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MSc Thesis – Environmental Policy Group

ENVIRONMENTAL (IN)JUSTICE IN AMSTERDAM GREENING POLICY:
A case study on the social impact of green interventions

Taliah Dommerholt

Supervision: Dr. Ingrid Boas
Second reader: Dr. Bas van Vliet

Student number: 940123189070
MSc Urban Environmental Management
ENP 80436
Wageningen University & Research

ABSTRACT

Greening is essential to many urban agendas, playing an integral role in climate change adaptation and mitigation, and making cities more livable, healthy, and resilient. While cities such as Amsterdam have committed to widespread greening, such interventions have been criticized for resulting in a so called 'green gap', in which the benefits of greening are unequally distributed. Although greening is often depicted as something 'politically neutral', in practice, there are many factors that can influence how greening is implemented and experienced. To understand the social implications of greening initiatives in the city of Amsterdam, this thesis assesses the city's greening strategy through the lens of environmental justice. In academia, there are multiple notions of 'justice', however, (in)justices often fall into one of three over-arching and interrelated categories: *distributional*, *procedural*, and/or *recognitional* justice. Using a mixed-methods, qualitative approach, this thesis assesses greening along these three forms of justice and then compares the ways in which environmental justice is conceptualized in policy to how it is implemented in practice, using a specific neighborhood case study, the IJplein-Vogelbuurt in Amsterdam Noord. While Noord is historically a very green area, it is perceived as being under threat by new housing developments and an influx of residents who are wealthier and threaten the social cohesion of the area.

Following an in-depth policy analysis of key municipal documents and interviews with a variety of stakeholders, this thesis demonstrates that in many ways, Amsterdam's green policy is exemplar of equitable policymaking, but there is still room for improvement. The municipality is aware of the need for greening to be just, but it faces the issue of how to overcome bureaucratic challenges related to participatory methods, and often fails to recognize the more nuanced forms of justice, such as experiences of marginalization felt in certain green spaces. In practice, while green amenities are relatively well distributed in IJplein-Vogelbuurt, there are numerous factors that influence how greening is experienced. Many long-term, lower-income residents, feel excluded and alienated from the rapid changes in the neighborhood, and there is a sense that urban renewal projects are not for them, but rather for wealthier newcomers. To accommodate a growing population and respond to the recurrent issue of space in the city, the challenge is how to equitably redevelop without compromising on green infrastructure or widening the social divide.

Keywords: urban greening, environmental justice, green gentrification, Amsterdam, IJplein-Vogelbuurt, Amsterdam Noord, policy analysis

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List of Abbreviations

ACMT Agenda City-making Together (*Agenda Samen Stadmaken*)
AFWC Amsterdam Federation of Housing Corporations
AMA Amsterdam Metropolitan Area
BCNUEJ Barcelona Laboratory for Urban Environmental Justice and Sustainability
CV Comprehensive Vision (*Omgevingsvisie*)
EJ Environmental Justice
EPA Environmental Protection Agency
ERC European Research Council
GV Green Vision (*Groenvisie*)
IPCC Intergovernmental Panel on Climate Change
LULUs Locally Unwanted Land Uses
PBL Planbureau voor de Leefomgeving
POA Amsterdam Shelter Platform
SES Socio-Economic Scores
ST Structural Vision
UPE Urban Political Ecology
US United States of America

1. INTRODUCTION

In 2020, the Netherlands experienced its sixth hottest summer since 1901, with 11 'tropical' days, in which the maximum temperature was 30°C or higher (Homan, 2020). This past summer again saw persistent heat waves, accompanied by extended periods without rain. As countries like the Netherlands experience increasing temperatures, the built environment is especially susceptible to such extremes. In the most recent publication of the IPCCC Working Group II: Impacts, Adaptation and Vulnerability, cities were recognized as "hotspots of impacts and risks [relating to climate change], but also a crucial part of the solution" (IPCC Working Group II, 2022). To manage the effects of climate change, cities like Amsterdam are increasingly turning to urban green infrastructure (UGI) in their mitigation efforts. Urban green infrastructure—specifically green spaces—can play a significant role in managing the effects of such unprecedented heat, drastically improving human quality of life. In one example, researchers found that the Amsterdamse Bos was 2 degrees cooler than the rest of the city, an indicator of the immense impact urban greening can have on reducing extreme heat (AMS, 2020).

As explored throughout this thesis, green spaces are vital components of a healthy city, providing a multitude of direct and indirect ecosystem services and having the potential to redefine urban areas. Not only do they make neighborhoods more livable and contribute to physical and mental well-being, they also play an integral role in climate change adaptation and mitigation. Green spaces are essential for biodiversity and increase climate resilience by lessening flood and drought risks, lowering temperatures, and reducing air pollution. They also make neighborhoods appealing places to live and convene, attracting tourism, and increasing the value of real-estate. Greening is a low-tech, relatively low-cost solution to the sustainable city.

As the world becomes increasingly urbanized, more and more cities are adding urban greening interventions to their development agendas. Although there is widespread global commitment to urban greening interventions (supported by policy initiatives, research agendas, and a variety of investors), such interventions have been criticized for neglecting to promote equity in their implementation, resulting in an unequal distribution of associated harms and benefits. As argued by Anguelovski et al. (2020), greening agendas rarely include "concrete measures for ensuring that greening solutions benefit all residents, and, in particular, residents and communities who are historically vulnerable to environmental racism, displacement, or both" (p. 1744). In fact, many urban greening interventions actually end up serving primarily white, upper-class people, and have resulted in rising real estate costs (Gould & Lewis, 2017). This creates further social exclusion and 'green gentrification,' in which greening processes attract more affluent people and displace inhabitants who cannot afford to stay, or no longer feel welcome or able to access green amenities (Anguelovski, Connolly, & Brand, 2018). This so called 'green gap'—in which greening only provides benefits to some, whilst creating even more profound vulnerabilities for others—results in greening initiatives that do not represent the preferences of local, lower-income communities, instead becoming 'green locally unwanted land uses' (Anguelovski, Connolly, Garcia-Lamarca, et al., 2019; Mohai et al., 2009).

Urban greening is commonly depicted as something "politically neutral" that will have widespread, universal benefits for all residents (Anguelovski, Cole, et al., 2018; Anguelovski, Connolly, Masip, et al., 2018). As explored in this thesis, greening is, however, a highly political concept—the way it is framed and applied creates winners and losers, and research has shown that the quality and quantity of urban green spaces is often lower in poor socio-economic areas (Astell-Burt et al., 2014; Byrne, 2018; Dahmann et al., 2010; Grove et al., 2018). Even when greening appears to be equitably

distributed, there are many factors that can impact whether the benefits are actually widely felt, or whether the space only benefits selected groups (Byrne, 2018).

To prevent unintended social consequences of green renewal, it is critical to monitor the impacts throughout the greening process—in the planning, implementation, and evaluation phases. This research explores the role of equity in green policy and green spaces in the city of Amsterdam. By examining the relationship between (re)development of green spaces and social inclusion, the objective is to assesses Amsterdam's greening strategy and then compare the ways in which environmental justice is conceptualized in policy to how it is implemented in practice. This is done through a focus on a specific neighborhood case study, the IJplein-Vogelbuurt, located in Amsterdam Noord. The district of Amsterdam Noord is undergoing large-scale urban transformation, specifically in developing neighborhoods like IJplein-Vogelbuurt. As a post-industrial neighborhood, the area suffers from high levels of poverty in comparison with the rest of the city, but with housing becoming increasingly scare throughout the city, it has started to undergo processes of gentrification. For the different neighborhoods in Noord to be more cohesive, efforts are being made to make the area more connected, and the construction of new residential and work areas coincides with the much-needed investments in existing areas. This means that priority will not only be given to new areas, but that simultaneously, old areas will see renovations in public space, as well as investments in social infrastructure.

The case study of Amsterdam was chosen because it is comparable to many Western European cities, undergoing widespread change as its population expands and diversifies. Amsterdam's urban agenda focuses on how to best manage space and maintain quality of life, respond to threats of climate change, promote economic growth, and reduce socioeconomic inequalities, in accordance with the United Nation's Sustainable Development Goal 11, to *make cities inclusive, safe, resilient, and sustainable* (UN General Assembly, 2015). The city has also become a globalized knowledge hub, attracting an international community and innovative, forward-thinking companies. While the information economy has created ample new jobs for the highly educated class, socioeconomic inequalities and social segregation have also grown (van Ham et al., 2015). As the city's population expands [1], there are numerous pressures to improve public transportation, supply adequate housing, and invest in public spaces. Although parts of the city have seen significant developments, other parts lag, and discrepancies between neighborhoods are becoming increasingly apparent, especially as sky-rocketing housing prices make it nearly impossible for low- and middle-income residents to find suitable homes. The thesis thus also considers topics related to housing and real estate developments. Not only does this serve as the context for which urban greening is occurring in the city, but housing development is directly related to greening. For example, new developments can put pressure on existing green spaces by competing for space, and greening can impact housing costs by making neighborhoods more appealing for investments.

In sum, this research examines the case study of Amsterdam from the neighborhood perspective, assessing social vulnerability in the context of gentrification. By analyzing how the benefits of greening are distributed, it considers how greening can potentially exacerbate inequalities and accelerate gentrification. In doing so, this research is relevant in multiple ways. First and foremost, there are many knowledge gaps when it comes to the social dimension of urban greening and the

[1] By 2050, Amsterdam's population is expected to grow by 250,000 inhabitants, reaching almost 1.1 million people, and the larger metropolitan region is expected to rise from 2.5 million to more than 3 million (Gemeente Amsterdam, 2021).

ways in which nature-based solutions can negatively alter a city (Anguelovski et al., 2020; Bockarjova et al., 2020). Furthermore, green gentrification is a relatively new concept in the Netherlands; in a recent metanalysis on the implications of gentrification, the Dutch Environmental Assessment Agency (PBL) found that although green interventions provide many ecosystem services and contribute to the overall sustainability of a neighborhood, the social impacts are poorly understood, especially when it comes to gentrification (Bockarjova et al., 2020). The analysis further showed that urban nature has a positive impact on housing prices in the surrounding area, having significant repercussions for lower-income residents who can no longer afford to move to these neighborhoods. Overall, there are limited studies that address the social context of urban greening, specifically regarding the "winners and losers" of green strategies (Haase et al., 2017), and the relationship between urban greening and inequities is still largely an "unexplored research nexus" (Anguelovski, Connolly, Pearsall, et al., 2019, p. 26140; Gould & Lewis, 2017). There is thus a need for qualitative analyses of neighborhoods targeted for new green infrastructure and the motivations behind such interventions, as well as research about participation in policy and planning processes.

This research contributes to the dialogue regarding the critical role of environmental justice in urban sustainability. As a theoretical concept, environmental justice brings together environmental sustainability and social justice. While its definition is expansive and constantly evolving, at its core it refers to the equitable distribution of environmental amenities, the meaningful involvement of all people in the development and implementation of environmental policies and management, and the recognition of different needs and values in environmental planning. Cities play key roles in responding to climate challenges, and urban sustainability can also acknowledge and respond to existing social inequalities, representing a diversity of interests and needs. Merging the concepts and associated methods of environmental sustainability and social justice enables urban planners to develop a common language and generate novel approaches that are instrumental to improving environmental health and quality of life (Anguelovski, Cole, et al., 2018).

1.1 RESEARCH QUESTIONS

To understand environmental justice in urban greening and renewal projects in the city of Amsterdam and, more specifically, IJplein-Vogelbuurt, this research seeks to answer a set of research questions. The primary research question is supported by four sub-questions that fall into three categories: theoretical, empirical, and analytical. The questions are as follows:

Primary research question: *In what ways do urban greening strategies in the city of Amsterdam support principles of environmental justice, and how does the way justice is conceptualized in green policy compare to how greening is experienced by residents of a gentrifying neighborhood?*

- ◊ **Theoretical:** *How can environmental justice be applied in the context of urban greening and how can it be used to understand green inequalities?*
- ◊ **Empirical:**
  - ⇒ *To what extent does municipal green urban policy include measures to promote environmental justice in green development?*
  - ⇒ *How is the IJplein-Vogelbuurt neighborhood experiencing green development and regeneration, and how does it align with principles of environmental justice?*
- ◊ **Analytical:** *What is the relationship between greening and gentrification in the case study?*

1.2 THESIS OUTLINE

The thesis begins with the conceptual framework, explaining the role of greening in urban settings and introducing the concepts of environmental justice (**Chapter 2**). This is followed by a detailed methodology of the qualitative and narrative-based approach of the research (**Chapter 3**). The following chapter discusses the case study, exploring greening policy and approaches in the city of Amsterdam, providing development contexts, and outlining green initiatives in IJplein-Vogelbuurt (**Chapter 4**). The results section begins with an analysis of municipal green policy, specifically considering the language used to frame topics of justice and equality in Amsterdam's two key greening policies, Green Vision 2020-2050 *(Groenvisie 2020-2050)* and Comprehensive Vision 2050 (*Omgevingsvisie 2050)* (**Chapter 5)**. Then, with an understanding of how environmental justice principles are conceived in urban policy—either explicitly or implicitly—the research explores the role of environmental justice in practice, based on a series of interviews (**Chapter 6**). By focusing on specific greening examples in the IJplein-Vogelbuurt, a transitioning neighborhood undergoing processes of urban renewal, the research looks at the relationship between how environmental justice is framed in policy, and how it is implemented in greening initiatives. For this phase of research, the research specifically considers whether local communities feel they are being included and adequately represented in decision-making processes. This is followed by a detailed discussion (**Chapter 7**) and conclusion (**Chapter 8**).

2. CONCEPTUAL FRAMEWORK: ENVIRONMENTAL JUSTICE IN THE CONTEXT OF URBAN GREENING

This thesis is based on the theory of environmental justice, using it as a lens through which to analyze the social context of urban greening. The framework of environmental justice was selected to analyze this case study because it can help to understand how environmental risks and benefits are (unevenly) experienced and improve urban planning processes to be more inclusive. This chapter begins with an introduction to greening strategies and how greening is often politicized in practice, as well as the concept of *equitable greening*. This is followed by an introduction to the concept of environmental justice, providing a definition and historical overview of the theory and its use. The final section explains how the environmental justice lens is applied to this research. Outlining three types of justice and their indicators, the indicators are then used to answer the research questions, serving as a guideline for the coding of the policy documents and the interviews to determine the role of justice in greening.

2.1 URBAN GREENING

For the purpose of this thesis, urban greening and green amenities are defined in line with Anguelovski et al. (2020), and include any green, nature-based infrastructure or service (e.g. parks, gardens, green roofs, stormwater management etc.). Greenspace can refer to both natural and human-altered areas, and be public or private, but for this thesis, research focuses primarily on human-modified, public spaces. The examples explored in the IJplein-Vogelbuurt neighborhood are at different stages of development; some are already established, while others are still in the planning process, yet all of them represent attempts to restore and improve physical spaces in the urban landscape in order to "redefine their purpose and the overall vision for an area" (Anguelovski et al., 2020, p. 1744).

Urban green space is a type of ecosystem service that provides a multitude of direct and indirect benefits to communities (Langemeyer & Connolly, 2020). There are many reasons why cities opt for green interventions. Greening can improve the physical and mental health of individuals and communities (Dahmann et al., 2010; South et al., 2018), and be used for exercise or play, social gatherings, and educational activities. A pleasant environment facilitates social interaction and enables people to learn more about nature and their surroundings, improving societal welfare and supporting a strong community. It helps to prevent loss of biodiversity and can be used as an adaptation measure, increasing climate resilience by mitigating flood and drought risks, lessening the urban heat island effect, reducing air pollution, and lessening the effects of urban noise pollution (Bowler et al., 2010). Urban greening also has significant economic implications, making neighborhoods more attractive and thus increasing tourism and economic investments, as well as real estate values (Anguelovski, Connolly, Pearsall, et al., 2019; Garcia-Lamarca et al., 2021).

2.1.1 THE POLITICS OF GREENING

Urban greening is promoted as a means to facilitate sustainability transitions and improve human wellbeing and quality of life, and it is often a key aspect of urban renewal projects (Gould & Lewis, 2017; Haase et al., 2017; Yazar et al., 2020). It is commonly construed as something "politically neutral" that will have widespread, universal benefits for all citizens, regardless of socioeconomic status (Anguelovski, Cole, et al., 2018; Anguelovski, Connolly, Masip, et al., 2018). Greening is, however, a highly political concept—the way it is framed and applied creates winners and losers, and it has been critiqued as a neoliberal approach that "commodifies nature and creates new sites for

capital accumulation largely in the hands of a global elite" (Kull et al., 2015). Although exposure to green amenities is shown to correspond with increased community health, research has shown that the quality and quantity of urban green spaces is often lower in poor socio-economic areas (Astell-Burt et al., 2014; Byrne, 2018; Dahmann et al., 2010; Grove et al., 2018). Even when greening appears to be equitably distributed, there are many factors that can impact whether the benefits are actually widely felt, or whether the space only benefits selected groups (Byrne, 2018).

When greening initiatives are introduced in neighborhoods, they can increase the appeal and value of the area, resulting in gentrification, displacement, and health inequalities, a so-called 'green space paradox' (Anguelovski, Connolly, Masip, et al., 2018; Cole et al., 2017; Pearsall & Eller, 2020; Wolch et al., 2014). Gentrification refers to a process in which a neighborhood attracts higher income residents, leading to raised property costs and the eventual displacement of poorer long-term residents who cannot afford rent or no longer feel welcome (Hochstenbach & van Gent, 2015). The residents who are most at risk of displacement often include elderly people, renters, and community members who depend on government financial assistance (Pearsall, 2010), and displacement can be both physical and social, the latter occurring if certain groups no longer feel they belong in a neighborhood or neighborhood shared spaces (Anguelovski, Connolly, Garcia-Lamarca, et al., 2019). Generally speaking, urban renewal makes neighborhoods more attractive to higher income groups, leading to increased rental costs that eventually price out vulnerable, low-term residents (Anguelovski et al., 2020; Gould & Lewis, 2017). When urban green interventions lead to gentrification through the "revaluation and/or allocation of undeveloped lands as a result of public or private investments" (Yazar et al., 2020, p. 638) it is termed *green gentrification* (Anguelovski, Connolly, Pearsall, et al., 2019; Gould & Lewis, 2017). The effects of gentrification impact access to green amenities, creating "enclaves of environmental privilege" that correspond with existing social inequalities (Anguelovski, Connolly, Garcia-Lamarca, et al., 2019, p. 1065).

Traditional greening practices commonly disregard or diminish the negative impacts such initiatives can incur on socially vulnerable residents, "while selling a new urban brand of green and environmentally resilient 21st-century city to investors, real estate developers, and new sustainability-class residents" (Anguelovski, Connolly, Pearsall, et al., 2019, p. 26140). Even if green infrastructure initiatives claim to address social issues, in reality, many are "market-driven endeavors primarily catering for higher income residents" (Haase et al., 2017, p. 43). The use of greening in city branding and marketing also reflects the financialization of nature and a growing emphasis on how greening improves 'livability'. Greening can also work in the other direction, when the gentrifiers themselves demand improvement of local green amenities (Anguelovski, Connolly, Garcia-Lamarca, et al., 2019; Anguelovski, Connolly, Pearsall, et al., 2019). It is thus important to recognize the motivations behind urban greening, as well as the actors and funding behind such projects, to understand whose interests are being represented and to avoid exacerbating existing socio-economic disparities.

2.1.2 EQUITABLE GREENING

Anguelovski et al. (2020) explain that green interventions are often supported by national policies, but rarely "begin with an equity lens," or include measures to ensure that vulnerable communities reap the benefits (p. 1744). While it is not uncommon for urban greening initiatives to include goals related to justice and equity, whether this is translated into practice is a different story. Greening is widely accepted as having a positive influence on a city, but in actuality, "interventions increasingly create dynamics of exclusion, polarization, segregation, and invisibilization to the detriment of the most socially and racially marginalized urban groups" (Anguelovski, Connolly, & Brand, 2018, p. 419). To

help ensure that this does not happen, green planning must incorporate protective measures and financial structures to safeguard existing housing and build new affordable housing "specifically designed in the context of climate adaptation planning" (Anguelovski, Connolly, Pearsall, et al., 2019, p. 26142).

Equitable urban greening is not simply about increasing the quantity of green spaces, it is also about "redesigning basic institutions that embody problematic practices connected to our basic material needs" (Schlosberg, 2013, p. 49). The response to limited green space is more than adding parks or green roofs, it is about working collectively with communities, and building "awareness that such basic needs that supply the functioning of a community should themselves be sourced without creating injustices" (ibid). This requires an understanding of a community's relationship to green space and their visions for its use, as well as active awareness and incorporation of different types of justice in urban planning. If green 'solutions' result in exclusion or the displacement of communities, other paths need to be explored, although Mohai et al. (2009) point out that it is "not immediately obvious what should be done after an injustice has been documented," and that addressing environmental (in)justices with public policy is often complex and expensive (p. 407). Still, cities can take measures to ensure protection of vulnerable residents by implementing anti-displacement and equitable green development strategies, such as land use tools (e.g., zoning regulations), developer requirements, and financial schemes (Oscilowicz et al., 2021).

2.2 ENVIRONMENTAL JUSTICE

To assess urban greening in the city of Amsterdam, greening policies and initiatives are assessed through the lens of environmental justice. As a theory, environmental justice is multifaceted and has a complex history. It has a plurality of definitions and a wide-ranging applicability that makes it a relevant concept in a both academic and practical contexts.

2.2.1 DEFINING ENVIRONMENTAL JUSTICE

For the purpose of this thesis, environmental justice is broadly defined as the recognition and response to issues of equity relating to the distribution of environmental burdens and privileges, as well as inclusion in decision-making and representation of diverse interests in environmental planning and implementation (Campbell, 2013; Schlosberg, 2013). It refers to the dynamic set of conditions necessary to support sustainability and help all humans to thrive (Anguelovski et al., 2020; Anguelovski, Connolly, Garcia-Lamarca, et al., 2019; Langemeyer & Connolly, 2020; Schlosberg, 2013). As explained further in section 2.3, environmental justice can be divided into three categories—distributive justice, referring to the spatial and temporal distribution of environmental benefits and harms; procedural justice, referring to participation and transparency in decision-making; and recognition-based justice, referring to the representation and inclusion of diverse interests and social groups.

Environmental justice can serve as a starting point for sustainability movements, as well as to ensure that the basic needs of communities are being met. It is often not about a single detrimental event or outcome but is linked to complex histories, with multitudes of stakeholders and perspectives (Holifield et al., 2017; Sze & London, 2008). To give an example of how this can manifest in greening, the mainstream environmental movement actively recognizes the benefits of green amenities in relation to climate change adaptation and mitigation, specifically in countering urban heat. As climate change increases the likelihood of extreme heat events, cities, such as Portland, have shown that the distribution of green amenities neglects poorer socio-economic groups and people of color, resulting

in significantly warmer temperatures in their neighborhoods (Voelkel et al., 2018). The reasons behind this are complicated, but inextricably linked to development histories, urban policies, and decades of social inequalities. As such, environmental justice can be employed to analyze "power as it plays out in the (mal)distribution of harms and opportunities related to the environment with a special attention to race and class" (Sze & London, 2008, p. 1348).

In academia, environmental justice is not a bounded concept and it can be applied to any "social power disparity associated with the environment" (Sze & London, 2008, p. 1332). It is also a means to analyze environmental interventions, taking a normative approach to sustainability and human rights (Svarstad & Benjaminsen, 2020). In addition to being reactive (i.e., in response to already committed environmentally related injustices), environmental justice may also be employed as a proactive measure to ensuring recognition and participation in reimagining the relationship between humans and the environment. In this sense, rather than using the concept to mitigate and remedy injustices that have already occurred, it becomes an important part of planning in that it builds concepts of justice into the decision-making process.

2.2.2 ORIGINS OF ENVIRONMENTAL JUSTICE

The integration of environmentalism and social justice has evolved over many decades, beginning as various forms of grassroots activism in response to accusations that the more mainstream environmental movements often disregard issues of justice and equity (Campbell, 2013; Mohai et al., 2009).

As a concept, environmental justice originated in the United States under the principle that "all people and communities are entitled to equal protection of environmental and public health laws and regulations," as well as equal access to decision-making and community-making (Bullard, 1996, p. 493). Pioneered by Dr. Robert Bullard, the theory was built on observations that race and class disparities are closely linked to exposure to environmental risks (e.g., increased exposure to air pollution or hazardous waste), also known as *environmental racism*. In the 1987 publication, *Toxic Wastes and Race in the United States*, by the United Church of Christ, findings suggested toxic waste sites were deliberately placed in proximity to communities of color, and that these communities were also discriminated against when it came to environmental policymaking and law enforcement (Commission for Racial Justice, 1987). With an understanding that "poor people, disenfranchised people, and marginalized communities" (Bullard, 2020, p. 239) are those most likely to suffer environmental inequalities, environmental justice emerged as a means to confront such disparities and reimagine the social dimension of environmentalism (Agyeman et al., 2016).

Although problems associated with environmental justice persist, the link between race and environmental injustice has inspired multiple US policies, activist groups, and academic pursuits (Gould & Lewis, 2017; Laurent, 2011; Mohai et al., 2009; Sze & London, 2008). In 1990, the Congressional Black Caucus, a coalition of activists and academics, approached the Environmental Protection Agency (EPA) to discuss findings produced by the United Church of Christ (1987) and Bullard (1990), that stated black communities were consistently targeted "for the siting of noxious facilities, locally unwanted land uses, and environmental hazards, and are likely to suffer greater risks from these facilitates than is the general population" (Bullard, 1990). The EPA then created the Environmental Equity Workgroup, which in 1992 published the report, *Reducing Risk in All Communities*, based on extensive research on health and environmental exposures, risk assessment and management, and an evaluation of EPA programs in relation to environmental equity. Later that year, the EPA established the Office of Environmental Equity (Environmental Equity Workgroup,

1992), which in 1994 became the Office of Environmental Justice, the first official governmental body to formally address the topic of environmental justice. Also in 1994, the Clinton Administration signed Executive Order 12898, "to address environmental justice in minority populations and low-income populations" and establish an Interagency Working Group on Environmental Justice (Federal Register, 1994). Next, the EPA published its *Environmental Justice Strategy*, outlining the importance of "fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies" which, as Laurent (2011) points out, indicates "the traditional distinction between distributional and procedural aspects of justice" (p. 1847). Since the formal recognition of Environmental Justice in the US, the EPA has continued to advance its programs regarding equality and the environment[2].

2.2.3 Environmental justice in Europe

Environmental justice, with its range of definitions and applications, has expanded on the global scale, and has been applied to a range of social and environmental contexts, not only in response to (racial) inequities and threats, but also as a means to "design and implement more just and sustainable practices of everyday life" (Schlosberg, 2013, p. 48). While applications of the discourse of environmental justice are often in response to imbalances in the distribution of environmental risks and hazards, it can also refer to unequal access to environmental benefits, such as healthy food, renewable energy, and green spaces (Holifield et al., 2017; Schlosberg, 2013).

While environmental justice has played significant roles in US public debate, it is still a relatively new concept in Europe. There are two recognized dimensions of environmental justice in Europe: first, in terms of global environmental justice, which refers to the "ecological debt" owed to developing countries that endure externalized environmental justices in regard to resource extraction and outcomes of climate change (Laurent, 2011, p. 1848); and second, referring to injustices within Europe itself. This thesis focuses on the latter, examining injustices that occur within Western European cities, specifically Amsterdam.

While the American understanding of environmental justice is framed in terms of race and ethnicity, the European understanding more often emphasizes the impact of environmental policies and practices on the living conditions of low-income groups, although conceptualizations of environmental justice vary from country to country (Köckler et al., 2017; Laurent, 2011). Unlike in the US, there has not been a strong environmental justice movement in the Netherlands, but this does not mean the country is exempt from issues of environmental injustice, and research on the topic has grown over the last decade (Bockarjova et al., 2020; de Vries et al., 2020; WHO European Centre for Environment and Health, 2012).

[2] For example, by implementing EJ Action Plans, issuing a *Framework for Cumulative Risk Assessment*, creating the *Environmental Justice Collaborative Problem-Solving Cooperative Agreement*, and developing the *Toolkit for Assessing Potential Allegations of Environmental Injustice*. The EPA also developed the Community Action for a Renewed Environment (CARE) program and coordinated with two other federal agencies (Housing and Urban Development, and US Department of Transportation) to form a partnership for sustainable communities. The EPA is not the only department to commit to environmental justice—the Department of Justice, for example, has highlighted its efforts to fulfill the mandate of Executive Order 12898, releasing an Environmental Justice Implementation Report in 2017 (DOJ, 2017).

In the European Union (EU), Laurent (2011) first traces environmental justice to Aarhus, 1998, and the UNECE Convention on Access to Information, Public Participation in Decision-making, and Access to Justice in Environmental Matters. At the convention, it was agreed upon that current and future generations have the right to environmental protection and access to justice in relation to the environment. More recently, the new European Green Deal outlined a growth strategy, pledging to respond to climate-related challenges and transition to sustainability while protecting "the health and well-being of citizens from environment-related risks," and ensuring that the future is "just and inclusive" (European Commission, 2019, p. 2). Part of the Sustainable Europe Investment Plan is to include a *Just Transition Mechanism*, in an effort to "leave no one behind" (European Commission, 2019, p. 15).

2.3 THEORETICAL APPLICATIONS OF ENVIRONMENTAL JUSTICE

In academia, and as described in section 2.1, there are multiple notions of 'justice', however, (in)justices often fall into one of three over-arching and interrelated categories: *distributional*, *procedural*, and/or *recognitional* justice (Anguelovski et al., 2020; Laurent, 2011) *(See Figure 1)*. This thesis assesses the greening strategy of the city of Amsterdam along these three forms of justice and then compares the ways in which environmental justice is conceptualized in policy to how it is implemented in practice. The framework is applied by considering the analytic indicators of each type of justice (*Table 1*), and then drawing them parallel to the interviews and policy documents, recognizing where language and case examples are representative of the different types of justice.

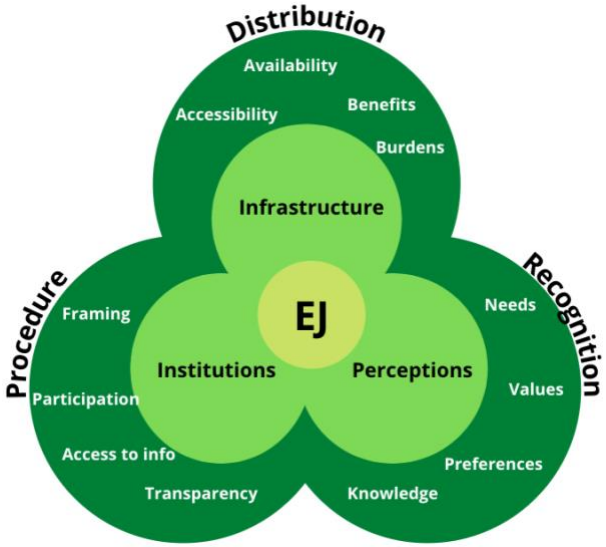

FIGURE 1. CORE ELEMENTS OF ENVIRONMENTAL JUSTICE, ADAPTED FROM LANGEMEYER & CONNOLLY (2020)

2.3.1 DISTRIBUTION JUSTICE

Distributive justice refers to the spatial distribution of environmental harms (e.g., pollution) and environmental benefits (e.g., green amenities) amongst different areas and socio-economic groups. This form of justice is outcomes-oriented, considering the environmental quality and availabilities of goods or services differ between communities (Langemeyer & Connolly, 2020). Distributive discrepancies lead to social inequalities and significantly impact quality of life for more disadvantaged groups. Distributional injustices in urban greening can occur when greening projects fail to address historical inequalities of access, when they cause new negative effects (such as green gentrification), or when they are unevenly distributed within a city or urban space (and as a result, the associated health and climate benefits are also unequally distributed) (Anguelovski et al., 2020). Distributive

justice can be spatial, referring to the distribution of costs and benefits at different scales (i.e., neighborhood, city, region, country, or even globally), and/or temporal, referring to the distribution over time and between generations. It also can refer to the distribution of compensation and mitigation mechanisms for environmental harms (Bennett et al., 2019).

2.3.2 *Procedural justice*

Procedural justice extends beyond the distribution of advantages and disadvantages, focusing instead on the institutional side of environmental amenities, including participation in decision-making and access to information. Procedural injustices occur if certain (marginalized) groups are excluded from involvement in planning, design, implementation, and management of green amenities (Anguelovski et al., 2020). Part of the reason that environmental benefits and harms are unequally distributed is because decision-making is often top down and neglects the voices of those who are most impacted (Bell & Carrick, 2017; Schlosberg, 2013). As Anguelovski et al. (2018) explain, urban planning often "fails to take asymmetric power dynamics into consideration, and therefore effectively limits the capacity of democratic dialogue and engagement to achieve a mutual understand of the issues at stake" (p. 418). For urban greening to be procedurally just, planning and management should be transparent and inclusive, and adequate support should be given for facilitating participatory processes, collaboration, and co-management (Bennett et al., 2019). It also requires accountable and responsive governing bodies that promote representation in decision-making and are contextually appropriate.

2.3.3 *Recognition justice*

Finally, ***recognition justice***, also known as *interactional justice*, refers to the explicit identification and inclusion of different social groups and their varying values, preferences, and needs, especially groups who tend to be neglected (Anguelovski, Connolly, Garcia-Lamarca, et al., 2019; Langemeyer & Connolly, 2020). Closely related to both distributional and procedural justice, recognition injustices occur if specific groups—often identified by gender, race, age, ethnicity, socioeconomic class, and so on—face exclusion and marginalization in urban greening decision-making processes and/or outcomes. Recognition-based justice is important because it involves active consideration of what constitutes adequate 'green space' in the first place—a real estate developer's vision of new green amenities and their ideal usages may differ significantly from the visions of specific communities, and it is necessary to question why the interests of certain groups are prioritized over others. When green infrastructure is planned and implemented, it should take into consideration the various people who will use and benefit from it, and this must be reflected in its design. Recognitional justice also aims to understand the relationship of groups to the built and natural environment, and why environmental amenities privilege some residents and not others—for example, residents may technically have access to a specific space, but feel unwelcomed or insecure in the area for any number of reasons (Anguelovski, Connolly, Garcia-Lamarca, et al., 2019). This requires sociological investigations into cultural histories and social relationships and experiences. For recognitional justice to occur, stakeholders and rights holders must be identified and differentiated, and initiatives should actively integrate different perspectives and worldviews, as well as "pre-existing practices, institutions, and knowledge systems" (Bennett et al., 2019).

Table 1 provides an outline of the theoretical framework, aggregating the analytical indicators for each of the three forms of environmental justice.

TABLE 1: THEORETICAL FRAMEWORK – ANALYTICAL INDICATORS OF ENVIRONMENTAL (IN)JUSTICE

Justice types	Analytical indicators	Elaboration
Distribution justice	Spatial distribution of (public) green amenities (goods & services)	Variation in *quantity* of green amenities Variation in *quality* of green amenities Neglect of minority groups or neighborhoods Distribution of climate & environmental risks/benefits associated with greening Distribution of associated health risks/benefits
	Temporal distribution of green amenities	Historical discrepancies & past inequalities related to access and inequalities Future plans for greening
	Gentrification	Connection to displacement from neighborhood due to amenity creation/restoration Lack of affordable housing in green areas
	Privatization/commodification of public green spaces	Real estate development on existing green space or community gardens Commodification/privatization of community gardens and parks
Procedure justice	Participation in decision-making & planning processes	Community involvement in planning & design Methods of decision-making (top-down/bottom-up) No or tokenistic participation
	Participation in implementation & management of green spaces	Emphasis on inclusion, participatory processes, collaboration, and/or co-management at various stages of greening
	Access to information and means of access	How is information pertaining to greening conveyed to residents? Are residents adequately informed? Little or no access to environmental education
	Recognition of unequal power relations and influences in green governance	Acknowledgement of power dynamics in the monitoring and evaluation of green projects
	Transparency of processes and procedures	Transparency throughout decision-making process (Lack of) communication regarding incentives for greening and desired outcomes Framing of wider objectives of greening (why is greening desired?) Transparency of budget and finances
Recognition justice	Emphasis on equity, inclusion, and representation of needs & preferences of different social groups (gender, race, age, ethnicity, socioeconomic class, etc.) in greening projects	Active investigations into cultural histories, social relationships, and experiences Acknowledgement and inclusion of diverse and plural values, preferences, and needs Context dependent design of green spaces Design for different uses of green spaces Stakeholder analysis
	Marginalization in existing urban greening spaces	Green spaces do not reflect the needs, values, or preferences of certain groups Members of different social groups do not feel comfortable or are not welcomed in green spaces
	Address past and existing injustices relating to benefits and burdens	Sociological investigations into cultural histories, social relationships, and experiences
	Recognition of different forms of knowledge	Integration of pre-existing practices and knowledge systems

3. METHODOLOGICAL FRAMEWORK

This chapter describes the methodology applied in this thesis, introducing the research strategy and a detailed description of the qualitative research methods used to gather data. The purpose of this research is to understand Amsterdam's urban greening strategies and the ways in which the city is changing its urban environment, as well as the impact this has on residents.

This research explores the linkages between policy and practice, using a mixed-methods, qualitative approach. The analytical framework of environmental justice is first applied to the broader city-wide greening strategy before zooming in on the specific urban greening process in the IJplein-Vogelbuurt neighborhood. This choice of analysis at different urban scales allows for an assessment of environmental challenges at different decision-making levels and a fuller analysis of the role of environmental justice in urban greening. To truly understand the role of environmental justice in urban greening projects, this thesis combines policy analysis methodologies with narrative analysis based on in-depth interviews.

As described in further detail throughout this chapter, the thesis examines the social impact of greening and the ways in which principles of environmental justice are incorporated into urban planning. First, a detailed policy analysis of Amsterdam greening policies was conducted to determine how policy is framed in accordance with the principles of environmental justice. Using qualitative coding, text was categorized into three different types of justice—*distributive justice*, referring to the spatial and temporal distribution of environmental benefits and harms; *procedural justice*, referring to participation and transparency in decision-making; and *recognition-based justice*, referring to the representation and inclusion of diverse interests and social groups—based on a set of predetermined indicators for each type of justice. This was followed by an analysis of how green spaces are experienced in the IJplein-Vogelbuurt, also categorized by the different types of environmental justice. The primary method of data collection for this part of the research was semi-structured interviews of residents, decision-makers, and urban planners.

3.1 RESEARCH MATERIALS

To answer the research questions, this thesis employed a variety of complimentary qualitative research methods, combining desk research with fieldwork. By triangulating different tools and techniques, I was able to build trustworthiness of my results and provide more nuanced and evidence-backed analysis (Williamson, 2018). The methodologies were mostly guided by the textbook, *Research Methods in Anthropology: Qualitative and Quantitative Approaches (5th ed.)*, by H. Russell Bernard (2011).

The thesis process began with a literature review about environmental justice and urban greening, using the Wageningen library online database and Google Scholar to conduct structured searches with the keywords: environmental justice, green space, and equitable urban planning. This was followed by exploratory desk research, which provided contextual and descriptive information about the city of Amsterdam and IJplein-Vogelbuurt. Then, to answer the empirical research questions, I first conducted a content analysis of policy documents regarding Amsterdam's greening strategies. As primary sources, the policy documents were analyzed to determine the extent to which they include principles of environmental justice, using the framework described in Table 1. For this part of the analysis, policy documents were coded for phrases and examples indicative of the different indicators of justice. Desk research was then complimented with 12 semi-structured interviews. The goal of the interviews was to further delve into the topic of municipal and local greening. They served

to gain an in-depth understand of how IJplein-Vogelbuurt is undergoing change, specifically regarding greening, and how these changes are experienced by residents. The results of these interviews are presented using narrative analysis. In addition to interviews, this research used non-participatory observation methods to further gain an understanding of urban renewal in the neighborhood. I also analyzed selected news and editorial publications to better understand how issues related to greening are framed from different perspectives. This complimented the interviews by providing viewpoints that were not otherwise accessible.

3.1.1 CASE SELECTION

As discussed, the purpose of this research is to further explore how greening is conceptualized in Amsterdam's policy and then compare this to how it is experienced at the neighborhood level, focusing on IJplein-Vogelbuurt. Amsterdam was chosen because it is a compact city known for its green amenities and progressive policies, making it a nuanced and complex case study, given that environmental injustices are not as overt as in other cities. As the city densifies, there is a pressing need to provide sufficient housing and adequate green spaces to accommodate the growing population and support high quality of life for all its inhabitants. While this is not a unique problem, Amsterdam can serve as an example for how to improve a system that is already advanced.

IJplein-Vogelbuurt, located in Amsterdam Noord, was chosen as the neighborhood case study because it is an area in transition. As a 'development neighborhood', the area is the target of multiple urban renewal schemes, while facing gentrification that threatens to displace long-term, lower-income residents. The challenge for the city is how to promote inclusive (green) development without radically changing the composition of the neighborhood (*see Chapter 4 for more extensive details about the case study*).

3.2 DATA COLLECTION & ANALYSIS

Data collection began with desk research, which included a policy content analysis and a light analysis of news and editorial publications. This was followed by fieldwork, including interviews and non-participatory observations.

3.2.1 POLICY CONTENT ANALYSIS

The policy analysis considers project and municipality-level documents related to urban greening. The content of urban policies and strategies was analyzed along principles of environmental justice as described in Table 1, specifically in regard to equitable access to sustainable amenities (*distributional justice*), presence and participation of diverse groups in political and decision-making processes (*procedural justice*), and fair representation of different social groups and their needs and/or interests (*recognition justice*) (Anguelovski et al., 2020; Schlosberg, 2013).

To understand the role of environmental justice in Amsterdam's urban policy, I examined key policy documents, assessing what language the municipality uses to frame greening motivations, how principles of environmental justice are framed (either implicitly or explicitly), and the types of methodologies used to ensure different types of justice. I also considered whether and how greening policy is connected to affordable housing and other redevelopment projects, whether topics such as the risk of displacement, accessibility, and/or representation are approached, who is ultimately making decision, how stakeholders are acknowledge and included, and whether different knowledge systems are recognized. The overall purpose of the policy analysis was to understand how environmental justice is framed from a municipal perspective. The two documents chosen for in-

depth analysis are the most recent policies pertaining to greening and urban development in the city of Amsterdam: Green Vision 2020-2050 (*Groenvisie 2020-2050)* and Comprehensive Vision Amsterdam 2050: A Humane Metropolis (*De Omgevingsvisie Amsterdam 2050: een menselijke metropool*) (*see Table 2*). Other policy documents were also part of a lighter analysis[3], but these two documents are the relevant documents for contemporary policymaking.

TABLE 2. KEY POLICY DOCUMENTS AT THE CITYWIDE LEVEL.

Original title	Translated title	Date of publication	Period of implementation
Groenvisie 2020-2050	Green Vision 2020-2050	21 Dec. 2020	2020-2050
De Omgevingsvisie Amsterdam 2050: een menselijke metropool	Comprehensive Vision Amsterdam 2050: A Humane Metropolis	8 Jul. 2021	2021-2050

3.2.2 SEMI-STRUCTURED INTERVIEWS

The purpose of the interviews was to assess greening interventions and initiatives from different perspectives, their implications for the neighborhood, and their connections to broader city-wide policy. Thus, this part of the research was targeted at the second sub-research question, *how is the neighborhood experiencing green development and regeneration, and to what extent does the implementation of green infrastructure support social inclusion?* I also aimed to understand the future of urban developments in the neighborhood and the relationship to environmental justice.

Semi-structured interviews were conducted with members of two over-arching groups: 1) municipality representatives/policymakers and 2) citizens (*Table 3)*. These two groups represent different types of knowledge—knowledge from the planning and decision-making side, and knowledge gained from lived experiences. Overall, I chose interviewees based on the diverse perspectives they would provide. All interviewees were either directly involved with or affected by urban greening in the city of Amsterdam, or more specifically in the IJplein-Vogelbuurt neighborhood. In total, 12 interviews were conducted specifically for this thesis.

Interviews differed, depending on who I was speaking with. Some interview questions were general, to help me become familiar with greening policy and the social context of the city, but others were specifically linked to the indicators of environmental justice, based on the literature review in Chapter 2. For policymakers, the interviews were focused on green strategies and the extent to which green policy adhered to principles of environmental justice. These included questions related to distributive justice (e.g., what criteria are chosen to determine the locations of new green spaces?), procedural justice (e.g., who is involved in the planning and implementation of green infrastructure?), and recognition justice (e.g., what are potential or existing barriers for people to access certain green spaces?). I also asked questions about housing and anti-displacement tools, and about the relationship between neighborhood redevelopment and housing, to better understand how greening can impact a neighborhood. For interviewees familiar with the IJplein-Vogelbuurt neighborhood I asked questions specific to the area, for example, about what challenges the neighborhood faces and how this has changed over time. The interviews for Group 2, the residents, began with an overview of their demographics, followed by their experiences in the neighborhood. These included questions related

[3] Including Verkenning van kansen IJplein/Vogelbuurt (2020), Samenwerking IJplein/Vogelbuurt en Hamerkwartier (2020), and Structuurvisie Amsterdam 2040: Economisch sterk en duurzaam (2011).

to housing, neighborhood characterization, and interactions with local green spaces. I asked about how they perceive and interact with existing and upcoming green initiatives, delving into knowledge and opinions on urban greening in the city/neighborhood. For the full list of interview questions, separated per interview category, refer to *Appendix I*.

TABLE 3. INTERVIEW CATEGORIES & DESCRIPTIONS.

Categories	Description
Group 1	
A	Policymakers & municipal city planners
B	Local urban planners & neighborhood decision-makers
C	Housing developers
D	Civil society groups (NGOs/activist groups, neighborhood greening initiatives)
Group 2	
E	Residents – long-standing (>5 years)
F	Residents – new-comers (<5 years)

The first group of interviewees consisted of urban greening experts and local organizers. This included municipal planners and architects, as well as decision-makers and politicians. From these interviewees, I hoped to gain an understanding of the role of environmental justice in urban greening projects, both local and citywide. For group 1, I began by researching the relevant actors and initiatives and grouping them into categories. This included urban planner, citywide greening networks (e.g. *BuurtGroen020*), community gardens (e.g. *Pluktuin Drakaterrein, Vodseltuin IJplein,*, greening specialists from the Amsterdam municipality, all five housing developers active in the neighborhood (De Key, Rochdale, Stadgenoot, Ymere, Eigen Haard), community initiatives (*Bewonersplatform, Huisvesting Kwetsbare Groepen*), community workers (*gebiedsmakelaars*), elected officials from different political parties, and activist groups (*De Noordas, ANGSAW, Verdedig Noord, Red Amsterdam Noord)*. I contacted these interviewees directly via email, sending messages to approximately 40 different groups and individuals. For actors who I deemed especially important, I sent follow-up emails and/or tried to contact them over LinkedIn. I also used the snowballing method during interviews, asking interviewees for further interviewee recommendations. For Group 1, I conducted a total of eight interviews (*Table 4*).

The second group of interviewees included residents, both long-standing residents and new residents (*Table 5*). This group had some overlap with the first group, in that some residents who I interviewed were also involved in greening initiatives. Although some interviewees belonged to Groups 1 and 2, I categorized them based on the type of interview that was conducted. For example, Interviewee 3 runs the Moestuinschool and is a long-term resident, however, her interview was primarily about her experiences with the garden, not her experiences as a resident. Interviewee 9, on the other hand, volunteers for Pluktuin Drakaterrein, another urban garden, however her interview was more about her experience as a resident, and the garden was only a small part of the conversation. Although I gained information from both interviewees that were relevant to Groups 1 and 2, the interviews were maximum one hour, and therefore I had to make choices about what to talk about, based on what information I deemed was most important at the time. I found one of these interviewees by simply 'hanging out' in the neighborhood, and the rest via flyers posted throughout the neighborhood. I also posted advertisements on Facebook (*Appendix III)* and sent an email to a neighborhood community newsletter but did not get any responses. I conducted a total of five interviews in this category.

Interviews took place in the months of October and November 2021 and were conducted either in person or over videocall. I recorded the interviews with permission (*see Appendix II for the Statement of Informed Consent given to each interviewee*) and then transcribed the interviews for coding. Coding was completed using NVivo, a qualitative data analysis software, and codes were developed in accordance with the framework of environmental justice described in Section 2.3 and table 1. This methodology is a form of top-down, deductive coding, in which the code guide was based on an existing research framework and developed prior to coding. I complemented deductive coding with inductive coding, in which I created new codes as I coded—this allowed me to build a narrative and find results beyond the scope of my framework.

TABLE 4. GROUP 1: INTERVIEW CODES AND PROFILES.

Interview Code	Profile	Method	Category
Interviewee 1, 25-10-21	Gebiedsmakelaar IJplein-Vogelbuurt – neighborhood support representative	MS Teams	B
Interviewee 2, 25-10-21	Project manager Instituut voor natuureducatie en duurzaamheid Director Adviesbureau De Natuurmakelaar	MS Teams	A
Interviewee 3, 04-11-21	Moestuinschool community garden director	In person	D & E
Interviewee 4, 04-11-21	Voedseltuin IJplein community garden member	In person	D
Interviewee 5, 09-11-21	Assistant program manager—Groenvisie at the Amsterdam Municipality	MS Teams	A
Interviewee 6, 16-11-21	Eigen Haard housing corporation employee	MS Teams	C
Interviewee 7, 25-11-21	Party representative, executive Board Amsterdam Noord	MS Teams	A, B, & E
Interviewee 8, 21-02-22	Urban Planner for the department Ruimte en Duurzaamheid	MS Teams	A

TABLE 5. GROUP 2: INTERVIEW CODES AND PROFILES.

Interview Code	Neighborhood	Years	Age	Gender	Living situation	Level of education	Method	Category
Interviewee 9, 26-10-21	Vogelbuurt	10	44	F	Owner; w/ partner	WO	MS Teams	D & E
Interviewee 10, 02-11-21	Van der Pek	1	27	F	Social housing w/ partner	Master's, working on PhD	MS Teams	F
Interviewee 11, 19-11-21	Vogelbuurt	1.5	32	F	Owner	Master's	MS Teams	F
Interviewee 12, 22-11-21	Vogelbuurt	11	39	F	Renter w/ partner & son	PHD	MS Teams	D & E

3.3 LIMITATIONS

As a master's thesis, choices were made given for the theoretical and methodological approaches, and there were multiple limitations to the research.

A major limitation of the methodology was that I was not able to speak with as many residents as I would have liked. Although this was a set-back, I was able to gain important information about

long-term residents from interviewees in Group 1 and Group 2, even if they themselves were not long-term residents. Due to budget and time restrictions, as well as the ongoing pandemic, I was only able to visit the neighborhood three times. During these visits I found it difficult to talk with people, especially given that the weather was cold, so people were not outside. My lack of Dutch-speaking skills was also an inhibiting factor, making it more difficult to randomly approach people on the street and reach residents who are not proficient in English. While it is conjecture, it could also be significant that responses to my interview requests were so low, perhaps signifying that the area is over-researched. This was also suggested to me by two of the interviewees, who explained that they get regular requests from students.

Another limitation was that the policy documents were written in Dutch. Because I am not a native Dutch speaker, I used an online translation service, DeepL, to translate the documents into English. It is important to note that this could have resulted in some content getting lost in translation or misinterpreted. To help counteract this, I translated text with multiple services and then compared the results (especially when the translation from DeepL seemed incorrect or unclear). One result of this translation method, however, was that original page numbers were lost, so for quotes from the policy documents, I have not included page numbers in the intext citations.

There are also limitations of qualitative coding. It is not a precise science and can be somewhat subjective, even when guided by a theoretical framework. The theoretical framework of environmental justice was adequate for the policy analysis, but it was more difficult to code the interviews along the same categories. Part of this is probably because the interviews were not always as structured, but rather conversational, making them less likely to hit every topic. Justice and inclusion are highly complex topics, and the framework was not always enough to articulate the many sides of environmental justice. The data results chapters aim to be as transparent as possible, should not be seen as rigidly connected to their categories, but rather interrelated with multiple types of justice.

Ultimately, I made the decision to code the policy documents along the guidelines of the framework so that the two documents could be easily compared, but I did not adhere to the same framework when coding the interviews. This is potentially a shortcoming of my research, but I made the decision to code interview quotes according to topic, rather than explicitly along the lines of environmental justice. I was then able to group these topics into the three categories of environmental justice, but the process was more organic. Because I had only 12 interviews, I did not feel it was necessary to compare the quantity of codes given to each category as I had done for the coding of the policy documents (*see Appendix IV*). The interview data was presented through narratives and was highly specific to each interviewee, so the frequency of codes was not as relevant.

Finally, is an ethical concern with this research, in that the impact of my findings can be seen as extractive, rather than contributing to the betterment of society. Although the results will be sent to everyone involved in the making of this thesis, it is difficult to reciprocate their generosity and willingness to be interviewed in meaningful ways. I hope the thesis can shed light on what the city of Amsterdam is and is not doing successfully in terms of environmental justice, so that Amsterdam and other cities can improve and adapt practices, becoming more socially and environmentally sustainable. This is not to say that this thesis offers all the answers, but it does provide a lens through which to view policymaking, specifically as it relates to urban greening.

4. THE CASE STUDY: GREENING IN IJPLEIN-VOGELBUURT, AMSTERDAM

The purpose of this chapter is to provide background information on the case study. The chapter begins with background information, first about Amsterdam and then more specifically about IJplein-Vogelbuurt. This is followed by an overview of green policy in Amsterdam, introducing the history and current objectives and motivations of urban greening. This is followed by a section specifically about green approaches and urban redevelopment plans in IJplein-Vogelbuurt. The information found in this chapter is based entirely on municipal policy documents and plans, rather than empirical data. The following sections form the foundation of the research.

4.1 BACKGROUND

4.1.1 AMSTERDAM

The city of Amsterdam is in the province of North Holland, in the western part of the Netherlands. Covering an area of 16.3 hectares with a population of approximately 872,000, the city has a population density of 5.3k inhabitants per km^2 making it a compact and highly urbanized city (Gemeente Amsterdam, n.d.-d). In addition to a rich cultural history, Amsterdam is known for its green and blue amenities, boasting elm-lined canals, wooded parks, and public gardens.

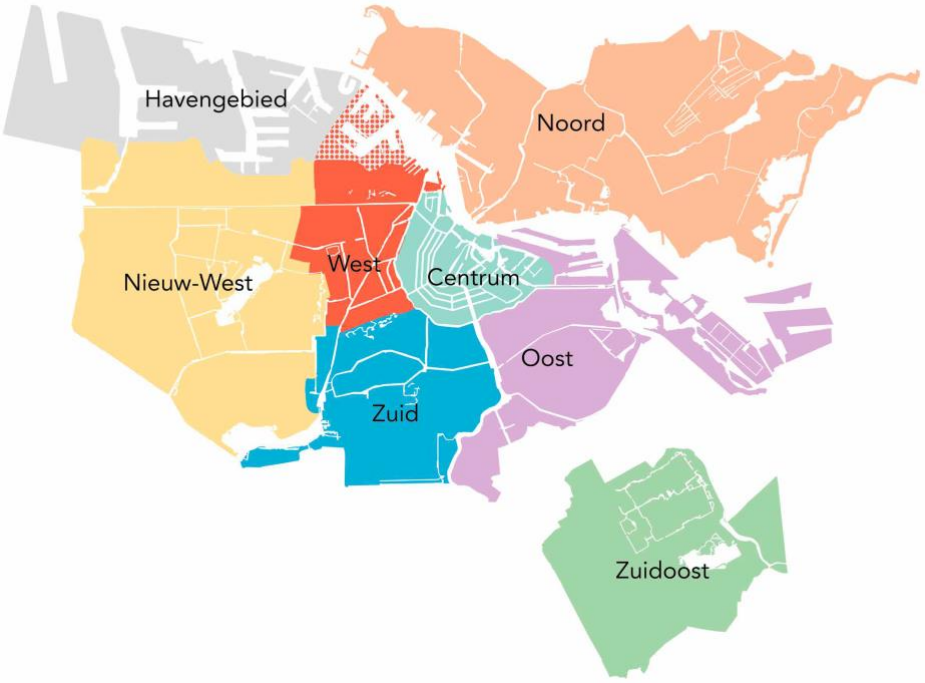

FIGURE 2. THE CITY DISTRICTS OF AMSTERDAM (*OMGEVINGSVISIE*).

Urban challenges

Amsterdam is a rapidly growing and changing city, with approximately 11,000 new inhabitants every year and a steady influx of tourists (Gemeente Amsterdam, n.d.-h). As housing demand grows, the available housing stock has become increasingly expensive and many public spaces—including parks and cycling lanes—are becoming overcrowded (refer to Box 1 below for a more detailed description of Amsterdam's housing situation). To accommodate more people it is not only expanding outwards, but is also increasing neighborhood density (Gemeente Amsterdam, n.d.-h, 2011; Korthals Altes &

Tambach, 2009). Increasing density has the benefit of leaving the green natural areas around Amsterdam protected from development and sprawl, but means that the existing green spaces within the city are becoming increasingly valuable spaces (Gemeente Amsterdam, n.d.-i). Today, there are many green amenities that comprise the city's green infrastructure. Elements include green buildings (façades, roofs, gardens), neighborhood greenery (streets, squares, small pars), park areas (city parks, sports areas, allotments), landscapes surrounding the city's edge, and green and green-blue connections (*see Section 3.2)*. As the city continues to grow, there is an urgent need to protect and enhance greenery, ensuring that green spaces are accessible to all, despite the urban densification associated with an intensifying demand for housing (Gemeente Amsterdam, 2020a).

In addition to housing pressures, the city faces numerous climate-related challenges that further drive Amsterdam's green agenda. Amsterdam is full of cobblestones and paved streets, as well as dense buildings made of materials that absorb heat and prevent adequate water drainage. In the summertime, when the city experiences heat waves and long dry periods, more vulnerable population groups are especially susceptible to negative health impacts, and considerable amounts of existing greenery are unable to withstand intensifying conditions (Gemeente Amsterdam, 2020a). As a result, groundwater levels have begun to decrease, impacting the wooden foundations of many buildings. Not only can increased and better maintained greening increase rates of water drainage and storage, but it can also reduce levels of atmospheric CO2, thus lowering the impacts of air pollution. A 10% increase in green cover can also reduce temperatures by 3 degrees Celsius.

As explored throughout this thesis, the concept of space is a prominent factor in much of Amsterdam's urban planning policy. While urban green space is recognized for its vast array of benefits, there is tension between providing sufficient housing and sufficient green space. A driving goal of planning is to affectively combine the two, maintaining a high quality of life for inhabitants by providing adequate housing with broad access to green space. This requires city planning to get creative with available space and incentivize its creation and maintenance through various schemes.

Box 1. Housing & development context

Social housing in the Netherlands dates to the Housing Act of 1902, in which the government recognized that affordable housing for vulnerable populations is a national responsibility. Since the 1990s, however, the Netherlands has experienced a steady transition from a social-democratic welfare state to a liberal market state. Despite this transition, there remained a tension between the desire to let market forces run their course, especially in the housing market, and the simultaneous need for state intervention to mediate classist segregation that emerges when liberalization is left unregulated. As Uitermark & Bosker (2014) explain, the Dutch government actively pursued "the contradictory goals of liberalizing the housing market [whilst] countering the concentration of low-income groups." Part of Amsterdam's restructuring plan in the early 2000s was to invest in historically underprivileged neighborhoods to promote social diversity and lessen the growing division between rich and poor. A core principle revolved around 'social mixing,' which meant bringing middle-income people into lower income neighborhood to reduce the concentration of minority groups, which resulted however, in an acceleration of the displacement of lower-income groups in a form of 'state-sponsored gentrification' (Uitermark & Bosker, 2014). To enable such social mixing, the government essentially had to counteract market forces by investing in neighborhood improvements and promoting home ownership through various privatization tools in these neighborhoods. The idea was that this 'mixing' would tackle the societal ills associated with poverty and promote social cohesion.

In practice, housing restructuring occurred throughout the city, and rather than investing in

'developing' neighborhoods, investors capitalized on the wealthier areas of Amsterdam that already had a strong market position—such as the center and Oud-Zuid. Those neighborhoods became richer, while the peripheral, lower-income areas—such as Amsterdam Noord—were seen as unprofitable investments. As Uitermark & Bosker (2014) pointed out, it is much more costly to improve a neighborhood in decline, so despite restructuring efforts, nothing truly changed. Today, residents of the so-called 'development areas' are still of lower income levels, have lower education levels, and are a higher proportion of non-Western immigrants. Still, the government continues to promote an image of the 'undivided city'.

The change in discourse since the 90s shifted the emphasis from funding affordable social housing to the promotion of private development and homeownership (Wijburg, 2021). The government attempted to use housing policy instruments to reduce segregation, however the simultaneous liberalization and emphasis on market logics only encouraged gentrification. Furthermore, Amsterdam has seen a surge in private rental properties, increasing housing unaffordability, particularly for middle-income groups who cannot afford to buy or rent, and do not qualify for social housing (Wijburg, 2021).

In 2017, the municipality introduced multiple affordability and tenure requirements for new housing development. As Wijburg (2021) explains, the city adopted an "interventionist strategy revolving around restrictive land use planning and active land bank policies aimed at increasing housing affordability" (p. 31). The 40-40-20 principle stands at the forefront of this, a form of inclusionary zoning in which developers are required to allocate a share of new housing for people with low or medium incomes (Oscilowicz et al., 2021). The principle requires that new buildings contain 40 percent social housing, 40 percent mid-range (including renting and ownership), and 20 percent reserved for high incomes at market-rate. The Municipal Land Bank is in charge of negotiating tenure requirements and affordability with the real estate sector (Wijburg, 2021).

The government continues to work toward the strategy outlined in the Structural Vision for increasing housing density and facilitating growth, while also reducing pressure on the market. Strategies include infill and re-zoning, with a pledge that by 2040, 70,000 homes will be built in the city of Amsterdam. Building on the Structural Vision, the 2016 development strategy, Setting Course for 2025 (*Koers 2025: Ruimte voor de stad*), states a goal of enabling the construction of 52,500 homes, or 5,000 new homes per year, which was further reiterated in the Housing Plan 2018-2025 (*Woningbouwplan*) (Gemeente Amsterdam, 2011). Not only do they want to expand housing capacity, but they "want to ensure that the city remains affordable and accessible" (Gemeente Amsterdam, 2011). Of the 52,500 homes, 17,500 will be social rental residences supported by housing associations (an average of 2,500 per year), 11,690 will be mid-priced rental homes (an average of 1,670 per year), and 10,500 are affordable housing and rooms for students and young people[4]. This increase is in stark contrast to previous years, which have seen approximately 4,000 new homes per year on average. The primary focus of the development strategy is to build high-quality housing in 'mixed environments' to meet demand. Mixed environments refer to homes built in existing business areas or office buildings, providing combined living and working areas.

[4] As of June 2020, there are also policy rules for new owner-occupied homes in Amsterdam. Known as the 'self-occupancy obligation' (*zelfbewoningsplicht*), anyone who buys a newly built or recently renovated home is not allowed to then rent it out at high rates. They are permitted to rent to close relatives or if they leave for a temporary stay abroad. They may also rent out the home at social or medium-rent prices, which in 2020 was up to € 1,027, although the homes that this will apply to have not yet come to market.

Collectivity & co-development

In May 2018, the 2018-2022 coalition of GroenLinks/D66/PvdA/SP published an agreement titled 'A new spring and a new voice,' about an implementation plan for six ambitions that the city will pursue during the coalition's governance period (Coalition GroenLinks/D66/PvdA/SP, 2018). The ambitions include supporting equal opportunities, pleasant neighborhoods & livability, health & sustainable city, open & tolerant city, freedom & safety, and opportunities for participation & digital access. The current government claims that they will involve Amsterdam residents in the implementation of the ambitions, stating "we want to be open and transparent, and to work together" to build a city for everyone. They also state that one of the most important challenges for the city is ensuring that it is 'fair,' explaining that:

> *"The success of Amsterdam […] does not just create winners. It is a paradox: the success is created from communality and solidarity – expressed in typical Amsterdam values such as freedom, openness, tolerance, and compassion – but then risks becoming selective and not beneficial to everyone. Exclusion is lurking and contradictions are becoming more and more prominent. To ensure our success, everyone has to be able to share equally. We want all Amsterdammers to have something to celebrate in seven years. We want to preserve Amsterdam and prevent that the city's success will become her biggest problem"* (p. 4).

As is evident in this quote, one of the overarching themes of the agreement is collectiveness and the idea that the city cannot thrive unless it operates for the greater good. In line with this thesis, the coalition further explains that they will improve public spaces and make the city more accessible, encouraging participation and co-development methods so that residents can share their visions for their neighborhoods. Developing neighborhoods (*Ontwikkelbuurten*), such as IJplein-Vogelbuurt, will receive particular attention regarding improvements of public space.

4.1.2 IJplein-Vogelbuurt

Amsterdam is divided into multiple districts that are further divided into neighborhoods. The IJplein-Vogelbuurt neighborhood is located in the Amsterdam Noord district (*see Figure 3*). As a post-industrial area, IJplein-Vogelbuurt has been categorized as one of Amsterdam's 32 'development areas' (*ontwikkelbuurten*), meaning that it lags the rest of the city regarding socio-economic terms. With housing becoming increasingly scare throughout the city, it has become more profitable to begin developing in peripheral areas, such as Amsterdam Noord. As a result, it is a neighborhood undergoing gentrification processes, with multiple examples of urban renewal, or *vernieuwering* (Krijger, 2021; Nirappil, 2018).

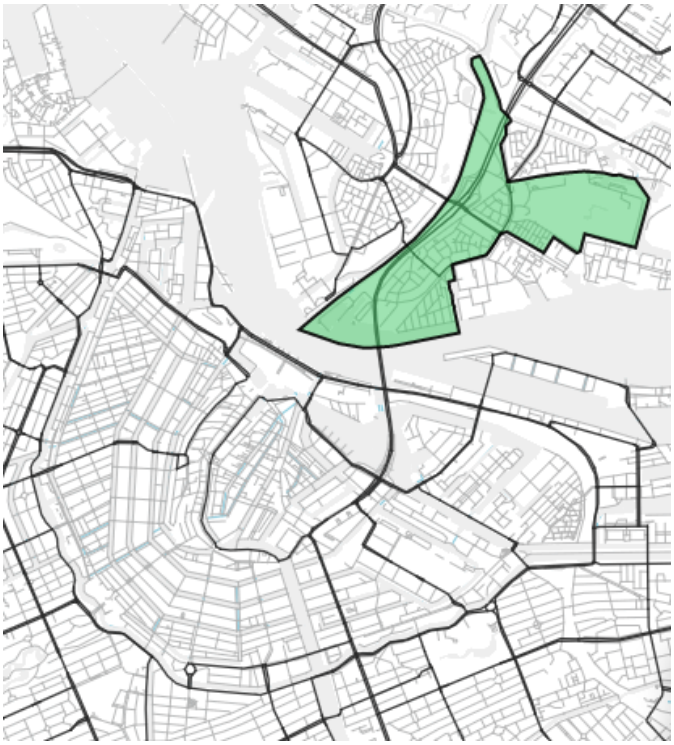

Figure 3. Map of IJplein-Vogelbuurt in relation to the larger city of Amsterdam.

There are approximately 8,250 inhabitants in the neighborhood, with roughly 4,000 homes (Gemeente Amsterdam et al., 2020). The population is relatively diverse compared to the rest of the city, with 43.5% of residents born in a non-Western country, or whose parents were born in a non-Western country, and 15.3% from Western countries other than the Netherlands. The international communities come primarily from Suriname (8.1%), Morocco (13.5%), and Turkey (4.1%).

History

Amsterdam Noord has a complex history and relationship with the rest of Amsterdam, and over the last decade, has undergone rapid changes. By the end of 19th century and into the 20th, Amsterdam Noord was home to several industrial companies, specifically those associated with the shipbuilding industry. The first houses in the area were built for directors of the companies, but soon construction expanded to house the port and industry workers. The Vogelbuurt was built at the beginning of the 20th century and was one of the first garden villages in the city. Consisting of affordable single-family homes, an overarching goal of the garden villages was to make attractive residential areas for the working class. As social housing, the garden villages were designed around squares and parks, in order to help build a sense of community amongst residents (Gemeente Amsterdam, 2020b). The urban structure of Amsterdam Noord was intentionally designed as a "social-democratic' residential area, with planned facilities such as schools, stores, bathhouses, and libraries. Construction of the Vogelbuurt was completed in 1930, and the residential area was accompanied by three parks: Vliegenbos, Volewijksprak, and Florapark. The IJplein is somewhat newer, having been constructed in the 1980s on the former ADM shipyard after the shipbuilding industry came to an end. Built in the 1980s by renowned architect Rem Koolhaas, the area consists entirely of social housing.

With the decline of industry in the 1960s came growing unemployment and poverty, and many families left in search of new opportunities. Those who remained in Noord were continuously stigmatized by the rest of the city, and it was seen as an area for the poor, white, working-class people. Then, in the 1990s, Noord began to diversify, becoming home to families from non-western backgrounds, such as Morocco, Turkey, and Suriname (van de Kamp & Welschen, 2019). Their arrival was met with resistance, and some older residents felt this brought new problems such as increased drugs and crime, and decreased social cohesion (van de Kamp & Welschen, 2019).

Precarity & neglect

Today, IJplein-Vogelbuurt continues to have high rates of poverty and low-level literacy[5], with over a quarter of its inhabitants living in long-term poverty (Interviewee 6, 16-11-21). One of the poorest neighborhoods in Amsterdam, IJplein-Vogelbuurt has been on the political agenda for many years (Gemeente Amsterdam, 2021). As explained in a document translated to the 'Exploration of Opportunities in IJplein-Vogelbuurt' (*Verkenning van kansen IJplein/Vogelbuurt*), the neighborhood has a unique beauty, but also has a lot of problems, especially when it comes to the quality of houses and the precarious futures of many residents (Gemeente Amsterdam, 2020b). Despite high levels of

[5] As of 2018, 34% of the adult population had received only a low-level of education, as of 2019, 26% of households had an income under the social minimum, and as of 2020, 15.6% of the adult population was unemployed and required some form of social assistance. There are also many people who live with long-term debt (Gemeente Amsterdam, 2020b). The average socio-economic scores (SES) of residents in IJplein-Vogelbuurt are significantly lower than the average scores of the entire city, contributing to its status as a development area (Gemeente Amsterdam, n.d.-d).

poverty, there is solidarity and neighborhood pride amongst residents—people know and take care of each other. They are committed to the neighborhood and feel a strong sense of belonging to the area.

As of 2021, 19% of addresses were registered as owner-occupied homes, 8% were rented from private companies, and 73% of the housing stock was rented out by a housing association. With such a large portion of social housing, the municipality continues to make investments in the neighborhood, claiming to be committed to "better housing and better quality of life" (Gemeente Amsterdam et al., 2020)[6]. Given that many of the buildings were constructed at the beginning of the 20th century, many have poor energy labels and need refurbishment and modern insulation. As with the rest of Amsterdam, there is also shortage of available social and medium-range housing. There is a low density of housing, and many houses are overcrowded, given that families cannot afford to move to larger homes and remain in the neighborhood (Gemeente Amsterdam, 2020b). On the opposite end of the spectrum, many elderly residents live in houses that are too big and unsuitable for growing old in, but there are limited available facilities for them to move into in the area.

In addition to housing improvements, it is also in need of developments in public space—may sidewalks are in disrepair and existing greenery is not consistently maintained. In 2020, Vogelbuurt-IJplein received a decay score of 34 out of 100, ranking public space in the neighborhood as one of the worst in the city (Gemeente Amsterdam, n.d.-d). An interviewee from the municipality explained that some of the buildings in the neighborhood have not been renovated in the last 30-40 years, and residents must endure leaking and flooding when it rains, as well as rat problems (Interviewee 1, 25-10-21).

Development plans

The area around Noorderpark has recently been connected to the rest of Amsterdam with the Noord-Zuid metro line, which some fear will lead to gentrification (Krijger, 2021). IJplein-Vogelbuurt is also located next to the Hamerkwartier (Gemeente Amsterdam, n.d.-f), one of the 'future districts of Amsterdam,' a former industrial park that is in the process of being transformed into a 'trendy' neighborhood that can house Amsterdam's rapidly growing population (Gemeente Amsterdam et al., 2020).

In the coming years, 6,700 new homes are planned, divided into 30% social housing, 40% medium rent housing, and 30% private sector rentals and owner-occupied dwellings. The goals of planning in this neighborhood are to retain economic activity, making it a 'live-work,' 'mixed-use' neighborhood (Gemeente Amsterdam et al., 2020). The IJplein/Vogelbuurt and neighboring Hamerkwartier are working together to build a "strong district," with neighborhoods that celebrate their unique identities (Gemeente Amsterdam et al., 2020). As part of one of the fastest growing districts, one of the overarching goals of development is to create an "undivided neighborhood" in which the IJplein-Vogelbuurt benefits from urban development and successfully builds connections between physical, economic, and social aspects of the area (Gemeente Amsterdam, 2020b). Part of this means linking job seekers from IJplein-Vogelbuurt to new jobs in the Hamerkwartier.

[6] Housing developments are planned in cooperation with the five housing corporations that have properties in the neighborhood: De Key, Rochdale, Stadgenoot, Ymere, and Eigen Haard. All but De Key have sold homes in recent years, so many of the houses are part of the homeowner's corporation (Vereniging van Eigenaars) (Gemeente Amsterdam, 2020b).

4.2 GREENING IN AMSTERDAM

4.2.1 HISTORY OF GREEN POLICY

Amsterdam brands itself as one of the greenest cities in Europe and has many motivations and approaches to greening (Gemeente Amsterdam, n.d.-m). In 1934, with the General Expansion Plan (*Algemeen Uitbreidingsplan – AUP*), a citywide green space system was set up based on calculations of how much green space was needed per inhabitant, and the distance of each inhabitant to these green spaces. The AUP instigated a gradual transition from primarily private greenery to the formation of more widespread neighborhood greenery and park system that still exists today. It also formed the basis of comprehensive citywide agenda for sustainable green infrastructure in the 1996 structural plan, 'the Open City' (*De open stad*). Known as the Main Green Infrastructure (*Hoofdgroenstructuur*) plan, the city pledged to increase green infrastructure that would support recreational use and the natural value of the space. This signified the beginning of the era of the densifying city, and recognition of the ecological and cultural value of green space (Gemeente Amsterdam, 2020a).

In 2002, the Council adopted the Additional Assessment Framework for the Main Green Infrastructure (*Aanvullend Toetsingskader Hoofdgroenstructuur* (ATK)). This supplementary framework outlined the policy rules and functions for different types of green spaces. In 2011, the Main Green Infrastructure Plan was integrated into the Structural Vision 2040[7], which focused on increasing housing density without compromising on the quality of public spaces, such as parks and squares. The Main Green Infrastructure Plan designates a minimum amount of protected green space, including areas that fulfill specific functions, that will not be repurposed for development purposes. It is currently being updated to include even more green space (Interviewee 5, 09-11-21).

While the Structural Vision focused on the preservation of green space, "it lacks a broad urban planning vision on the significance of green space for the city," and is thus not considered a suitable successor of the AUP (*translated*) (Gemeente Amsterdam, 2020a). It was thus followed by the Green Agenda in 2015, which outlined a 20-million-euro investment into urban parks, climate and biodiversity, neighborhood green space, and increased accessibility.

4.2.2 CURRENT GREEN POLICY

In December 2020, the city council adopted 'Green Vision 2020-2050, a livable city for people and animals' (*Groenvisie 2020-2050, een leefbare stad voor mens en dier*). The Green Vision (GV) is one of the 'building blocks' of the Amsterdam Environmental Vision (*Amsterdamse Omgevingsvisie*) and is a key part of the regional urbanization strategy (*regionale Verstedelijkingsstrategie*). The Green Vision presents Amsterdam's conceptualization and plans for how to improve existing greenery and its accessibility, how to add more greenery and green spaces, and how to better connect green spaces

[7] The Structural Vision 2040 explains that "the City of Amsterdam wants a mixed and undivided city, where living is accessible and affordable, regardless of income, family composition, age or background" (Gemeente Amsterdam, n.d.-h) The primary purpose of the Structural Vision was to propose ideas of how to make Amsterdam economically strong and prosperous. One of the pillars of the Structural Vision is to have more attractive greenery and water bodies in and around the city. Because climate change poses a serious threat to the city, greening is seen as an investment that can help 'climate-proof' the city. It is also an economic factor, increasing the attractiveness of the city and thus encouraging residents and companies to establish themselves there.

within the city. To ensure the growing city remains livable and attractive, the GV outlines a picture for the future and the challenges that may arise regarding health, nature, climate adaptation, and social well-being. Greening is also considered in conjunction with issues such as the use of renewable energy, public transportation, housing affordability, and social safety. City planners recognize growing urban densification but explain that accessible green amenities are essential—both within and surrounding the city, writing that greening "is not a luxury, it is a necessity, and a crucial part of a global survival strategy" (*translated*) (Gemeente Amsterdam, n.d.-c). The Green Vision explicitly emphasizes the importance of accessibility of green spaces because such amenities "make people happy" and should be readily available to everyone in the city.

Green infrastructure is further elaborated upon in the Comprehensive Vision Amsterdam 2050: A Humane Metropolis (*De Omgevingsvisie Amsterdam 2050: een menselijke metropool)*. The Comprehensive Vision (CV) serves to replace the Amsterdam Structural Vision 2040, although it does not replace the Main Green Structure, which was integral to the Structural Vision (this will remain in effect until replacement policies are adopted). The Comprehensive Vision nevertheless has its own approach and framing of green policy, as explained in this analysis. The CV describes the development strategy of the city and presents a 'spatial-programmatic framework' and policy agenda for the urban environment. A main goal of the Comprehensive Vision is to build a green network, connecting all parts of the city with continuous green spaces. The Green Vision and Comprehensive represent the city's most recent green policy documents, to date, and serves as the bulk of this analysis (*see Table 6 for an overview of these documents*).

While the Comprehensive Vision is expansive, beyond the scope of greening, this analysis focuses specifically on how greening is framed. Like the policy documents that preceded it, the Comprehensive Vision makes evident the deep and widespread value of greening. One of the main strategies of the CV is 'rigorous greening', in which densification is consciously combined with greening. Streets and squares will be greened, areas will be made car-free and greener, buildings will incorporate greening into their roofs and facades. The city explains that although "greening is ecologically imperative," it must be kept in line with the desires of Amsterdammers. The goal is to make a continuous green network, connecting green areas and routes in and around the city. It also plans to combine the existing ecological structure with the main green structure, thus giving attention to the needs of both humans and animals. There will also be increased attention to the importance of water, such as recreational lakes and green banks, as well as greening at the neighborhood level.

TABLE 6. SUMMARIES OF KEY POLICY DOCUMENTS.

Policy document	Summary
Green Vision 2020-2050 (***Groenvisie***)	*Purpose*: Increase green space in the city between 2020 and 2050, making the city more attractive and increasing livability for people and animals The Vision also examines how to respond to urban densification and the growing demand for housing without compromising on the quality and quantity of green space. *Importance of greening:* health, nature, climate adaptation (futureproofing), social welfare *Goals*: ◊ Improving existing greenery and its accessibility ◊ Adding more greenery and green spaces ◊ Better connecting of green spaces within the city

	Principles: 1. Provide enough diverse green space for everyone 2. Complete as many goals as possible with greening 3. Build and manage the city in a nature-inclusive way 4. Work together to achieve green goals
Comprehensive Vision Amsterdam 2050: A human metropolis (*De Omgevingsvisie Amsterdam 2050: een menselijke metropool)*	*Purpose:* Prepare the city for challenges associated with climate change, tourism, population growth, etc., by developing the economy and making the city more livable and sustainable. It is a long-term, binding vision and planning for the spatial development of the city until 2050, including projects, policies, and programs relating to the physical environment. The function is to direct growth, accelerate transitions, and provide space for new and existing initiatives. *Strategic Choices:* 1. Polycentric development: regional distribution of urban facilities and employment 2. Growth within limits: 150,000 more homes; make existing neighborhoods/homes more sustainable; maintain productive activity; space for clean energy/ sustainability initiatives 3. Sustainable and healthy mobility: environment that invites people to meet, play, & exercise; more space for cyclists and pedestrians; roadways become green urban avenues; scale up the metro and train networks 4. Rigorous greening: make public spaces as green as possible, develop parks, green routes/ecological connections, invest in the landscape with nature development & agriculture 5. Making the city together: access to information, neighborhood environmental visions, greater role of Amsterdammers in management & development, wider scope for housing coops *Ambitions:* ◊ Inclusive city ◊ Sustainable city: climate neutral, climate resilient, circular ◊ Vital city: economically strong and accessible ◊ Healthy city: healthy, safe, and environmentally sound ◊ Livable city: quality of life and nature ◊ Compact city: spatial quality

4.3 URBAN DEVELOPMENT & GREENING INITIATIVES IN IJPLEIN-VOGELBUURT

The municipality and housing corporations have made agreements on the use and improvement of public spaces in the neighborhood. They aim to improve daily maintenance of such spaces, employing a "neighborhood concierge" and a team that will respond to complaints. A focus of Amsterdam's greening strategy is to work at the neighborhood level, tailoring green interventions to the needs of specific areas. Noord is known as a green district but is also undergoing multiple forms of development that have the potential to alter its green landscape. IJplein-Vogelbuurt is bordered by multiple large green and blue amenities, with the IJ river to the south and the Noordhollandsch Kanaal to the west. It extends northeast to the Vliegenbos—the first urban forest for workers in Noord—and northwest to the Noorderpark, which was created in 2014, as a merger of Florapark and Volewijckspark.

IJplein-Vogelbuurt has a total of 16 squares within the neighborhood, contributing to quality of life with some level of public value—as places to meet, exercise, and play. According to the

municipality of Amsterdam, the neighborhood is undergoing improvements to public outdoor spaces, largely by increasing green amenities (Gemeente Amsterdam, n.d.-g). Since 2019, different stakeholders, including policymakers, entrepreneurs, and residents, have been working together to redesign different squares, such as Koekoeksplein, Spreeuwenpark, and the square at the community center De Valk. This includes building new sports and play facilities in the spaces. There are future plans to also renew Pluvierplein. In addition to the social benefits, greening throughout the neighborhood is desirable to reduce the likelihood of flooding during heavy rains. Noorderpark itself is undergoing redevelopment through the construction of bridges (West 8, n.d.) and other green amenities (Gemeente Amsterdam, 2011; Interreg Europe, 2016).

FIGURE 4. DISTRICT MAP OF AMSTERDAM NOORD: AGENDA-SETTING AND GUIDING PROJECTS FOR URBAN DEVELOPMENT (*OMGEVINGSVISIE;* LEGEND PERTAINS SPECIFICALLY TO FEATURES IN IJPLEIN-VOGELBUURT—FOR A MORE DETAILED LEGEND, VISIT THE ORIGINAL DOCUMENT).

There are two main roads that run through the neighborhood—Johan van Hasseltweg and Meeuwenlaan—that serve as the main entrances/exits to the neighborhood for car transportation (*see Figure 4)*. Considering expected population growth, these roads are expected to become heavily trafficked, and the *vernieuwing* thus aims to ensure that quality of life for residents is not impacted. As the municipality works to improve these areas, they are building transportation connections and accessibility between neighborhoods, as well as redesigning the layout of certain streets. De Meeuwenlaan will be made safer and greener, with more opportunities for crossing the street. The area along the IJ river in the Hamerkwartier will be allotted for recreational purposes, increasing the availability of outdoor space (Gemeente Amsterdam et al., 2020). The most recent update regarding this vernieuwing is the plan for a new outdoor space around the Dirk supermarket on Meeuwenlaan (Gemeente Amsterdam, n.d.-f), designed in consultation with residents from IJplein-Vogelbuurt, the housing corporation Ymere, and local shops. According to the municipality, residents requested more greenery, seating areas, and clearly marked cycling lanes. There are further discussions of how best to reduce cars and through-traffic within the neighborhood (Gemeente Amsterdam, 2020b).

There are other planned amenities in Noord that will undoubtedly have repercussions for the district. Two new bridges over the IJ will connect Noord to the rest of Amsterdam, and new public transport lines and bicycle routes will better connect Noord to the neighboring city of Zaandam. Creating more opportunities for cycling and public transportation means reducing the number of cars, an endeavor that will be difficult to implement but will improve overall quality of life for residents. Furthermore, a continuous bicycle and pedestrian route will run parallel to the IJ river. As explained in the Omgevingsvisie, the challenge is to ensure that residents of existing neighborhoods can benefit from the development in the district (Gemeente Amsterdam, 2021). There is also the challenge of densifying the neighborhoods around Noord and Noorderpark, improving the quality of public spaces while building additional housing and other facilities for the surrounding neighborhoods.

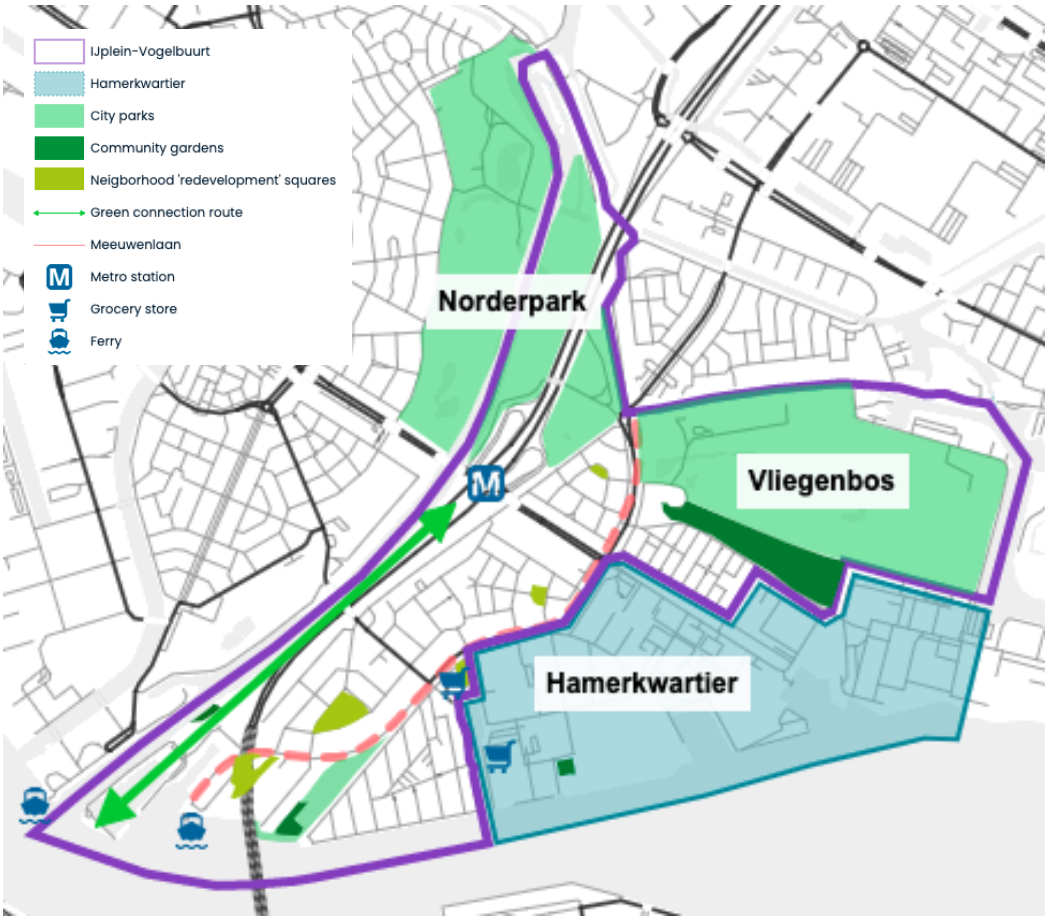

FIGURE 5. MAP OF GREEN AMENITIES IN IJPLEIN-VOGELBUURT.

Other green amenities in the neighborhood include the Voedseltuin IJplein, a volunteer-run urban gardening initiative that supplies food for residents and food banks in the area (Voedseltuin IJplein, n.d.). The garden is a site for community engagement and education, framing itself as a haven where anyone is welcome. Within the new Hamerkwartier neighborhood, there is Pluktuin Hamerkwartier, an initiative propagated in part by the Residents Platform (*Bewonersplatform*) of IJplein-Vogelbuurt. Located on the site of the former Draka factory, the urban gardening initiative officially opened in June of 2021, and is available to locals who want access to locally grown produce, although it is a temporary endeavor and will end as construction begins. On the edge of IJplein, located next to the Noordhollandsch canal, is the Moestuinschool, an organic urban farm and educational center (*see Figure 5)*.

4.3.1 MUNICIPAL PLANS TO REDEVELOP THE NEIGHBORHOOD

The policy documents, Samenwerking (Collaboration) and Verkenning van Kansen (Exploring Opportunities), explain how to develop the neighborhood in ways that tackle deep-rooted issues and vulnerabilities, while supporting what makes the area unique. There are five key principles that feature in the redevelopment of the IJplein-Vogelbuurt neighborhood, as formulated by the municipality in conjunction with the five social housing corporations active in the area (Gemeente Amsterdam et al., 2020). First, the neighborhood is *open to all*, meaning that all residents should feel at home and there are suitable and accessible amenities, such as stores and restaurants, that are available to residents in different economic situations. Second, the neighborhood endorses *respect for what already exists*. Historical architecture and long-term businesses and residents are to be values as "the heart of the neighborhood," and new plans must compliment what is already there. The third principle relates to *connection*, referring to the diversity of human interactions that can occur in the neighborhood. It is a place "where you can live, work, and relax"—a place for meeting up with friends and caring for your neighbors. The plan stresses that "by working together, we can tackle problems at early stages." The fourth principle emphasizes *balance*. This refers to balance in the types of available housing, a diversity of residents, and quality facilities that cater to education, care, and leisure. The fifth principle refers to *opportunity*—opportunities for education, employment, and quality of life.

These principles form the basis of eight objectives for the neighborhood that will be achieved over the coming 10-20 years. While the municipality and housing corporations agree on how the neighborhood should progress, they explain that developers and the City Council must also give input and will play a role in how the neighborhood will evolve. The objectives, summarized, state:

- ◊ *As few homes as possible will be sold by corporations*, to keep the neighborhood "pleasant and livable to a variety of people." This will provide housing for middle income residents and residents that can afford a higher social rent, and no new complexes will come on the market.
- ◊ *Housing will be made for middle income residents by selling fewer homes and reserving homes specifically for middle income people*. This also implies that the amount of social housing will decrease. There will be an increase in targeted allocation of housing and reduction in the inflow of vulnerable households to the neighborhood, because "too many of the same problems in the same area have consequences for quality of life".
- ◊ In the adjacent Hamerkwartier, there will be an *increase in social rental housing*—as they reduce social housing in Vogelbuurt-IJplein, 30% of homes built by corporations in Hamerkwartier will be reserved for vulnerable households.
- ◊ At least 60% of the *social housing in the Hamerkwartier will be developed by housing corporations*, in partnership with the municipality
- ◊ Residents from *IJplein/Vogelbuurt have housing priority if they wish to move to the Hamerkwartier.* Housing will cater to different groups, such as families and elderly people.
- ◊ In response to the shortage of adequate housing for families, *more large social housing (>65m2) will be added or made available*, allowing residents to move to appropriate dwellings
- ◊ The municipality aims to *improve the quality of housing in the IJplein-Vogelbuurt*, renovating homes and developing maintenance plans together with residents.

5. ENVIRONMENTAL JUSTICE IN AMSTERDAM'S GREENING POLICY

This chapter looks at the extent to which municipal greening strategies incorporate principles of environmental justice. Importantly, this policy analysis is not a comprehensive analysis of the city's policy, but rather considers two key selected documents: Green Vision 2020-2050 *(Groenvisie 2020-2050)* and Comprehensive Vision 2050 (*Omgevingsvisie 2050)*[8]. These documents were selected because they are the most recent and relevant guidelines for greening in the city of Amsterdam. This section thus explores the ways in which the two policy documents discuss the three types of justice, providing empirical evidence from both documents, as well as from relevant interviews from different stakeholders to corroborate findings. Within each justice-type, common themes emerged, which are included as subcategories. For Distributive Justice, the subcategories are 1) Quality & quantity: 'Green, unless', 2) Human & environmental health, and 3) Access to green amenities. For Procedural Justice, they are 1) Participation in decision-making and urban planning, 2) Citizen-led implementation, management, and ownership of public green spaces, 3) Access to information & transparency of governance procedures, and 4) Recognition of unequal power relations in green governance. Finally, for Recognition Justice, the thematic subcategories are 1) Inclusion & diversity in green spaces, 2) Representation in urban planning, 3) Social barriers to participation, and 4) Initiatives to diversify participation.

The following results are based on extensive coding of the documents in accordance with the analytical indicators presented in Table 1 in Chapter 2 (otherwise phrased, each indicator served as a code; for a breakdown number of codes per policy document for each justice indicator see Appendix IV). The chapter concludes with an analysis of environmental justice in Amsterdam's greening policy.

5.1 DISTRIBUTIVE JUSTICE

5.1.1 QUALITY & QUANTITY: 'GREEN, UNLESS'

The health- and climate-related benefits of greening are explicitly recognized and understood throughout Amsterdam's policy, including the need for widespread access to green amenities[9]. As the city densifies, more attention is given to improving the quality of existing inter-city spaces and enhancing greenery in less obvious spaces, such as façades, green roofs, and small postage stamp parks (Interviewee 5, 09-11-21). This adheres to the 'green, unless' principle, introduced in the Green Vision (Gemeente Amsterdam, 2020a). The principle means that public space should be as green as possible—there should not be excess paving, for example, and surfaces should support green infrastructure as much as is achievable without compromising on function. The principle also works in reverse—in areas where there is enough greenery, the focus is on increasing the nature value of the existing greenery, rather than adding more.

Urban greening is also important to improving accessibility to different parks. While certain parks, such as Vondelpark, are used frequently and even tend toward overcrowding, others are much less popular. To efficiently use available green space, the city is working on improving park

[8] It should be noted that because of the translation of the documents, page numbers were lost, as discussed in the methodology. All the quotes from these documents are English translations.

[9] In the coding, there were a total of 61 codes for *Distributive Justice,* 46 in the Green Vision and 15 in the Comprehensive Vision. This difference is mainly because the Green Vision is explicitly about greening, while the Comprehensive Vision is about general urban planning.

connections—for example by building a network of cycle routes connecting parks—and making specific parks more appealing, so that more parks will be used. In some cases, the design and function of a park is not conducive to what local people want, and the municipality claims to be improving such parks by "entering into discussions and making agreements with the parties concerned" (Gemeente Amsterdam, n.d.-m). The network of green and green-blue connections includes as tree-lined avenues, nature-friendly banks, pedestrianized green city streets, cycling routes, and green quay walls (*Figure 6*). These connections serve as green routes that spread out through the city and into the surrounding nature areas. In general, the municipality is also improving the quality and maintenance of parks, preparing them for intensified use and rainier conditions (Gemeente Amsterdam, n.d.-m) .

There are also connections known as "scheggen" that lead to larger landscape areas, connecting the built-up area to the surrounding countryside. According to the Green Vision, the design of green spaces and the green connections are designed together with residents, companies, and organizations so that they are customized to the desires of those who rely on specific locations. A major priority of the city is to ensure efficient use of space, given that available space is so limited and valuable.

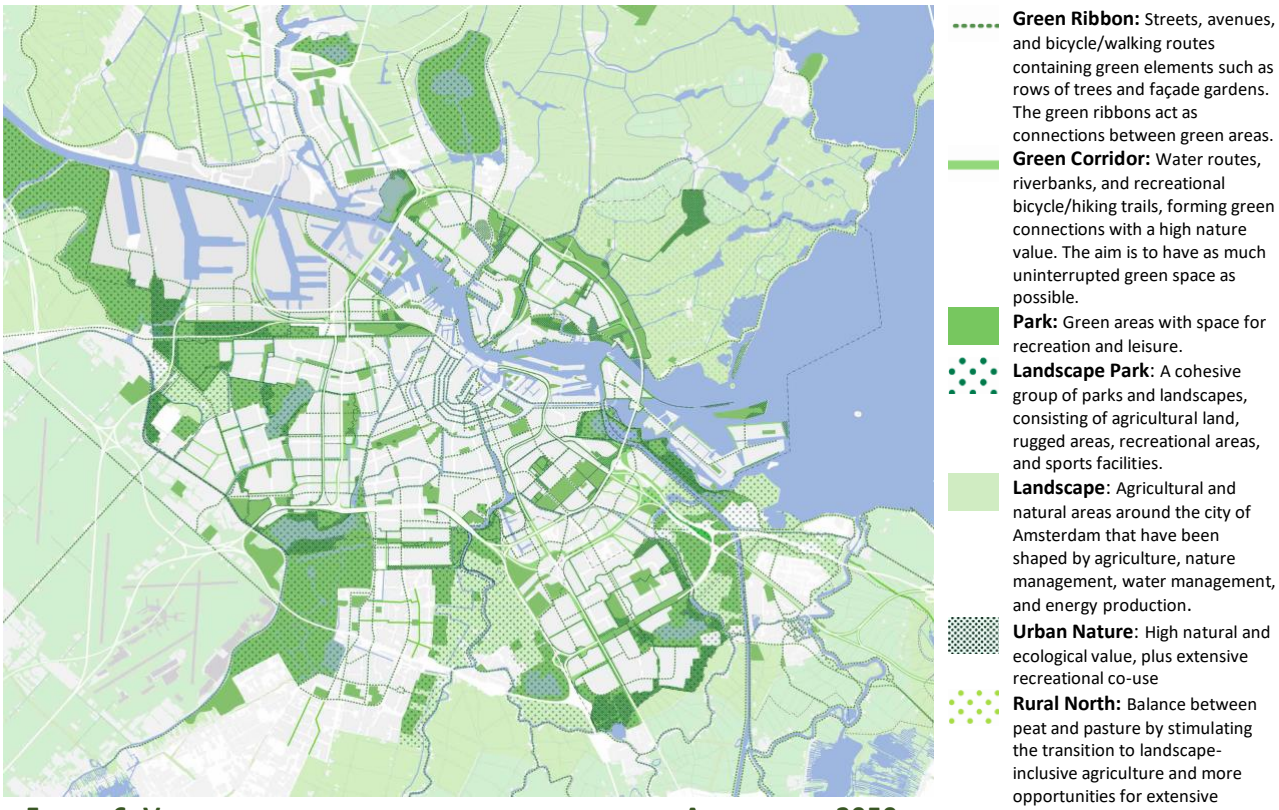

FIGURE 6. VISION OF A NEW GREEN-BLUE FRAMEWORK FOR AMSTERDAM 2050 (*OMGEVINGSVISIE*).

5.1.2 HUMAN & ENVIRONMENTAL HEALTH

The Green Vision recognizes the spatial distribution of environmental amenities and the associated health benefits, specifically in the variation in quantity and quality of green spaces. The municipality is adding more greenery to increase water retention, maintaining green environments that support exercise and outdoor activities, and planting (indigenous) trees where possible and diversifying trees to prevent disease. Trees are valued because they store CO2 and play an important role in climate adaptation, offering shade, and improving absorption of rainwater. Tree and shrub planting is

specifically prioritized in parts of the city that are lacking greenery in public spaces. According to the municipality, they take into consideration current layouts of public space and the ways in which spaces are used, and then plant trees to create a balance of shadowed and sunny areas. Furthermore, high-noise parts of the city receive additional foliage to reduce noise levels. Overall, health is clearly of value—as the municipality explains, green contributes to the health and wellbeing of residents, making their lives "meaningful" and supporting mental and physical health (Gemeente Amsterdam, 2020a). City authorities are also focusing on improving and increasing sport and exercise facilities in outdoor green spaces and green play spaces for children.

One of the municipality's key priorities is to increase spending on expanding green spaces throughout the city. The municipality's focus on green space aims to support a variety of activities, including leisure, sports, and urban farming, while future proofing the city and bolstering biodiversity (Gemeente Amsterdam, 2020a). As explained in an online statement, "the additional spending [on green amenities] is a recognition of the value that green space holds for local people, and a response to challenges such as overcrowding, the changing demands of residents, and climate change" (Gemeente Amsterdam, n.d.-m). In addition to improving health and social well-being, greening makes the city more attractive to residents and entices companies to establish themselves in the city. In this sense, greening is seen as an economic force and a branding opportunity for the city (Gemeente Amsterdam, n.d.-c).

5.1.3 Access to green amenities

The Green Vision states that by 2050, Amsterdam will be a city in which every resident experiences green in their immediate surroundings at home or at work. The idea is that everyone should experience greenery as soon as they step out of their house, an explicit example of distributive justice. Furthermore, every person should have access to a 'park-like' setting within a 10-minute walk from their homes, and access to the larger green areas on the outskirts of the city after a maximum 15-minute bike ride. The public green spaces should be reachable with public transportation and accessible for everyone, including people with physical disabilities. This is reiterated in the Comprehensive Vision, which states that in part due to densification, Amsterdammers can have all their facilities, including parks, within walking distance of their homes. Green space can be managed by either the municipality or by residents/companies but should be open to the public as much as possible. The municipality also applies an urban green standard when building new neighborhoods or improving existing greenery (Gemeente Amsterdam, 2021). A key focal point is increasing the accessibility of green space by making more areas public, removing fences, and supporting more recreational activities. Regarding temporal distribution of green amenities, greening policy in the city of Amsterdam does focus in part on areas that have traditional been underserved or lacking in greening.

As for issues related to gentrification, the topic is only referred to implicitly in the most recent city policy. According to the Comprehensive Vision, an inclusive city means that opportunities to develop are available throughout and that the perceived differences in quality of life are addressed. There is also a need for a more pointed focus on disadvantaged areas. While growth is recognized as an indicator of success, the authors explain that there are also downsides, in that "competition for space, without intervention" is leading to a "dispersal of lower- and middle-income groups […] towards the edges of the city and regional areas, creating a division" (*translated*). They explain that the city is becoming a "social and economic monoculture," becoming less inclusive as prices rise and long-term residents and small businesses can no longer afford to stay. The Comprehensive Vision

explains that Amsterdam has become home to an increasing number of international companies and "associated knowledge migrants," but that public transport, public spaces, and green areas have not adequately kept up with the growing population. The authors are especially conscious of the growing challenge of sky-rocketing housing and rental prices, which make difficult for middle- and low-income residents to find housing, writing that such rapid changes give some residents "the feeling of displacement" and that the gains and losses of the growing city are unevenly distributed.

5.2 PROCEDURAL JUSTICE

5.2.1 PARTICIPATION IN DECISION-MAKING AND URBAN PLANNING

Procedural justice is apparent throughout Amsterdam policy, but it is especially evident in newer policy documents [10]. The municipality places high value on participation in decision-making and planning processes, as well as in implementation and management of green spaces. In creating neighborhood-specific and municipal policy and plans, residents are consulted and have multiple opportunities to attend meetings and share their concerns and ideas through online platforms. The Green Vision explains that it will be most successful if the municipality combines "existing knowledge in the city" and facilitates cooperation between different stakeholders. Not only will this produce more comprehensive results, but it will "strengthen the sense of ownership of green spaces" (*translated*). This means ensuring that existing and new knowledge about green space construction and management is widely accessible. In the Green Vision, the municipality explains that by working together with residents, entrepreneurs, housing corporations, knowledge institutions, and other organizations throughout the city, they can strengthen urban green infrastructure. This is reiterated, more broadly referring to the management of public space, in the Comprehensive Vision.

The Green Vision further explains that the municipality and urban planners want to understand the desires of Amsterdammers who have not yet found green spaces that they want to spend time in. To answer these questions, the municipality held open discussions throughout the city in 2019, speaking with representatives from different districts, schools, and green organizations. They also conducted the Big Green survey (*het Grote Groenonderzoek*) and hosted multiple sessions about ecology, climate adaptation, and health. All the information gained from this research contributed to the Green Vision and its implementation program.

The Comprehensive Vision applies similar forms of participation in decision-making and planning processes but goes even further. As explained by one interviewee, the process of making the CV had to be "inclusive, open, and organic" (Interviewee 8, 21-02-22). One of the strategies of the CV is *city-making* together. This strategy is about cooperation in spatial planning and combining policy goals regarding housing, greening, transportation, sustainability, and so on, so that they all contribute to a shared vision for the future. The municipality encourages residents to come together to build affordable housing in the form of cooperatives, help manage facilities, generate their own renewable energy, and participate in neighborhood planning. The Comprehensive Vision involved many residents of Amsterdam in its creation, and the authors explain that "the board wants to continue the conversation with the city", inviting Amsterdammers to participate in its implementation.

[10] For *Procedural Justice,* there were a total of 28 codes in the Green Vision and 47 in the Comprehensive Vision, together totaling 75 codes. Again, many of the codes in the Comprehensive Vision were more directly about urban planning than specifically about urban greening, but there is a clear shift in emphasis to participatory decision-making, transparency, and access to information in newer policy documents such as the CV.

In recognizing the importance of cooperation, the municipality admits that "the unstable growth of the past decade has caused alienation and the feeling of losing one's own neighborhood. Participation gives Amsterdammers the chance to take back their city" (*translated*) (Gemeente Amsterdam, 2021). Participatory urban planning is an opportunity to reshape the city so that "Amsterdammers, old and new, feel at home." The Comprehensive explains that city making requires both professional parties and ordinary citizens, and that democratization is more than just having a say, it is about taking a part in building desired urban spaces. This includes experimentation in the 'so-called commons,' where citizens and organized collectives form building groups, housing collectives, and work collectives, in order to be given a share in the development of the city.

5.2.2 Citizen-led implementation, management, and ownership of public green spaces

The municipality encourages residents and companies to redevelop their own outdoor spaces, and public spaces are constructed, maintained, and managed according to citywide frameworks. It also means providing co-management and participation opportunities to residents, businesses, and organizations, as well as access to information about green standards, including quality of greenery and nature-inclusive building (Interviewee 5, 09-11-21). As explained in the Green Vision, "a green and livable city is made with many hands," and not only are citizens encouraged to participate in municipal initiatives, but they are encouraged and given financial support to start their own initiatives and improve private spaces, such as vertical façade gardens or rooftop green spaces. Collaboration is key to urban greening, as well as sharing knowledge to ensure that the city greening is "accessible to everyone" (*translated*). This includes the development of nature education programs throughout the city and the promotion of communal gardening. Regarding the latter, part of the vision includes securing existing allotment areas for the long term and making them more public and more accessible. New initiatives are encourage in neighborhoods, empty buildings, and rooftops, because such initiatives "are good for social cohesion, health, and greening of the city" (*translated*) (Gemeente Amsterdam, n.d.-k). Residents can also join local gardening groups and apply to design and maintain public green spaces (Gemeente Amsterdam, n.d.-l, n.d.-j), including small 'postage stamp' parks, neighborhood planters (Gemeente Amsterdam, n.d.-b), or one of the mini tree gardens that line most streets (Gemeente Amsterdam, n.d.-a).

A notable chapter of the CV is Agenda Samen Stadmaken (Agenda City-making Together-ACMT), in which authors discuss the importance of communal ownership in green projects, explaining that "in order to prevent the playing field […] appealing only to a small group of [elite] Amsterdammers, it is important to make planning and decision-making more accessible," and improve access to information. ACMT also has a section titled "increasing accessibility to planning and decision-making," in which they explain that simple interventions, such as placing an information board on locations of future developments, are effective ways to notify residents of upcoming changes to the neighborhood. They also recommend workshops in which residents can share their knowledge and experiences of the neighborhood. Such aggregations of collective knowledge can prevent the formation of silos within the municipality. To support continuous dialogue between city-makers and citizens, ACMT recommends developing a citizens' council, in which citizens serve in an advisory role to the city council on complex spatial topics. Such a council must be inclusive and enable diverse citizen participation.

There is also a shift in development priorities; rather than focusing on expansion of the city, careful interventions will be made in the existing city limits. Neighborhoods are encouraged to create

their own local environmental visions, an effort to unite communities and facilitate "exchange over urban issues." The municipality also presents a tool known as a Community Benefits Agreement, in which a neighborhood comes to consensus on the general benefits of a specific project and must give its support before the project may proceed. The Comprehensive Vision states that an "explicit wish is to give Amsterdammers a more active and equal role" in urban development, including in "the management and programming of their own living environment."

5.2.3 Access to information & transparency of governance procedures

The municipality of Amsterdam has a comprehensive website complete with interactive maps and simplified descriptions of its various activities[11]. For those who seek out the information and want to participate, it is possible. As explained above, two-way knowledge exchange with residents and other parties outside of the municipality is valued (Gemeente Amsterdam, 2020a). The municipality aims to ensure that information is accessible to all, including information about co-management, desired quality of green space in (re)design, and nature-inclusive construction. Overall, access to information is key to Amsterdam's public policy, and is featured in the ACMT, which explains that "making a city together requires an open and accessible attitude" (*translated*) (Gemeente Amsterdam, 2021). This means the municipality strives for "equal information," and that municipal expertise is available to the public. They do this by making information as accessible as possible, "making full use of the possibilities of digitalization." Available information includes procedural reports, data, and transparency of results.

The Omgevingsvisie claims to be developing new instruments for city-making, enabling citizens to play more active roles. This involves making data, instruments, and expertise widely available, and hosting feedback and information sessions in districts and neighborhoods. It also relies on digitization methods as a means of communication. Such instruments include an alert service that interested parties may subscribe to, which will inform them of new plans and permits issued with third parties. It will inform them of plans and decisions being made in their neighborhood and the ways in which they can influence this or voice opinions. The municipality is also setting up a 'transparency portal' in which contracts between the municipality and third parties can be found. Collaboration is done "on the basis of an equal information position," meaning that all information about the living environment should be available to everyone, not only those who are active in local politics. The idea is that citizens should be informed in all stages of a project, from planning to implementation and management, although how they plan to do this is not overtly clear. They also state that the municipality should not have "an information advantage" and should respond to requests for information in a timely manner. The municipality explains that they are responsible for overcoming barriers to participation, such as language (literacy, jargon), time constraints, and digital abilities, because if information is not adequately shared, democratic processes cannot be fully realized. Related to access to information, the municipality is also very transparent regarding their processes and procedures, and they are open about motivations behind greening and spatial development.

5.2.4 Recognition of unequal power relations in green governance

The final component of procedural justice assessed in Amsterdam policy is acknowledgment of power relations in green decision-making processes. The Comprhensive Vision recognizes such power, as well

[11] See, for example, an interactive map of the Main Green Infrastructure of Amsterdam https://maps.amsterdam.nl/hoofdgroenstructuur/ .

as equity and inclusion of different groups (see *Recognition Justice* below), stating that inclusiveness means paying attention to those who are less likely or unable to make themselves heard, such as children and senior citizens. Despite efforts to encourage participation and democratic decision-making, the CV explains that urban management and the power of decision ultimately rests with the city council, in continual collaboration with the municipality, and it is their responsibility to ensure inclusivity. Accordingly, decisions about investments and infrastructure that "transcend" projects are no longer made at the project level, and projects are not responsible for financing or the "social discussion." It is not clear what this will mean in practice, as it requires the city to rethink how the spatial sector is organized and what the roles and responsibilities are of different officials, but it appears to be an attempt to streamline and standardize social aspects of urban planning.

Another point relating to power relations was brought up by an urban planner, who explained that the department of spatial planning in the Amsterdam municipality has started discussing in more detail "our role in society." He believes "people are starting to realize it's not about 'more and more participation'" or about specific participatory trajectories, but rather about taking "a different attitude as a civil servant, serving society" (Interviewee 8, 21-02-22). He explained that in Dutch, the word for civil servent is *ambtenaar* and the synonym for ambtenaar is *overheidsdienaar*, which translates to 'serving the government.' This is significant and represents a cultural shift in the organization of the municipality because it indicates a leveling of the playing field and a movement away from more traditional government hierarchies. In other words, policymakers are no longer above civil society, they are simply there to serve the government. In this sense, it is not about only changing methodologies to increase civilian participation in governance, it is about rethinking what it means to make a city within a democracy.

5.3 RECOGNITION JUSTICE

5.3.1 INCLUSION & DIVERSITY IN GREEN SPACES

While recognition justice is arguably the least present in Amsterdam urban planning policy, it still plays a significant role and is increasing in prevalence in more recent documents, with broadening discussions about equity, inclusion, and representation of different social groups[12]. Recognition justice in the Green Vision is mostly present through acknowledging that "everyone has their own perception of green" and that "greening can take many different forms" to best suit users (*translated*) (Gemeente Amsterdam, 2020a). It further explains that parks and community green spaces "are places where everyone likes to be, rich and poor, old and young," and people from diverse backgrounds (*translated*) (Gemeente Amsterdam, 2020a). Because public spaces are open to all, it becomes possible for different groups to interact in ways they would otherwise not have the opportunity to. Green spaces also need to meet the needs of different uses, such as dog-walkers, children, athletes, and disabled people. In addition to users, there are also many different types of managers of green spaces, including gardeners, organizations, and private individuals. In its creation, the Green Vision explicitly asked, "what do all these people think about green space and what do they think could be improved?" (*translated*) (Gemeente Amsterdam, 2020a). Such questions underlined the vision throughout its drafting process.

[12] For *Recognition Justice*, there were minimal codes within both documents – 15 in the Green Vision and 13 in the Comprehensive Vision. While the inclusion of recognition justice was less apparent, the few mentions of the various aspects of recognition justice indicate a clear understanding of its meaning and importance.

The Comprehensive Vision takes recognition justice even further, explicitly stating that "dominant use [of green space] by one group is undesirable" (Gemeente Amsterdam, 2021). It further encourages diverse forms of use of public green spaces, explaining that Amsterdam consists of a many unique neighborhoods and districts with different demographics, and therefore the design of public space needs to reflect the different needs and usages of different locations. The municipality also pays attention to the "different utility values of green spaces" for different residents and works to ensure the preservation of green areas for different uses.

5.3.2 Representation in urban planning

The CV explains that "because we want to be an inclusive city" and because public space belongs to everyone, users must be involved in the design and management of such spaces. The municipality emphasizes incorporating different perspectives in urban design, so that residents can have influence over their own living environments, explaining that "an increasingly diverse population requires greater diversity in the way we design the city" (*translated*) (Gemeente Amsterdam, 2021).

As introduced in the previous section on procedural justice, ownership is central in new policy because it "increases involvement in, responsibility for, and confidence in the future of the city" (*translated*) (Gemeente Amsterdam, 2021). In the Agenda Samen Stadmaken, it is explained that "the development of the city in recent years has been so rapid that it has led to alienation of various societal groups" and that "the feeling of home is under pressure." It is thus important to build ownership in future developments and increase equality amongst those involved, so that Amsterdammers can be their own city-makers. Authors go on to explain that urban development should improve community welfare and create value for local communities, which includes affordable housing and urban quality of life. The CV calls for new directions in city-making, in favor of methodologies that value democratic decision-making based on collective knowledge. The municipality hopes to build facilities and public spaces that are sufficient, but not prescriptive, meaning that such spaces remain open for residents and users to further adapt and personalize such spaces. This enables opportunities for co-decision-making and co-building of the city.

In addition to meeting a variety of different needs, there are brief discussions of different forms of knowledge. In Appendix 2 of the Green Vision, for example, the authors discuss green space and its relationship to cultural history. In doing so, they recognize that the landscape has been shaped by people over time, and that the various forms of public space are reflective of the periods in which they were designed. They further explain that nature has been assigned different values over time, ranging from nature for aesthetic or educational purposes to nature for its recreational and psychological benefits. Today, nature is valued for its contribution to climate adaptation and support of biodiversity, as well as its social value.

5.3.3 Social barriers to participation

The Comprehensive Vision recognizes barriers to participation, stating that: *"*we realize that participating in the process of making a city together is not automatically open to everyone. This has to do with the distance between the government and some groups in society. Language barriers and cultural differences often stand in the way of good cooperation" (*translated*) (Gemeente Amsterdam, 2021). They go on to explain that many groups in the city are not involved in local decision-making because of obligations such as work, informal care necessities, and sometimes even survival to make ends meet, and alternatives forms of participation must be introduced. The city also recognizes a need accommodate "a wide variety of lifestyles, cultures, and other identities," and pay more attention to

the “female perspective” and the needs of less vocal groups, such people with disabilities, children, and the elderly (*translated*) (Gemeente Amsterdam, 2021). As explained, “meeting the needs of groups who do not participate in the discussion and decision-making process […] creates opportunities for entrepreneurship and social initiatives in vulnerable districts” (*translated*) (Gemeente Amsterdam, 2021).

5.3.4 INITIATIVES TO DIVERSIFY PARTICIPATION

One such form of including different voices is through the Women Make the City advisory board, an initiative to actively include women in decision-making (Interviewee 8, 21-02-22). Another methodology used to reach different groups in the creation of the Omgevingsvisie was taking a layered approach to networking, reaching out to key figures in communities and then connecting with citizens through them. An interviewee explained that Facebook polls aiming for thousands of people have “really no impact,” so instead, city planners tried to have “actual conversations, actual co-authorship, with groups in Amsterdam society that normally [are not heard]” (Interviewee 8, 21-02-22). He also noted he and his colleagues are hesitant about using terminology like “less vocal or less heard,” because “maybe government just isn’t listening”. Similarly, he recoiled from the characterization of citizens who are active in societal changes and policymaking as “the usual suspects,” because that “criminalizes being involved.” This practice of networking was partially enabled by the fact that they had more time to write the Omgevingsvisie than is typically allotted for projects, so they were “able to really invest in relationships” (Interviewee 8, 21-02-22). Another aspect that made the participatory planning process successful was that the team was not solely technical, but also included an anthropologist and a human geographer, and these members helped them to “reach people that, as the government, we normally don’t reach as easily.”

5.4 REFLECTIONS ON JUSTICE IN URBAN POLICY

Based on the in-depth analyses of the Green Vision and the Comprehensive Vision, as well as lighter analyses of other relevant policy documents, principles of environmental justice can be found throughout Amsterdam greening policy, although it is not explicitly recognized as environmental justice. In all policy documents, greening is portrayed as something of value to residents, whether they actively engage with green spaces or indirectly benefit from the healthy living environment it creates.

As seen in Figure 7, the Green Vision has more of an emphasis on distributive justice, while the Comprehensive Vision is more focused on procedural justice (*see Appendix IV for a breakdown of codes for each document*). As noted previously, the Comprehensive Vision is more broadly focused on urban development, so it does make sense that distribution of green amenities is less of a focal point than in the Green Vision, which almost exclusively deals with greening (as the name would suggest). Yet taken together, the two documents are complimentary, serving as a basis for equitable green development in the city.

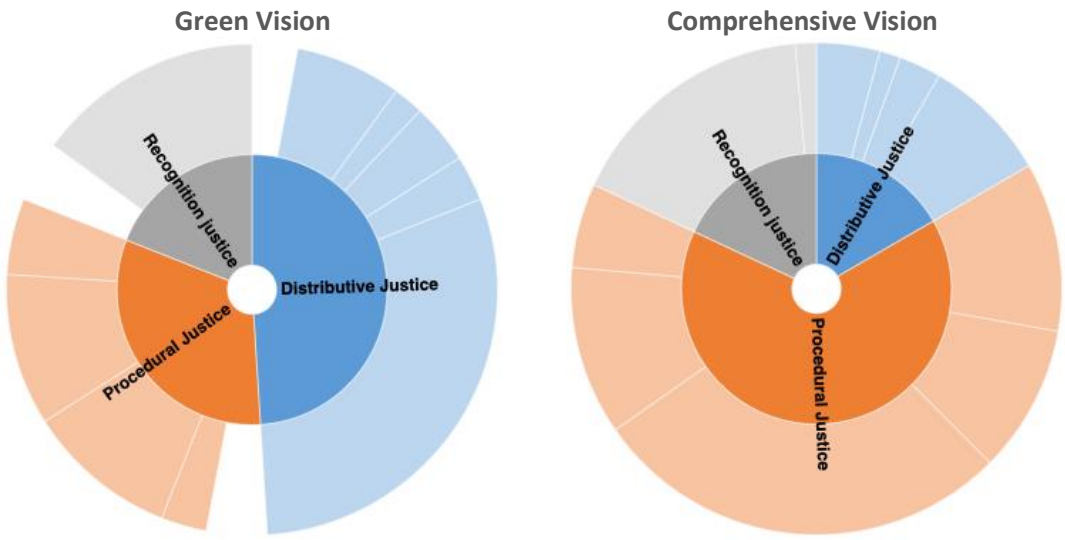

FIGURE 7. COMPARATIVE DIAGRAMS OF THE DISTRIBUTION OF THE THREE TYPES OF ENVIRONMENTAL JUSTICE IN THE GREEN VISION AND THE COMPREHENSIVE VISION.

5.4.1 EQUITY IN URBAN GREENING

Throughout all texts, the assumption is that greening has universal value. This is especially apparent in the Green Vision, which accounts in detail the various benefits of greening, but ultimately neglects to recognize that greening is not necessarily experienced evenly. The primary focus of the Green Vision is on how important greening is for the city and its inhabitants, but it only makes a surface-level distinction between the different needs of different groups. There is, however, a clear shift in inclusive language between the older green policies and the newest document, the Comprehensive Vision.

In the Comprehensive Vision for Amsterdam 2050, equity is explicitly recognized, marking a shift in emphasis from primarily distributional justice (and some references to participatory justice), to an understanding of the nuances of participatory and recognition justice. The first ambition of the Comprehensive Vision, for example, is for Amsterdam to be an *inclusive city*, building on the concept of the 'undivided city' presented in the Structural Vision and Green Vision. This broadening of language is indicative of a new environmental justice angle in spatial development. While not explicitly linked to greening, the Comprehensive Vision includes a section, Agenda City-making Together (*Agenda Samen Stadmaken*) (ACMT), about how to improve diversity and cooperation in urban development, enabling Amsterdammers to play more of an active role in improving their own living environments. There are many reasons for this new approach to city-making. First, the upcoming passing of the Environmental Act encourages democratization of development and increased access to information. Second, the municipality wants to provide more opportunities for bottom-up initiatives in housing to accommodate variations in housing needs, and third, the municipality recognizes a need to improve community welfare and urban quality of life. This form of city-making will help to build ownership amongst residents, encouraging involvement and responsibility for the creation of the city.

As mentioned, one such way to increase ownership of space is through the creation of housing cooperatives and community land trusts, as well as other forms of collective self-management, such as urban agriculture. This increases opportunities for "democratic innovation and social innovation, with more collective forms of creating public value in the district and community" (*translated*) (Gemeente Amsterdam, 2021). Another concept introduced in the Agenda City-making Together is the idea of reciprocity, in which value creation must be explicit in area development. Initiatives must

show that they have something to give back to the city, thus preventing so-called value-extraction (Gemeente Amsterdam, 2021).

The authors explain, however, that "municipal spatial policy cannot directly guarantee inclusiveness and equal opportunities" because such a guarantee depends on a synthesis of different sectoral policies, such as education, housing, and economic policy (*translated*) (Gemeente Amsterdam, 2021). While recognizing bureaucratic limitations, they provide an overview of the directions city policy and urban planning need to take to improve inclusivity. According to the authors, inclusivity partly begins with counteracting the effects of segregation by ensuring mixed neighborhoods. As the authors explain, the municipality strives for "homogenous streets in heterogenous neighborhoods," so that people can live in proximity to others of similar socio-economic status. What this will mean in practice is still unclear but indicates a new approach to social design (Gemeente Amsterdam, 2021).

5.4.2 A WORK IN PROGRESS

Finally, Amsterdam policy recognizes that it still has room for improvement. The Green Vision explains that to realize its ambitions, it needs to conduct further evaluations and research to understand what knowledge is already available. It also needs to explore other methodologies to ensure the success and sustainability of urban planning projects. The together city-making agenda begins to do this, introducing the concept of *neighborhood rights* as a means of leveling the playing field between the municipality, professional parties, and neighborhood groups. Potential neighborhood rights include 1) the right to challenge local services, 2) the first bid right for land and real estate, 3) the right to plan and initiate spatial strategies, and 4) the right to organize as local representation.

An urban planner and author of the Omgevingsvisie from the municipality explained that the story he told me about participation and justice in policymaking "sounds really great, but it's not that we have reached complete co-authorship. Not even close, to be honest, and I'm still very critical of how it went in the end" (Interviewee 8, 21-02-22). This was partly due to the COVID-19 pandemic, which made coming together more difficult and thus hindered relationship-building to an extent. Another hurdle was getting city planners who authored the Omgevingsvisie to agree on participatory methods—with so many people working on a single report, getting everyone one the same page is difficult. The same urban planner explained that "it was extremely challenging to have this sort of progressive idea of having groups in the city joining you to write this Omgevingsvisie (Comprehensive Vision)," when at the same time authors had to navigate a bureaucratic system "that doesn't really allow you to innovate as much as you would like to" (Interviewee 8, 21-02-22). This resulted in "a struggle between participation and governance," however ultimately, they succeeded in involving many different people. He also noted that such participation required taking down barriers within the municipality's organization, but that eventually "colleagues [who] were not very enthusiastic about [participatory methodologies] saw that it has value to do it this way."

6. ENVIRONMENTAL JUSTICE IN URBAN GREENING & DEVELOPMENT IN IJPLEIN-VOGELBUURT

This chapter presents the main results of interviews with citizens and decision-makers. Building on the previous chapter, it provides anecdotes and narrative descriptions of how urban (green) spaces are used and experienced. By framing findings along the framework of environmental justice, I present the main results divided into common themes that emerged during the interviews. To give an overview of the thematic subcategories, within the category Distributive Justice, the main findings were grouped into 1) Quality of green spaces, 2) Community gardens: A struggle for space, and 3) A gentrifying neighborhood. As for Procedural Justice, the subcategories include 1) Participation in decision-making and 2) Municipal efforts to improve participation & respond to unequal power relations in urban governance. Finally, for Recognition Justice, the subcategories are 1) Equity & exclusion in urban spaces and 2) Citizen Activism.

As becomes evident, there is not a clear division between the three different types of justice. Although the results *are* categorized by types of justice, these categorizations were decisions I made for clarity of results, and there are multiple examples of overlap between the types of justice, explored further in the discussion and conclusion.

6.1 DISTRIBUTIVE JUSTICE

6.1.1 QUALITY OF GREEN SPACES

North is known to be a very green district, and this is something that the residents take pride in and cherish (Interviewee 10, 02-11-21; Interviewee 7, 25-11-21). All interviewees listed Noorderpark (*Figure* 8) and Vliegenbos as the green spaces in which they spend the most time, one explaining "I really like Vliegenbos—they're managing it like a forest, which I really like because it feels more wild" (Interviewee 10, 02-11-21). In contrast, and as was echoed by other interviewees, she felt that "Noorderpark is a bit strange because it's quite big but then you have this huge road right in the middle that you have to cross with a bridge, so it still feels urban" (Interviewee 10, 02-11-21). Still, Noorderpark is "really a place for everyone," a place where people come to do yoga, play sports, walk dogs, have barbecues, and so on. Another green area is the park along the IJ, which is a popular place for people who do not have direct access to green spaces or private gardens to spend time (Interviewee 3, 04-11-21). There is also a green 'scheg' along the Noordhollandsch Kanaal, one of the connections that leads out of the city into the larger landscape. As explained by an interviewee, it was only recently considered a scheg, "because North always gets forgotten in these plans" (Interviewee 3, 04-11-21). Although "pressure on land use is enormous," with its status as a 'scheg', the area has to remain "as green as possible."

Greening & urban densification

Many residents expressed concern that densification and development will reduce the quality and quantity of green spaces. One interviewee felt that it will be impossible to adhere to the city's green norm when so much housing needs to be built, much of which will be high rise buildings; "the ratio between green and housing, it's becoming worse and worse, and I don't see a solution for that […] I think Amsterdam is quite a green city, but [increased construction] will change the livability of the city" (Interviewee 2, 25-10-21). The same interviewee wondered if, perhaps, Amsterdam has "reached its limits of growth," explaining that such rapid growth and expansion could prevent people from living

healthy lives. Another interviewee, a city planner, stressed the importance of maintaining green spaces, despite urban growth "there are going to be hundreds of people living here [in Noord]. When you're a city planner, you should be thinking, where are all these people going to sit outside? They can't always be locked up in their building. And they probably won't cycle to the Vondelpark or the Westerpark all the time. So where are they going to be?" (Interviewee 3, 04-11-21).

Some residents feel they must defend nature from housing developments encroaching on green space, and that the municipality has not been as responsive to this issue. In recent protests in the Vliegenbos, for example, residents felt that new developments were a form of de-greening, and that green spaces are seriously threatened by scheduled housing projects; as explained by one interviewee, "my feeling is that people fear that the green identity of this part of town is disappearing or rapidly changing, and that they don't have a lot of control over this" (Interviewee 12, 22-11-21). They were particularly upset over a series of bike paths that were planned through the Vliegenbos, angered about what many felt was a failed participation process (Het Parool, 2021). In response, residents went on a 'participation strike,' to get the municipality to start listening. Overall, it was successful; the municipality recognized that participatory processes had been insufficient and halted construction. Furthermore, the mayor now comes once a month to listen to the community's needs to improve communication.

FIGURE 8. NOORDERPARK, LOCATED ON EITHER SIDE OF THE HIGHWAY AND METRO SYSTEM.

A council woman explained that she understands that people want to protect nature, but on the other hand, green spaces need to fit the needs of all types of people—for example, people who live in small apartments without gardens should be able to go to parks for barbecues. This means that there needs to be dedicated space for such activities, and not everything can be strictly preserved as 'nature'. She

further explained that she sees "the fight for nature values in these areas as a fight against the rapid changes in these areas. I think everybody understands there are people who need housing, and everybody understands that people need to use green areas. But the speed of these changes puts a lot of pressure on people" (Interviewee 7, 25-11-21).

Missed potential of green areas?

There are also examples of green spaces not meeting their full potential or serving a different purpose than originally intended. The park, Voortuin van Noord, next to the Moestuinschool, attracts a mix of people, but has not become a community hub as some had imagined it would be. This is partially because it is not at the core of any specific neighborhood, but rather on the cusp of three different neighborhoods. While it has a lot of open green space, it is used more as a passage between neighborhoods, a covert location for drug dealers, and convenient place to let your dog run loose, even if that is technically not allowed. There are also 'sleepers,' people who come to spend the night before moving to the next location, and tourists from the nearby hostel that want to "get high and have a cheap beer on the grass". There are secondhand, plastic play sets in the park, but interviewees explained that they do not see children coming there to play as much as would be expected. It is still used as a meeting place for some groups, but because there is no shelter or protected area, "if it's raining, then everything stops" (Interviewee 3, 04-11-21). Of the residents that live East of the park, many never go through, especially those whose entire lives are based in Noord and do not need to get to the ferries on the other side. As explained:

> *"The people that live in that neighborhood and have low income and do their shopping at Dirk never come here; no need to go across the water. So only the people working or following education, or who have friends or family or relatives [on the other side of the river], or who have a cultural desire because all the theaters are over there. Young people more and more also come this way because there are more interesting places to go out, like the Hamerkwartier, so you see people coming from the center passing through this little area. But they're not coming for this area"* (Interviewee 3, 04-11-21).

As is evident from these descriptions, the green space serves certain functions, but is perhaps not as impactful or inclusive as it could be. The same interviewee explained that the park lacks maintenance, but there is no budget for upkeep; "we all asked the woman that is helping to organize this [park] from the city council, please do something with it so that it becomes a little less sloppy. Make it more of an open, inviting place than it is now, because we don't have the vision of how to do that."

6.1.2 COMMUNITY GARDENS: A STRUGGLE FOR SPACE

Urban agriculture is also a significant source of green space in the neighborhood. In my interviews I was able to talk with representatives from different community garden initiatives in IJplein-Vogelbuurt (*see Figure 9*). While these initiatives differ in many ways, they have also faced similar hurdles, specifically regarding securing funding and space.

Voedseltuin IJplein

Founded in 2014, the Voedseltuin IJplein garden is run entirely by volunteers, most of whom come from the other side of the IJ river and are educated, upper-middle class females (*see section 6.3.1*). After some initial hardships, the garden became what it is today largely thanks to two team members

who “were both retired and highly educated, and more or less familiar with bureaucracy” (Interviewee 4, 04-11-21). With the ability to establish the garden as an association and legal entity, they were able to consistently secure funding (due in part to a member’s knowledge of fundraising), although navigating subsidies from the municipality has proven so complex that “the costs, in terms of time and energy, is larger than the benefit, and we can afford to not do it” (Interviewee 4, 04-11-21). The primary source of income from the garden is through memberships, which varies from five euros to 500 euros, depending on the member’s income. As the interviewee explained, in Dutch urban planning, there are few land use statuses for urban gardening, which makes securing land for such gardens difficult, and many initiatives end up being temporary (Interviewee 4, 04-11-21). Luckily for the IJplein garden, the land they are on is secured because of its association with the social housing complexes next to it, which are protected by a municipal amenity status. The garden also provides food to a local food bank, making it an integral part of the community. As explained by an interviewee familiar with the garden, although not directly connected to it, “it was based on the idea that if we hand out food for free to the poorest people in the community, they will also come and help out with gardening,” although that did not pan out as was hoped (Interviewee 3, 04-11-21).

FIGURE 9. UPDATED MAP SEEN IN FIGURE 5, SHOWING THE LOCATIONS OF THE COMMUNITY GARDENS.

Moestuinschool Amsterdam

The Moestuinschool Amsterdam, located between the IJplein and the Noordhollandsch Kanaal, has only been in existence for a few years (*see Figure 10)*. As a school for urban farming, the garden provides food to 40 families, most of whom are not local. Prior to being a garden, the area was a building pit, housing unused and discarded construction materials. When it opened in 2019, the municipality did not have a plan or budget for the space, although eventually they will likely put in new high rises, as they have on the other side of the canal. In the meantime, “they didn’t want to have

any costs, but they also didn't want to have any trouble with the people living in the neighborhood"; according to the interviewee, plans for developing the area was met with outrage and protests, so the area was designated, at least temporarily, as a park, known as the Voortuin van Noord, with an adjacent garden, the Moestuinschool. This garden has had more difficulties securing funding—their first year they received funding for supplies, but no funding for labor costs. They started a foundation called 'eetbare stad" (edible city), but they have continued to face challenges, one of the women explaining:

> *"We had an ideal of more urban farming in the city of Amsterdam. Everybody mentions urban farming in all plans, but there is never any space for it. So, it's like, what is urban farming then if you don't create a space where it can actually happen? Except for some of those square meter boxes that you put everywhere, but nobody takes care of those after throwing some seeds in them. But serious urban agriculture needs some space, so you have to reallocate the green space to urban farming, and that always hurts. Because somebody else is already using that green space or wants to use the green space for another purpose. And up to now, urban farming projects have always been temporary. Just temporary land use*" (Interviewee 3, 04-11-21).

Not only does urban farming compete with urban green space, but such initiatives are considered temporary, and the process of acquiring permits to expand farming endeavors can take months. As mentioned in Box 3, the Voortuin van Noord park that surrounds the garden is not heavily trafficked, and people do not usually come there unless they have a specific reason to, meaning that the garden has not become an integral part of the area's identity as the garden at IJplein has. Originally, the women who started the garden had planned to sell vegetables to people living in the adjoining neighborhood, which is largely social housing. As explained, however, "that didn't work—people considered us as white, highly educated, making a lot of money, which is all true in a way, except that we were not making any money. While the assumption is that the vegetable garden is a neighborhood initiative, in this neighborhood, it didn't work that way" (Interviewee 3, 04-11-21). When asked how she planned to get more people involved in the garden, she described a master plan for the future, in which people have access to healthier, plant-based food, and green spaces to spend time in—both of which can be achieved with urban farming. It is, in a way, reviving the 'volkstuinen' traditions of the past. One way to instigate this could be to introduce a small café with an attached tea garden, in which people can pick their own tea. Yet she also recognized that people with income issues "don't have time and headspace" to participate in local farming projects, "so it's the young people, the idealistic people" that they mostly attract.

FIGURE 10. MOESTUINSCHOOL AMSTERDAM.

Pluktuin Drakaterrein

Another urban garden in the area is pluktuin Drakaterrein. Built on the site of a former factory on the border of the Vogelbuurt and the Hamerkwartier, the area will soon become housing developments. While its existence is temporary, organizers are making the best of what time is available. As a coordinator of the pluktuin Drakaterrein explained, they have successfully integrated into the community and were able to build a garden with a diverse mix of people who participate (Interviewee 9, 26-10-21). One of the ways of appealing to the local community was directly approaching the neighborhood mosque.

6.1.3 A GENTRIFYING NEIGHBORHOOD

As introduced in the case study description, IJplein-Vogelbuurt is rapidly gentrifying, experiencing many of the challenges of a historically impoverished neighborhood undergoing 'urban renewal'. In an interview in a Dutch newspaper, Het Parool, Massih Hutak, an artist, writer, rapper, and columnist, explains that in the past, "no one wanted to be found dead in Noord," but now, it's overrun with "cargo bikes and cool coffee shops" (*translated*) (Wiegman, 2020). Hutak recently published a book about the so-called "development neighborhoods" and gentrification, with the provocative title "You didn't discover us, we've always been here" (*Jij hebt ons niet ontdekt, wij waren hier altijd al*). Hutak writes that Noord has become an attraction, a place wealthy people have only just realized exists. Like many of my correspondents, he explains that the neighborhood is rapidly changing, noting specifically that the new people do not greet each other on the streets, which, according to Hutak, is the least you can do to recognize each other's existence. When asked if he feels evicted, Hutak says that "everything in this environment communicates: you have to leave, there is no place for you anymore" (*translated*). New houses crop up constantly, but the prices are far out of reach, inciting in him what

he calls, “construction panic”. For elderly residents, these changes can be especially jarring; as one interviewee explained, “they live here their whole life, and they know everybody […]. But then suddenly, the house on the corner is being sold for money that they will not even make in their whole life. You know half a million and these new people they don't greet each other. And this is the biggest sin you can do in the North. In this neighborhood, you fucking greet” (Interviewee 6, 16-11-21).

One interviewee described the neighborhood explaining, *“Of course, you have old school Amsterdam Noord, people from lower class backgrounds that have been living here for a very long time. Most of the houses surrounding us, they’re from Ymere, and a lot of the social houses are having conflicts with them because they don’t really renovate the houses or provide safe living conditions. But then of course, you notice the gentrification, that’s happening really quickly. You have the old stores but then also new coffee places with oat cappuccinos. And then towards NDSM it feels very industrial, but there’s also a lot changing because you have old garages that are being destroyed and then new apartment blocks, like very expensive apartment blocks for expats or something are rising up”* (Interviewee 10, 02-11-21).

History of neglect & high vulnerability

Over the years, Noord has been structurally neglected because its inhabitants were not “economically interesting”—as one interviewee explained, “you’re either from Amsterdam, or you’re from Noord Gestoord[13], and if you’re not from Noord Gestoord, there’s no reason for you to go there” (Interviewee 6, 16-11-21). After the deterioration of the shipping industry, large numbers of people became jobless, causing many to leave the city, “wanting out of the neighborhood where this disaster had happened” (Interviewee 3, 04-11-21). As explained previously, with the construction of more social housing, many families of immigrant backgrounds began moving into the area, not necessarily by choice, but because it is “for the people that cannot afford anything other than social housing” (Interviewee 3, 04-11-21).

Multiple interviewees explained that there continues to be considerable poverty in the neighborhood, with high rates of illiteracy, mental illness, and other vulnerabilities (Interviewee 6, 16-11-21), but “because there are many cheap, small houses, people [with those profiles] often end up here” (Interviewee 1, 25-10-21). This means that there is a high concentration of vulnerable residents, compared with other parts of the city. Another interviewee explained that people eligible for social housing nowadays tend to be the most vulnerable (e.g., suffering from addiction or psychiatric problems), and so other lower income groups, such as young starters, are not given the same priority in the system (Interviewee 7, 25-11-21). People who have resided in Noord for a long period of time in social housing are not evicted from their houses, but if they get new employment and their incomes increase, so does their rent. And because the turnover in social housing prioritizes the most vulnerable, the population in social housing has drastically changed—“of course, [back then], everyone had quite a low income, but still there was more room for people who were a bit more powerful, had a little bit more strength to put energy into the area, into their environment, and not worry quite as much about money” (Interviewee 7, 25-11-21). This creates a new dynamic, because on the one side there are the wealthier newcomers in the neighborhood, drawn to it for its quiet streets and garden space, and on the other side there are those who have no alternatives and little capacity to care for the area in the same way.

[13] Noord Gestoord translates, roughly, to “Crazy North”.

There are also, however, groups of people that fall in the middle of the two categories. One woman moved to the neighborhood with her partner more than 11 years ago, attracted to the area because of its low housing prices. At the time, it was the only area they could afford as young professionals, and she and her partner agreed that they "shouldn't occupy social housing" (Interviewee 12, 22-11-21). When asked if she would consider moving, she responded, "right now it would be completely impossible," and even if they could afford to, they would not, explaining that they are "stuck but happy;" it is a caring neighborhood, where "people really look out for each other." This was reiterated repeatedly; another interviewee explained that "the strong point of the neighborhood is the social structure—I mean, it's one of the poorest areas I think in all of the Netherlands […], but it's a beautiful village, people are willing to talk, they're not ashamed of poverty. I always say, if you're poor, you can better live here than anywhere else, because people take care of each other" (Interviewee 7, 25-11-21).

Redevelopment, renovation, and rebranding

Noord is an area in transition. With the new metro station and planning housing in the Hamerkwartier, much is changing. Now that the neighborhood has been deemed a "development neighborhood," associations are taking steps to upgrade homes, or, as Hutak explains, the homes are "made livable." The need for better facilities is nothing new, but the fact that houses are only now being renovated indicates that improvements are "not for us, but for the people who have yet to come live here." This sentiment was reiterated by one interviewee, who explained that "the neighborhood has definitely become gentrified. In the past, nobody wanted to live in Amsterdam Noord; now it's very hip and happening, and the feeling that current inhabitants have is that everything we do in the area is for the new inhabitants" (Interviewee 1, 25-10-21). As renovations are made, rents increase, and long-term residents end up relocating. She further explained that inhabitants of IJplein-Vogelbuurt wonder why so much is being invested in the Hamerkwartier, rather than in their own neighborhoods—this, however, is not entirely factual, as the municipality and housing associations *are* making efforts to fix streets and renovate buildings, though perhaps not on the same scale. The projects can be quite small-scale and are not always as visible as larger endeavors like Hamerkwartier, especially social projects aimed at poverty reduction.

The responsibility for housing renovations lies with the housing corporations and largescale renovations will likely begin at the end of 2022. According to one estimate, however, "about 75% of the inhabitants won't return," which could have significant repercussions for the "social cohesion in the neighborhood" (Interviewee 1, 25-10-21). Even though the neighborhood is very poor, "people do a lot for each other" and they have a strong social network, "so it would be a real shame if it falls apart." There is a shared feeling that people are not returning to their homes after renovations, not because they do not want the renovations, but because they "see it as a new city" and "they feel less of a connection with the new people coming in," so they leave permanently (Interviewee 1, 25-10-21). Another interviewee explained that when corporations renovate housing, they always offer you the option to return, but most of the time the conditions are very different; for example, if you are a single mother who lives with adult children, the children do not officially count as dependents, so the new house will only be zoned for one adult person and therefore be significantly smaller than the previous house (Interviewee 12, 22-11-21). If your old house had a garden, there is not a guarantee that your new house will have one as well, if space is deemed an issue. In other cases, rent will have increased.

One interviewee poignantly described what she sees going on around her, describing how, in many ways, the burden of renovations and 'sustainability' are placed on the consumers, who are not the owners of the properties and have no autonomy to renovate. Residents are asked to make personal sacrifices to compensate for the shortcomings of the housing corporations. The interviewee explained:

> *"My corporation hasn't done anything for I think 25 years now. This whole [housing block] is very poorly insolated. And we have the new gas prices and everything else going on. A lot of people are experiencing this—this fear of what they are going to pay [for gas] and the fact that they have been living in cold houses for 25 years. And now everyone is talking about sustainability, and they feel like sustainability is for rich people, and I think that is a real problem. Their reaction is like, 'I don't want to have anything to do with [sustainability].' The corporations, with all their good intentions, offer an energy coach who will talk to you about how to insulate your radiators, but they also tell you that you should shower less often and for a shorter time. And that feels very humiliating, people here are like, 'who are you and why do you think you can tell me how many minutes I can use my shower?'* ***I think it's good for everyone and for the planet if we start to use less energy, but we cannot tell people here, who have been neglected for so many years, tell them to start****. They should not be the first ones. I think first insulate the houses, and then you can tell them how to behave. But it's always the other way around.* ***First you neglect them and then you tell them, ok, you should change****. No wonder they feel frustrated. We need to help the people who are already here, invest money in them as well, not only the Hamerkwartier and all the cool new things that are coming. The old things are beautiful in their own way and deserve some care as well"* (Interviewee 12, 22-11-21).

An urban planner from the municipality explained that the size of the new houses is generally quite small because private companies are tasked with the responsibility of building, and it is more lucrative to produce a higher quantity of smaller homes. What happens then is that the regulated housing – the 80% designated for social and middle-income housing – is not big enough for families, causing a sort of exclusion to occur. This concern was repeated by the council woman, who explained that housing regulation is insufficient and contains loopholes when new housing is designed in such a way as to still maximize profit at the expense of adequate housing for families.

The Netherlands still has relatively strong social protection, so people often do not face literal displacement or evictions from their homes, but in many cases, they cannot afford to upgrade their homes or move to larger places to accommodate growing families. Many have also run into the issue that their grown children cannot afford to move into the neighborhood, so they leave for more affordable places outside of Amsterdam; "I have a few neighbors who now have kids and they're in their 20s and can't find a place, so that's very frustrating, because at the same time they see these very luxurious apartments and penthouses everywhere (*see Figure 11)*, and also there's this whole thing of the North being upcoming and trendy and cool. Just a few years ago, everybody was like, it's a neighborhood of crazy poor people and you shouldn't go there. I think it's unfair and people feel that it is unfair" (Interviewee 12, 22-11-21). Another interviewee explained that although Amsterdam has been rapidly getting more popular and expensive, "in Amsterdam Noord [it felt like there] was a lot of time, no one was interested in us, [but] that changed in an instant, and suddenly Amsterdam Noord was becoming hip and trendy" (Interviewee 7, 25-11-21). While there is still social housing and

she “hopes it stays that way,” as discussed, many of the houses being sold on the market “go for half a million or more, so there’s this really big gap between what was once and how it is now.”

FIGURE 11. NEW LUXURY RENTAL APARTMENTS BEING BUILT NEXT TO IJPLEIN-VOGELBUURT.

‘Diversification’ & declining social cohesion

As the municipality plans to redevelop the neighborhood, one objective is to increase the proportion of middle-income residents in the neighborhood, meaning that the amount of social housing will decrease (*see Section 4.3.1*). An interviewee expressed skepticism of this policy, explaining that “[they say] we have to diversify this neighborhood, and they do that mainly by offering people money to move out, and then offering those houses to people who can afford more. So, they don’t really do something for the people living here, they just change the people who live here” (Interviewee 3, 04-11-21). Vulnerable residents were originally brought together in Noord, but now discourses of ‘social mixing’ permeate public policy, although the conversation is primarily about wealthy people moving to neglected, poorer neighborhoods, not the other way around. The same interviewee said that in part, she understands this strategy because “it’s not bad to diversify if there’s 80% social housing in an area. But for those [poorer] people, it felt like they were chased away. The problem with [not enough] social housing is still there, so it’s not a better option for them” (Interviewee 3, 04-11-21). Those that remain live next door to new residents who bought their homes for high prices, meaning the neighborhood is diverse but not necessarily cohesive (Interviewee 6, 16-11-21).

Another interviewee explained that in terms of safety, the neighborhood has improved (e.g., open drug dealing is less prevalent), however, the "social cohesion of the neighborhood is changing, and the people that used to live here cannot live here anymore," meaning that only wealthier people can afford to move to the area (Interviewee 12, 22-11-21). She explained that as soon as people leave, corporations sell the apartments at "insane" prices "so the people that come live here are clearly from a very different social class than the people that already live here or used to live here. And as a result, there's some tension and people are sort of nervous and angry." One of the interviewees I spoke with, in her early 30s, was, as she explained "one of those yuppies that moves in the neighborhood […] I'm one of those taking other people's houses" (Interviewee 11, 19-11-21). She said that she has observed significant differences between those in social housing and those who bought their own houses, "so sometimes there's a bit of disconnect" due to educational and livelihood differences. Furthermore, "their houses are not very well maintained because they are depending on the housing company […] and there's just trash everywhere."[14]

Many of the people who are moving to Noord are relatively young and highly educated, with lives that take place primarily on the other side of the IJ, but who cannot afford to buy in the areas where they work and socialize. As one interviewee explained, "first the young people start moving here because its affordable, then it starts to be hip, and then the fucking people with money come and they ruin the neighborhood" (Interviewee 6, 16-11-21). Despite Noord being cheaper than the other side of the IJ, "they [still] pay crazy prices, insane. And there's a lot of expats, and most of them don't learn Dutch. These [expat] people think that all Amsterdam people are like the people who can [speak English] with them, which is not true" (Interviewee 3, 04-11-21). As a result, there is a deepening divide between those who are educated and able to communicate with the growing expat community, and those who cannot. Summarized succinctly, one community member said: "I think it is important for cities to think about the people first and make sure that a city is livable. There needs to be affordable houses for families. So, you shouldn't think about them money and you shouldn't sell your house to expat companies who drive prices up, you know? I mean, this is the thing, to think of people and not just of money" (Interviewee 6, 16-11-21).

Noord is marketed as an affordable place to live, still within reach of the city center, but the new residents, according to some, do not all seem to feel the same responsibility and allegiance to the neighborhood as the people whose entire lives are based in it. The cargo bike has become a symbol of exclusion, representing a new class of residents and eventual displacement of the old. As explained to me, "you hear these stories, like the old woman on the corner who cannot go and get a normal cup of coffee, because now it's like, you know, soy milk with vanilla and its costs five euros and she cannot afford this. So, the whole social structure is changing from the days when you could meet in the old café and have a cup of coffee and talk. The old café is gone now" (Interviewee 6, 16-11-21).

Green gentrification?

[14] It is important to mention that while there are clear divides between the newcomers and the long-term residents, there are many examples of the two groups mixing and living together cohesively. As one interviewee explained, "a lot of them are being very helpful and understanding of their environment, so they're not socially existing in a bubble, as some say" (Interviewee 7, 25-11-21).

When asked if he saw a relationship between greening and gentrification, the representative from Voedseltuin IJplein (*Figure 12*) said "our garden is in fact also an act of gentrification. Me sitting here, speaking with you, is the consequence of gentrification I'm afraid" (Interviewee 4, 04-11-21). He further explained that they had conducted interviews with real estate representatives in the neighborhood, "and they told us that they sold a few of the apartment buildings […] and the value [of those next to the park] was 20,000 euros higher than the value of an [identical] apartment a few blocks from here, so that is what the garden adds in economic terms to the neighborhood" (Interviewee 4, 04-11-21). The apartments closest to the garden are private apartments, while the apartments on the other side of the same building are social housing. Those with views of the garden are labeled "urban villas". He further explained that "the relative value of green in this neighborhood is rising on an almost daily basis. A garden like this adds a lot to the traditional dark greens that you see all over the neighborhood. So, people are very motivated and that is one of our strengths—and we have close connections with our neighbors, and they appreciate this garden very much."

FIGURE 12. APARTMENTS OVERLOOKING IJPLEIN GARDEN.

Tension between housing and green space

It is important to recognize that gentrification is not experienced equally amongst long-term residents. While one interviewee felt passionately that the neighborhood was changing in many negative ways, she acknowledged that it is not all bad—as people spend more time in Noord, they spend more money at local businesses and more money is invested in improving the area (Interviewee 6, 16-11-21). One long-term resident explained that she likes how the neighborhood is changing, but she does not like when "green space is sacrificed for housing projects" (Interviewee 9, 26-10-21). She is among the many who feel that they must defend nature from housing and development. In the area around the harbor, there are still many old factories and some areas lacking in greenery. She explained that "they're redeveloping [this area], putting in a lot of buildings with just a little bit of green, like green

roofs and green facades. But in the end, it's just a lot of buildings and a lot of stone. You need to also think about the ecology in the city, how animals and other life can travel. These big building walls have less opportunities for nature." She acknowledged that there is a major housing problem in the country but felt that the amount of housing planned for Amsterdam Noord will "negatively influence how people live together in the North—it's like building a city within a city." In her view, changes are happening so rapidly that residents do not have time to react and adapt, even if there are participatory measures in place that keep locals up to date and involved in what is happening.

6.2 PROCEDURAL JUSTICE

6.2.1 PARTICIPATION IN DECISION-MAKING

There are many opportunities for residents to participate in (green) decision-making in IJplein-Vogelbuurt, including meetings and events where people can present their desires and demands, and opportunities for citizens to serve in advisory roles in policymaking. As a council woman who represents the neighborhood explained, "it's good to stimulate initiatives for people to come up with their own plans for greening" (Interviewee 7, 25-11-21). Municipal greening and development plans are largely influenced by a group of inhabitants known as the Bewonersplatform Vogelbuurt-IJplein that brings issues to attention with the municipality and advocates for funding[15] for renovations on behalf of citizens (Interviewee 1, 25-10-21). This section examines the views of citizens and planners on the various participatory methodologies and the factors that influence their success.

Factors influencing participation

When discussing how to improve social facilities, one interviewee explained that "people who are higher educated, white, they understand the [term] 'maatschappelijke voorzieningen' (social facilities)," while those who have low-literacy or are not native Dutch speakers "sometimes have difficulty understanding what needs to be addressed" (Interviewee 17, 26-04-19, GREENLULUs; Interviewee 6, 16-11-21). Another interviewee reiterated that residents can be impeded by computer and technology skills, and that many of the current green projects have been initiated by 'new' inhabitants who "are better at communicating with the gemeente" (Interviewee 1, 25-10-21).

In terms of who participates in neighborhood decision-making, it is usually the same group of people (Interviewee 1, 25-10-21). Those in charge have asked themselves how to organize something where everyone can participate, "but in this area it's tricky. On the one hand, it's nice that the same people keep coming, they're very motivated and invested, but on the other hand, if you want to ask people specific questions about their living environments, you have to [approach them], actually ring their doorbell, and still a lot of people don't answer" (Interviewee 1, 25-10-21). The interviewee furthered explained that talking about their living environment is, for many people, "een ver-van-hun-bed-show," meaning that it is far removed from their personal lives because they have more pressing, immediate problems. For others, it is simply not interesting. As a neighborhood gebiedsmakelaar, she explained that "I, personally, would find it difficult if I lived somewhere and had to go to a meeting and speak in front of many people about exactly what I want […] it's already hard to simply express this."

[15] Much for the budget for redevelopment comes from the ontwikkelbuurt budget, because of its status as a developing neighborhood.

Another interviewee said that when it comes to participation and initiation of municipal funded greening initiatives, the people most likely to put in requests for greening projects are "women from 30 to 50 years old, especially moms who work parttime and are highly educate and have free time, but also the knowledge, experience, and qualities necessary to start an initiative—it's not just green knowledge, but also the social skills" (Interviewee 2, 25-10-21).

The level of participation also depends significantly on the type of urban project – a playground, for example, is more straightforward and people generally have more opinions about playgrounds than about a bridge or roundabout, where people often "don't have interest" or "there's too much information to convey and it's hard for people to see what their participation actually accomplishes […] I think what goes on is that people don't know beforehand how the process works" (Interviewee 1, 25-10-21).

Disconnect between participation & project implementation

While some forms of participation are successful, there are many factors that influence whether participation is ultimately effective in achieving expressed desires during implementation. Despite active efforts on the part of the municipality, a common complaint of residents from Amsterdam Noord is that they do not get feedback or recognition when they make formal complaints or give suggestions, making some hesitant to share their ideas (Interviewee 12, 22-11-21). Participatory processes can also be lengthy and complex; it you involve inhabitants in a plan to green their neighborhood, by the time "you bring it to the municipality and everyone in the administration has their say, then the manner in which the project is finally realized is not really reflective of the initial [participatory] plan" (Interviewee 1, 25-10-21). This is also because there are specific methods and criteria for how projects are conducted, and there are often budget constraints. The participation process can also be limited by policy and zoning restrictions (Interviewee 1, 25-10-21; Interviewee 5, 09-11-21). As a result of all these factors, many people have become skeptical of the effectiveness of participating.

Another issue is a disconnect that occurs during implementation is between those in charge of urban planning and those who are executing greening projects on the ground. A representative from the municipality explained "we create all these ecological maintenance plans and visions and policies, but [maintenance workers], they don't read that, it's just going to end up in a drawer somewhere and never be implemented" (Interviewee 5, 09-11-21). To remedy this and improve the connection between different departments, the authors of policies, such as the Green Vision, are attempting to create plans that are simpler and easier to understand, so that they can be implemented. Another interviewee explained that the management organization who is responsible for maintenance in public spaces is understaffed and underbudget, so a lot falls on the buurtteams (the local neighborhood representatives) (Interviewee 1, 25-10-21).

6.2.2 Municipal efforts to improve participation & respond to unequal power relations in urban governance

The Municipality is aware that there is often a disconnect with residents in the IJplein-Vogelbuurt, and this something it is actively responding to. In multiple district policy documents, including *We Work Together—IJplein/Vogelbuurt and Hamerskwartier* (originally Samenwerking IJplein/Vogelbuurt en Hamerskwartier), *Exploration of Opportunities IJplein/Vogelbuurt* (originally Verkenning van kansen

IJplein/Vogelbuurt), and the municipality's *Area Agenda 2021 for Oud-Noord*[16] (originally *Gebiedsplan 2021*), authors discuss the most important issues in the neighborhood and how they will work with residents, entrepreneurs, and community organizations to deliver tailor-made solutions and implementation new social programs (Gemeente Amsterdam, n.d.-e, 2020b; Gemeente Amsterdam et al., 2020). In the *Exploration of Opportunities IJplein/Vogelbuurt* policy document, the municipality explains that after extensive interviews with randomly selected residents, one of the main findings was that:

> "*We have regularly heard that we, as a municipality, listen to things but say nothing in return. In response, we have organized more frequent meetings in which we share what we are doing, practice telling people that there is no news yet, and look for forms of cooperation with residents that are based on clear agreements*" (translated) (Gemeente Amsterdam, 2020b).

This also implies customizing participation to specific situations and audiences, co-creation where possible, clear communication on how decision-making takes place, and transparency regarding timelines and processes. The idea is that urban planning and decision-making should be available to everyone, that there should be a clear overview of what is happening in the district and how individuals can get involved, and that participation should be tailored to the target audiences. Furthermore, feedback should be provided on how participation and input is then operationalized in actual plans.

Municipal staff and associated organizations dedicated to facilitating participation

As discussed in previous sections, there is an initiative to establish *buurtteams* (neighborhood teams) and *gebiedsmakelaars* (area agent) in all parts of the city (Interviewee 6, 16-11-21). A gebiedsmakelaar is a person who focuses on the 'openbare ruimte,' or public space, of the specific area. This person oversees responses to complaints from residents and encourages them to communicate what kinds of changes they would like to see for their neighborhoods. For large-scale renovation projects, such as the redesign of the Dirk supermarket parking lot and outdoor space, participation plays an important role. As a gebiedsmakelaar explained, over the past two years they have organized numerous meetings where people can bring up what they want improved in the area, which motivated many of the renovations being made, such as the Dirk and playground upgrades. She explained that "because the houses are so small, people really live out on the street, since many don't have much personal space; the majority don't have gardens, so the space outside needs to be set up for people to live there. It needs to be green, and it must be easy for people to meet each other" (Interviewee 1, 25-10-21). After such meetings, residents and the buurtteams have come up with a 'pleinenplan' – a plan with all the places that inhabitants have listed as places where people come together and require upgrades. According to the interviewee, not much has been done yet because acquiring funding for such projects is a long process.

In order to better facilitate participation, the municipality also works with organizations like '!Woon' (translated to 'living'), that help to bridge communication between residents and

[16] The 2021 Agenda for Oud-Noord builds on Noord's Agenda 2019-2022, a document for the larger area that identifies six priorities: care, area development, youth, accessibility, public space, and participation. These six priorities form the basis of policy choices during the allotted period and are translated into concrete tasks and activities aimed at confronting area-specific challenges.

government[17]. !Woon is an independent non-profit that provides residents with information about living in the city and assists with housing renovation. While most of its projects are funded by the municipality, !Woon often represents citizens in policy-making processes, gathering ideas and opinions from residents and then working with the city council to ensure various interests are represented. The challenge is involving citizens, without forcing opinions or ideas on them. !Woon also works with housing corporations representing citizens when their homes and neighborhoods are undergoing renovations.

Alternative forms of communication

The municipality recognizes that long-term stressors, such as poverty, can impair how information is received, and thus policy makers look for alternative means of communication (Gemeente Amsterdam, 2020b). This includes project pages on Facebook, an online residents' platform, and Whatsapp news sharing groups. It also includes a newsletter and residents' letters delivered to homes, meetings and information evenings, and flyers posted on information boards around the neighborhood. The municipality tries to take a proactive approach, investing in getting minority groups involved, to not only hear from those most likely to attend meetings with the city council.

6.2.3 Groen in de buurt: Citizen involvement in greening projects

The initiative, Groen in de Buurt (Green in the Neighborhood), supports citizens in the creation of their own greening initiatives and community projects (Interviewee 2, 25-10-21; Interviewee 7, 25-11-21). If you are an inhabitant of Noord, you can go to your local municipality and request assistance (Interviewee 5, 09-11-21) (*see Figure 13 for an example of possible project for citizen funding*). For such an initiative, it is required that it is not an individual endeavor, but done in a group, to there is enough support and interest. Especially with COVID-19, interest in greening projects has grown, and now many districts are running into the problem that they either do not have enough money or enough capacity, such as human resources, to assist all the proposed projects. A representative from the Amsterdam municipality explained that the stadsdeelen struggle with such immense demand and that the municipality is not equipped to handle the number of requests (Interviewee 5, 09-11-21).

Despite municipal capacity issues, many citizen-led greening initiatives have been funded. In addition to making neighborhoods greener, the initiative is important for social cohesion. It also takes some financial and managerial burdens off the municipality, as community initiators are responsible for continued upkeep of the green spaces that would otherwise extend beyond the city's capacity. There are many reasons why these initiatives are started. As explained by one interviewee, sometimes it comes from "frustration that the municipality is not taking responsibility," but in many other instances participants also feel it is important for their personal development (Interviewee 2, 25-10-21). With increased citizen participation in greening initiatives, representatives have realized "there's this gap between what the municipality thinks is good for the neighborhood and what the people living in the neighborhood think is good for them." (Interviewee 2, 25-10-21). Thus, Groen in de Buurt is an opportunity for residents to have more say in how their natural environment looks and functions.

For many of these greening projects, the municipality of Amsterdam defers to external consultants for support. One interviewee explained that for many of the larger municipal greening

[17] The city council expects residents to be involved in urban redevelopment, but because people are less likely to listen to the local government, objective organizations like !Woon are enlisted to get citizens involved.

projects, his company's focus is on working together with citizens, including citizen initiators and larger green organizations, with the goal being to strength participation in the city's green policy program (Interviewee 2, 25-10-21).

FIGURE 13. NEIGHBORHOOD PLANTER BOXES.

While the municipality is still in charge of larger green projects, such as parks, shifts in responsibly indicate a societal change; "I think that 20 years ago, everybody thought that it's one of the tasks of the municipality," but now people are starting to act themselves (Interviewee 2, 25-10-21). Part of this can be attributed to the worsening climate crisis which "really stimulates people to take initiative." This requires adaptations on the side of the municipality, to be able to adequately support citizen initiatives. Each district of the city has its own models for supporting and guiding citizen initiatives – some rely entirely on volunteers, while others pay professionals to act as green coaches. This means that the type and sometimes quality of support varies; "the South is the richest part of the city, and they also have the most professional guidance from local green organizations. It just kind of historically grew that way—25 years ago, most of the initiatives were in the South. It really helps when you are well educated, and you have free time and the luxury of a high income. So, you saw more green initiatives arise there" (Interviewee 2, 25-10-21). The South also benefited from having a higher budget, although over the past years the budget distribution has been leveled between the different districts, but districts still get to decide how to spend their allocated budgets.

6.3 RECOGNITION JUSTICE

6.3.1 EQUITY & EXCLUSION IN URBAN SPACES

Over the years, the municipality has come to realize that it cannot only invest in physical infrastructure, such as housing, but also needs to invest in social structures and local economies, specifically in struggling neighborhoods. This means getting a sense of how the community wants to

change and supporting vulnerable groups, like youths and the elderly, as well as building suitable social facilities, such benches for the elderly to sit on, after school activities for children, or facilities specifically for teenagers. At the same time, efforts to create a 'mixed' neighborhood with fewer vulnerable people, does not

Divisions and separation in green spaces

The community garden at IJplein represents an interesting case study for justice related to inclusion of needs and preferences. While the interviewee from IJplein explained that members of the garden have formed a very close community, defined by democratic deliberation and unique customs and habits, the first divide in the group is based on which side of the river the participants come from. According to the interviewee, the divide is roughly 50/50. The second divide is those with a white background and those with a Moroccan or Turkish background. As he explained, the majority of members are white, with only approximately 10% non-white. As he pointed out, this does not reflect the ethnic composition of the neighborhood surrounding the garden. He further explained, however, that it is part of their policy to connect with the neighborhood and help accommodate families with Moroccan and Turkish backgrounds. The garden is a public space, and people are welcome to enter even if they do not participate in the gardening. There is a small playground for children, and they host neighborhood parties and harvest festivals that are popular amongst residents.

The garden also has a 'Dutch integration project,' aimed at attracting people with a migration background. From this project, and from interacting with the neighborhood, they discovered multiple barriers to participation. One man of Moroccan origin explained to the man I interviewed that he did not want to join the garden because: "in Moroccan culture, the gardener is the king or queen of his or her own garden. He says, you have this group, this community, and all these democratic debates about everything, every little detail. He says, I don't like that, I bet you won't get any other Moroccan to step in" (Interviewee 4, 04-11-21). The other reason the man would not join the garden was because most participants are female. As explained, it has been much easier to recruit female members of Turkish and Moroccan backgrounds. By creating 15 private allotments on the property, women of different backgrounds have felt comfortable joining the garden, but there is still a cultural barrier— "two ladies who are members of the garden almost never join us during the coffee break. So, I asked them, why don't you join? They said, well, you make all these jokes, and we don't understand your humor" (Interviewee 4, 04-11-21).

There are also examples of exclusion in parks, including Noorderpark—there is a small café in the middle of the park that was established as "a place in the park where everybody was welcome. But because the people who initiated it and who worked there and who got the funding for it were not the same people as the poor people of the neighborhood, [the poor people] immediately got the feeling that, 'oh, that's not for us'" (Interviewee 3, 04-11-21). The people who run it have tried to connect with locals, including homeless people, asking how they can facilitate a relationship, "but it never really works."

Urban redevelopment for who?

When asked about challenges for the city of Amsterdam, an urban planner explained that the rate of development of houses is happening very quickly—this is a good thing, on the one hand, because "there's a shortage of housing, and people want to go to Amsterdam" (Interviewee 8, 21-02-22). But on the other hand, the speed at which they are building means that construction is less "conscious," and lacking "reflection on how we do it" and "sensitivity towards local communities," whose

neighborhoods are rapidly changing. According to the interviewee, a lot of people are asking what will happen to their neighborhoods and are saying that they do not identify with the changes. A citizen from the neighborhood explained that she feels "one of our biggest points is that the people that are already here should also benefit from everything that is coming. We want the young people to be able to live in the new buildings, but also to have opportunities just to work or do an internship in all of the new commercial activities" (Interviewee 12, 22-11-21)

The same interviewee explained that many feel that the upgrading of urban space is done to accommodate newcomers to the neighborhood. One example in the neighborhood was the issue of too-large speed bumps that were difficult to see at night and even more difficult to cycle over. Then, as soon as "new people" started moving in, these speed bumps were instantly removed when those groups complained, even though older residents had been trying to get them removed for years (Interviewee 12, 22-11-21). Similarly, there was a lot of trash on the streets, and "then new people with money come in, and, of course, not only with money, but also with influential contacts, and then things start changing." The changes in themselves can improve the neighborhood, but there is an underlying implication that renovations are not for the original residents, but for the new residents. There is also the fear that with these renovations comes a decline in available social housing and irreversible changes to the neighborhood composition. The interviewee further explained "every week there's an apartment coming on Funda for sale." In response, Amsterdam residents have formed an action group called Niet te Koop, an organization which has now been making an appearance in Noord, to protest the need for more housing:

> *"They started selling these houses and they promised us new social housing in the hamerkwartier, for example. But those will take like six or seven years, and the apartments they are going to build are much smaller, I think the majority are studios or two room apartments, so that's not for families. And the houses they are selling right now, those are for families. And so there, you really feel the gentrifying process. It's like, okay, you used to have this neighborhood, which was almost 100% social housing, and how we're importing richer, young urban professionals. And of course, students, we love students, but that's only temporary housing, which is another thing that really bugs me. I think we should start making smarter choices, but at the moment, the only thing that seems to count is money"* (Interviewee 12, 22-11-21).

6.3.2 Citizen activism

In response to urban changes and challenges, there are multiple activist groups present in Amsterdam Noord that are pushing for recognition and change. The activist group, De NoordAs, has been fighting against growing housing prices in the neighborhood, and is committed to protecting the long-term, vulnerable residents who are threatened by changing neighborhood dynamics and rising housing prices (NoordAs, n.d.). Verdedig Noord (*Defend North)* is another organization that endeavors to act against gentrification, explaining that "the changes and improvements in Noord should not be at the expense of people who have lived there all their lives" (*translated)* (Verdedig Noord, n.d.). They argue that the "so-called upgrading of neighborhoods" only increases the gap between rich and poor, resulting in exclusion and dispossession. As part of their platform, Verdedig Noord demands that no social rental housing is sold by housing corporations, that people who have lived in Noord all their lives are given priority in housing, that new entrepreneurs make social contributions to the neighborhood, and so on.

As explained by an interviewee, the activist groups have come together to offer an agenda to the city mayor, starting with 15 demands structured around four topics: greening, housing, infrastructure, and participation (Interviewee 12, 22-11-21). What started the movement, in part, she explained, was that there "were all these participation projects, but in the end, we had the impression that no one is actually doing anything with our input." They now have a small shop at Mosveld that serves as a meeting place—passersby can stop in to learn about neighborhood initiatives and voice their opinions, making it an inclusive, open space. As the interviewee explained, "people who are not into politics often don't start with solutions, they just say, 'this bugs me.' So, I'm not sure yet how we are going to transform some of these complaints into more positive or constructive points. We're in the process of just talking to people and asking them, 'what do think, what do you feel?" She further explained that it is not just about what is wrong, "there's also a lot of beautiful things that we don't want to see threatened, like the very strong community. There's beautiful stuff we want to defend. And I think it's important to show that, and to make it visible, all these nice things that are not that obvious to people from the outside."

7. DISCUSSION: THE POLITICIZATION OF GREEN AMENITIES

With this thesis, I aim to contribute to academic debates on the role of environmental justice in urban greening. By conducting a qualitative analysis of greening in the IJplein-Vogelbuurt, a neighborhood undergoing processes of urban renewal and gentrification, the thesis explores the relationship between green policy and implementation.

Overall, this research has demonstrated how greening is inherently political (Anguelovski, Cole, et al., 2018; Anguelovski, Connolly, Masip, et al., 2018). Despite good intentions, urban renewal projects are often uneven processes that can reinforce class divides and unequal power relations (Connolly, 2019). It has also shown that by examining who has the power to participate in decision-making processes and the ways in which those decisions are made, it becomes possible to understand how and why environmental benefits and harms are not equitably distributed, and the ways in which urban processes create winners and losers (Sze & London, 2008). The following sub-sections discuss the role of environmental justice in green policy and practice, and then the relationship between greening and gentrification, concluding with a reflection on the research as a whole.

7.1 ENVIRONMENTAL JUSTICE: FROM POLICY TO PRACTICE

7.1.1 JUSTICE IN MUNICIPAL POLICY

Building on the reflections in Section 5.4, greening in Amsterdam today is defined by the growing pressure from the housing market. With rising competition for space, greening is increasingly valued—for its human value, as well as its ecological value. It also has its own market value, enhancing the worth of an area to residents and businesses, and contributing to overall urban quality of life. Despite a scarcity of space, greening is invaluable to urban areas, providing reprieves in dense urban neighborhoods, and making areas more social, livable, and multifunctional.

Evident from Amsterdam's array of social and environmental policies, the municipality considers many different aspects of environmental justice, striving to create an inclusive city. Despite the assertion by Anguelovski et al. (2020) that greening agendas rarely include tangible measures for ensuring that green solutions benefit all residents, there is a relatively high level of awareness within Amsterdam's municipality of the potential negative consequences of urban renewal. It became evident during this research that the municipality—specifically, the spatial planning department—has begun to rethink its role in society and what constitutes adequate participation and inclusivity. While the city uses growth measures as indicators of success, it also recognizes that untethered competition without intervention is resulting in gentrification and social displacement of lower- and middle-income groups. With Amsterdam becoming increasingly unaffordable and a "social and economic monoculture", urban planners and policymakers continue to actively encourage civic engagement, stressing the importance of co-creating desirable urban spaces, ensuring affordability, and preventing the dispersal of lower- and middle-income groups to the peripheries of the city (*translated*) (Gemeente Amsterdam, 2021).

While it is evident that the municipality of Amsterdam is aware of the benefits of greening and strives for participation, the municipality still falls short of truly effective strategies and implementation of inclusionary practices. Green policy is broadly acknowledged for how it will improve quality of life—for example, by making areas more attractive, encouraging outdoor activities, and mitigating the effects of climate change—but the direct relation to vulnerable populations is not always explicitly recognized.

The Comprehensive, in its creation, used participatory planning methods, but it is not evident how representative these methods were of the diverse population that is Amsterdam, a common issue of planning in which participatory methods do not always lead to efficacy, leading to citizen disenchantment with participation (Bennett et al., 2019). This is again linked to the issue of space—even when planning projects use exemplary participation practices, they still must fit within strict planning requirements for how spaces are used and designed. It also implies a disconnect between policy and practice

When asked what the inspiration was for using a participatory approach, an author of the Comprehensive and urban planner explained that it was in response to the community expressing the need to be more involved (Interviewee 8, 21-02-22). He further explained that "we can do better," referring to the municipality; "we can do a lot better when it comes to civic engagement." It was thus my impression that the municipality is aware of what it *should* be doing, but what happens in practice is not consistently in line with what they hope to achieve. This could be because not everyone in decision-making roles is as keen to introduce participatory practices into an already highly complicated bureaucratic system, the benefits of participation are not fully understood, and that there are systematic constraints that prevent full participation from always being feasible. The Agenda Samen Stadmaken is perhaps the best example of inclusive policymaking, and it is recommended to give such policy a more prominent role in future legislation, embedding the concepts and guidelines for participation, accessibility, and representation throughout policy.

Still, there is a clear shift in focus between earlier policy documents, which focus more on distributional justice, to newer policy documents, which broaden the scope of justice to include aspects of procedural and recognition justice. In older policy, for example, it is explained that Amsterdam should be made greener, which, along with other improvements, will make the city socially sustainable and prepared for the future, but in focusing on the citywide benefits of greening, it implicitly assumes that benefits will be felt equally. This is indicative of the way greening is commonly assumed to be "politically neutral" and its effects are expected to be universally experienced status (Anguelovski, Cole, et al., 2018; Anguelovski, Connolly, Masip, et al., 2018). Until the Comprehensive Vision, aspects of environmental justice were mostly considered in its most rudimentary forms, such as references to spatial distribution of green amenities. The more nuanced forms of justice were lacking, such as experiences of marginalization in green spaces and participation by vulnerable groups (Anguelovski, Connolly, Garcia-Lamarca, et al., 2019; Langemeyer & Connolly, 2020).

The Comprehensive Vision's primary ambition is to be an 'inclusive city', a broadening of language from previous documents, in which the objective is to be an 'undivided city'. This new language suggests an environmental justice angle in spatial development and is accompanied with documentation on how to improve diversity and autonomy in designing public spaces. The policy appears to be well-rounded and inclusive, but effectiveness during implementation will require a consistent adherence to participatory and inclusionary practices, from the beginning to the end of green interventions. Given how new the Comprehensive Vision is, it is not yet clear how such discussions of inclusivity will manifest in practice, and how policy will translate into bureaucratic changes, but it marks a shift in policy perspective.

7.1.2 Justice in practice in the IJplein-Vogelbuurt

In greening initiatives in IJplein-Vogelbuurt, there are many efforts made to consider the social dimension of sustainability. As one of the fastest growing districts, the municipality aims to transform

Amsterdam Noord into an “undivided neighborhood”, connecting areas like IJplein-Vogelbuurt with the Hamerkwartier to ostensibly strengthen the social fabric whilst creating new opportunities and celebrating the unique qualities of the different areas. Despite such efforts, this thesis has also shown that attempts to ‘mix’ the neighborhood – from an area for the most vulnerable to a place for people of all social backgrounds – have not yet succeeded in lessening a staunch divide between classes. Furthermore, there remains a disconnect between what the municipality aims to achieve, with all its good intentions, and what is experienced on the ground. The management and use of public spaces are complex and inherently political, making equitable green development a complicated process.

Unlike in other cities and neighborhoods, the quality and quantity of greening in IJplein-Vogelbuurt does not correspond with socio-economic status (Astell-Burt et al., 2014; Byrne, 2018; Dahmann et al., 2010; Grove et al., 2018). Yet, there are other factors that indicate greening is not always as equitable or apolitical as it is portrayed to be. Processes of urban change and redevelopment, which include revamped green agendas, are happening so rapidly that people feel alienated from public spaces and do not identify with the changes. As was shown, many of the changes are initiated by the ‘gentrifiers’ themselves, similar to what has been described in the literature (Anguelovski, Connolly, Garcia-Lamarca, et al., 2019; Anguelovski, Connolly, Pearsall, et al., 2019). There is also a feeling of temporality in that many green projects seem to be impermanent or threatened by impending redevelopment.

Distributive justice

Regarding distributive justice, IJplein-Vogelbuurt has an array of green amenities that are relatively well distributed. As one of the less dense districts of Amsterdam, there are multiple parks and green squares that most residents feel meet their needs. Residents are concerned, however, that rapid development of the neighborhood is threatening the quality and quantity of green space. As more and more people move to the city, Noord faces the challenge of being able to house newcomers without compromising on green amenities. There are further disputes regarding how to best use green space—some feel that green areas must remain ‘wild’, while others take more utilitarian stances on how to use green areas to meet the needs of people. Overall, the issue of space was repeatedly raised, and there is a sense of impermanence attached to many green projects.

Existing green spaces also contribute to the appeal and value of the area, and as the city becomes increasingly popular and housing increasingly scarce, Amsterdam Noord is seen as green, spacious contrast to the rest of the city. So, even if *new* green amenities are not necessarily creating the ‘green space paradox’, the city as a whole is rapidly gentrifying, and the existing green amenities in Amsterdam Noord—in combination with improved connections between the area and the rest of the city, and relatively low housing costs—have increased the appeal and value of the area (Anguelovski, Connolly, Masip, et al., 2018; Cole et al., 2017; Pearsall & Eller, 2020; Wolch et al., 2014).

Participatory justice

As for participatory justice, for residents who want to participate in greening, there are ample opportunities. In fact, many greening initiatives encourage citizen participation, based on the premise that this will result in more equitable and inclusive urban environments. However, for residents who are less proactive, there does not seem to be as much of a strategy for how to best involve them (Anguelovski et al., 2020). It also remains unclear how consistently participation occurs throughout urban greening projects, and thus it is recommended that projects more clearly outline how participation will play a role during different management phases, including planning, design,

implementation, and maintenance of green projects. For full participatory justice, it is critical that the participation process is adapted throughout a project, and that it is further adapted for specific groups, particularly marginalized groups that historically have lower participation rates (Fors et al., 2021).

Recognition justice

Recognition justice in IJplein-Vogelbuurt is the most nuanced and the least overt in this research. There are many different groups in the area, including the long-term white working-class residents and those of non-Dutch origin. As explained above, some older residents expressed uncertainty over the changes in Amsterdam Noord, questioning how municipal funding is allocated and feeling a loss of place. The sense that greening is not for them suggests that green planning does not adequately represent needs and preferences of different social groups, and that more could be done to involve these groups in planning and participations processes. There are also certain spaces that attract specific groups of people—for example, the community gardens attract primarily white, educated females, and it is evident from the ways in which people use public spaces that there remains a strong social divide.

There are many examples of how long-term residents feel excluded in Amsterdam Noord provided throughout this thesis. Long-time residents feel that urban renewal projects in Amsterdam Noord are an afterthought, or otherwise are not for designed for them, but rather for the more desirable new residents who have influence in decision-making and can afford rising living expenses. Participation is an especially sensitive topic in Noord from a recognition perspective—many feel that their voices are not heard in decision-making processes and that new construction is prioritized over investments into existing residences and public spaces. There is also a clear sustainability of privilege (Campbell, 2013; Mohai et al., 2009), seen in the fact that residents living in poorly-insulated, neglected homes are asked to reduce their water consumption and make other personal sacrifices to reduce gas consumption.

7.2 JUSTICE & GENTRIFICATION

This research further confirms a possible link between greening and gentrification, but it also raises the question of whether greening leads to gentrification, or whether gentrification results in increased greening (in that the 'gentrifiers' initiate or encourage greening initiatives) (Anguelovski, Connolly, Garcia-Lamarca, et al., 2019; Anguelovski, Connolly, Masip, et al., 2018; Cole et al., 2017; Pearsall & Eller, 2020; Wolch et al., 2014). Arguably, the answer is both—the green amenities Noord has to offer attract higher-income residents (in addition to the new Metro line that has vastly improved mobility), and in turn, they inspire local urban renewal projects. In both cases, greening can be seen as something catering to newer, higher-income residents. Another finding was the fact that some residents felt that greening is under threat from development, which makes evident how nuanced greening can be and raises the question of what kinds of green amenities are preferred or more valued (and valued by who?), and how can planning adequately couple housing necessities with greening necessities? A green façade, arguably, does not have the same value as a park, but it is considerably more space efficient and compatible with urban densification.

From the objectives in *Samenwerking* it is apparent that the neighborhood aims to make a shift to a more middle-class demographic, and residents from IJplein-Vogelbuurt are encouraged to move to the social and middle-rent housing in the Hammerkwartier (Gemeente Amsterdam, 2020b), but, as one interviewee made clear, this is done by offering the long-term residents incentives to leave and then encouraging wealthier groups to move in, simply exchanging the old residents for a newer

class of people. Despite the 40-20-20 principle and ideations of affordability and accessibility, new houses are often inadequate for families, and long-term residents no longer feel they are welcome in Noord. The neighborhood *has* become more mixed, but this does not mean it is more cohesive. Building on the critique of 'state-sponsored gentrification' of Uitermark & Bosker (2014) and Wijburg (2021), it has become evident that social-mixing policies are effectively displacing lower-income groups from neighborhoods like IJplein-Vogelbuurt, in that they no longer feel welcome and no longer have the same living opportunities.

7.3 REFLECTIONS ON RESEARCH & FUTURE RESEARCH PATHWAYS

This research provides insights on greening in the city of Amsterdam and can serve as starting point and inspiration for equitable green interventions. Because environmental justice is still a relatively new concept in Europe, the research presents a method to analyze the role of justice in green governance, providing a novel framework for understanding the three overarching categories of justice. Ideally, this framework can be used in further analyses of green interventions, serving as a model and entrance point for research on environmental justice in greening initiatives, especially in cities that already have high-level greening agendas, such as Amsterdam. It also has the potential to support policymakers in understanding the impact of environmental decisions and practices on the living conditions of different groups of people, helping them to take concrete measures to ensure the widespread benefits of greening solutions (Anguelovski et al., 2020; Köckler et al., 2017; Laurent, 2011).

While this thesis takes a traditional approach to justice in urban greening, as Anguelovski et al. (2020) have expressed, this tridimensional account of justice "only allows for limited view of the ways in which residents experience (in)justice" (p. 1750). As a result, narratives of urban greening are simplified to fit within these three categories, thus narrowing the potential scope of activism and urban planning. Justice also exists in more nuanced, complex, and intersectional forms, and therefore the framework of environmental justice needs adapting and expanding, as it may not cover the full spectrum of experiences. Although beyond the scope of this thesis, it is also important to recognize that environmental justice has been criticized for taking a Western, universality approach to development, and thus needs to be decolonized, especially when applied to non-Western contexts (Svarstad & Benjaminsen, 2020).

It is recommended that future research on the topic be conducted to validate and further verify the findings of this thesis. As a master's thesis, with time restraints and limited capacity, the results of this research are not as extensive or in-depth as they could be. It is therefore not possible to claim that 'data saturation' was achieved, a principle used to determine when there is adequate data collected in a study to produce robust and valid results. Regardless, the 12 interviews complement each other and align with desk research, indicating a level of reliability of the findings.

Future research building on this study could take multiple pathways. First, a more comprehensive survey of the neighborhood and additional interviews would bring in more perspectives and help paint a more nuanced picture of the situation. Expanding research to include other neighborhoods in Amsterdam would make the connection from policy to practice fuller, and potentially bring to light significant differences between areas. Another idea would be to compare neighborhood satisfaction scores between neighborhoods in Amsterdam, to better understand how groups feel about their living environments. Since this research only examines the neighborhood-city relationship, additional research could expand the scope to examine national policy, and then compare different cities. Recognition justice (specifically regarding the experiences of different

groups) was lacking the most in my research, so future research could place more emphasis on interviewing people from a larger variety of social and cultural backgrounds, asking them to describe experiences in public spaces. Research could also focus more on the ways the people directly affected by environmental interventions perceive such interventions (Svarstad & Benjaminsen, 2020), and consider the role of environmental justice in other planning activities, beyond green amenities. Another suggestion would be to further explore the roles of activism in urban greening, and the ways in which activism has impacted the relationship between citizens and governing bodies.

The results would also be made more salient if the interviews and policy analyses were combined with quantitative research, for example by analyzing the relationship between incomes or housing prices and the distribution of green amenities. Another example could be observation-based quantitative research, in which the researchers physically observe who is using specific green spaces and the ways in which they are interacting with these spaces.

8. CONCLUSION

In Amsterdam Noord's transition from a neglected working-class neighborhood to a popular, up-and-coming area for starters and expats, processes of urban renewal have faced dilemmas of how to couple the need for housing with the need to provide adequate green space. This research considers 'urban renewal' agendas from the environmental justice perspective, combing both environmental and social sustainability, and ultimately making the argument that one cannot be achieved without the other. Green amenities can be beneficial to local communities, representing their preferences and serving the purpose of climate change mitigation/adaptation, without resulting in exclusion or displacement. If green projects do not take an environmental justice lens, they could significantly impact the socioeconomic makeup of neighborhoods and run the risk of widening the social divide in the area.

To conclude this thesis, I answer each research question, building on the discussion and including recommendations for improving environmental justice in the city of Amsterdam.

***How can environmental justice be applied in the context of urban greening and how can it be used to understand green inequalities*?**

My research has shown that environmental justice is an adequate lens through which to view greening projects. As a theoretical concept, environmental justice is expansive and evolving, and can be used to assess the social side of environmental endeavors, both in policy and practice. It can be used reactively, to assess when injustices have been committed, but may also be employed as a proactive measure to ensuring recognition and participation in reimagining the relationship between humans and the environment (Campbell, 2013). In this sense, rather than using the concept to mitigate and remedy injustices, it becomes an important part of planning, in that it builds justice into the decision-making process from the start. It is interesting to point out that there is not always a clear divide between the different types of justice. Recognition justice, for example, is often contingent on adequate forms of participatory justice, making them interrelated and interdependent.

The research offers a means to assess the role of justice in green governance, providing a framework for understanding the three overarching categories of justice. The framework can be used in further analyses of green interventions, both in Amsterdam and in other cities, serving as an entrance point for research and policymaking on environmental justice in greening initiatives.

To what extent does municipal green urban policy include measures to promote environmental justice in green development?

To answer the first empirical question, I conducted two in-depth analyses of the Green Vision and the Comprehensive Vision. While neither explicitly recognizes the concept of environmental justice, both portray greening as something valuable for people, whether they actively engage with green spaces or indirectly benefit from the healthy living environment it creates. Overall, green policy is broad, often explaining that greening will improve quality of life, but without explicit recognition of how greening is not uniformly experienced. Still, there are clear indicators that the municipality is aware of the social side of greening and urban renewal and is taking significant steps to address this in planning projects. In many ways, Amsterdam green policy is exemplar of equitable policymaking and while there is a lot to be learned from Amsterdam's most recent greening policies, there is still room for improvement, especially when it comes to civic engagement. The municipality is aware of the need

for greening benefits to be equitable, but it faces the challenge of how to overcome bureaucratic challenges that impact effective participatory strategies.

To enable equitable greening, it is recommended that greening be an integral part of all development policy—rather than being reserved for the environmental and sustainability departments of the municipality, it could be integrated into housing and spatial planning departments, as well as economic development, thus giving environmental justice a more prominent role in legislation. A balance between adequate greening and social housing/subsidy systems, and coupling investments in green infrastructure with investments in social infrastructure, could also help make greening more just (Anguelovski, Connolly, Pearsall, et al., 2019). This is related to the importance of zoning and ensuring there is enough housing for different income groups through regulations and permanent social housing. It is also recommended that the city widely adopts the concept of 'the commons', mentioned in the Comprehensive Vision, but not yet a key part of Amsterdam policy. The commons include alternative forms of housing, such as cooperatives, which ultimately allow citizens to have a share in the development of the city, giving them autonomy and ownership over their living spaces, which is especially valuable if they do not otherwise have the means for traditional private ownership. The city can also continue to foster the shift in leadership, from top-down to bottom-up ownership and management of public green spaces. As seen in IJplein-Vogelbuurt, policy alone cannot achieve just development.

How is IJplein-Vogelbuurt experiencing green development and regeneration, and how does it align with principles of environmental justice?

Regarding the second empirical sub-question, it is evident from the 12 interviews that the neighborhood is undergoing significant transformations, so much so that some residents feel they must defend Noord from urban development and others feel they can no longer identify with what their neighborhood is becoming. While the large parks in IJplein-Vogelbuurt are currently not under threat, there have been disputes about how to use the spaces. There are also multiple initiatives to renew areas, adding green amenities and multi-use spaces. Residents can get involved with the various policymaking, urban planning, and greening initiatives, but this often requires motivation, time, and certain competencies. As a result, the same groups of people tend to participate—often native Dutch speakers who are educated and have time to spare. Given how many long-term, lower-income residents feel new amenities and developments are not for them, increased use of participatory methods would increase ownership and rekindle a sense of place and belonging for those residents. The challenge remains of how to involve citizens in a way that is constructive and representative but is not so tedious and complicated that it prevents action.

What is the relationship between greening and gentrification in the case study?

As mentioned in the discussion, greening and urban renewal initiatives are largely seen as something for wealthier newcomers to the IJplein-Vogelbuurt—greening both attracts 'gentrifiers' and is increases as the result of initiatives inspired by the 'gentrifiers'. Still, while this thesis offers anecdotal evidence of green gentrification in IJplein-Vogelbuurt, it is not possible to fully conclude a direct correlation between all green amenities and gentrification. As an urban planner explained, because there is so much gentrification already occurring, it is difficult to determine a causal relationship between exclusion, rising prices, and greening (Interviewee 8, 21-02-22). Nevertheless, it can be argued that greening does increase housing prices, as seen next to the garden at IJplein. As explored in the empirical section of this thesis, it can also be concluded that there is a relationship between

available housing and access to green amenities. In a city such as Amsterdam where space if very limited, there must be a balance between adequate housing and sufficient green spaces, to preserve quality of life for both long-term and newer residents. Greening is also employed as a marketing strategy, used to advertise the appeal of an area for both tourists and potential residents, so whether it directly causes gentrification, it remains a factor that increases the appeal of a neighborhood (Haase et al., 2017). As the city continues to implement greening interventions, it will be interesting to see how new greening and urban renewal do or do not contribute to gentrification.

Finally, to answer the primary research question, '***in what ways do urban greening strategies in the city of Amsterdam support principles of environmental justice, and how does the way justice is conceptualized in green policy compare to how greening is implemented and experienced by residents of a gentrifying neighborhood*****?***',* this research has shown that greening strategies, in the larger context of urban renewal of IJplein-Vogelbuurt, aim to improve public spaces for the benefits of both people and the environment.

The urban greening strategy in Amsterdam, and more specifically Amsterdam-Noord, is multifaceted, involving the redevelopment of existing areas while also building new ones. While Noord is historically a very green area, it is perceived as being under threat by new housing developments and the influx of residents who are wealthier and complicate the social cohesion of the area. With the recurrent issues of space and the need to accommodate a growing population, the challenge is how to increase density without compromising existing green infrastructure. While distributive justice is very prevalent in both policy and practice, and interventions are increasingly tailored to the needs of specific areas, there is room for improvement when it comes to participatory processes and representation of lower-income and minority groups.

This thesis has shown that it is arguably impossible to separate urban greening strategies from the broader socio-political context because the urban environment is produced through so many intertwined political, economic, social, and ecological processes (Cornea, 2019). As a result of these findings, it is evident that urban greening strategies could better consider the various dimensions of environmental justice to be truly effective. Effective urban greening can be used to build emancipatory (rather than exclusionary) spaces and be used to reimagine distributions of power, especially in favor of historically marginalized groups in decision-making processes (Anguelovski et al., 2020).

Although greening is a complicated process, greening and sustainability projects in cities can lead to positive changes if they bring value to communities. This research has shown that it is not just about the green space itself, but about what the green space represents and who it attracts. This drives home the necessity for explicitly recognizing how space can be used in a way that accepts all people. Even when faced with bureaucratic challenges, urban planning can be made more just by taking the time to employ participatory methodologies, and then being fully transparent about how decisions are ultimately made, thus building trust in participatory processes.

I want to finish by arguing that bottom-up greening seen throughout Amsterdam signifies an important shift in ownership of green spaces—instead of being seen as a top-down, municipal responsibility, residents can contribute to meaningful urban greening. Representative participation can thus be seen as a means to take back the city.

8.1 RECOMMENDATIONS

Finally, although not a comprehensive list, I present multiple suggestions for how green policy could be made more environmentally just. Ideally, the principles of environmental justice can be applied

throughout greening and more general urban planning projects, resulting in a city that is both equitable and just. The recommendations are as follows:

- ◊ Incorporate standards to ensure that (environmental) justice and equitable development play integral roles in urban policy and are featured in municipal decision-making processes across departments (i.e., not just the environmental/sustainability departments). Include tangible measures to ensure that green solutions benefit all residents, especially vulnerable and historically marginalized groups.
- ◊ Clearly outline how participation will be facilitated during different management phases, including planning, design, implementation, and maintenance of green projects; adapt participatory methods to specific groups (including directly approaching people), particularly marginalized groups that historically have lower participation rates (Fors, Hagemann, Sang, & Randrup, 2021). Continued interaction between decision-makers and citizens can help increase transparency and build trust.
- ◊ Couple greening with adequate social housing and investments in social infrastructure. As neoliberal rationalities spread, it is critical to regulate housing, ensuring sufficient (and permanent) housing for different income groups, especially for middle income groups who are not entitled to social housing but cannot afford rental prices. This includes controlling for size (e.g., homes for families, not just the maximum number of units) and raising the rental values of properties (set by the national housing valuation system, woningwaarderingsstelsel) so that a larger portion of rental properties can be regulated.
- ◊ Introduce alternative forms of land ownership, such as cooperatives (representing a different type of justice in which groups re-imagine spaces and have autonomy and ownership over their living situations). Continue to promote bottom-up ownership of public spaces through citizen-led initiatives.

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APPENDIX I. INTERVIEW QUESTIONS

Each interview began with an introduction to myself and my research. I ask if they give me permission to record and provided a consent form that states that their responses will remain anonymous. The interview questions served as guides, as the interviews were semi-structured. This mean that the interviews were often more like conversations. I also tailored each interview to the specific person being interviewed.

Groups A & B: Policymakers, decision-makers, & municipal urban planners/green strategists

Introduction

- Describe role & responsibilities
- What are your priorities as a _____?

IJplein/Vogelbuurt (if relevant to the interviewee)

- How would you describe the neighborhood?
    - What is quality of life for the residents of Amsterdam Noord?
    - What challenges or problems does the neighborhood encounter?
- How has the neighborhood changed over the last decade or so?
- To what extent are you involved in urban planning?
    - What can you tell me about urban planning in Amsterdam Noord? What are the Council's goals/visions for the area?
- What is your perception of the green spaces in the neighborhood?
- Can you tell me about housing current projects in the neighborhood?
    - What is the planning and rough timeline for the neighborhood?
    - What is the vision for the neighborhood?
    - How do projects relate to larger municipal policies/plans?
- What does the future of the neighborhood look like?
    - What are threats to the future?
    - What does an ideal future look like?

Greening (including policy & strategy)

- Can you describe Amsterdam's greening strategy and agenda, and the role that the District Councils play? What drives greening in the city of Amsterdam? Why is the city investing in green infrastructure? (*Specifically asked to the Council member interviewee*)
- What kinds of policy instruments (regulatory, economic, communication, spatial) are being used, and which are most effective in implementing greening?
- What criteria are chosen to determine the locations of new green spaces or improving existing spaces? (*distributive justice*)
    - How do you envision people interacting with these green spaces?
- Who is involved in the planning and implementation of green infrastructure? (*procedural justice*)
    - In what ways do citizens participate in the decision-making process? How do you engage with citizens throughout a greening or redevelopment project?
    - How do you respond to people's needs and requests?

    - How do you communicate new greening projects and other information with the public?
- What difficulties arise in relation to the creation of greening, especially in IJplein/Vogelbuurt?
    - What kinds of conflicts do you encounter? (e.g., conflicting priorities about usage of particular spaces, different stakeholder interests)
    - What kinds of restrictions or setbacks do you encounter?
    - What needs to be done to overcome these restrictions?
- How would you describe access to green space in Amsterdam Noord? What prevents access to green space? How do you ensure access by different social groups? (*recognition justice*)
    - What are potential or existing barriers for people to access certain green spaces? How do you think these barriers can be overcome?
- Based on the current trajectory, what does the green future of Amsterdam (and more specifically, Amsterdam Noord) look like, realistically? And what does the ideal future look like? What kinds of obstacles do you anticipate to achieving that ideal future?

Housing/Anti-displacement tools

- How do you perceive access to housing in Amsterdam?
    - What about specifically for lower-income groups?
- How is the municipality ensuring that Amsterdam stays affordable, especially for vulnerable residents?
    - What is being done in Amsterdam Noord to ensure that there is enough housing, and that it is equitably available?
    - How is the municipality ensuring that Amsterdam stays socially diverse?
    - What are constraints to supplying adequate housing?
- Do you think that current policies respond to the problem of access and demand?
    - How do you evaluate their success?
- What are your thoughts on gentrification? How is Amsterdam Noord experiencing gentrification?
- Which policy tools (rent control, housing coops, land trusts, social housing) are most effective in addressing issues regarding gentrification? Examples:
    - Land use tools (zoning)
    - Developer requirements
    - Financial schemes
- **What is the relationship between neighborhood redevelopment and the housing crisis? How do you think greening impacts a neighborhood?**
    - Is there a relationship between greening and urban renewal, and access to housing? If yes, elaborate
- What kinds of policies would you like to see enacted to ensure that housing is accessible? And how do you envision these policies interacting with greening policies?
- What impact has the COVID situation had on urban greening and planning? What opportunities does it provide? How has it hindered planning?

Group C: Housing developers

Introduction

- Interviewee's position – what are their responsibilities, what does daily work look like?
- Can you please introduce your company/organization? What are your goals? What is your vision as a company?
- How has urban planning changed over the last decades in Amsterdam?

IJplein/Vogelbuurt

- How would you describe the neighborhood?
    - What is quality of life like in the neighborhood?
    - What are challenges or problems the neighborhood encounters?
- What are priorities for improving the neighborhood?
- How has the neighborhood changed over the last decade or so?
- What is your perception of the green spaces in the neighborhood?
- What does the future of the neighborhood look like?
    - What are threats to the future?
    - What does an ideal future look like?

Housing

- Can you tell me about housing current projects in the neighborhood?
    - What is the planning and rough timeline for the neighborhood?
    - What is the vision for the neighborhood?
    - How do projects relate to larger municipal policies/plans?
- How do you decide where to build new housing or renovate existing housing?
    - Who is involved in the decision-making process?
    - What are your company's priorities in creating housing?
- Who qualifies for social housing? What role do you play in deciding who gets housing?
- What is your relationship with the municipality? How do you work together on development projects?

Greening

- How are you involved in urban planning or Amsterdam's green infrastructure?
- How are housing corporations contributing to making the city greener?
    - What drives your organization to do so?
- How do you balance social priorities with greening?
- What are the most attractive neighborhoods in Amsterdam?
    - What makes them attractive?

Group D: (Green) civil society groups

Introduction

- Can you please tell me about yourself and your organization?
    - What does your organization represent? What is its purpose?
    - What is your role?
- How and why did your group come into existence?
- What challenges have you encountered?
- What kind of change do you want to bring about?

    - When do you know that you've been successful?
- Why is what you do important?

IJplein/Vogelbuurt

- How would you describe the neighborhood?
    - What is quality of life like in the neighborhood?
    - What are challenges or problems the neighborhood encounters?
- What are priorities for improving the neighborhood?
- How has the neighborhood changed over the last decade or so?
- What is your perception of the green spaces in the neighborhood?
- What does the future of the neighborhood look like?
    - What are threats to the future?
    - What does an ideal future look like?

Greening

- What criteria are chosen to determine the locations of new green spaces or improving existing spaces? (*distributive justice*)
    - How do you envision people interacting with these green spaces?
- Who is involved in the planning and implementation of green infrastructure? (*procedural justice*)
    - In what ways do citizens participate in the decision-making process? How do you engage with citizens throughout a greening or redevelopment project?
    - How do you respond to people's needs and requests?
    - How do you communicate new greening projects and other information with the public?
- What difficulties arise in relation to the creation of greening, especially in IJplein/Vogelbuurt?
    - What kinds of conflicts do you encounter? (e.g., conflicting priorities about usage of particular spaces, different stakeholder interests)
    - What kinds of restrictions or setbacks do you encounter?
    - What needs to be done to overcome these restrictions?
- How would you describe access to green space in Amsterdam Noord? What prevents access to green space? How do you ensure access by different social groups? (*recognition justice*)
    - What are potential or existing barriers for people to access certain green spaces? How do you think these barriers can be overcome?
- Based on the current trajectory, what does the green future of Amsterdam (and more specifically, Amsterdam Noord) look like, realistically? And what does the ideal future look like? What kinds of obstacles do you anticipate to achieving that ideal future?

Groups E & F: Long- and short-term residents

Introduction

- Name, gender, age, employment, living situation (including whether they are renters/owners/subsidized housing), education level
- How long have you been living in the neighborhood? What attracted you to this neighborhood (if relevant)?

- Can you tell me about your experience of finding accommodation?
    - How are your living expenses? (are they manageable? Why/why not)
- What do you think about access to housing in Amsterdam?
- What do you think about the availability of rent support and social housing in Amsterdam?
    - What do you think could be done differently?
- In your opinion, what would be necessary to improve affordability?

Neighborhood

- How would you characterize the neighborhood?
    - Do you interact with the community, and if so, in what ways? Has this changed over time?
- Can you explain what the people of this neighborhood are like, generally speaking? What is the community like?
- What do you like about the neighborhood? What makes a neighborhood attractive for you to live in?
    - And what would you change?
- What does the neighborhood have to offer? (e.g., restaurants, outdoor space, schools, play areas, recreational facilities)
- Can you describe the safety of this neighborhood, in comparison with other parts of Amsterdam, for example?
- How are your living expenses? (are they manageable? Why/why not)
- **What changes have you observed in the neighborhood over the past years?** (Related to housing, residents, green spaces, shops, costs)
    - When did you start to notice changes?
- Do you know of people who have had to leave, and if so, why did they?
- If you have questions regarding the neighborhood or personal life (e.g., housing, healthcare, etc.) do you know where to go? Where do you go?

Green space interactions

- Which outdoor areas do you like to spend time in? What do you do in these areas?
    - How much time do you spend outside every week? Where do you go? Why do you spend time in outdoor spaces?
- How would you describe the public (green) spaces in your neighborhood?
    - What purposes do they fill?
    - Who uses these spaces most?
    - How do different groups use the spaces and what are your impressions of the interactions between different groups?
- What are your experiences in the neighborhood and in green spaces? (quality/quantity)
    - How long do you have to travel to get to green spaces?
- Are there certain spaces or areas that you avoid, and if so where are they/why do you avoid them?
- What does access to green space mean to you?
- Have you noticed changes in the green space in your neighborhood?
    - *If yes*, how has such greening impacted the neighborhood and yourself/family?

    - Do you see a relationship between greening and the ways the neighborhood has changed mentioned earlier?
- To what extent are residents a part of the planning and decision-making in the neighborhood green projects?
- To what extent do you think the green spaces are valuable for local people as opposed to visitors? Who benefits most from them?

Housing

- Can you please describe the housing in this neighborhood?
    - Is it sufficient? Is it quality?
- Do you know about housing plans for the area? What can you tell me about them?

For those involved in neighborhood planning:

- Do you engage in community development or affairs? Why or why not?
- Do you feel you have a voice in decision-making and neighborhood planning?
- How are your knowledge and experiences validated or taken into consideration in decision-making processes?

APPENDIX II. STATEMENT OF INFORMED CONSENT

This statement of informed consent was provided to all interviewees. For the interviews conducted over MS Teams, the participants were given a copy of the form and then gave verbal agreement during the interview. A Dutch version was provided to participants who felt more comfortable in Dutch.

Statement of Informed Consent

Working Research Study Title: Environmental justice in urban greening
Researcher Name: Taliah Dommerholt
Supervisor: Ingrid Boas

Description of the study

You are being asked to take part in a study. This is a study about the social impacts of greening and green policies in the city of Amsterdam. You are being asked to participate because your knowledge and experiences are relevant to the topic. You will be asked to participate in an interview. It will take about 45 minutes to one hour to complete. Before signing, please read this form and ask any questions.

Risks and Benefits of Being in the Study

This study poses little risk to you. You may stop participating and answering the questions at any time. There are no direct benefits to you from taking part in the study. Your input will be important to research projects and publications by improving our knowledge of the social impact of urban greening. Your input is important to these discussions. The information from this project will be shared with the participants. It will be shared via report sent by email.

Confidentiality

- The data derived from this study may be used in education, student projects and published in academic journal article(s) but you will not personally be identified without your consent.

Voluntary Nature of the Study

We thank you very much for your participation. Your decision to participate is completely voluntary. You may choose not to answer any part of the study or stop taking part at any time without any penalty to you.

Recording

I would like your permission to record our conversation for data collection purposes. The recording will be for my own reference and will not be shared with other parties without your permission. If you agree now, you may still revoke recording permission at any time. If you agree to be recorded:

- I will keep your name confidential, but I would like your permission to indicate your (generic) position title when using direct quotations or referring to information you provide during this interview.
- You have the right to ask that all data linked to you be removed from this research project.

- The data you share with me during this interview will be used for the final publication of the MSc Thesis published by Wageningen University, and potentially for future online publications.

Contacts and Questions

If you have any questions, concerns please contact Taliah Dommerholt at taliah.dommerholt@wur.nl. If you have additional questions regarding your rights as a research participant, please contact the Wageningen University and Research Scientific Integrity Committee at cwi@wur.nl .

Permissions:

I understand the procedures above. My questions have been answered and I have been given a copy of this consent form. I agree to participate in this study and to the following conditions.

_____ Yes, I would like to take part in the research.

_____ No, I would not like to participate in the research.

Please initial next to the uses you agree to and sign at the end. I will only use the material in the ways that you agree to. In any use of the recorded material, you will not be identified by name.

[ ] I give my permission for this interview to be recorded.

[ ] If I am quoted or information I provide in this interview is used in publications, I give my permission to the researcher to indicate my position title.

[ ] I give permission to include the transcription of the interview in the appendices of the thesis.

[ ] I give permission to include my initials in the transcription, at least once.

Right to Erasure

[ ] I understand that I am entitled to have the abovementioned information destroyed at my request, both during the research and while in storage, in line with the GDPR's right to erasure provision.

Please print your name:

_____

Date:

_____

Signature:

APPENDIX III. PARTICIPATION FLYERS

DEELNEMERS GEZOCHT!

45 MINUTEN INTERVIEW OVER UW BUURT, GROENE RUIMTE, EN HUISVESTING @VOGELBUURT-IJPLEIN

Woont u sinds kort of al een paar jaar in de Vogelbuurt-IJplein en wilt u deelnemen aan een interview* voor een onderzoeksproject van Wageningen Universiteit?

Vragen? Mee doen? Stuur dan een berichtje (+31619863030) of email (taliah.dommerholt@wur.nl) en dan kunnen we een afspraak maken op een tijd die voor u handig uitkomt! Interviews kunnen persoonlijk zijn of via de telefoon, WhatsApp bellen, of MS Teams.

*Uw antwoorden blijven anoniem

Taliah | Wageningen Onderzoek
taliah.dommerholt@wur.nl
+31 6 19 86 30 30

PARTICIPANTS WANTED!

45 MINUTE INTERVIEW ABOUT YOUR NEIGHBORHOOD, GREEN SPACE, & HOUSING @VOGELBUURT-IJPLEIN

Do you live in the Vogelbuurt-IJplein and are you interested in taking part in an interview* for a research project from Wageningen University?

Questions? Interested in participating? Send me a message (+31619863030) or email (taliah.dommerholt@wur.nl) to set up an appointment at a time that works for you! Interviews can be done in person or via the phone, WhatsApp calling, or MS Teams.

*Your answers will be anonymous

Taliah | Wageningen Research
taliah.dommerholt@wur.nl
+31 6 19 86 30 30

APPENDIX IV. LIST OF NVIVO CODES FOR POLICY DOCUMENTS

Type of justice	Indicator	Green Vision	Comprehensive Vision
Distributive	Climate benefits & risks	7	3
	Gentrification	2	4
	Health benefits & risks	4	2
	Privatization or commodification of public green space	3	0
	Spatial distribution of green amenities	30	6
	Temporal distribution of green amenities	0	0
Procedural	Access to information	3	8
	Participation in implementation & management	10	7
	Participation in planning & decision-making	10	20
	Power relations in green governance	0	8
	Transparency of processes & procedures	5	4
Recognition	Different forms of knowledge	0	0
	Equity & inclusion of needs/preferences of different groups	15	12
	Marginalization in greening outcomes	0	1
	Acknowledgement of past & present injustices	0	0