duncan Crowley & Margarida Esteves (FCID), Tom Henfrey (ECOLISE), Phillipp Spaeth, Romane Joly and Sophia Silverton (ALU-FR), Ian Cook & Tamaras Steger (CEU), Karlijn A. Schipper, Sarah J. Rach, Flor Avellino (DRIFT)
Reviewers	All consortium members
Dissemination level:	Public

Contents

   1.1 From mapping approaches to mapping manifestations and drivers of injustice   **4**

   1.2 Inequality and exclusion as part of urban injustice   **5**

   1.3. Co-creation and outputs of the meta-analysis   **6**

2.   Methods   7

   2.1 Selection of projects relevant to sustainability and justice   **7**

   2.2 Compiling a pool of materials for analysis   **7**

   2.3 Building a list of drivers of injustice   **8**

   2.4 What type of (in)justice?   **11**

   2.3 Detailed coding   **12**

   2.4 Qualitative interviews   **13**

3.   Analysis of results   14

   3.1 Drivers and manifestations of injustice   **14**

      3.1.1 Driver 1: Exclusive Access to the Benefits of Urban Sustainability Infrastructure15

         Access to infrastructure and benefits   15

      CASE EXAMPLE: Manchester's cycling infrastructure   17

         Access to knowledge and information   17

      3.1.2 Driver 2: Material and Livelihood inequalities   **20**

         Low incomes   20

      CASE EXAMPLE: Council estates, public space and the function of community gardening in King's cross, London   22

         Affordable housing   22

      3.1.3 Driver 3: Racialized or Ethnically Exclusionary Urbanization   **25**

      CASE EXAMPLE: Housing and energy poverty in Santa Maria/Santa Anna–Tió neighborhood, Catalunya.   26

      3.1.4 Driver 4: Uneven and excluding urban intensification and regeneration   **28**

         Urban densification and expansion   28

      CASE EXAMPLE: *Germanetes* Community garden of Barcelona's *Pla Buits* scheme   29

         Urban regeneration, revitalisation & social resilience   30

      CASE EXAMPLE: The regeneration of Marvila old docks neighborhood, Lisbon   32

1. Aims and rationale of the UrbanaA meta-analysis of research on urban justice and sustainability

UrbanA - Urban Arenas for Sustainable and Just Cities is a 3-year 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. The focus is on synthesizing and transferring knowledge, breaking silos and building new networks for transformative change.

After a process of mapping the different approaches towards sustainability and justice evidenced and studied in Europe through an initial sample of 350 EU-funded research projects (WP3), UrbanA aims to assess and distil information from the existing database (Deliverable 3.2) in order to deepen those insights related to drivers and manifestations of urban injustice. The first step of this assessment and distillation work taken up in WP4 and presented in this deliverable was an in-depth and qualitative meta-analysis of 43 projects selected by the UrbanA Consortium as those with the richest focus on issues related to urban injustice. This deliverable thus consists of the results of the analysis of relevant materials from a subset of projects (chosen from the WP3 mapping database), and will serve as a reference source for further discussion and development via the rest of the WP4 activities, as well as throughout the rest of the UrbanA project's work packages and Community of Practice engagement.

1.1 From mapping approaches to mapping manifestations and drivers of injustice

UrbanA's **database of existing approaches** to tackling unsustainability and injustice in cities was developed from knowledge and insights generated in previous EU-funded projects. It is also being enriched by the experience of a Community of Practice (CoP) that has in its core the members of the UrbanA consortium as well as UrbanA fellows recruited to expand the boundaries of the project, Arena participants who signed up to participate in one or more of the UrbanA arenas, and a wider set of individuals and organisations that share an interest in the practice of urban sustainability and justice in Europe. WP4 works to identify the drivers and manifestations of urban injustice related to or derived from sustainability efforts began from an assessment of that database of approaches and the EU-projects mapped (UrbanA short-list of projects and approaches), and followed a similar path of analysis as that used to develop the full database. WP4 started from a desk-study of the projects, then deepened understanding of the findings through interviews with project researchers, and further enriched these findings through engagement with the UrbanA Community of Practice (see section 2 on Methodology for details).

The purpose of this process was to gather knowledge and insight produced through EU-research with concern for manifestations and drivers of injustice that these projects aimed to address, identify, or that these projects sometimes represented and thus conspicuously ignored or exacerbated (despite intentions otherwise). In short, this process was meant to take an in-depth look into the various pathways through which the drivers and manifestations of urban injustice are and were made visible within recent EU-funded research. Thus, we took the role of critical reviewers of the materials we analysed but did not assume ourselves to be the final arbiters of the knowledge. Rather, we opened this knowledge-creation process up to

4

a wider community of people involved in "making" cities, as well as those who were connected to the projects we studied. Selected members of this wider community served as key informants for us to filter our lessons through, from within academia and beyond. We thus engaged in a co-creative process that captured both past work done and current processes of urban struggle, experimentation, and change towards more sustainable and just cities.

In a nutshell, our purpose was **locating and analyzing drivers and manifestations of urban injustice** that relate to sustainability and which became evident in EU-funded research. It was not to generate the one and only exhaustive list of contemporary drivers and manifestations of urban injustice, but rather to plumb the depths of knowledge that has been gained to open up the conversation about how, when, where, and why injustice might manifest and to begin to develop a comprehensive infrastructure for organizing that knowledge. Insights from this work will eventually inform effective strategies for strengthening just sustainability in cities, based on theory and practice. This infrastructure will support the scenario-building process of WP5 that digs more deeply into successful governance arrangements for justice-oriented environmental governance, and which will help to ultimately generate a set of policy recommendations and summary statements.

1.2 Inequality and exclusion as part of urban injustice

For the purposes of WP4, we define injustice as our dependent variable (the outcome we are trying to explain), with inequalities and exclusion being central components of injustice and thus unquestionably important aspects of our analysis. Unequal societies that discriminate against certain groups can lead to exclusion, and social exclusion involves inequality, but justice (and injustice) is a larger concept than inequality or exclusion. 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 (Nussbaum, 2000; Schlosberg, 2013). 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).

Thus, 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 or exclusions that might affect the capacity to ensure equity. Because of its broad application, we recognize that justice is a disputed concept, which is mobilized in numerous forms toward many ends. In the discussion below of types of justice that our work reveals, we attempt to reduce the fuzziness of the term by offering a functional framework for this diversity, even while embracing a wide framework for the notion of justice itself.

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 (in the context of urban sustainability) that the concept becomes meaningful to elucidate what is still lacking to generate sustainable urbanism. We argue that this wide and inclusive approach

allows for a more comprehensive analysis than the often-limited equity discussion within sustainability, and that, above all, this is what is missing.

It is important to acknowledge here that this broad and inclusive approach to justice in the context of urban sustainability is at times messy. Although in some cases manifestations and drivers of injustice are easily disentangled, some types (manifestations) of injustice could also be conceptualized as drivers. These phenomena are usually interdependent and cyclical rather than unidirectional and static. This could potentially lead to a circular reasoning, and thus consists of an analytical hazard, which can only be avoided through careful contextualised analysis at a case-by-case basis. Thus, while we code according to a clean structure that generates information per driver of injustice, our analysis and discussion ensures that these nuances and interactions among processes are acknowledged. We further address this risk by building our code-list through a grounded approach, based on specific instances of injustice in context, which are there further clustered into our coding list (see Methodology section).

1.3. Co-creation and outputs of the meta-analysis

The results of WP4 build on the general database of knowledge produced in WP3 (see Deliverable 3.2), by generating a more focused pool of sources consisting of leading EU-funded research projects for a detailed meta-analysis of the drivers of injustice.

This meta-analysis has high value for future policy and academic discussions on its own, but the purpose of UrbanA is to take this knowledge into the world and already start to filter it through on-the-ground experiences. In order to do this, we have generated a full meta-analysis report, but also aim to boil the results down into online wiki pages and easily digestible booklets (following Deliverables 4.2 and 4.3), building thus the foundation for further discussion with a wide variety of stakeholders within the UrbanA Community of Practice (CoP).

Once these materials have been filtered through the CoP, we also aim to bring together all of these inputs within a final widely accessible handbook-style publication that describes the drivers of urban injustice in the context of sustainability (D4.3).

2. Methods

2.1 Selection of projects relevant to sustainability and justice

Our selection of previous and on-going EU-funded projects was based on the database of projects produced in WP3 (starting from >350 projects and reduced to the "UrbanA Short-list" of 112 projects most relevant for urban sustainability and justice). Of those projects, we identified a list of 35 focus projects for our efforts to develop a detailed understanding of the drivers and manifestations of urban injustice related to sustainability, according to the following criteria:

- Projects ranked by members of the UrbanA Consortium with a 3 (from a range 1-3) in the category "link between sustainability and justice" as developed through the mapping process in WP3.
- Projects whose aims and objectives stated in summary materials and deliverables, explicitly refer to justice.
- Projects dealing with approaches that we identified through the earlier mapping process and outcomes (WP3) as carrying high relevance for justice (this may have occurred, e.g., through deeper engagement with the project materials or through feedback from people with close knowledge of projects).
- Projects with robust findings related to urban injustice, as gauged from deep engagement with project outputs.
- Projects that focus on issues of sustainability that are identified within wider academic literature to have especially important implications for justice (e.g. the retrofitting of old buildings or neighbourhoods, and eco-friendly transportation, as is the focus of SmartEnCity)
- Projects that focus on issues of justice that are identified within the wider academic literature as having high impact on urban sustainability challenges (e.g. anti-gentrification practices in Europe, as the focus of AGAPE project).

This list of 35 projects selected for focused study by the core WP4 team was then enriched by 9 more projects identified by members of the full UrbanA Consortium as highly relevant to this analysis (based on above criteria), but which had not made it into the final (WP3) database due to earlier exclusion criteria not related to justice. After full review, we decided to include these 9 additional projects as high priority cases and, therefore, ended up with 43 WP4-relevant projects that formed the basis for this analysis (list in Annex).

2.2 Compiling a pool of materials for analysis

Using the list of projects identified from the (2.1) selection methods, we developed a database of relevant documents associated with these projects. Relevance was determined through an initial review that highlighted materials (including academic publications and published reports) that contained insights on justice (manifestations, drivers, or implications for). These materials were assembled on a shared online spreadsheet and all consortium members were

asked to augment as needed based on prior engagement with these projects through the WP3 mapping process. Once the materials were decided, they were added to internal file management libraries including the project's online [Zotero library](#) of documents[1] as well as in the project's online storage (BOX > WP4 > Coding material). The materials were then put through a second-round review for the purpose of building a coding list/protocol that would allow the WP4 core team to distil information from these documents. This second-round review resulted in some documents being discarded due to limited relevant information. In all, the library of drivers, manifestations and implications for justice contained circa 100 documents.

2.3 Building a list of drivers of injustice

Based on the new WP4 database of project materials with highly relevant information on justice in the context of urban sustainability described in Section 2.2, we identified more than 140 individual instances of actual circumstances that generated or pointed toward unjust outcomes. We categorized these specific instances into an initial list of intermediate level drivers (27), which we outline below (Table 1).

Table 1. Intermediate-level conceptualization of the drivers of injustice linked to and affecting sustainability efforts

Drivers and manifestations of injustice (intermediate level)
UR: Urban regeneration/revitalization
G: Gentrification
H: Lack of affordable housing/real estate
UD: Urban densification/expansion
R: Racial injustices and inequalities / racism
S: Racial/ethnic segregation
KN: Little or no access to (environmental) education and to knowledge on innovative solutions that can address (environmental) problems
PC: Privatisation and commodification of public space (including parks, other urban nature etc.) and sustainable practices
LGB: Lack of (access to) /poor quality/insufficient (public) green/blue spaces and other sustainability-oriented interventions/measures
N: Neoliberal (austerity) urbanism

---

[1] We named documents relevant to WP4 analysis, adding a number in parenthesis in the original title, maintaining that numbering throughout our archives (in the online spreadsheet referencing and in the UrbanA WP4 Box folder).

UE: Unequal exposure to health risks/hazards
LN: Long-term/historical neglect of minority neighbourhoods
P: No or tokenistic participation in neighbourhood development schemes and urban planning
CR: Increased (perception of) crime/lack of safety in public/green spaces
CM: Corruption and/or mistrust in institutions
I: Income inequality/low incomes
CG: Obstacles to (the longevity of) citizen-led/grassroots projects
CO: Low/lack of community/neighborhood organisation
FA: Lack of access to healthy food
GDP: Growth oriented indicators of well-being/ progress (narrowly defined)
IGM: Institutional/governance malfunctions
PO: Polluted soils/post-industrial sites
GI: Gender inequalities
D: Disciplinary and professional silos
GM: Globalised markets/globalisation
A: Age-related inequalities
SN: soft neoliberalism

In a final stage of analysis, we aggregated these codes into 11 main categories of manifestations and drivers of injustice related to sustainability in cities (Table 2). Our final list of drivers was developed in order to condense the above codes into a manageable yet comprehensive set of information around which to structure our discussions with the UrbanA Community of Practice. These, in essence, represent the first draft of our overall statement on the drivers of injustice in cities related to sustainability, which will be filtered through several more co-creation layers in the UrbanA process.

It is important to highlight that neither the first clustering of instances to intermediate level drivers (Table 1) nor the further aggregation to 11 drivers of injustice (Table 2) were conceptualized in an exclusive way. For example, cases of neighbourhood segregation would

feed into the intermediate level drivers of both "Long-term/historical neglect of minority neighbourhoods" (LN) and "Racial/ethnic segregation" (S). Similarly, as seen in the table below (Table 2) the intermediate driver "Lack of access to healthy food" (FA) would feed into both "Driver 2: Material and livelihood inequalities" and "Driver 3: Unaddressed consequences of urban intensification". These links are contextual and can only be fully derived based on the circumstances that framed each type of observed (driver or manifestation of) injustice as described in the analysed material.

Methodologically, this means that our findings on each driver of injustice will surely include overlaps and that differentiating one driver/manifestation from another can never be a fully unambiguous exercise. Moreover, it is worth noting that each of the 27 intermediate level drivers could be both manifestations and drivers of the more aggregated 11 drivers listed below. This doesn't affect the overall analytical validity of our work, but rather, again, points to a complex set of factors and observations that need to be made when trying to address the notion of justice.

Table 2. Code list of manifestations and drivers of injustice related to sustainability in cities

CODE LIST OF DRIVERS OF INJUSTICE	Intermediate-level drivers included	# instances coded with such driver
1. Exclusive access to the benefits of urban sustainability infrastructure	LGB + CR + GI + A	19
2. Material and livelihood inequalities	I + H + FA	18
3. Racialized or ethnically exclusionary urbanization	R + S + LN	15
4. Uneven and excluding urban intensification and regeneration	UR + G +UD + FA	21
5. Uneven environmental health and pollution patterns	UE + PO	7
6. Unfit organizational structures	IGM + D	9
7. No or tokenistic participation in/engagement with urban governance	P + CM	16
8. Lack of effective knowledge brokerage	KN	10

9. Unquestioned neoclassical economics and neoliberal growth/austerity	PC + N + GM + GDP + SN	27
10. Weak(ened) civil society	CO + CG +SN	12

Note: In light green we highlight those drivers which appeared in more than 15 instances in the material analysed.

2.4 What type of (in)justice?

Furthermore, through this process of building a code list of drivers of injustice, we also began to conceptualize the theoretical types of justice that these drivers point toward. These types of justice were developed by juxtaposing the examples within our projects with wider literature and discourse on urban justice.

Thus, they represent wider conceptual categories related more to the way we think about justice than to the specific drivers or manifestations. In order to do this, we created short memos in the database, where each project was associated with types of (in)justice derived from the underlying issues of concern within the case. These memos included a short justification of how each project addressed/was implicated in such forms of injustice.

The types of justice we considered were:

1. **Distributive** justice: This is the classic liberal foundational concept of justice, which highlights inequities in the distribution of material goods.
2. **Procedural** justice: This is a well-established aspect of the social justice concept, which focuses on who is involved, and how, in decision-making processes concerned with the public and private use of a society's resources.
3. **Recognition** justice: This is a more recent, but still well-established, notion of justice premised on the notion that there are many ways that certain individuals and social groups are marginalized simply due to their identities (i.e. ethnicity, race, gender, sexuality). The result of this identity-based marginalization is systemic exclusion from some of the benefits of society, which generates recognition injustices.
4. **Hermeneutical justice**: When vulnerable residents are engaged in re-imagining safe/healthy/welcoming spaces, and their narrations (which often go beyond traditional scientific, political, or social language) provide for their experiences of place to be expressed and accounted for.
5. **Epistemic justice**: When local knowledge and perceptions (of space, of local ecology, of social relations, and of factors that affect health -otherwise known as popular epidemiology- among others) are validated and taken into account.
6. **Testimonial justice**: The past, historical experiences (of violence, racism, exclusion) in a specific neighbourhood/place are taken into account.
7. **Responsibility justice**: Recognizes and addresses the restrictions of access or availability of people to "urban stewardship" projects, due to their potentially intersectional (economic, cultural, racial, gender) realities.

8. **Imaginary and historical (in)justice**: New urban imaginaries erasing values (about) and spaces cared for by long-term residents, and potentially make invisible past injustices, while causing new exclusions (e.g. through displacement)
9. **Reparative (or restorative) justice**: Promoting anti-colonial/anti-racist practices and visions of urban nature, that are equity-oriented and not simply equally distributing/making broadly available the needed (owed) spaces/services/resources.
10. **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).
11. **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.

This list was adopted from recent work published in the field of urban geography (Anguelovski et al., forthcoming) and from our observations throughout the analysis of the projects. We include it here because it enhances the discussion in what seems a necessary manner in order to enable a wide and diverse discourse with the UrbanA CoP. It conceptualises justice beyond the liberal distributional type of inequities and rather seeks to uncover how persistent domination and subordination in urban development often prevent urban sustainability interventions from being emancipatory, intersectional, and relational feminist projects that consider the needs, identities, and everyday lives of marginalized groups.

However, as the analysis here will show (Section 3), only some of these categories were derived from the materials we coded. Some categories were identified through engagement with wider discourse on the topic. We include them here as a potential gauge for understanding where gaps and oversights may exist. As we further elaborate in section 3.3, these gaps might result from the nature of projects (mostly interdisciplinary, focusing on the European context) and the nature of outputs from these projects that we studied (we did not have access to raw data, and thus, had only a selected and interpreted view of results from the in-depth empirically-based analyses).

2.3 Detailed coding

Having completed the first round of coding that led to an intermediate and final code structure and having developed a conceptual frame of the types of justice that may be implicated in the projects we studied; we undertook a final systematic coding of all materials gathered using NVIVO 12 software. For this systematic analysis, we targeted those projects with rich outputs that provided lots of information to code. However, we did not ignore the more challenging projects for which information was lacking or was not sufficient to draw conclusions on justice. For the latter, we identified involved researchers and reached out to them to conduct qualitative interviews designed to elicit a broad understanding of the justice issues revealed through their work (see 2.4 below).

In NVivo, each project was created as a "case" and was assigned various "sources" (materials and, later, interviews). Cases were coded for type of injustice (procedural, distributive, recognition, and other emerging forms that were appearing in the projects) and "sources" were coded per driver of injustice using the code-list we developed through our first round of

analysis (Table 2). The types of injustice and category of drivers described above thus constitute our coding matrix in NVivo. Our mixed coding strategy ensured a good balance of grounded and structured coding.

In short, our overall sources of coding consisted of the selected project materials[2], as well as transcripts and summaries of conducted qualitative interviews (see below).

2.4 Qualitative interviews

Having completed the first round meta-analysis coding, we identified projects where it would be beneficial to follow-up with in-person interviews because the project was especially rich, some questions were raised about interpretation of the work, or projects were new, so limited information was available.

Reflecting these criteria, we selected key informants to interview with a focus on learning more about the drivers of injustice in the identified projects and approaches. We employed semi-structured interviews with 14 informants, which were all highly involved postdoctoral researchers or research coordinators in the selected projects. Interviews were conducted by ICTA-UAB WP4 researchers as well as by partners from the overall UrbanA consortium team.

A general interview protocol (see Annex) was set up in order to structure and guide the interviews, but specific themes/questions were adjusted to each interviewee according to their background and knowledge in relation to the project's various research fronts. Interviews were conducted both in person and via online calls and documented in written form (full transcripts or concise summaries).

The analysis of interviews was conducted by ICTA-UAB WP4 researchers, who proceeded by integrating the interview transcript material with the existing NVivo project, assigning interviews to projects (there could be more than one), and coding them with the same set of codes used in prior analyses of outputs (drivers of injustice).

We also expanded the boundaries of the project by interviewing people who had not worked in the identified projects but who deal with the specific manifestations and drivers of injustice in their work and activism. This expansion was done in order to enrich and broaden our understanding of these processes, and to refine our conceptualizations. Feedback from outside experts was especially important for offering specific place-based and currently ongoing conflicts around intersecting issues of social justice, urban development, environmental management and sustainable urbanism. We integrated these interviews as case study examples in the analysis of drivers.

---

[2] These can be found at UrbanA's online Zotero library of documents as well as in UrbanA's online storage (BOX > WP4 > Coding material.)

3. Analysis of results

3.1 Drivers and manifestations of injustice

This analysis describes how justice is conceptualised, studied and understood through EU-funded inter-disciplinary research linked to urban sustainability.

As described in the Methods section, after an initial identification of 140 instances of drivers or manifestations of injustice in the context of urban sustainability, we developed an intermediary coding of those instances into 34 general categories of drivers of injustice (Table 1). Subsequently, our analysis clustered those 34 categories into 11 overarching types of manifestations/drivers of injustice (Table 2), which constituted our final coding list for the full library of materials. Our results thus are structured around these 11 drivers of injustice in urban sustainability. As mentioned in the methodology section, the bulk of our analysis is based on information from open access materials linked to our pool of selected projects, as well as interviews with researchers from within those projects.

These findings thus by no means constitute a complete literature review or discourse analysis around each driver of injustice (in some cases, there are hundreds of years of literature that could be applicable). Rather, this analysis describes how justice is conceptualised, studied and understood through EU-funded inter-disciplinary research linked to urban sustainability. For each of our findings, we include references to EU projects as well as more in-depth case examples as vignettes illustrating our results. Additionally, for each driver we identify the relevant theoretical types of injustice that the case studies represent, to help broaden the conceptual discussion on justice (Anguelovski et. al, forthcoming).

In many cases, we find these manifestations/drivers to be a starting point for research or urban planning/communities/policy interventions, which set out to study and tackle the challenge of making cities sustainable while also mending such injustices. In other cases, however, manifestations/drivers of injustice are themselves entangled in sustainability-oriented interventions that this research studies or promotes. In other words, 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 **outcome** of efforts to accomplish urban sustainability.

Our results show, at first sight, that (1) unquestioned economic growth and austerity urbanism, together with (2) exclusivity in access to the benefits of sustainability efforts and (3) the lack of meaningful participation processes, are the three central, most coded for (i.e. most present in the outputs we studied), drivers and manifestations of injustice (Table 2). Further, based on the project materials and case study examples, the types of drivers/manifestations that we identify are commonly linked with one another and express several of the broader conceptual categories of justice. Thus, drivers should not be understood as strictly bounded conditions, but rather as porous categories that are in constant interaction in contemporary urban arenas.

3.1.1 Driver 1: Exclusive Access to the Benefits of Urban Sustainability Infrastructure

Driver 1 refers to the ways in which spatiality, identity, education, knowledge, and information are, in effect, drawing lines between social groups that lead to an uneven distribution of benefits from urban sustainability.

Exclusive access to the benefits associated with the existence of urban sustainability infrastructure and initiatives relates directly, but not exclusively, to distributional justice issues. First and foremost, this refers to the extent to which the material benefits of new sustainable urban infrastructure including green spaces, nature recovery projects, resilience measures, climate mitigation initiatives and green development are installed and remain in different types of neighbourhoods, including those occupied by minority and low-income populations.

Exclusive access can result from different types of processes (e.g. lack of or poor quality/insufficient sustainability-oriented interventions in marginalised neighborhoods, lack of safety in public/green spaces, insufficient knowledge brokerage, gender inequalities and age- related vulnerabilities) as well as a combination of those processes (Anguelovski et al., 2019; Park & Pellow, David, 2011; Pearsall & Pierce, 2010). In addition to direct distributional justice implications, our analysis of findings from the examined projects found that accessibility can manifest itself as testimonial, intersectional, epistemic and hermeneutical forms of justice, as exemplified below.

Access to infrastructure and benefits

Research from the projects we analysed indeed starts with the diagnosis and/or further confirms the fact that, in many cases, exclusive access is defined spatially by the lack of good quality, publicly accessible, green/blue spaces and other sustainability-related social innovations or infrastructure (e.g. green roofs, eco-buildings, energy upgrades, repair shops, bicycle lanes) in certain, often marginalised and vulnerable, neighbourhoods or districts. This point has also been observed in a number of studies showing that "lower-income and minority groups have traditionally had less access to urban vegetation, fewer high quality parks and natural settings (Dahmann et al., 2010; Pham et al., 2012), and fewer urban reforestation programs (Perkins et al., 2004) than well-off and white residents" (Anguelovski, Argüelles, et al., 2018). To address this, in Lisbon, ROCK researchers found that building an edible garden and new public green spaces in a green-deprived neighborhood provided "access to green spaces, similar to what exists in other parts of the city" (ROCK, personal communication, February 5, 2020). As the URBAN GREENUP project reports from Liverpool, sustainability infrastructure programs often proceed from a recognition of this unequal distribution between lower- and higher-income areas of cities:

> "The distribution of green infrastructure across the city varies considerably. The north of the city, traditionally the more industrial and more deprived areas, have lower levels of green infrastructure than the more affluent central and southern areas." (URBAN GreenUP, 2017a, p. 29)

Exclusive access to the benefits of urban sustainability initiatives, however, is not only about proximity or availability of physical infrastructure. Even if the amenities provided are spatially proximate, access can be limited due to the privatised/semi-private status of infrastructure, or because socio-cultural norms link certain interventions or spaces with specific social groups, making other groups feel unwelcome or uncomfortable if they try to access them (i.e. psychological accessibility barriers). Psychological accessibility barriers were especially identified within ethnic minority communities, due to the type of activities commonly hosted, or due to certain activities being prohibited. One example of this would be the popping up of expensive bars in the vicinity of sustainability interventions (e.g. parks, greenways) excluding lower class clientele and generating sense of otherness in the entire area (Kotsila et al., 2020). Another examples would be the often "pseudo-public" spaces like squares and parks where private companies rent them in high-demand /high-use season for holding events, or when the use of apparently public places are ruled by undisclosed regulations of use and conduct (Shenker, 2017).

Exclusion can also be related to (recent or historical) testimonies and experiences of verbal or physical violence against particular groups such as women, immigrants or people of colour. Overlooking past experiences is a form of testimonial injustice, which fails to consider the impact of historical neglect. Last, green spaces in particular can also be under-maintained and/or of poor quality to the extent that they are actually rendered less accessible. In Barcelona for instance, some neighbourhoods have suffered from lower maintenance of public spaces. These underlying forces of exclusion that end up being expressed through and challenging urban sustainability initiatives are described as the development of a typical stigmatisation process in the RELOCAL project:

> *"Since its origin, La Mina began a process of physical and social decay, which was strongly manifested in some of the neighbourhood's public spaces. High levels of vandalism, a product of the non-civic responsibility of some groups of residents, combined with poor maintenance by public authorities, or the presence of drug dealers in public spaces have characterised this neighbourhood. This created a general atmosphere of degradation, discomfort and social conflicts, which has produced spatial injustice processes within the neighbourhood and in relation with adjacent urban areas. The whole neighbourhood became stigmatised as one of the most deprived neighbourhoods in Barcelona and Spain."* (Ulied et al., 2019, p. 8).

Based on the links made within the projects examined, several outputs point toward the importance from a justice perspective of considering the intersectionality of such exclusions for vulnerable citizen groups. Women, for example, might suffer a combination of the above-mentioned exclusion patterns (based, for example, on class, race, or ethnicity) even while their continued status as the principal caregivers in society enforces its own form of exclusion and/or obliges them to be the household member traditionally responsible for children's activities and contacts with nature. A takeaway from this intersectional perspective points toward the issue of urban design overlooking existing needs and practices of care. Urban design can thus add layers of injustice for those who perform those practices (e.g. a sidewalk/square not suitable for strollers, design of amenity dangerous for kids or the elderly, playground not providing ability for women to feel protected from violence) and therefore are

not welcoming for those women and for their dependants (see GRAGE project[3], TRANSIT project[4]).

CASE EXAMPLE: Manchester's cycling infrastructure

In the city center of Manchester, cycling infrastructure was criticized for being accessible mainly around a university campus and further South through what was a middle-class suburb, but leaving other areas outside of the city center neglected in this sense. The project was initially part of a national effort to fund innovative projects regarding transport infrastructure, but its design and commitment to safety was driven by cycling activists in the city. Though the cycling infrastructure was celebrated by many for its dedication to health and sustainability, it proved to be designed for specific demographics, catering to the more affluent middle class, including academics and young professionals. The municipality has claimed that its long-term plan is to create a more comprehensive network of cycling lanes across the metropolitan area, but this, it has been argued, is more of a "symbolic" gesture, accentuating the contrasting "politics of representation" versus "politics of tangible manifestation".

According to an interviewee from an accompanying project:

"The cycle path did not necessarily become the symbolism of gentrification and house prices and so on [...] but it did become wrapped up 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, personal communication, February 6, 2020

Access to knowledge and information

Further, accessibility can and should be understood not only in terms of spatially-bound resources, but also in terms of knowledge and information (further elaborated in section 3.1.8). In order to receive the benefits of urban sustainability initiatives, it is necessary to know about them and about the pathways through which those benefits flow. Knowledge of the benefits that certain urban sustainability initiatives and infrastructure can bring is often itself bounded in spaces and social networks from which some people, often those with vulnerable socio-economic background or otherwise marginalised status, can be excluded. And beyond access to knowledge in general, several studies raise the issue of what kind of knowledge different people and entities have access to, and why. This is closely related to both the unquestioned prominence of neoclassical economics as the basis of social analysis and measuring wellbeing (see also 3.1.10), as well as to broader questions of epistemic and hermeneutical justice.

There is, for example, an evident lack of (attention to) knowledge, including data, time and resources, on alternative ways of measuring wellbeing beyond traditional Gross Domestic Product (GDP) or other economic growth measures (Janoušková, 2013; Paris, 2013 - BRAINPOOL project). According to researchers in the BRAINPOOL project, indicators and data

---

[3] https://www.grageproject.eu/
[4] http://www.transitsocialinnovation.eu/home

that go "beyond GDP" would allow for environmental harms and income disparities to be included and would thus lead to a more just and grounded understanding of socio-ecological realities. In short, this and other projects point toward deeply embedded mechanisms of policy-making that shape urban sustainability initiatives in ways that privilege one type of knowledge over another and, thus, exclude certain people's interests.

The issue of accessibility is also closely linked to other drivers and manifestations of injustice, and particularly to material and livelihood inequalities (3.1.2). The TESS project revealed that, while many community-based initiatives were prioritising and in fact succeeding in lowering environmental impact, many of them were also reproducing exclusive or elite versions of environmentalism. This is partly because they needed the dedication of time, energy and (often) financial capital, which socially and economically vulnerable people cannot afford (Celata & Sanna, 2014 - TESS project). In the case of the Energy Cooperative "somenergia" in Catalonia, for example, only those who could pay an entry tax were able to participate (TESS, Personal communication, February 2020). One of the key observations from this project's work on justice is that:

> *"Those initiatives located in multicultural neighbourhoods and concerned with the struggles of marginalized groups have higher chances of enhancing social and environmental justice. When CBIs [community based initiatives] serve a wide range of social or ethnic groups their contribution to sustainability transition becomes applicable more extensively"* . (Celata & Sanna, 2014 - TESS project).

A more complex case of exclusive accessibility and knowledge involves processes where smart city, greening, climate mitigation, or sustainability initiatives become embedded in processes of gentrification.

The increased interest of the urban middle and upper classes in populating neighbourhoods/districts that have received extensive greening demonstrates the complex feedback loops of sustainable interventions. When greening becomes a pole of attraction and the housing market is uncontrolled, there is radical change in demographic composition (in terms of income, and often race, educational background, ethnicity, age and professional status). This leads to a (further) rise in property and rent prices, and many longer-term residents and businesses may be evicted or pushed out to other parts of town. In the UNALAB project, researchers realized that:

> *"As soon as the quality of life in an urban area is improved, specifically through the integration of natural/green elements, it becomes more attractive. A logical follower is an increase in the rent prices which pushes some former residents out"* (UNALAB, personal communication, January 30, 2020).

In other cases, the goal of increasing the presence of social innovation (e.g. co-working spaces or "impact hubs") along with green areas (e.g. parks, gardens, preserves), or other sustainability-related infrastructure (e.g. climate resilient public spaces or eco-buildings) might also be accompanied by and/or fuel fast-paced gentrification, wherein upper and middle class residents displace working class residents in specific neighbourhoods. Impact Hubs (present in over 100 locations, across five continents and more than 50 countries; e.g. London, Stockholm, Vienna, Johannesburg) for example, are places where entrepreneurs that

focus their work objectives around social and environmental goals find like-minded people in order to enable their professional development and, through this, enhance their contribution to such goals. Whereas Impact Hubs are very diverse in their character, depending largely on the dynamic generated by the people and enterprises that comprise them, they may contribute to gentrification because they create a local "hype" and attention around their practice as they draw more "creative class" professionals and businesses into their space. However, as was the case for an Impact Hub in Amsterdam, these innovative co-working spaces oriented to sustainability can then themselves be "gentrified out" by the construction of, e.g., luxury hotels nearby, leaving them to struggle to find permanent places to host their activities (Wittmayer, Avelino, & Afonso, 2015) (TRANSIT, personal communication, January 15, 2020). This example demonstrates the complex feedback process in which urban sustainability initiatives operate relative to gentrification.

Even before people have to move, the unjust and unequal impacts of gentrification are multiple, with mental and physical health and well-being deteriorating for the most vulnerable (Cole et al., 2017). And even before the wealthy newcomers arrive, processes of green infrastructure construction may act as gentrifying factors and dispossess residents from low-income neighbourhoods with community assets that are "replaced by greenery and by outside visitors (and constructors) who shape it, control it, and benefit from it" (Anguelovski, Connolly, & Brand, 2018, p. 431 - GREENLULUS project). Because this process of green gentrification is built upon and reinforces historical patterns of injustice, the intended benefits of urban sustainability initiatives may be subverted in unjust ways.

> *"[…] In gentrifying neighbourhoods only those with high socioeconomic status (high education or income) benefited from exposure to green spaces" and "gentrification does not – as some champions of gentrification argue – bring benefits normally afforded only to the dominant race or social class (i.e., the gentrifiers) to those among the subaltern. The benefits of active green space on health are not equitably distributed and there is no health benefit spill over across social divides as a result of gentrification."* (Cole, Triguero-Mas, Connolly, & Anguelovski, 2019, p. 10 - GREEENLULUS)

In all, Driver 1 demonstrates that exclusive access to the benefits of urban sustainability infrastructure is derived both from underlying conditions of inequality and from processes that unfold during the implementation of urban sustainability initiatives that expand, reinforce, or express these inequalities. Research that seeks to address this driver of injustice has mostly been about efforts to undo the feedback loop between existing inequalities and urban sustainability interventions. These efforts seek to do so by intervening in the ways that spatiality, identity, education, knowledge, and information are used to generate access to benefits for those that are historically excluded.

3.1.2 Driver 2: Material and Livelihood inequalities

Driver 2 refers to the ways that the underlying distribution of economic resources gets expressed within urban sustainability efforts with the effect of reinforcing or exacerbating unjust outcomes.

It has been widely documented that lower-income populations often suffer from worse quality living environments and exposure to pollutants (Taylor, 2014). Apart from the disadvantage this creates *a priori* for those groups inhabiting the city, it further challenges the equal or just distribution of and potential benefits from sustainability interventions, directly relating to distribution justice (Maantay & Maroko, 2018). In many cases this disadvantage is rooted in historical processes of oppression and marginalisation (importantly these are not only economic but also intersect for example with race, religion or ethnicity), and is part of a vicious cycle that leaves socio-economically vulnerable groups without the necessary resources to achieve a just level of wellbeing (Foster, 1998).

Material and livelihood-based inequalities are often premised on testimonial and imaginary/historical injustices, in which past experiences of exclusion are neglected, and, as a result of this neglect, new imaginaries of sustainability may further exclude economically disadvantaged groups. Indeed, research projects that we reviewed point to the material and livelihood inequalities in cities, treating those as both manifestations and drivers of injustice. In most cases, projects begin by recognizing and seeking to address such inequalities or at least consider them in their study of urban sustainability. In only a few cases, though, do we see material and livelihood inequalities actually examined as an integral part of environmental sustainability interventions (see, for example SOPHIE[5] or GREENLULUS[6] projects).

Research on this driver of injustice in the context of urban sustainability occurs around two main issues: (1) persistent income inequalities generating inter-generational and racial/ethnic wealth gaps that limit the efficacy of urban sustainability programs, manifested in mobility, food and energy infrastructures and (2) lack of affordable housing as a condition that unto itself limits the efficacy of urban sustainability initiatives.

Low incomes
First, the growing problem of persistent low incomes among marginalised groups (i.e. lower than legal minimum wages, or lower than minimal wages needed to guarantee people's basic needs are met) is recognised as a manifestation and driver of injustice in many projects, and especially those dealing with housing conditions, urban infrastructure, and healthy food access in cities. These income-based restrictions of people's options then limit the efficacy of many urban sustainability initiatives, with justice implications. For example, this condition may generate mobility or transport poverty as the HIREACH project explores (e.g. in the example of South Solento, Italy). An interviewer from the CONVERGE project described trying to address this challenge in terms of "unequal consumption" derived from income as an indicator central to their analysis:

---

[5] http://www.sophie-project.eu/conclusions.htm
[6] http://www.bcnuej.org/projects/greenlulus/

> *"We had difficulty measuring and identifying indicators. Uneven consumption seemed to us to be both a symptom of inequality and a driver in itself - reflecting and reinforcing the inherent dysfunction in the economic system" (CONVERGE, personal communication, February 7, 2020).*

Increased distances of food chains, for example, reduces the availability and accessibility of fresh, locally produced, healthy food in cities (do Rosário Oliveira, 2014 - FOODLINKS) and lower-income people tend to consume the less expensive but also less healthy, mass-produced and over-processed foods available in chain supermarkets or restaurants. Here, food chain globalisation is decreasing access to healthy food, and calling for the need to (re)invent ways of producing, making and sharing healthy food for, with and amongst, all urban dwellers (Ibid.). Low incomes reflect inequalities not only for consumers, but also for certain types of producers, especially in the case of urban food producers as many of them are not able to access and secure land for food cultivation that would allow them to earn a living (Dahmann et al., 2010 - EDICITNET; Wascher et al., 2015 - FOODMETERS). For example, small-scale farmers struggle to find affordable land to grow food for sustenance, or for making a living.

In this spirit, findings from EDICITNET project point to the need for more inclusive approaches to re-naturing cities that are not simply about rewilding but can also serve as "nodes for urban agriculture and community garden spaces more connected to communities and concerns about food security, job creation and human health" (Säumel et al., 2019, p. 6). In Oslo, a SME collaborated with local residents to create an edible garden in a small urban square (Vaterlandsparken) near the train station that had previously been stigmatised by crime and drug use. The redevelopment project helped to change the way in which this public space was experienced by residents and made it more accessible to the broader community.

Income inequalities also impact directly on the potential for sustainable transformations in housing conditions, as the example of implementing energy interventions, such as energy-efficient or renewable-energy powered housing, clearly demonstrates. Retrofitting buildings for achieving more energy efficiency is harder for social groups such as low-income people, renters or elderly people who suffer most from fuel poverty because they cannot afford initial costs for such a transition and, as SOPHIE project finds, landlords are not incentivized to improve their energy efficiency, or there is insufficient attention to residents' needs or preferences (Malmusi & Borrel, 2015, p. 43). Thus, as the project emphasizes, energy transitions/efficiency interventions that do not address income inequalities might end up exacerbating them. Additionally, energy poor residents are statistically more likely to report poor health and emotional well-being than the non-energy poor population, linking the issue of housing and energy to health and distributional justice (Thomson, Snell, & Bouzarovski, 2017 - EVALUATE).

CASE EXAMPLE: Council estates, public space and the function of community gardening in King's cross, London

London is a city where low wages for many working- and middle- class residents are combined with high rental prices that/which exacerbate inequalities in livelihood opportunities and access to safe and healthy spaces. As a result, people with low incomes have to live in areas with cheaper rents (social housing/council estates) where open space infrastructure is poor. Children living in council estates in Kings Cross, for example, do not have access to safe communal spaces to play and socialise. This precludes social interaction and cohesion for many lower income residents.

In this case, the emergence of a small community garden, the "Skip Garden and kitchen" was initiated as a temporary food growing space through an educational charity organisation. They had secured access to this place, as part of the developer's strategy for "sustainable innovation and community involvement". The initiative combined food education for kids, a small vegetarian cafe for the generation of independent income, and food sharing activities. Most of the staff and volunteers in the project are women from different ethnicities.

The Skip Garden thus served many purposes: from food education and healthy food consciousness, to making healthy food more accessible, while also providing mental and physical health benefits. As the informants from that initiative described it, the garden provided "the perfect antidote to our city urban lifestyles", while also addressing the needs for access and knowledge around healthy food in disadvantaged neighborhoods.

Source: SHARECITY (Marovelli, 2019)

Yet, in some cases, Smart City tools can address sustainability problems that intersect with social/income inequality in relation to housing conditions. In the city of Tartu, Estonia, the socialist-era housing estates are "obsolete, often stigmatised as socially problematic neighbourhoods that face issues of vacancy, social decline and crime" (Ahas et al., 2019, p. 358), with very low energy performance, as they were built during a time when energy was inexpensive and climate change was not a recognised issue. In many of those residences, which are targeted for retrofitting, inhabitants are vulnerable groups with low incomes (Ibid.) and the dilemma is whether improving the facilities will not only increase diversity in the estates but also force displacement of the most vulnerable, raising questions regarding testimonial and imaginary/historical (in)justices. As authors describe:

> "Since the area under intervention is located in the city centre, increasing real estate prices and the value of apartments can force the outmigration of pensioners, students and low-income earners" (Ibid.)

Affordable housing

Second, beyond generating limited efficacy in affecting housing conditions, urban infrastructure, and healthy food access, material and livelihood inequalities often make the basic cost of housing/real estate another central element of the struggles contained within urban sustainability initiatives. As a result of unregulated market prices in the housing sector, some more attractive (often green or sustainability-inspired) estates, neighbourhoods or districts can become exclusive to the upper classes. The flipside of the exclusivity process that generates more expensive neighbourhoods is the deterioration of areas where lower class and socially marginalised residents concentrate. These processes are also closely connected to

urban densification and exclusionary urbanisation processes, described below (section 3.1.4 & 3.1.5).

In Izmir, Turkey, for example, squatter houses with insufficient infrastructure started in the peri-urban fringes of the city, as the development of industry there provided job opportunities for working-class residents. The difference between low income and upper income neighbourhoods grew starkly in terms of access to daily urban services and basic living conditions (such as clean water, drainage, roads and electric lines). These different affordability and infrastructure conditions across the city greatly determine what is possible from a sustainability perspective (in terms of environment/ climate change mitigation and adaptation measures) as there is a lack of coherency in urban planning that can address challenges of coastal resilience and climate change mitigation/adaptation, while also ensuring more social justice in terms of housing, income and quality of life in general (URBAN GreenUP, 2017b).

The challenges faced in Izmir were not unique to the Turkish context. The EDICITNET project pointed toward the wider sustainability challenges in e.g. Heidelberg that housing segregation and the diminishment of affordable housing generate:

> *"Lack of affordable housing affects access to privileged (green) neighbourhoods. The main challenge of Heidelberg is rent and price inflation, which has led to a severe shortage of affordable housing. The densification trend therefore needs to be stemmed by good quality open space and long-term affordable housing models" (Säumel et al., 2019, p. 10).*

More broadly, structural changes in the housing sector, financial markets, and global investment are often highlighted as factors that led to the financialization of housing as a means of accumulating capital -- trends all identified as core contributors to housing unaffordability, shaping inequalities and injustices in cities today and exacerbating the challenges for sustainability derived from housing costs (SEISMIC[7] project). Real estate speculation and rising prices also impact the local business sector, as there is an increasing lack of affordable business opportunities or creative spaces for young people with little economic and social capital to start a project. In this case, socially innovative practices developed by, and for, young people in urban areas to improve their ability to participate in economic activity and to engage in civic initiatives, are identified as efforts to address macro- and meso-level causes of inequality in cities (CITYSPYCE[8] project). These structural constraints can be summarized in the following terms:

> *"[…] changing economic structures in the city/neighbourhood, high levels of unemployment and precarious/poor quality employment, discrimination and stigmatisation in all life domains, unequal opportunities and access to institutions which are channelling life chances – education, labour market and housing at the first place, material deprivation and indebtedness, distance and isolation in the deprived neighbourhoods, ghettoization/gentrification, exposure to crime and addictions, vicious circle of deprivation/exclusion"* (CITYSPYCE project, 2016, p. 130)

---

[7] https://cordis.europa.eu/project/rcn/185532/reporting/en
[8] http://www.citispyce.eu/

In sum, income inequality, unemployment, and low wages especially the way they are experienced in the urban context, can constitute obstacles to achieving wellbeing. As explained in an interview with researchers from WWWforEUROPE, these challenges begin with income but are acutely intertwined with identities that are racialised or socially excluded in a manner that generates low social capital, such as is often the case for immigrants:

"We can even push the idea further, mentioning the extreme exploitation and slavery that is happening still today in Europe in the agriculture sector, such as in greenhouses and slaughterhouses (especially in Southern and Mediterranean countries, but also eastern Germany and Poland). For instance, in some parts of Italy, migrants are being exploited as it is the only way the farms can economically survive to the liberal market conditions. Small producers are forced to hire migrants 'under legal market conditions' and thus become exploiters, in order to not disappear. They are not controlled by authorities, as submitted to the interest of the world's market. Regional and local policies don't address this issue, don't care about it" (Personal communication, 25 February 2020).

These important socio-material relations lie at the heart of inequalities generated by society in general and reflected strongly in cities. Thus, this set of relations should not be taken out of focus in the consideration of better governance, policy or innovation for sustainability. Material and livelihood inequalities that generate unequal consumption capacity, especially seen in housing conditions, urban infrastructure, access to healthy food and affordable housing, are deeply embedded societal challenges. Many instances of urban sustainability initiatives acknowledge the challenges, but few have directly intervened in ways that those involved have found to be satisfactory.

3.1.3 Driver 3: Racialized or Ethnically Exclusionary Urbanization

Driver 3 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.

Racialized or ethnically exclusionary urbanization is the result of historical racism, income inequalities, and segregation via mortgage lending practices and other societally enforced norms around residential patterns. Racial injustices and inequalities are often territorially experienced and expressed in terms of spatial segregation(i.e. 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); a form of distributional justice. Segregation is a common feature of many international metropolitan city regions (Kundu & Saraswati, 2012) among which in Europe, where segregation is increasing (Arapoglou & Sayas, 2009; Musterd, 2005; Wacquant et al., 2014).

Racialized or ethnically exclusionary urbanization is often accompanied by a neglect of minority neighbourhoods. Neglect might translate into the deterioration of social welfare (e.g. in terms of uncontrolled crime, low quality of education facilities, low quality of public transportation infrastructure etc.) and into the increase of environmental health risks for those who live, work and play around such neighbourhoods, as minority neighbourhoods often suffer from proximity to freeways, incinerators, or waste sites, in and around cities (Pulido, 2000; Schively, 2007). Based on the case studies, we also found out that racialized and ethnically exclusionary urbanization can demonstrate procedural, recognition and hermeneutical justice, as described below.

In the material that we analysed, we find a case study of Dudley neighbourhood in the Roxbury district of Boston, USA, which speaks about historical contamination and waste dumping alongside the homes of mainly low-income African American, Cape Verdean, and Latino residents (URBLIV project). Health deterioration was accentuated also by "a lack of supermarkets, community centres, parks, and recreational facilities" " (Anguelovski, 2013a). There, initiatives of urban community gardening and greening emerged through the action of residents and local organizations as a response to such neglect and unevenly high health risks experienced by its racialized inhabitants. This has now transformed the neighbourhood in a number of positive ways and has given residents land development control through tools such as Community Land Trusts. This is an example of hermeneutical justice, in which residents re-imagine and contribute to the improvement of local spaces. It could also be considered a form of recognition justice, taking into account the historic racism and marginalization experienced by those communities.

As highlighted also in section 3.1.1, it is often the case that access to amenities, such as retail centres, services, quality public spaces, transportation, and green spaces and the related health and social benefits is often racialised in cities. For instance, the racial composition in neighbourhoods matters in terms of the percentage of active green space available per resident, and green space availability does not bring the same level of (self-rated) health benefits to all residents (Cole et al. 2019 - GREENLULUS). Similarly, although we know

accessible greening can act as an enabling factor for social cohesion URBAN GreenUP, 2017a, p. 147), 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. In Barcelona, also, while waterfront neighbourhoods are increasingly populated by white people with higher education and incomes, newly-greened areas away from the city centre are often surrounded by highly polluting highway networks and with poor housing conditions, are instead inhabited by lower-income groups, non-college educated residents, and residents whose nationality is from the Global South (Anguelovski, Connolly, et al., 2018 - GREENLULUS).

CASE EXAMPLE: Housing and energy poverty in Santa Maria/Santa Anna–Tió neighborhood, Catalunya.

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, 21% 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 also face particularly serious problems in finding employment. The neighbourhood also suffers from housing defects as houses are too small and have structural problems due to precarious conditions of construction.

Racial/ethnic exclusion is also a core social marker of low wages, lack of access to affordable housing, and energy poverty. Immigrant populations are those predominantly suffering from energy/water poverty, with many families unable to pay electricity and water supplies, especially so during and in the aftermath of the 2007 economic crisis.

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

Immigrant neighbourhoods comprise one of the most acute emerging types of racialized or ethnically exclusionary urbanization. During the last five years, a number of people arrived in Europe as refugees and their protection and integration has become an issue of high importance for European societies. Exclusion and racism against refugees reduce social cohesion and affects the abilities of communities and cities as a whole to combat environmental injustice. In order to tackle this kind of driver of injustice, which reflects economic and social exclusions related to ethnicity/religion/origin, some initiatives have been set up trying to meaningfully involve refugees in sustainability-driven practices, which is a form of procedural justice. For instance, the initiative ScArt in Rome helps refugees become self-sufficient and secure greater dignity through recycling materials and creating art products that can support them economically (PATHWAYS[9] project).

Newly arrived refugees are also facing similar housing challenges, as illustrated by refugees from the Middle East moving into Istanbul's marginalised neighbourhoods (AGAPE[10] project). Interestingly, underlying issues of material inequality and immigration combined with the

---

[9] https://www.pathways-project.eu/home

[10] https://www2.le.ac.uk/departments/geography/redundant-content/research/old-research-folder/projects/exploring-anti-gentrification-practices-and-policies-in-southern-european-cities

experience of exclusionary urbanisation brought about solidarity: grassroots organisations struggling for housing rights supported refugees via "quiet activism or intimate efforts", which were especially considerate of the legal status –undocumented or unrecognised– of participants (Annunziata & Rivas-Alonso, 2020).

Urban mobility is also characterised by important inequalities that are cast in terms of origin/ethnicity and are suffered by immigrants and refugees. These groups might not be fully aware of the local public transport system (adequacy), while also not always being able to afford it. This both limits their (sustainable) commute options and stands in the way of their integration into local communities (Wirtz et al., 2019 - HIREACH). For example, many night workers are also immigrants and are exposed to insecurity and violence as well as poor access to efficient and safe transit systems.

There can also be less overt causes of exclusion amongst minorities. For example, in a food sharing initiative in Berlin, in which participants "saved" and shared food otherwise discarded from local supermarkets, the majority of participants were white and educated people. Here, more marginalized community members were hesitant to participate "because it reflect[ed] stigma on them" (TESS, personal communication, February 20, 2020). Food cooperatives in Europe were also found to have low rates of non-white, non-European members, due to structural or participatory injustices that these groups are often subject to (such as racial discrimination, low civil protection, thus low incomes, precarity, social exclusion etc.) (TESS, personal communication, February 22, 2020).

In sum, 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. Urban sustainability initiatives commonly recognize and seek to intervene in these processes, though sometimes they unwittingly reflect them as well.

3.1.4 Driver 4: Uneven and excluding urban intensification and regeneration

Driver 4 refers to the ways in which new urban developments might force trade-offs between the goals of urban sustainability projects. It includes 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 urbanisation and intensification, including through the re-development/re-generation of existing urban space, can lead to more dense urban environments and to the expansion of developments in new territories. Both of these processes can be linked to urban sustainability initiatives but can also be drivers of injustice as land, housing, and open/green space get reconfigured in ways that sometimes have negative material and cultural impacts on vulnerable and long-term residents (Anguelovski, Connolly, et al., 2018; Checker, 2011; Goodling, 2017). Urban intensification or regeneration is linked to wider sustainability efforts or sustainable-branded projects through, for example eco-districts, transit-oriented development, green building (Knuth, 2016), greenways (Gould & Lewis, 2016),or other green resilient infrastructure (Shokry et al., 2020). In addition, densification itself is often a goal of urban sustainability.

Similar to the preceding drivers, distributional justice is highly relevant to urban intensification and regeneration (specifically as it relates to access to green spaces, housing, and other urban amenities). The decision-making process in re-development projects is also relevant to procedural justice, as well as imaginary and historical (in)justice.

Urban densification and expansion
A first clear trend with regard to densification concerns the way in which community-driven initiatives connected to sustainability efforts, like community gardens, depend on the (scarce) availability of affordable land or housing in densely developed cities. Many times, these initiatives occupy land or housing stock that is lying empty, semi-abandoned, and idle. Asserting continuation of these informal occupations are often framed as a way of enforcing grassroots "right to the city" in times of real estate speculation, housing crisis, and touristification of historical city centres. Increased (public or private) interest in developing such land, even when this is for its inclusion in newly constructed green areas, is a threat to the survival of these initiatives -- densification goals and the associated generalized efficiencies are put in conflict with local wellbeing initiatives. This dynamic relates to a common difficulty among some urban sustainability initiatives in "rooting" themselves in neighbourhoods that are undergoing regeneration and development (TRANSIT, personal communication, January 15, 2020).

As the project leader of SHARECITY highlights: "for community gardens, shared gardens, getting access to secure land is the main issue: they often emerge on bits of land which are zoned for development but haven't yet been developed, so are living on borrowed time" (SHARECITY_(01)_Q&A with Anna Davies). This access becomes an issue for social justice, as community gardens are very often political projects that are either initiated by or oriented toward support for vulnerable groups like poor families, immigrants and other minorities. It also relates directly to imaginary (in)justice, given that the urban imaginary of 'development'

28

threatens spaces occupied by long-term residents. In the Liberties neighbourhood of Dublin, for example, where after the financial crisis that began in 2008 a number of community gardens had taken root and united the neighborhood's economically vulnerable residents, they are now facing the threat of eviction as the economy recovers and land prices escalate.

> *"In a densifying neighborhood with an endless waiting list of families waiting for emergency homes, Dublin City has chosen to make housing the priority. In the meantime, community gardeners worry that local authorities will fail to find them a new site while pushing for more rapid-build, social housing."* (BCNUEJ Lab, 2019 - GREENLULUS & NATURVATION projects)

CASE EXAMPLE: *Germanetes* Community garden of Barcelona's *Pla Buits* scheme

The "Pla Buits" (Urban Vacant Lots with Territorial and Social Involvement) policy, adopted in 2012, is a co-management initiative fostered by the City Council that aims to involve civil society in defining, installing and managing activities of different types on unused, publicly owned land. Pla Buits was launched as a response to the economic/real estate crisis, when many construction projects of public facilities were cancelled due to financial cuts.

Within that plan, the Espai Germanetes, is a project of an 500m2 open place for encounter and dialogue in the neighbourhood of Eixample and includes a space for growing food. As all Pla Buits gardens, Germanetes had to work with a temporary conditional lease (3 years), after which the originally planned public construction projects would start realizing. This was seen as very problematic from many members of the Germanetes project, especially because the initial community group had defended a social and green recovery for the whole 5,000m2 available space and did not support a compromise for only 500m2. Although permission was granted for the 500m2 space to be used even after the construction of the planned facilities, neighbourhood participation has declined and the place is no longer considered a nucleus of grassroots activism.

In sum, city authorities recognised the need for green space as well as the socio-cultural value of the Germanetes initiative for neighbourhood cohesion, solidarity and care, as well as its symbolic value to the grassroots struggles for urban commons, but however were not able to reverse the planned agreements for development.

Source: NATURVATION (Personal communication, 01 March 2020).

Certainly, urban densification does not stand alone as a driver of injustice but is composed of dynamics and processes that connect also to income inequalities, neoliberal austerity politics of development and growth, and the often tokenistic or lack of participation in urban planning. These pressures of urban intensification and expansion are thus entangled with issues of housing inequality and real estate speculation, as land becomes more valuable and neighbourhoods gentrify (Anguelovski, 2013a - URBLIV project) (see also section 3.1.1).

The development of dense urban centres, as loci of business and entertainment, has meant the shrinking of public space, including green and healthy spaces, for those who inhabit them.

In Rome, for example, while approximately 68% of total urban surface is made of green space, its distribution is highly unequal, with urban "voids" of recently intensified but grey areas (Certomà & Martellozzo, 2019). In Dublin, also, central green spaces such as urban gardens (Corcoran & Kettle, 2015), have been lost due to urban development post-crisis, and others – largely peripheral former farmlands or semi-natural areas– have gradually been transformed into new urban greenspace as the surrounding city expanded (Anguelovski, Argüelles, et al., 2018). As the EDICITNET project findings highlight, for Heidelberg:

> "The main challenge is rent and price inflation, which has led to a severe shortage of affordable housing. The densification trend therefore needs to be stemmed by good quality open space and long-term affordable housing models" (Säumel et al., 2019, p. 10).

Last, urban densification can often both cause environmental pollution and limit the options for placing and integrating more sustainable or nature-based infrastructure. In Tartu, Estonia, the densely populated housing estates with largely planned interior areas limit the ability to make major changes to the physical environment, such as developing new more energy efficient buildings (Ahas et al., 2019). This "space scarcity" has to be understood through the lens of inequality, as it is often poor residents who end up inhabiting overly dense neighbourhoods, crowded homes in very poor physical conditions, and grey-dominated or limited public spaces. Similarly so, while urban expansion might mean that there is increased access to open free space for the inhabitants of peri-urban districts -- those also tending to be more affordable than central districts -- there is also a need for affordable and accessible regional or metropolitan mobility solutions for those residents who have to suffer longer commute times to work and a concomitant potential for negative environmental impacts.

It is mentioned as a generally observed phenomenon, that pacifying streets and removing traffic often boosts property values in neighbourhoods with negative gentrification effects (SMARTEES-D3.1_SI_in_Action_CH4). Findings from the GUST project, for example, describe the Vauban area of Freiburg, Germany as a place where the "sustainability" ambition and the attraction of "environmentalist"-minded people resulted in the neighbourhood being a highly desirable place to live for young families, driving real estate to ever higher levels. As the Infra-lab report of GUST describes:

> "The very success of the measures to e.g. reduce car traffic and parking in the streets and the engagement of volunteers in the planning of the public space in the district hence had an unintended effect – the limited accessibility of the area for low and middle income groups due to the market mechanisms and later developments of commercial developers targeting the high-price sector" (Qianqing, Bulkeley, Marvin et al., 2016).

Urban regeneration, revitalisation & social resilience
Processes of neighbourhood revitalisation and regeneration proposed with an urban sustainability justification often do not take into account the vulnerability of long-term residents in a context of free-market rentals and real estate. It is often mistakenly assumed that increasing the economic and social diversity of a neighbourhood by attracting more affluent populations and economic activity will necessarily prove beneficial for all through a trickle-down effect (Anguelovski, 2013a; URBAN GreenUP, 2017b). Yet, in Rome, the sale of property owned by public or religious institutions in the historical neighbourhood of

Trastevere had "tremendous impact on the evictions of elderly residents", while eliminating the city centre as a residential neighbourhood:

> "The city centre does not exist anymore, is lost' (ibidem), meaning that spatially the city centre does not belong to those who have been living there, neither to their descendants, but to financial institutions, tourists who stay in hotels and/or short-term accommodation and city users who come for business". (Annunziata & Rivas-Alonso, 2020, p. 7 - AGAPE project)

In Istanbul, similarly, the abolishment of rent control and the sale of publicly owned residential stock in the 1990s, led to the gradual gentrification of the city centre (Annunziata & Rivas-Alonso, 2020). Though these urban regeneration initiatives were seen as ways of creating denser, more efficient cities, they had far-reaching effects for who receives the benefits of intensification and regeneration.

Urban regeneration often is a driver of inequality because it is planned in a centralized manner -- with or without private investments -- that often does not consider the needs and demands of residents already inhabiting those neighbourhoods. This procedural injustice commonly impedes urban regeneration efforts' ability to truly link up with urban sustainability goals (see also section 3.1.7). While social innovation approaches (such as District regeneration or Mobility in superblocks and energy efficiency initiatives) can emerge from municipalities and local stakeholders after traditional top-down strategies fail, such innovations are not necessarily implemented in an inclusive manner. The effect may be that certain neighbourhoods are radically altered toward a view of attractiveness defined by non-residents that generates a "take-over" by more affluent classes (Caiati et al., 2019).

While participation processes might be able to prevent or alleviate gentrification through the active consideration of citizen's demands for affordable housing and protection of local business, it is not always the case that more participatory processes are necessarily protective against the forces that generate injustices. In Stockholm, for example, a shift in the planning of a regeneration project in the housing area of Järva took place. Starting as a top-down planning process, it was strongly resisted by residents. However, a dialogue between the housing company, the local municipality and citizens was initiated and over 10.000 residents took part. Today, seemingly, residents actively participate in local- decision making processes - both inside and outside of the project (Caiati et al., 2019). However, it remains unclear if the most vulnerable groups in relation to gentrification and displacement were represented in such processes. ROCK project researchers from Lisbon state:

> "With regards to gentrification, the relation is not linear, between gentrification and participation. I don't think you can stop gentrification through participation only, I think gentrification is a much more complex phenomenon, related to multilevel public-private investment. If we think that participation has been developed through very specific localised initiatives, I don't think there are conditions for real participation to address gentrification. Perhaps it's only just one component of the problem" (ROCK, personal communication, February 5, 2020).

CASE EXAMPLE: The regeneration of Marvila old docks neighborhood, Lisbon

The challenge of regenerating historic city centres in an inclusive manner and with the risk of gentrification in mind, was taken up by ROCK project. Lisbon, one of the cities under study, is currently facing "a massive set of transformation" in terms of investment, development, tourism and gentrification.

In Lisbon, this project is based in the old docks' neighbourhoods of the long neglected eastern side of the city, in Beato and Marvila. This riverside territory is divided by two major train lines, that resulted in a seriously geographically fragmented territory. Until the late 1990's the interior side housed the city's largest shanty town of informal housing. Since the 1998 Expo, which happened a little further upriver, a series of fragmented housing developments were built, amongst very wide and unused open areas.

This neighbourhood in Marvila is one of the Lisbon areas facing the strongest gentrification impulse (Local Arena Lisbon insight). Although there have been major investments recently in the area by the riverside, such as star architect Renzo Piano's "Prata Riverside Village", there has been much weaker urban development in areas on other side of the train tracks (upper side). According to an interviewee from ROCK,

"the upper side is more connected to social housing and [...] low educated and low income populations. In the riverside, the preconditions were much different; it was more private-based housing and property, so it was easier to invest. Things are still changing and it's hard to know the future, but clearly the riverside has been changed massively in recent years with major flagship urban projects".

Marvila is undergoing a 'boom' phase of development due to economic, real estate and cultural expansion that is transforming it into a new pole of the creative economy. There, the support of local communities in organizing and building citizen activism proved to help in achieving anti-gentrification goals, and included:

-The **Rés-do-Chão** (Ground Floor) Association, which works in the area of urban regeneration, promoting the reoccupation of ground floors, intends to create a network of local agents and intervene in the improvement of the public space.

-The non-profit organization Cozinha Popular (Local Kitchen), based in Mouraria, joined forces with the collective **Warehouse**, to establish urban agriculture practices and to develop an alimentary strategy for Marvila.

-The **Lisbon Architecture Triennal** intends to implement actions within the scope of its mission, which consists in investigating, stimulating and promoting the thinking and practice within the architecture field.

Source: ROCK project[11], Lisbon

---

[11] https://rockproject.eu/project

As an interviewee from the GREENSURGE project also noted:

> *"We see gentrification in all cities; and that often means separation of green spaces from the public space, the rich people tend to separate themselves from the rest of the population [...]. But the cities [aka, city governments] are not helpless, they can interfere here".*

Indeed, the challenge remains in how to make neighbourhoods more resilient to climate change, greener, healthier, and more liveable for their inhabitants, while also protecting the right to housing, to public space and to healthy green amenities, for all. These conflicts embedded in urban regeneration and intensification efforts point toward certain drivers and manifestations of injustice, despite goals to the contrary. In the end, resolution of these conflicts comes down to answering the question: regeneration for whom?

3.1.5 Uneven environmental health and pollution patterns

Driver 5 refers to unequal exposure to harmful and health-impairing pollutants, conditions and urban environments and/or unequal access to safe and health-promoting conditions and environments.

Environmental health concerns have been historically linked to human rights debates through theories and activism related to environmentalism. In cities these concerns manifest as an injustice where lower income, marginalised, racialized groups are unequally exposed to pollution (air, water), climate-vulnerable infrastructure (flood-prone, non-ventilated work places and heatstroke-provoking conditions), 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). For example, historically neglected neighbourhoods in Rome have unequally high exposure to environmental health hazards and lower income areas have less access to "green (public) healthy spaces" (CROWD, personal communication). In Naples the historical and continued dumping of garbage near inhabited but marginalized areas of the Pianura region in the South of Italy has caused high rates of cancer and other (unrecognised and often denied) health problems to the local communities (Armiero & D'Alisa, 2012 - LARES project). Findings in the LARES project describe how "the social construction of the Pianura case and explosion of violence was the result of making peripheries into ''social dumps'' as a consequence of the gentrification of the inner city" (Ibid.).

In many cases the production of hazardous environments inhabited by vulnerable people is the consequence of exclusive urbanisation, urban intensification or re-generation, 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 have to move (Anguelovski, 2016; Armiero & D'Alisa, 2012a). In some instances, the irony is that the activism demonstrated by marginalized residents was the early driver of neighbourhood environmental improvements. Such contradictions can be evidenced at the level of city areas (peripheral, central), or at the district and neighbourhood level. 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.

Recently, urban energy poverty and vulnerability has become a particular area of concern for poor households [EVALUATE[12] project]. As many households in Europe suffered from the economic crisis and austerity, fuel prices for heating homes has become unaffordable for many residents. As a result, many have adjusted their everyday behaviours and often started to resort to burning unsuitable and unsafe materials in their houses in order to keep warm. In particular areas, these trends have caused intense air pollution which affects the whole neighbourhood. For instance, a smoke-cloud of incomplete combustion fumes was evidenced in many districts of Athens during the first 3 years of the financial crisis that began in 2008, and especially in lower-class vulnerable neighbourhoods. As a result, "this rapidly unfolding

---

[12] https://urban-energy.org/evaluate/

energy landscape challenges existing conceptualisations of vulnerability in Europe and brings new potential issues, such as indoor air pollutants resulting from incomplete combustion of wood-based fuels" (Thomson et al., 2017a).

Furthermore, in some cases, the existing condition of urban polluted soils, such as in post-industrial or post-military sites, presents a challenge for their potential remediation and sustainable re-generation. For example, in Newcastle, the Newcastle Science Central construction site would require a land decontamination procedure to remove coal particles, which private investors were not willing to undertake. Thus, this expense was left to public authorities, which eventually slowed down the process of its sustainable redevelopment (Mai et al., 2016). This is not to say that such investments are not, in other cases, made and that post-industrial territories do not get regenerated, greened and, in absence of control measures, even gentrified (see for example the case of Salford, UK, which transformed from a "dirty old town" to the greenest place to live in England, yet with significant inequalities across its neighbourhoods and borrows) (Wall, 2020).

Uneven environmental health and pollution patterns are not only an issue of justice in distribution terms (who has access to healthy environments/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).

Moreover, it is often the health of socially vulnerable people and groups which is compromised if healthy food is not affordable (or not easily reachable, or generally unappreciated as a result of lacking information or false perceptions). As other projects discuss, conditioned access to (knowledge about) healthy food (organic, locally produced, and/or fresh) often also has racial/ethnic dimensions. Namely, racial minorities are often unable because of price or cultural exclusion to buy fresh food and staples from their countries of origin. Yet, as interviewees highlighted, providing access to healthy food in under-privileged neighbourhoods, especially through the support of urban agriculture and community gardens, but also through the set-up of local and healthy school canteen programs, can have many positive effects to the health of kids, especially of vulnerable families (Anguelovski, 2015).

CASE STUDY EXAMPLE: Waste dumping in Campania

Campania is among the poorest and most densely populated regions in Italy, and Naples is the urban centre of the region. The region has been facing a series of events surrounding the lack of waste collection and illegal toxic waste dumping in and around the Province of Naples, beginning in the 1980s. The northern part of Campania has been facing an "urban waste emergency" during the years 1994-2009 and the illegal disposal of hazardous waste, since the beginning of 90s until today (De Rosa, 2014). With no regional waste management plan in place, the region's main landfill in Pianura became overfilled with both hazardous and non-hazardous waste, with waste also coming from northern Italy.

LARES project is speaking to uneven patterns of environmental pollution through waste dumping activities in the region of Campania, Italy. The case 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 (unrecognised and often denied) health problems to the local communities. Findings describe how "the social construction of the Pianura case, claim that the explosion of violence was the result of making peripheries into ''social dumps'' as a consequence of the gentrification of the inner city".

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.

Waste dumping in Southern Italy attests to a narrative injustice, of discarding the concerns of people who directly experience and embody environmental health risks, as official and "objective" scientific narratives shy away from declaring proven links between environmental pollution and the health of surrounding communities (LARES, personal communication).

Source: (Armiero & D'Alisa, 2012b); LARES personal communication.

In sum, underlying inequities in terms of environmental health conditions are both target of and structuring element for urban sustainability initiatives. As health environments of cities are altered, direct alterations 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.

3.1.6 Unfit organizational structures

Driver 6 refers to those aspects or functions of organizations, public offices, administrations and authorities (of different scales and sectors) that deal with urban (environmental) governance and stand in the way of achieving just outcomes in urban sustainability.

As urban sustainability depends largely on coordinated policy and decision-making by urban governance institutions within cities and in regional, national and inter/trans-national bodies, effective and transparent inter- and intra- institutional communication and collaboration is a central concern. Hierarchical structures within urban governance agencies can shape their relationship with citizens, civic organizations and social movements in ways that make it challenging to account for the needs and demands coming from the urban grassroots to be incorporated into urban sustainability initiatives. In these circumstances, top-down approaches limit knowledge generation and exchange, and regulatory barriers posed by rigid bureaucracies result in budgeting priorities and policy implementation around sustainability that fails to address the reality of vulnerable residents, and thus might have marginal or even negative effects in terms of justice. This driver is especially concerned with decision-making processes and representation, which relates primarily to procedural justice.

One issue widely reported in the research projects analysed here is the lack of consonance between the priorities of local (municipal/regional) authorities versus central (national) government institutions, with the result that national regulating bodies often stand in the way of transformative change that comes from the city/town level. In the case of Chrudim (Czech Republic), for example, research studying the possibility and potential of using indicators other than GDP, highlighted the scepticism and hesitation of local level governments and agencies in changing their practices (metrics of measuring sustainability) because such a change would be out of line with national-level programs (BRAINPOOL[13] project).

In the case of city-level management of power utilities, the WWWforEurope project reported that throughout Eastern Europe, municipalities often did not have a say because utilities were managed in a highly centralized manner (WWWforEurope, Personal communication, February 25, 2020). In Barcelona, similarly, it was reported that agencies from different government levels were operating at different temporalities, which stood in the way of positive local change in terms of neighbourhood redevelopment:

> *"Administrative timelines from the different government levels are not aligned. This reduces real time to make the most of opportunities from cooperating entities. Some of the funding opportunities from Catalan Government are scheduled with timelines that do not necessarily fit into local governments timelines, taking account the available technical staff*

---

[13] https://neweconomics.org/2014/04/the-brainpool-project

> *that a Town Council have to manage the bureaucracy required to apply for funds, for instance"* (Ulied et al., 2019, p. 24 - RELOCAL project)*.*

As well, historic organizational networks comprised of stable and long-term connection between local government agencies and private development groups are often identified as a challenging aspect of the existing decision-making infrastructure with which urban sustainability initiatives must contend. Generally, there are conflicting priorities between government agency-private developers coalitions relative to local communities and residents. This tension is especially present in targeted "problematic" neighbourhoods or districts that become subject to urban regeneration/revitalisation. As the RELOCAL project shows from the case of La Mina, in Barcelona, while global/city actors tend to focus on large scale physical developments, with attractive public spaces, in order to draw new residents and activities, local and neighbourhood actors claim that both physical and social changes should benefit the existing residents (Ulied et al., 2019). This neglect of the long-term residents is a form of distributive injustice, as well as imaginary injustice, given that the new use of space is exclusive and caters to a vision of the neighbourhood that contradicts existing values regarding the use of space. It also raises questions regarding epistemic justice and the validation of local perspectives and knowledge (ROCK, Personal communication).

The expression of conflicting demands from emergent local groups and stable local agency-private development coalitions can create friction in the implementation of a project in urban sustainability. This friction is a healthy part of the democratic process of negotiating interests, and thus is not per se a problem. However, when interventions such as nature-based solutions (NBS) depend on multiple private investors, pre-existing stable organizational links favouring private demands can become the default position in the face of a highly variegated field of interests. This was seen in the case of Newcastle and the Ouseburn Trust for the Valley's regeneration, where "the very diversity of usages and user-groups makes it not particularly easy to settle conflicts." (Mai et al., 2016). Conflicts that arise between top-down and bottom-up policy priorities are shaped in a substantial way by pre-existing organizational networks, but also overlap quite a bit with issues concerning a lack of true and meaningful citizen participation processes and a weakened civil society (see sections 3.1.7 & 3.1.10).

In the absence of well-designed participation and a strong civil society, research we reviewed reinforced the point that pre-existing power imbalances are hard to be counteracted. In Nairobi, for example, it was found through the FOODMETRES project, that although urban farming was widely practiced and benefitting urban poor households, in the absence of a means for organizing these households, "the practice continued to be shunned and discouraged by many, receiving little support from city authorities and policy makers" (Wascher et al., 2015, p. 37). Relatedly, the needs and demands of residents from marginalised (and often dense and polluted) neighbourhoods for more green space or other sustainability-related interventions were often not reflected in hierarchically organized municipal budgets (Cantergiani et al., 2019).

As emphasized also under Driver 7, tokenistic participation (section 3.1.7), inclusivity in decision-making procedures can be subverted/co-opted by institutions as a means for ensuring the continuation of established organizational relations. A common mode is to claim to be inviting inclusive processes but end up with exclusive outcomes through the selection of participants or through non-inclusive participation formats and communication. The URBLIV project, for example, discussed this in the case of the Casc Antic neighbourhood and its grassroots versus institutional effort for greening and improvement, in Barcelona. Activists denounced fictitious processes of participation and demanded "a more transgressive democracy in the city as a whole" (Anguelovski, 2013b, p. 1027).

In the TESS project, researchers also found that some people were hesitant to participate in policy discussions facilitated by city authorities because of a general negation and "ambivalence towards the state", at the same time when others seemed to rely on the state and claim for more support, which arguably limited "their radical potential" (TESS, personal communication, 20 February 2020). 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.

Another starting point of research for some of the projects we analysed relative to existing organizational strategies is the slow adoption capabilities of urban governments, especially when it comes to addressing interdisciplinary issues of sustainability and justice. This organizational rigidity is seen as hampering sustainability-related interventions that could address environmental injustices, such as Nature-based interventions for climate change, health, and equity (e.g. NATURE4CITIES project[14]; CLEVERcities project[15]). It indeed appears that rigid bureaucracies have played an important role in holding back initiatives and practices that could act to the benefit of vulnerable groups and enhance social and environmental sustainability, inhibiting the potential for testimonial or reparative justice. In the case of small-scale food sharing initiatives studied in the SHARECITY project, for example, food donations, social kitchens, or any initiative that handles surplus food have to adhere to complex and overly demanding regulations which were designed for large-scale commercial food operations and unfairly hamper the (legal) function of those micro-scale initiatives (SHARECITY, 2019).

In the case of housing, similar constraints hamper the protection of the right to housing for vulnerable residents who become victims of displacement as a result of re-development and gentrification. Namely, in the case of Istanbul, studied through the AGAPE project, proving homeownership in order to fight against eviction can turn into a bureaucratic nightmare and legal dead-end, as the project finds:

---

[14] https://www.nature4cities.eu/
[15] https://clevercities.eu/

"On one hand, the courts can cancel the urban renewal plan (up to three times so far in the case of Okmeydanı) and yet the legal framework gets amended to suitably allow for urban intervention, invalidating previous laws that had offered dwellers a sense of protection: "the state can do something with one law and then say you're not the owner of this place with another law." (Annunziata & Rivas-Alonso, 2020, p. 9)

Nevertheless, it is not only slow and rigid institutions that can produce injustice, but also the overly quick reactions by authorities and private organizations (i.e. declaring an "emergency state" with exceptional policy), whereby decision-making often bypasses democratic processes of public debate and reflection. In extreme cases such "emergency" measures might even act to justify the use of violence and repression as was showcased in the study of the 'waste emergency' in Campania, Naples:

"The alleged state of emergency has effectively silenced opposition, enabled the illegal disposal of toxic waste to continue, and hidden, if not the complicity, then at least the inefficiency of local governments. Through both legal repression and repression via propaganda, the state of emergency has erased even the possibility of alternatives, shifting public attention away from the issue of long-term and structural environmental injustice to that of managing the ''emergency'' by means of technocratic rule." (Armiero & D'Alisa, 2012b, p. 58).

Related to the concept of "the emergency state" are also measures taken in response to socio-economic crisis, international lending institutions and austerity, in countries like Greece, Ireland, or Spain. Austerity urbanism has impacted existing green/blue urban nature as well as has hampered the planned creation, protection or sustainable management of sustainability infrastructure in ways that would enhance distributional, procedural or recognition justice in cities. In Athens, for example, previously publicly owned land was privatised in order to allow for the development of long awaited (grey and green) infrastructure, seriously compromising processes of participatory design, accessibility and ecological sustainability, on the altar of speculation and international investment interests (NATURVATION, Personal communication, March 1, 2020).

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

CONVERGE project created a a multi-level "framework for convergence" and tested it via action research in 3 locations: Bristol (UK), Reykjavik (Iceland) and Tirunelveli (India). By the concept of "convergence", the project brings together the dual concepts of equality and planetary limits and seeks 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).

According to interviewees, efforts to bring a multiple-scale perspective to urban sustainability was challenging within the limits of existing institutions:

> *"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".*
>
> Moreover, research showed, there were great divisions between the more institutionalised sectors of environmental policy and development and those broadly concerns with issues of (social and environmental) justice.
>
> Source: (Vadovics et al., 2012) (CONVERGE, personal communication, February 7, 2020)

In sum, various mechanisms are in place to ensure that governmental hierarchies and durable relations between private interests and public agencies are maintained. These organizational structures are supported through various strategies -- at times slowing things down, at times speeding them up, at times creating a facade of openness. However, the underlying dynamic is one that often moves against the direction of ensuring that justice goals can be expressed through urban sustainability programs.

3.1.7 Driver 7: No or tokenistic citizen participation in urban planning

Driver 7 refers to those direct or indirect processes of involving and engaging citizens in decision-making around the planning, design, implementation and/or evaluation of urban sustainability-related interventions.

When citizen participation is not encouraged, supported and sought out in a meaningful way, interventions risk reflecting top-down status quo priorities rather than the needs and demands of local residents and collectives, especially those who historically face exclusion, vulnerability and marginalisation. The question of participation is closely linked to procedural justice, which is concerned with the level and form of civic participation in decision-making. The justice question with participation not only concerns whether there are structures in place to invite and process input by local communities and stakeholders, but how open and inclusive these structures are with regard to the different urban collectives. This is a question of who is represented in participatory processes, and how much they influence decision-making.

It has been observed, for example, that the "moral authority" of implementing sustainability initiatives in cities has often escaped the question of by whom and for who the initiatives are being realized (Anguelovski, Connolly, et al., 2018). Here too, hierarchies of class, education levels, gender, nationality, race or ethnicity, among others, can affect not only access to participation but also the dynamics and outcomes of such processes (Fainstein, 2014). The lack of adequate participation arguably impacts most forms of justice (especially procedural). However, awareness and consideration of the multiple identities, values and needs represented in a specific place can help promote recognition and intersectional justice.

Urban sustainability interventions often include the development of non-traditional and nature-based infrastructure which addresses various social and environmental challenges, either related to climate change adaptation and resilience or other societal challenges (insecurity, social alienation, social integration). ProGIreg[16], NATURVATION[17] and UrbanGreenUp[18] are some of the research projects we studied that focus on the participatory and socially innovative aspects of Nature-based Solutions, as alternatives to traditionally top-down implemented strategies of (grey) urban regeneration. However, depending on context and the nature of the intervention, the goal of boosting the (local) economy tends to overshadow other social and environmental objectives, with direct impacts on justice.

The case of the *Passeig de Sant Joan* (green corridor avenue) in Barcelona, for example, is illustrative of a participation process that was partial, including one specific interest group, namely local business owners, whose concerns fit well with the dominant economic narrative and excluding others, in ways that also reflect other dimensions of inequality/exclusion. As a

---

[16] https://progireg.eu/
[17] https://naturvation.eu/home
[18] https://www.urbangreenup.eu/

result, while the green corridor constructed helped boost the profile of the neighbourhood as green, attracting new businesses, including many new bars and restaurants, it also meant that a large number of existing Chinese-owned wholesale shops closed down and real estate in the area became more expensive (Kotsila et al., 2020 - NATURVATION). Competing priorities that clash in the aspired implementation of "multifunctional" projects, such as urban nature-based solutions, often demonstrate in participation processes and find expression in procedural and recognition injustices.

Defining successful participation in urban governance can be complex. A point of contention is the issue of how and whether to include people who seem not to want to participate. As noted in an interview with a representative from the TESS project, people might want to participate but cannot afford to "pay into" participatory bottom-up projects or cannot dedicate time away from work or their dependents. This restriction to participate due to low-income/precarity and care responsibilities thus constitutes a form of exclusion (TESS, personal communication, February 20, 2020). Furthermore, research points to a notion of 'we can't reach everyone' claim in relation to participation processes that determine the placement of green amenities or investment priorities in neighbourhoods (Ibid.). Arguably, this type of claim naturalizes environmental inequalities, putting social justice "as a second priority element" in some cases of urban sustainability efforts.

In the CROWD_USG project, researchers reflect on their findings and note that not all people are interested in direct participation processes that demand a lot of commitment and time. A diversity of participation options has been seen to make it easier for citizens to engage (i.e. through email, or in person in their neighbourhoods, in organized workshops, or digitally through participation apps). One way to increase participation that this project was examining was through digitization of collecting opinions, but again this was only accessible to those more technologically literate (see also section 3.1.8), introducing another level of complexity in achieving more just participatory processes and outcomes.

The AGAPE project, studying the claims and efforts of anti-gentrification and anti-eviction groups in three European cities (Madrid, Athens, Rome), indicated that those most vulnerable to displacement due to urban gentrification processes were the ones often excluded from the decision-making processes that led to gentrification in the first place. This is an important illustration of how distributive and procedural justice –and their drivers– intersect to create entangled outcomes of exclusion. In response, the project also finds, those involved in the fight for social justice and anti-gentrification are the most affected, and often "low income, marginalized people struggling to survive day to day". These bottom-up efforts thus result potentially "exhausting personally for individuals with other everyday life commitments to take care of" (AGAPE, personal communication, January 31, 2020). This demonstrates why engaging the most vulnerable parts of population in shaping policy through participation (in grassroots initiatives, activism, citizens consultation processes) can only be possible if it starts from their own priorities and needs.

CASE EXAMPLE: Participatory budgeting in Amsterdam Indische Buurt

In 2011, after a reversed development 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, the Netherlands. This consists of 1) a community-initiated stream that practices budgetary monitoring and community members formulating their own priorities, and 2) a municipality-initiated stream that uses an online application that provides information about financial data to the public, at the level of the neighbourhood. As the TRANSIT project reports, these contribute to budget transparency and accountability at local level. (TRANSIT project; Wittmayer & Rach, 2016).

However, in 2013 the CBB decided to let go of the "human rights" perspective in their discourse and aims. Firstly, this happened without internal consultation with members of the initiative. It, most importantly, meant that city authorities had more flexibility in adapting the participatory budgeting initiative to austerity policies. This, as is argued through the TRANSIT project findings, 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 terms of procedural justice concerning the initiative itself, it was also mentioned that participation in the activities was characterised by only a few people who had the time (and privilege) to engage in the process, and that people's relationship with or perception of public authorities also played a significant role, as "those who are jobless or in debt, have less confidence" and therefore did not attend. However, an effort had been made to include the perspectives of a broader group of citizens, other than those participating in person, through collecting opinions via questionnaires - although here as well, language acted as a barrier to participation (TRANSIT, personal communication, January 15, 2020).

Source: TRANSIT project material and personal communication.

Participation through research projects

Participation in the process of research, generation of policy proposals and implementation of promising approaches was an integral element of many research projects studied. The CONVERGE project, for example, prioritized participation in their methodology, taking "an in-depth look at different forms of community action taking place in different parts of the world", trying to understand mechanisms and models of engagement, and barriers that marginalized certain communities (CONVERGE, personal communication, February 7, 2020). Research from the GREENSURGE project also emphasized the importance of participation to well-being and health, and as one researcher stated:

> *"it is critical for people to have a voice in the process, through co-creation and development [...] there should also be a lot of learning and sharing of information between experts and community members as a form of interactional justice, in which different kinds of knowledge are recognised and acknowledged" (Personal communication, 25 January, 2020).*

Insights from the ROCK project, however, point to how the research timeline and process itself presents challenges to meaningful participation and engagement of citizens and civil organizations in urban sustainability governance, due to the short timeframes that such projects have to work within.

> *"If we are working with local authorities and Lisbon municipal council and other grassroots groups that want to engage and are working with and starting to do things, we should have a more serious commitment with what we do in terms of sustainability. Since we are asking people to get involved, and the involvement is not for free, the involvement should be based on something practical, something concrete. A practical advantage that the people can take from their involvement, and this needs time."* (ROCK, Personal communication, 5 February 2020).

UNALAB also promoted co-creation as a participatory process, as it involved local actors including public authorities, entrepreneurs and civil society). In a case study in Tampere, Finland, they engaged citizens through workshops in which participants could describe how they would like to change and improve the space around them. But they explain that "this broad co-creation process is only applicable to small-scale projects involving a few citizens [...], it seems complicated to implement a proper co-creation process involving too many stakeholders" (UNALAB, personal communication, January 30, 2020). The difficulty to incorporate the multiple identities and their associated challenges is one of the many challenges of achieving intersectional and procedural justice. In Eindhoven, a much bigger city than Tampere, they held similar workshops, but the stakeholders involved were mostly those who were already engaged in city management. Additionally, the interviewee points out that:

> *"Co-creation through participation is often undermined by the top-down nature of these European projects which results in a big contradiction. On the one hand, EU-funded projects are required to be co-created. On the other hand, projects have to be roughly designed in advance to be funded. This contradictory process undermines the ability to do true co-creation because the projects are already determined from the get-go. This raises the question of tokenistic participation."* (UNALAB, personal communication, January 30, 2020).

Participation as stewardship

Participation is often also cast in terms of stewardship and volunteerism around urban sustainability. In a number of projects reviewed, we found cases of community-initiated projects (e.g. urban gardens, repair shops, food sharing networks) which support urban sustainability objectives in different ways but count on the unpaid work of activists and engaged individuals. As the CROWD_USG coordinator stated, "if the responsibility for supporting such sustainable initiatives and actions escapes completely the public sector, we are running the risk of enabling the gradual responsibilization of people and even privatization of what used to be in the sphere of public social welfare" (CROWD_USG, personal communication, 18 February 2020).

At the same time, however, many of those initiatives stemming from the ground up have been trying to re-appropriate different spheres (the digital, the technological, the food, the urban

45

space) as part of the commons, and thus produce a counter-narrative to neoliberal ideologies, which focuses on equity, participation and sharing and not on profit. One conclusion that researchers from the WWWforEurope project draw is that "there is a strong trade-off between (inclusive) participation and complexity of the management of urban common-pool resources on the urban level", because participatory approaches are often "dependent on [the availability of] technology, capital and institutional [setting]" (Personal communication, February 25, 2020). Urban agriculture, for example, might have low technological requirements, making it more accessible than the management of renewable energy systems.

In summary, questions of participation in urban sustainability initiatives form a well-established and longstanding area of concern with regard to justice. The key dimensions of this concern relate to the depth of participation -- are those most affected actually empowered to shape outcomes? They also relate to the breadth of participation -- how can the technologies of engagement best enable the widest representation? Finally, research and local volunteer stewardship form important arenas for engagement that contain these key dimensions of concern, but also enable on the ground innovation.

3.1.8 Driver 8: Lack of effective knowledge brokerage

Driver 8 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 can enhance the justice aspect of urban sustainability interventions when it specifically benefits under-privileged and vulnerable groups. Said differently, exclusive knowledge production and communication that stays within the bounds of disciplinary, professional or economic elite circles, is a driver of injustice as it limits the potential for stewardship and uptake of innovations in urban sustainability. Access to knowledge can 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 distribution and accessibility of knowledge around both the "mechanics" and the benefits of urban sustainability can be proxies for the actual benefits that sustainability infrastructure might be able to bring to people and society in general. To know of and about such infrastructure (e.g. urban green areas, local agriculture and healthy food, or social innovation projects like participatory budgeting, repair cafes, and food sharing), how it is organised and governed and why it is beneficial, can be an enabling factor for the implementation and thus the degree of benefit received. This is particularly important for people and groups that are most in need and/or have traditionally suffered from social exclusion. However, it is also

critical to recognize the restrictions of access to urban stewardship projects, due to various factors that may prevent participation (e.g. in section 3.1.7, lower income and marginalized people have other issues that take precedence in their daily lives). Responsibility justice addresses these various capabilities and aims to maximize inclusivity within reason.

In our analysis, we found for example, through the FOODMETERS project, that farmers in Ljubljana had low awareness of existing food producer and food-related networks, and little overall knowledge of what were better established practices to reach the consuming public (FOODMETERS - Ljubljana: workshops with local (urban) farmers (Wascher et al., 2015). This hampered their own potential to survive against more industrialized agricultural businesses, and the overall potential of local food production networks, as a more sustainable consumption practice, to become more established and competitive.

Similarly, the NATURE4CITIES and CLEVERCities projects found (and sought to address) the lack of environmental/sustainability awareness and education, which it is argued hamper the overall development of nature-based solutions in cities (Nature4Cities, 2018a, 2018b). MILESECURE departs from a similar identified challenge: limited access to education around the benefits of energy transition (away from fossil fuels) and how to achieve it has kept people away from engaging in clean energy initiatives (Valkenburg et al., 2015; 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 (Erian, 2016). The SHARECITY project, for example, found that the use of difficult terminology and the lack of translation to other languages did not help in making social innovations relating to food sharing in the city, transcend existing exclusionary structures:

> *"Prior to the quiz, the rules were shared person to person with lower barriers to entry. Not everyone is happy with the quiz, and both native and non-native German speakers have expressed so much frustration about the tricky and exclusively German-language questions that ambassadors have established monthly tutoring sessions to help people beat the quiz. I think now food-sharing is not as open because of this quiz, and many people do not quite understand it. Because there are so many words in there, that are more technical or not every day, it's not accessible to a lot of people, unfortunately".* (Morrow, 2019, p. 207).

Moreover, not only the language but also the platform of communication matters. A major issue in facilitating digital urban participation has also been, for example, "the gap created between technologically educated people and people who do not have access or do not want access to technological tools" (CROWD_USG, personal communication, 18 February 2020). This raised questions regarding who would participate, and how to avoid promoting digital platforms that would only give technologically literate people access to participatory urban governance.

Knowledge is perhaps the central support for urban sustainability initiatives. The extent to which people not only access, but also internalize the innovations being undertaken can to a great extent determine the benefits perceived. Thus, knowledge brokerage of urban sustainability goals and technologies has a justice dimension because those who can best leverage the knowledge produced or required to make sustainability transitions happen are those best positioned to benefit from them. Thus, the type, expression, and source of knowledge mobilized are central concerns for justice in urban sustainability.

3.1.9 Driver 9: Unquestioned neoliberal growth and austerity urbanism

Driver 9 refers to processes of privatization, commercialization, budget cuts and state withdrawal from various sectors related to urban sustainability, which is guided by an ideology of unfettered economic growth and which often aligns with austerity policies.

Unquestioned neoliberal growth and austerity urbanism expresses itself both in blatant, often large-scale privatisation and commodification (of natural resources, public assets or services, common-pool resources, or life aspects), and through more subtle processes of downscaling responsibility onto the habits and behaviours of individuals and organisations so that (for things such as health, well-being, climate change mitigation, environmental protection, neighbourhood security, etc.) public sector oversight by democratically accountable entities is displaced by management of the private sphere (Swyngedouw et al., 2002). In the realm of urban sustainability, through the projects that we studied, we see neoliberal growth and austerity narratives of "there is no alternative" accompanying 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 discourse in which projects themselves are embedded and thus subtly promote. As such, this driver is at times critically discussed within projects and at times overlooked as a factor of injustice in the context of urban sustainability interventions.

One of the ways in which neoliberal urbanism is evidenced is in the example of privatisation and commodification of public space for the creation and/or maintenance of environmental amenities like parks, riversides, docks, and beach fronts. The GREENSURGE project, for example, points out that because green spaces are costly to maintain, cities with limited municipal budgets may outsource the maintenance to private companies, citizen/inhabitants' associations, or gardening groups. This transition to semi-private ownership shifts responsibility and ownership to certain groups or districts, ultimately hindering public access and reducing the potential of the city "to make real change" (GREENSURGE, personal communication, 25 January 2020). The project thus draws particular attention to the issue of land use and ownership, by emphasizing the question "Who owns green spaces and who decides who is to make use of them".

> CASE EXAMPLE: Neoliberal austerity versus community gardening in Carnisse, the Netherlands
>
> The southern neighbourhood of Carnisse, with close to 11,000 inhabitants – many of which immigrants and newcomers– is one of the forty most 'disadvantaged neighborhoods' in the Netherlands. It is also the target of a number of projects for improving its conditions of housing, security, schooling and working.
>
> There, an urban garden was initiated in 2011 as part of a regeneration initiative (the Resilience Lab) focusing on urban sustainability and place-making. In 2012, the garden was

shut down by the Municipality due to budgetary cuts. However, after continued efforts of members of the Lab and residents, it was revived as a community garden.

"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: (Frantzeskaki et al., 2018 - GUST project)

When urban sustainability initiatives are linked with private development, it is commonly the case that the logic of privatisation short circuits the potential for just outcomes. For example, a common strategy is to allow new housing real estate to be built on land that was public with the agreement of constructing green space in order to achieve wider sustainability goals. However, the value of such real estate largely affects the use of the green space: if new developments are directed to elite buyers, then green space becomes an enclave and thus in distributive terms, public land and public space is taken away from the working class. Similar phenomena have been noticed for example in the case of the development of the Hellenikon airport in Athens, Greece, studied by the NATURVATION project (Kiss, Sekulova, & Kotsila, 2019. There, an area that used to host the national airport, and was initially planned to be transformed into a public green amenity, turned into an asset to be speculated upon and privatized in the face of crisis. The real estate development plan is arguably the largest so far in Greece (Prentou, 2012) and focuses on high-class tourism, landmark architecture and real estate, while maintaining an over-developed green area that is surrounded by such private elite development (Kiss et al., 2019).

Neoliberal austerity urbanism often impacts institutions of different scale in distinct ways, hampering the potential of city-level sustainability initiatives (see also section 3.1.6 on unfit institutional structures), including the weakening of civil society (see next section 3.1.10). In Amsterdam, for example, after 2014, and as part of austerity policies, there has been a municipal reorganisation (into district board committees) which meant that budget authority became more centralised and available budget directly for the districts got diminished, together with a substantial loss of policy-making power at that level (Wittmayer & Rach, 2016).

The imperative of growth is expressed also in the different "branding" that cities seek and which affects their policies in terms of land use, planning and environmental protection, as they prioritise competitiveness in terms of attracting international foreign capital (in the form of tourism, the creative class, or direct investment), especially in times of crisis. Research from

Barcelona, for example, speaks of the city as being transformed from a place to live, to "a place to visit, work in, or consume" (Anguelovski, 2013b, p. 1021). Findings from Portugal, through the ROCK project attest to similar tendencies:

> "Critical thinkers say that there are some measures that were adopted during the implementation of the austerity agenda that may have facilitated some of the worst impacts of what we are seeing in Lisbon, in Porto, and other areas of the country. For example, the easy access of retired people from other countries, who don't have to pay taxes in Portugal, or the golden visa, which is also a measure of things being made easier for private investors to use real estate as a means for something else." (ROCK, personal communication, February 5, 2020).

Some argue that one of the main problems relating to the neoliberal growth imperative is the way in which prioritises growth over other goals within sustainability. In this context, many projects set out to question the underlying principles of sustainability with regard to growth and indicators of well-being (ESDINDS project; WWWFOREUROPE project). According to such research, prosperity beyond growth is a key entry point for connecting justice and sustainability, and should be based on local governance of common pool resources and self-organisation capabilities in order to counterbalance privatisation trends (WWWforEurope, personal communication, 5 February 2020). Findings also point to the potential of social innovation that fit the context of different countries and kinds of wealth, including, for example, social/solidarity economy. The TRANSIT project also examined the transformative potential of social innovation towards sustainable, fair and just societies and found such potential can be realised when social innovation puts dominant structures and institutions under question.

However, and relatedly, other research looks critically at this transformational potential, pointing to how sometimes civil society activism or innovation may be co-opted by neoliberal agendas of public or market institutions, when for example green infrastructures are used to "as a further locus for exercising social control" (Ernwein 2017, cited in Certomà & Martellozzo, 2019). A form of "soft power" neoliberalism, for example, "the promotion of volunteerism and citizen participation can be seen as a neoliberal strategy to solve inadequacies of the state and of the market, such as environmental problems or social problems" (TESS, personal communication, 20 February 2020). As research from TESS project further shows, many of the people involved in community-based initiatives were motivated to participate exactly because they had lost their trust in the function of the state with regard to realising meaningful transitions to sustainability.

The key point in relation to justice here, is that when such responsibility is left to civil society actors, it escapes the democratic sphere, as not everyone can participate in such initiatives (due to material, time, and intersectional constraints, and thus responsibility justice issues). Therefore, and relatedly, the "alternative" imaginary of change, transition and transformation is inhabited by a limited fraction of a few privileged groups (imaginary, hermeneutical and recognition justice issues).

3.1.10 Driver 10: Weak(ened) Civil Society

Driver 10 refers to the ways in which collective institutional forms that share common interests (and are 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.

Civil society refers to the arena of action coming from diverse organizations such as non-governmental and not-for-profit, community groups, professional associations, unions, social movements and advocacy groups. A focus on civil society in questions of justice is important because if the multiple identities of stakeholders in a given space are represented and recognized in decision-making processes, this can represent procedural, recognition and/or intersectional justice. Additionally, weak civil society could lead to the systematic exclusion of certain groups or individuals, a form of distributive injustice. As justice might be compromised through rigid state or profit-seeking market institutions, a strong presence of civil society action is commonly seen as a strong indicator of active struggles for social justice.

In this analysis we focus, on the one hand, on how a weakened civil society reflects a decreased capacity for uptake and just implementation of sustainability-oriented initiatives and, on the other hand, how such initiatives themselves can be a debilitating factor for the actions of some civil society groups, and consequently for justice.

Many of the examples show low levels of community and neighbourhood organization, thus speaking strongly to **procedural** and **representative injustice**. For example, the projects studied demonstrate that multilingual societies (or neighbourhoods) may fail to meaningfully include linguistic minorities (and disadvantaged groups) in deliberation processes, as seen in the case of food sharing experiments in Berlin, Germany. There, language restrictions limited access and the feeling of ownership to such programs, and thus had a **distributive justice impact** (Morrow, 2019). As well, lack of existing community organisation can be an obstacle for organising 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 would offer.

In many cases, the lack of community organization has been the reason why sustainability-related initiatives are hard to implement. In the case of Newcastle's Ouseburn empty sites, for example, there was no community organization or collective to coordinate its re-generation until the 1990s, although uncoordinated private purchasing and transformation of empty sites in Ouseburn started in 1982 (Mai et al., 2016). Similarly, in the case of Vitoria (Basque Country, Spain), the fact that there were no house associations to concentrate the communication of the project's value proposal meant that 1305 private owners had to be engaged individually and agree to refurbishing their houses and changing their heating system from natural gas to biomass (SmartEnCity, n.d.).

Many (research) projects try to enhance this type of "digestion" of information and ideas in smaller groups with common interests, through co-creation, urban innovation/experimentation/living labs and similar initiatives. These processes are expected to facilitate both the formation of (local or transnational) communities of practice and the 'rootedness' of those projects in the local community context, as a form of advancing a more plural civil society for sustainability (e.g. SMARTENCITY, GUST, UNALAB, TRANSIT projects).

However, it is also often observed how sustainability-related practices of civil society groups end up being exclusive because they are embedded in structural inequality (see also 3.1.7 on the limits of citizen participation processes). Even in the case where explicit social justice movements are organized, participation can be challenging for low income, marginalized people struggling to survive day to day, as an AGAPE researcher told us: "Bottom up fights for social justice are exhausting personally for individuals with other everyday life commitments to take care of" (Personal communication, January 31, 2020). Getting engaged in struggles related to housing and livelihood is a demanding activity that is hard to maintain, making engagement with what might appear less urgent issues, such as urban resilience or alternative energy sources challenging for those who are already strained for resources. In other words, for communities with daily struggles, sustainability is not always a priority.

In the case of community-based initiatives that link to sustainability efforts (like bike repair shops, renewable energy cooperatives, among others), it was found that despite being organized around communities and even if they engage with radical claims, these initiatives often fail to address structural roots of injustice and unsustainability, and thus "are severely limited in what they are able to perform in terms of communitarian organizing" (Argüelles, Anguelovski, & Dinnie, 2017, p. 36). It was commented for example in the case of alternative food production and commercialization, that:

> "While initiatives offering food products might articulate a clear discourse against the globalization of food markets and the large-scale conventional agriculture, their usual position is to avoid confronting the structures that create and control those markets. They often delegitimize political institutions as a possible target for driving change." (Argüelles et al., 2017, p. 37).

The tendency for groups and individuals to "take responsibility into their own hands" through involvement in civil society initiatives, is often the result of distrust in state institutions (their efficiency, transparency, or priorities). However, 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 (Ibid.).

A common issue faced by many citizen-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. 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 their often-temporary occupation of empty plots, puts them in a

particularly vulnerable position when public developments or private investments become economically feasible/profitable.

It was evidenced, for example, in the case of the urban gardens network in Rome, that there is a strong connection between the emergence of urban gardens with the precedence of some sort of social civil engagement, but also that "*gardens are very poorly supported, and temporary*" (CROWD_USG, personal communication, 18 February 2020).

As described in section 3.1.4 on 'Uneven and excluding urban intensification and regeneration', in Barcelona, many gardens were created as community-led projects that were given 3-year leases on public land, with many of them having to terminate their activities as this land (re)entered the competitive market. Here, it is worth noting, a crucial role in mending such injustices is that of local/city governments which, if progressive, can decide to relocate or indeed maintain the function of gardens and other common-based projects despite market-driven pressures for development/privatization (although city governments also are limited by their incumbency period).

An overall conclusion of the TESS project[19] has been that community-based sustainability initiatives located in multicultural neighborhoods and concerned with the struggles of marginalized groups have higher chances of enhancing social and environmental justice and their contribution to sustainability becomes applicable more extensively when they serve a wide range of social or ethnic groups. This points to the links between civil society, racial/ethnic inclusivity, material and livelihood equity and justice. As one interviewee pointed out:

> *"You need a strong civil society. It is important to try to give every group a say, a voice, especially to the 'invisibles', the refugees, the homeless." (GREENSURGE, personal communication, 25 January 2020).*

In sum, the status of and challenges faced by civil society is 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. When civil society is underdeveloped, it is much more challenging to achieve just outcomes. When civil society is hindered, the same result is likely despite a high degree of activism.

---

[19] http://www.tess-transition.eu/

3.2 Understanding urban sustainability challenges through an analysis of justice

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.

Some limitations of this analysis

In trying to distil the drivers and manifestations of injustice in the context of urban sustainability, the analysis here presented faces some core limitations.

- First, it primarily focuses on research coming from EU-funded projects and thus excludes research conducted independently (funded by national authorities and other bodies). This, however, is both a limitation and an interesting condition, as it might tell us something about the priorities that the EU itself poses with regards to funding for urban sustainability.

- Second, as this analysis was mainly based on secondary/published/available research and information, it was limited in its sources. Although the conducted interviews helped broaden our understanding, we did not have access to raw data, could not trace all scientific publications coming out of each project, and not all outputs were yet available as some of these projects are ongoing. While we intended to cover those gaps through interviewing project researchers, a lot has also escaped the scope of this analysis (and deliverable).

- Last but not least, our pool of projects was limited by the factor of combining sustainability and justice in each project's thematic focus. Other important research that speaks to either one of these two themes, while being relevant to both, certainly exists but was not captured entirely by this meta-analysis.

In order to address some of these limitations we plan to open up the results presented in this deliverable, in a more summarized version, to UrbanA's Community of Practice and work through multiple co-creation avenues (Arena events, wiki platform, co-authoring publications, webinars etc.). Through this process, our emerging observations can be again grounded and (re-)discussed based on real life scenarios and challenges and enriched by more experiences and knowledge that exist beyond our database of selected projects.

Despite these limitations, it is worth drawing some first conclusions on how justice is understood in the context of sustainability discourse and research.

Initial conclusions from this analysis

From the initial scanning of the projects, and based on the identified key materials they produce, we already see some tendencies in relation to the types of justice mostly addressed in/by these projects:

1. Most research project on these topics identify challenges of distributive (28/43) and procedural (22/43) justice, but only few projects identify or deal with other types of justice such as recognition (2), epistemic (8), relationality-inspired (6), responsibility-related (2), or others that were marginally present in the material we examined (such as hermeneutical, intersectionality and testimonial or reparative justice). While the drivers that lead to these more refined types of (in)justice might in some cases be present, mentioned and/or analysed through the research conducted in the framework of the examined projects, the concrete justice impacts of those drivers and how they intersect with sustainability interventions are found to be rarely explicitly discussed.

2. A significant number of projects which call for urban sustainability interventions utilize the language of ´justice´ as an assumed and automatic outcome of sustainability. This is removing the concept of justice from its historical emphasis on the most-vulnerable populations. Discursively, the narrative we observe rests on the assumption that climate change or environmental degradation is a "global" threat (in itself an argument that tends to hide the unequally experienced impacts of such change in society). In this line, global environmental change is presented as, or implied to be, the result of anthropogenic activity *in general* and 'business as usual' in modern Western societies (and thus, claims on the 'Athropocene'). This again is shying away from recognizing the unequal share of culpability towards climate/environmental change and the unevenness of its impacts.

   Likewise, then, when urban sustainability projects seek to address multi-faceted problems which hinge on environmental and climate concerns, they tend to downplay the unevenness of costs and benefits tied to such interventions. Further, more often than not, the needs and perspectives of the most socially/environmentally vulnerable groups, and the ways in which the latter are being given a space in public discourse and policy making, are downplayed or ignored.

3. A number of projects are emphasizing the importance of "enabling" sustainability in efficient ways through institutional adaptation or change. Justice is therein understood as something that urban sustainability will bring, as part of "spill over" and "trickle down" effects of the benefits produced by sustainability-related interventions. This is, for example, based on the false assumption that more climate resilient, green, and less polluted cities will be better for all, and thus also for the poor and marginalised.

   In some cases, and increasingly, justice is addressed sustainability interventions through a focus on civil participation, including marginalized groups, or by supporting grassroots initiatives of local communities. However, in these, as in all types of sustainability-related efforts, justice can also become an *emerging* issue, depending on how (with whom and for whom) such interventions are being envisaged, designed and implemented.

In sum, both the assumed trickle-down effects, and the level and depth to which sustainability interventions address justice, deserve more critical attention from research and practitioners.

5. References

Anguelovski et al., (forthcoming 2020). Expanding the boundaries of justice and equity in urban greening scholarship: Towards an emancipatory, intersectional, and relational approach. *Annals of the American Association of Geographers.*

Ahas, R., Mooses, V., Kamenjuk, P., & Tamm, R. (2019). Retrofitting Soviet-era apartment buildings with 'smartcity' features: The H2020 SmartEnCity Project in Tartu, Estonia. In D. Hess & T. Tammaru (Eds.), *Housing Estates in the Baltic Countries: The Legacy of Central Planning in Estonia, Latvia and Lithuania* (pp. 357–375). Springer International Publishing.

Anguelovski, I. (2013a). From environmental trauma to safe haven: Place attachment and place remaking in three marginalized neighborhoods of Barcelona, Boston, and Havana. *City & Community*, *12*(3), 211–237.

Anguelovski, I. (2013b). Beyond a llivable and green neighborhood: Asserting control, sovereignty and transgression in the Casc Antic of Barcelona. *International Journal of Urban and Regional Research*, *37*(3), 1012–1034. https://doi.org/10.1111/1468-2427.12054

Anguelovski, I. (2015). Healthy food stores, greenlining and food gentrification: Contesting new forms of privilege, displacement and locally unwanted land uses in racially mixed neighborhoods. *International Journal of Urban and Regional Research*, *39*(6), 1209–1230. https://doi.org/10.1111/1468-2427.12299

Anguelovski, I. (2016). From toxic sites to parks as (green) LULUs? New challenges of inequity, privilege, gentrification, and exclusion for urban environmental justice. *Journal of Planning Literature*, *31*(1), 23–36. https://doi.org/10.1177/0885412215610491

Anguelovski, I., Argüelles, L., Baró, F., Cole, H. V. S., Connolly, J. J. T., Lamarca, M. G., Loveless, S., Pérez del Pulgar, C., Shokry, G., Trebic, T., & Wood, E. (2018). *Green trajectories: Municipal policy trends and strategies for greening in Europe, Canada and United States (1990-2016)*. BCNUEJ.

Anguelovski, I., Connolly, J., & Brand, A. L. (2018). From landscapes of utopia to the margins of the green urban life. *City*, *22*(3), 417–436. https://doi.org/10.1080/13604813.2018.1473126

Anguelovski, I., Connolly, J. J., Garcia-Lamarca, M., Cole, H., & Pearsall, H. (2019). New scholarly pathways on green gentrification: What does the urban 'green turn' mean and where is it going? *Progress in Human Geography*, *43*(6), 1064–1086.

Annunziata, S., & Rivas-Alonso, C. (2020). Everyday resistances in gentrifying contexts. In S. Murru & A. Polese (Eds.), *Resistances: Between Theories and the Field*. Rowman & Littlefield Publishers.

Arapoglou, V. P., & Sayas, J. (2009). New facets of urban segregation in southern Europe: Gender, migration and social class change in Athens. *European Urban and Regional Studies*, *16*(4), 345–362.

Armiero, M., & D'Alisa, G. (2012a). Rights of resistance: the garbage struggles for environmental justice in Campania, Italy. *Capitalism Nature Socialism*, *23*(4), 52–68.

Armiero, M., & D'Alisa, G. (2012b). Rights of resistance: The garbage struggles for environmental justice in Campania, Italy. *Capitalism Nature Socialism*, *23*(4), 52–68. https://doi.org/10.1080/10455752.2012.724200

BCNUEJ Lab. (2019, October 9). The dichotomous challenge of greening and housing access in The Liberties. *BCNUEJ*. http://www.bcnuej.org/2019/10/09/the-dichotomous-

challenge-of-greening-and-housing-access-in-the-liberties-dublin/

Caiati, G., Marta, F. L., & Quinti, G. M. (2019). *D3.1 Report about profiles of social innovation "in action" for each cluster*. SMARTEES.

Cantergiani, C., Herranz, K., Murphy-Evans, N., Bradley, S., Pastoors, J., Menny, M., Robert, J., Casagrande, S., Barone, E., Berrini, M., & Bono, L. (2019). *Co-Creation Plan and Co-Design of Solutions in CALs. CLEVERCities Deliverable 2.2*.

Celata, F., & Sanna, V. S. (2014). Community activism and sustainability: a multi-dimensional assessment. *Working Paper Del Dipartimento Di Metodi e Modelli per l'Economia Il Territorio e La Finanza*, *137*, 1–48.

Certomà, C., & Martellozzo, F. (2019). Cultivating urban justice? A spatial exploration of urban gardening crossing spatial and environmental injustice conditions. *Applied Geography*, *106*(3), 60–70. https://doi.org/10.1016/j.apgeog.2019.03.007

Checker, M. (2011). Wiped out by the "greenwave": Environmental gentrification and the paradoxical politics of urban sustainability. *City & Society*, *23*(2), 210–229. https://doi.org/10.1111/j.1548-744X.2011.01063.x

CITYSPYCE project. (2016). *From research to action : bridging gaps between the academic and policy debates*.

Cole, H. V. S., Garcia Lamarca, M., Connolly, J. J. T., & Anguelovski, I. (2017). Are green cities healthy and equitable? Unpacking the relationship between health, green space and gentrification. *Journal of Epidemiology and Community Health*, *71*(11), 1118–1121. https://doi.org/10.1136/jech-2017-209201

Cole, H. V. S., Triguero-Mas, M., Connolly, J. J. T., & Anguelovski, I. (2019). Determining the health benefits of green space: Does gentrification matter? *Health & Place*, *57*, 1–11. https://doi.org/10.1016/j.healthplace.2019.02.001

Collins, T. W. (2010). Marginalization, facilitation, and the production of unequal risk: the 2006 Paso del Norte floods. *Antipode*, *42*(2), 258–288.

Corcoran, M. P., & Kettle, P. C. (2015). Urban agriculture, civil interfaces and moving beyond difference: the experiences of plot holders in Dublin and Belfast. *Local Environment*, *20*(10), 1215–1230. https://doi.org/10.1080/13549839.2015.1038228

Dahmann, N., Wolch, J., Joassart-Marcelli, P., Reynolds, K., & Jerrett, M. (2010). The active city? Disparities in provision of urban public recreation resources. *Health & Place*, *16*(3), 431–445.

do Rosário Oliveira, M. (2014). Planning the Urban Food System in the Metropolitan Area in Portugal. A conceptual framework. In *Proceedings of the 6th AESOP Sustainable Food Planning conference "Finding Spaces for Productive Cities"* (pp. 5–18). Cambridge Scholars.

Erian, P. (Ed.). (2016). *SEiSMiC: Enabling social innovation in European cities*. SEISMIC. www.seismicproject.eu

Fainstein, S. S. (2014). The just city. *International Journal of Urban Sciences*, *18*(1), 1–18.

Foster, S. (1998). Justice from the ground up: Distributive inequities, grassroots resistance, and the transformative politics of the environmental justice movement. *California Law Review*, *86*(4), 775. https://doi.org/10.2307/3481140

Frantzeskaki, N., van Steenbergen, F., & Stedman, R. C. (2018). Sense of place and experimentation in urban sustainability transitions: the Resilience Lab in Carnisse, Rotterdam, The Netherlands. *Sustainability Science*, *13*(4), 1045–1059. https://doi.org/10.1007/s11625-018-0562-5

Fraser, N. (2005). Mapping the feminist imagination: From redistribution to recognition to representation. *Constellations*, *12*(3), 295–307.

https://doi.org/10.1017/CBO9780511619205.002

Goodling, E. K. (2017). *Grassroots resistance in the sustainable city: Portland Harbor superfund site contamination, cleanup, and collective action*. https://doi.org/10.15760/etd.5505

Gould, K. A., & Lewis, T. L. (2016). *Green Gentrification*. Routledge.

Janoušková, S. (2013). *Implementation of an evaluation system – an indicator set – in the Healthy City of "Chrudim", Czech Republic*. BRAINPOOL PROJECT.

Kabisch, N., & van den Bosch, M. A. (2017). Urban Green Spaces and the Potential for Health Improvement and Environmental Justice in a Changing Climate. In *Nature-Based Solutions to Climate Change Adaptation in Urban Areas* (pp. 207–220). Springer, Cham.

Kiss, B., Sekulova, F., & Kotsila, P. (2019). *International comparison of nature-based solutions project report*. NATURVATION.

Knuth, S. (2016). Seeing green in San Francisco: City as resource frontier. *Antipode*, *48*(3), 626–644.

Kotsila, P., Anguelovski, I., Baró, F., Langemeyer, J., Sekulova, F., & Connolly, J. J. T. (2020). Nature-based solutions as discursive tools and contested practices in urban nature's neoliberalisation processes. *Environment and Planning E: Nature and Space*, 251484862090143. https://doi.org/10.1177/2514848620901437

Kundu, A., & Saraswati, L. R. (2012). Migration and exclusionary urbanisation in India. *Economic and Political Weekly*, *47*(26–27), 219–227.

Maantay, J., & Maroko, A. (2018). Brownfields to Greenfields: Environmental Justice Versus Environmental Gentrification. *International Journal of Environmental Research and Public Health*, *15*(10), 2233. https://doi.org/10.3390/ijerph15102233

Mai, Q. L., Bulkeley, H., Marvin, M., McCormick, K., Voytenko, Y., Hartmann, C., Breitfuss-Loidl, M., Sauer, A., Sengers, F., Spaeth, P., Evan, J., Levenda, A., Broto, V. C., Trencher, G., & Hodson, M. (2016). *D1.2.1.c Newcastle Infra-lab Report*. GUST.

Malmusi, D., & Borrel, C. (2015). *Conclusions of the SOPHIE project*. Addenda.

Marovelli, B. (2019). Cooking and eating together in London: Food sharing initiatives as collective spaces of encounter. *Geoforum*, *99*, 190–201. https://doi.org/10.1016/j.geoforum.2018.09.006

Morello-Frosch, R., Pastor, M., & Sadd, J. (2001). Environmental justice and Southern California's "riskscape." *Urban Affairs Review*, *36*(4), 551–578. https://doi.org/10.1177/10780870122184993

Morrow, O. (2019). Sharing food and risk in Berlin's urban food commons. *Geoforum*, *99*, 202–212. https://doi.org/10.1016/j.geoforum.2018.09.003

Musterd, S. (2005). Social and ethnic segregation in Europe: Levels, causes, and effects. *Journal of Urban Affairs*, *27*(3), 331–348.

Nature4Cities. (2018a). *D2.1 –System of integrated multi-scale and multi-thematic performance indicators for the assessment of urban challenges and NBS*. Horizon 2020 grand agreement No 730468.

Nature4Cities. (2018b). *D5.2 Citizen and Stakeholder Engagementstrategies and tools for NBS Implementation*. Horizon 2020 grand agreement No 730468.

Nussbaum, M. (2000). Women's capabilities and social justice. *Journal of Human Development*, *1*(2), 219–247.

Paris, S. (2013). *Outcomes from Toulouse*. BRAINPOOL.

Park, L. S., & Pellow, David, N. (2011). *The slums of Aspen: Immigrants vs. the environment in America's Eden*. New York University Press.

Pearsall, H., & Pierce, J. (2010). Urban sustainability and environmental justice: evaluating

the linkages in public planning/policy discourse. *Local Environment*, *15*(6), 569–580. https://doi.org/10.1080/13549839.2010.487528

Perkins, H. A., Heynen, N., & Wilson, J. (2004). Inequitable access to urban reforestation: The impact of urban political economy on housing tenure and urban forests. *Cities*, *21*(4), 291–299. https://doi.org/10.1016/j.cities.2004.04.002

Pham, T.-T.-H., Apparicio, P., Séguin, A.-M., Landry, S., & Gagnon, M. (2012). Spatial distribution of vegetation in Montreal: An uneven distribution or environmental inequity? *Landscape and Urban Planning*, *107*(3), 214–224. https://doi.org/10.1016/j.landurbplan.2012.06.002

Prentou, P. (2012). More Athenian sociospatial injustice in the works. *Creating a Metropolitan Park at the Former Hellinikon International Airport of Athen, Conference Paper for Presentation at the AESOP 26th Annual Congress, Ankara*.

Pulido, L. (2000). Rethinking environmental racism: White privilege and urban development in Southern California. *Annals of the Association of American Geographers*, *90*(1), 12–40. https://doi.org/10.1111/0004-5608.00182

Säumel, I., Reddy, S., & Wachtel, T. (2019). Edible City Solutions—One Step Further to Foster Social Resilience through Enhanced Socio-Cultural Ecosystem Services in Cities. *Sustainability*, *11*(4), 972. https://doi.org/10.3390/su11040972

Schively, C. (2007). Understanding the NIMBY and LULU phenomena: Reassessing our knowledge base and informing future research. *Journal of Planning Literature*, *21*(3), 255–266. https://doi.org/10.1177/0885412206295845

Schlosberg, D. (2013). Theorising environmental justice: the expanding sphere of a discourse. *Environmental Politics*, *22*(1), 37–55.

SHARECITY. (2019). *Q&A with Anna Davies, Project Lead for the SHARECITY Project*.

Shenker, J. (2017, July 24). Revealed: The insidious creep of pseudo-public space in London. *The Guardian*. https://www.theguardian.com/cities/2017/jul/24/revealed-pseudo-public-space-pops-london-investigation-map

Shokry, G., Connolly, J. J., & Anguelovski, I. (2020). Understanding climate gentrification and shifting landscapes of protection and vulnerability in green resilient Philadelphia. *Urban Climate*, *31*, 100539. https://doi.org/10.1016/j.uclim.2019.100539

Swyngedouw, E., Moulaert, F., & Rodriguez, A. (2002). Neoliberal urbanization in Europe: Large-scale urban development projects and the new urban policy. *Antipode*, *34*(3), 542–577. https://doi.org/10.1111/1467-8330.00254

Taylor, D. (2014). *Toxic communities: Environmental racism, industrial pollution, and residential mobility*. NYU Press.

Thomson, H., Snell, C., & Bouzarovski, S. (2017a). Health, well-being and energy poverty in Europe: A comparative study of 32 European countries. *International Journal of Environmental Research and Public Health*, *14*(6), 584. https://doi.org/10.3390/ijerph14060584

Thomson, H., Snell, C., & Bouzarovski, S. (2017b). Health, well-being and energy poverty in Europe: A comparative study of 32 European countries. *International Journal of Environmental Research and Public Health*, *14*(6), 584. https://doi.org/10.3390/ijerph14060584

TRANSIT project. (n.d.). *Participatory Budgeting Amsterdam (PB Amsterdam) (Netherlands)*. Transit Social Innovation.

Ulied, A., Biosca, O., Rodrigo, R., & Noguera, L. (2019). Transformation Plan for La Mina Neighbourhood in Barcelona Metropolitan Region, Spain. In *RELOCAL Case Study* (Vol. 9). University of Eastern Finland.

URBAN GreenUP. (2017a). *D3.1 Report on the diagnosis of Liverpool, Working Paper*. Working Paper 3.

URBAN GreenUP. (2017b). *D4.1 Report on the diagnosis of Izmir, Working Paper*. Working Paper 4.

Vadovics, E., Milton, S., & the CONVERGE Project Team. (2012). *Case studies ('initiatives') illustrating contraction and convergence. Equity and limits in theory and practice. CONVERGE Deliverable 33*. GreenDependent Institute.

Valkenburg, G., Bijker, W. E., & Swierstra, T. E. (Eds.). (2015). *Secure and low-carbon energy is citizens' energy – A manifesto for human-based governance of secure and low-carbon energy transitions. Deliverable 5.1 of the MILESECURE-2050 project*. Maastricty University / Politecnico di Torino.

Valkenburg, G., & Cotella, G. (2016). Governance of energy transitions: about inclusion and closure in complex sociotechnical problems. *Energy, Sustainability and Society*, *6*(20). https://doi.org/10.1186/s13705-016-0086-8

Wacquant, L., Slater, T., & Pereira, V. B. (2014). Territorial stigmatization in action. *Environment and Planning A*, *46*(6), 1270–1280.

Wall, T. (2020, March 14). Salford beats Brighton and Bristol to title of 'greenest place to live.' *The Guardian*.

Wascher, D., Kneafsey, M., Pintar, M., & Piorr, A. (2015). *FOODMETRES: Food planning and innovation for sustainabile metropolitan regions Synthesis Report 2015*. FOODMETRES.

Wirtz, J., van Egmond, P., Freitas, A., Reis, V., Santos, F., Carvalho, D., & Marquet, A. (2019). *Mobility solutions and estimation oftheir potential impacts on inclusive mobility and equity, Deliverable 3.3*. HiReach.

Wittmayer, J. M., & Rach, S. (2016). *Participatory budgeting in the Indische Buurt; Chapter 5 of TRANSIT case study report participatory budgeting.* TRANSIT: EU SSH.2013.3.2-1 Grant agreement no: 613169.

6. Annex

List of projects

Table 6.1 List of WP4 projects

Projects	Brief outline	Types of (in)justice - preliminary analysis
TRANSIT (2014-2017)	The project has developed a new theory on Transformative Social Innovation (TSI) and drafted a manifesto for TSI	Procedural: altering the manner in which people/communities are participated in social transitions
FOODMETRES (2012-2015)	Thrives to assess both the environmental and the socio-economic impacts of food chains with regard to spatial, logistical and resource dimension of growing food as well as food planning and governance	Distributive: attempting to aid in alleviation of inequalities in access to affordable and healthy food Procedural: aimed to create a dialogue between a diverse mix of stakeholders (e.g farmers, policy makers, community food activists, and campaigning organisations) from the very first steps of the project where they could give critical feedback to the research team.
NATURE4CITIES (2016-2020)	Creating a comprehensive reference platform for the adoption of collaborative models driven by citizens, researchers, policy makers and industry leaders with regards to urban nature-based solutions'	procedural: aiming for inclusive engagement/participation of various stakeholders, including all citizens relationality-inspired: the created reference platform may act as a tool to foster placed-making through adoption of NBS in cities
EdiCitNet (2018-2023)	Edible city solutions will be used not only to grow food but also to alleviate social injustices within cities	distributive: provision of edible agriculture to all urban residents relationality-inspired: emphasis placed on emotional impacts of urban gardens, specifically on mental health and feelings of inclusion/belonging procedural: edible solutions show higher rates of increased and lasting citizen participation in green space creation/maintenance
URBLIV (2011-2013)	Focuses on how residents make proactive environmental and health claims, defend their vision for improved lasting neighbourhood conditions, and address inequalities in environmental planning decisions in cities'	distributive: emphasis placed in alleviating inequalities in provision of environmental goods in urban areas hermeneutical: (exploring how) vulnerable residents engage in reimagining space procedural: (exploring how) vulnerable residents are excluded and fight for inclusion in decision making procedures relationality-inspired: (exploring how both) vulnerable residents make claims for spaces of wellbeing and historical injustices have created spaces of connection epistemic: different levels of institutional legitimacy given to different types of knowledge (technical vs phenomenological, academic vs "local") and its impact on in participatory dynamics.
MILESECURE (2013-2015)	Societal Energy Transition aims at a democratization of energy governance, building on the knowledge of local authorities and communities and providing them with more responsibilities reality and taking into consideration good practices of local energy projects. The scenario assumes a significant increase in public awareness and acceptance, which by definition should lead to changes in consumption patterns and changes in	epistemic: emphasis on building upon local knowledge in democratization process procedural: aiming for inclusive engagement/participation of all citizens responsibility: recognition of inability to act as ´urban stewards, due to their varied realities

	individual and social preferences - not only at the local level.	
LARES (2010-2012)	Maps environmental conflict(s) (garbage) in the Campania region of Italy and argues to be reveal that conflicts are producers of communities; they create identities and redraw public and private space	distributive: main emphasis on unequal distribution of environmental ills/neighbourhood pollutants and avenues for mobilization/redistribution hermeneutical/epistemic: bottom up reclaiming of space and formation of new identifies through this process
BRAINPOOL (2011-2014)	seeks to help accelerate the use of 'Beyond GDP' indicators in policy-making	procedural: re-assessment of indicators may create basis for more just allocation of resources distributive: re-examining of indicators as pathway to redistribution recognition: re-examining of indicators as pathway to recognition of historical injustices
EN-SUGI (2016-2021)	Established in order to bring together actors to find innovative new solutions to the Food-Water-Energy Nexus challenge. The ultimate goal is to increase the access and the quality of life.	distributive: continuous and equal access to sustainable goods and services for all citizens
WWWFOREUROPE (2012-2016)	Instead of GDP have a measure of "wellbeing in a sustainable environment" as the optimal benchmark of economic performance and social progress; places employment and sustainable development at the core	distributive: fostering social inclusivity through equitable distribution of economic and material opportunity intersectional: approaching inequalities/injustices as multi-layered, listing a gendered approach as necessary
FOODLINKS (2011-2013)	aims to develop and experiment with new integrative modalities of linking research to policy-making in the field of sustainable food consumption and production	distributive: access to cheap/healthy/sustainable food as a basic right!
proGIreg (2018-2023)	to improve the accessibility to these green corridors so that the cities become more liveable and locals can connect more to nature.	distributive: improved access to ´green spaces ´for all citizens procedural: inclusion of citizens in decision making procedures
CITISPYCE (2013-2016)	Explore socially innovative practices being developed by, and for, young people in urban areas to improve their ability to participate in economic activity and to engage in civil society.	distributive: aiming to alleviate inequalities in the distribution of participatory capabilities hermeneutical: mapping strategies which are emerging among young people in distressed areas of cities
MUSIC (2010-2015)	The MUSIC project (Mitigation in Urban Areas: Solutions for Innovative Cities) aims to catalyse and mainstream carbon and energy reduction in urban policies, activities and the build environment. Cities offer the opportunity for decisive local action to address sustainability challenges.	procedural: aimed at participatory processes for addressing climate change. The focus was on facilitating a bottom-up process of developing a vision, agenda and experiments in five different cities
CLEVER Cities (2018-2023)	how to adapt nature-based interventions for the needs of towns and cities around the world.	distributive: NBS for all urban residents epistemic: local knowledge at forefront of decision-making procedures
PATHWAYS (2013-2016)	Focuses on key objectives of EU sustainability policy (moving towards a sustainable, resource-efficient, low-carbon and climate-resilient Europe	distributive: providing pathway to self-sufficiency for refugees, increased availability of safe and accessible bike paths, recognition: providing refugees the ability to participate in society as equals/fostering social cohesion
ESDINDS (2009-2011)	To develop values-based indicators and assessment tools to evaluate achievements related to core ethical/spiritual values within four CSOs	epistemic: creation of a set of indicators in order to measure ethics/values of CSOs in relation to those of local communities in order to ensure local imaginaries are represented in projects related to ESD

		procedural: aiming to ensure just and inclusive participation
SEISMIC (2013-2016)	Living and lively laboratory for urban, social and open innovation - a platform for dialogue and mutual learning among citizens and urban actors to strengthen social innovation in a local context	procedural: innovative pathway towards inclusive citizen involvement
GREEN LULUS (2016-2021)	Analyses the conditions under which urban greening projects in distressed neighbourhoods redistribute access of environmental amenities to historically marginalized groups	distributive: redistribution of urban quality of life testimonial: past injustices in particular neighbourhoods/cities are given voice and importance reparative: at its core the project promotes equity-oriented greening in place of broad distribution of green amenities relationality-inspired: emphasis placed on green amenities as spaces of care and connection for all, with specific attention placed on marginalized communities
HiReach (2017-2020)	Addressing mobility poverty and lowering emissions	distributive: project aims to a create new mobility options for low accessibility social groups and areas (to alleviate ´transport poverty´)
CONVERGE (2009-2013)	Outlines a process through which we can avoid dangerous climate change by stabilising atmospheric concentrations of greenhouse gases while promoting global social equity'	distributive: ensuring all are provided with fresh air (equity component) testimonial: allowing for historically marginalized regions/peoples to develop while West reduces footprint
TRANSLATE DEMOCRACY (2010-2012)	Explored whether multilingual organized democracy experiments, and political translation, may enhance inclusive dialogue	hermeneutical: (quite literally) allowing for narrations of vulnerable residents to be heard and accounted for in decision making processes by allowing for all to speak in native language/providing translation procedural: pushing for further inclusivity in decision making processes
GREEN SURGE (2013-2017)	Identify, develop and test ways of connecting green spaces, biodiversity, people and the green economy, in order to meet the major urban challenges related to land use conflicts, climate change adaptation, demographic changes, and human health and wellbeing	distributive: allocation of ´green space for all residents of urban areas relational-inspired: emphasis placed on improving human health and well-being through greening projects
CITI-SENSE (2012-2016)	will develop "citizens' observatories" to empower citizens to contribute to and participate in environmental governance, to enable them to support and influence community and societal priorities and associated decision making	procedural: citizen involvement as integral in decision making process distributive: allocation of responsibilities to citizens and enabling citizens to measure cleanliness of their lived environments epistemic justice: people can document pollution and exposure to env air quality
IN-STREAM (2008-2011)	will undertake the qualitative and quantitative assessments necessary for linking mainstream economic indicators with key well-being and sustainability indicators, thus providing needed insight into the synergies and trade-offs implicit in Europe's simultaneous pursuit of economic growth and environmental sustainability	procedural: re-assessment of indicators may create basis for more just avenues for the allocation of resources distributive: re-examining of indicators as pathway to redistribution recognition: re-examining of indicators as pathway to recognition of historical injustices
GRAGE (2014-2018)	focuses on developing winning ideas to promote an active, harmonious and inclusive citizenship for elderly people living in urban contexts	recognition: emphasis on elderly population, seen as marginalized in (green) urban planning distribution: allocation of environmental goods to vulnerable population relationality-inspired: spaces for elderly population seen as new spaces of care and connection, which

		aims to alleviate ills related to health and social contact present in elderly populations
GUST (2014-2017)	measuring success of 40 urban living labs (ULLs) throughout Europe in providing economic stability and social cohesion while achieving urban sustainability	procedural: ULL as space for inclusive decision making and urban planning
URBiNAT (2018-2023)	Inclusive urban model to regenerate deprived districts & Participative design for new models of urban development.	distributive: affordable social housing development utilizing Nature Based Solutions (NBS) procedural: participative design aimed at including all citizens in planning procedures epistemic: local voices and knowledge are brought into decision making processes
SmartEnCity (2016-2021)	the retrofitting of old buildings or neighbourhoods so that they have reduced energy consumption, creating eco-friendly transportation, and service provision	distributive: offering equal opportunity for renewable energy, transit, and service provision to all
TESS (2013-2016)	community based sustainability initiatives show ways in which active citizens can participate in the transition to non-carbon-based society	distributive: exploring capabilities of community-based initiatives (CBIs) in (re)distributing environmental amenities/making local people benefit from local goods (lack of access to CBI as distributive injustice relationality-inspired: CBIs fostering spaces of connection/community Responsibility justice: restriction of access/availability of people to take part in CBIs due to their intersectional realities (class, racial, gender etc.)
CROWD_USG (2017-2019)	Explores the potential of crowdsourcing to advance innovative urban sustainability governance	procedural: aiming to uncover emerging forms of local urban sustainability justice (mainly through crowdsourcing) and the manner in which local communities are 're-politicizing' issues of urban sustainability distributive: exploring the uneven distribution of urban environmental harms and processes through which communities achieve the redistribution of urban environmental goods
URBAN GreenUP (2017-2022)	Nature-based solutions will be implemented to cover a variety of complementary aspects of urban life and infrastructures: re-naturing urbanization, water interventions, singular green infrastructures and non-technical interventions. To this end, Urban GreenUp has a catalogue of interventions (i.e. sub-approaches) that can be used by cities to develop their renaturing plans.	distributive: broad (use of justice) greening of city through adoption of NBS procedural: exploring new pathways for inclusive citizen involvement
SHARECITY (2011-2014)	A variety of specific approaches concerning sharing of materials, spaces and skills/knowledge relating to food	distributive: redistribution of material and social capital related to urban agriculture and food hermeneutical (?) justice: food sharing initiatives would not be formally included in policy (gardens), others will be overregulated to make their function impossible (e.g. sanitary rules) - this can make access to food and to the practices (and benefits) of food sharing that are valued as safe, fulfilling, accessible, welcoming, non-discriminating, non-stigmatizing, etc., less possible to vulnerable residents.
NATURVATION (2016-2020)	Urban NSB governance and innovation for responding to urban sustainability challenges	distributive: broad (use of justice) re-naturing of city through adoption of NBS procedural: exploring new pathways for inclusive citizen involvement
Divercities (2013 - 2017)	How to govern hyper-diverse cities, diversity as an asset. Main question: What evidence can we find of the positive aspects of urban diversity for social cohesion, social mobility	

	and economic performance in European cities? How can these positive arrangements be enhanced by participatory policies and governance arrangements?	
SOPHIE (2007-2013)	The project looks at the "causes of the causes of health inequity" - it aims to generate new evidence on the impact and effectiveness of structural policies in reducing health inequalities	Distributional: People lack access to decent housing, that is heating, warm water etc. Plus, they also don't have fair and easy access to health care system Procedural: Vulnerable urban dweller are not included in decisions regarding how they want the built environment to be
mySMARTlife	Transforming current cities into more sustainable places where smart people and smart economy become reality. Making cities more environmentally friendly by reducing CO2 emissions and increasing the use of renewable energy sources. Making cities more inclusive and allowing a high quality of life. Involving citizens in the development of an integrated urban transformation strategy, which is easily transferable to other cities. Increasing the digitalization of the cities thanks to the urban platforms.	distributional aspects of injustice in regard to the use of 'smart' technologies
AGAPE (2014-2016)	The overall aim of the research project has been to explore and compare the rise of anti-gentrification practices in three Southern European cities Rome, Madrid and Athens, with the final goals to reworking our collective imagination and repertoire of solutions to displacement and contribute to gentrification resistance theory.	Distributive: increasing exclusion of poorer people from access to urban housing. Procedural: those affected are not involved in the decision-making processes that stimulate gentrification. Recognition: anti-gentrification, anti-austerity and pro-poor perspectives are not represented in decision-making and planning processes
ROCK (2017-2020) -	ROCK aims to develop an innovative, collaborative and circular systemic approach for regeneration and adaptive reuse of historic city centres. Implementing a repertoire of successful heritage-led regeneration initiatives, it will test the replicability of the spatial approach and of successful models addressing the specific needs of historic city centres.	procedural: participative design aimed at including all citizens in planning procedures epistemic: local voices and knowledge are brought into decision making processes
RELOCAL (2017-2020)	RELOCAL project proposes bottom-up perspective within a multilevel context. It departs from the basic premise that localities and their functional spaces represent the contextual nexus where the relationship between individuals and spatial justice unfolds. Therefore, the principal rationale of the RELOCAL project is to contribute to conceptually and empirically enhancing the knowledge base on spatial justice and territorial inequalities and it also contributes to identifying policies promoting spatial justice and socio-economic well-being at various levels of governance.	The project's focus is on manifestations of and responses to inequality, rather than drivers of injustice specifically. Its combination of case study approaches and national analyses includes much contextual information on drivers.
UNaLab (2017-2022)	The UNaLab project is contributing to the development of smarter, more inclusive, more resilient and more sustainable cities through the implementation of nature-based solutions. The project results will enable the development of a European NBS Reference Framework on benefits, cost-effectiveness, economic viability and replicability of nature-based solutions, which will guide cities across Europe and beyond in developing and implementing their own co-creative nature-based solutions.	Project uses co-creation as a central methodology for developing and testing its NBS.
SMARTEES	SMARTEES – Social Innovation Modelling Approaches to Realizing Transition to Energy Efficiency and Sustainability – is a transdisciplinary research project which aims to support the energy transition and improve policy design by developing alternative and robust policy pathways that foster citizen inclusion and take local peculiarities into account. To reach these objectives, SMARTEES examines five types of energy- and mobility-related local social innovation in ten front-runner cities and islands across Europe.	epistemic: residents are supposed to take leading roles in designing different projects, at least one initiative (Samsø) started with residents and the municipality supported them. procedural: All projects focus on including residents in the different project stages

EVALUATE	The project aimed to investigate the manner in which urban institutional structures, built tissues and everyday practices shape energy vulnerability at a variety of geographical scales.	

1. Intro- UrbanA and the purpose of this interview
2. Justice in general as a topic/framing/goal
   - Was justice (social, economic, environmental) part of the project's initial goals/conceptualisation?
     - How/in which terms?
     - Was it challenging to research justice or to comply with such goals? Why?
   - What were the project findings in terms of justice in urban contexts?
     - Could you give an example of a case/project/initiative that you were part of or examined in relation to its justice aspects?
     - What can be the main take-away? What does it tell us about justice and sustainability as two connected concepts/goals?
   - From our review of the project, we have found that it addresses (_____) type of justice, because it touches upon_____ (see excel), would you agree?
3. Drivers of injustice
   - Looking at some of the documents and cases that the project studied, we have found that (some of) the main drivers of injustice related to the project's theme and findings are _____(see excel).
     - Could you comment on one or more of these findings?
     - Would you agree with our interpretation?
     - Have we missed some other important drivers of injustice that the project dealt with?
4. Recap - closing - thank you
   - If I have understood you right then, project _____ is (or is not) dealing with justice mostly through/because_____?
   - Would you recommend we talk to someone else from the project to get more information on these issues?