



universität
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MASTERARBEIT / MASTER'S THESIS

Titel der Masterarbeit / Title of the Master's Thesis

verfasst von / submitted by

angestrebter akademischer Grad / in partial fulfilment of the requirements for the degree of

Master of Science (MSc)

Wien, / Vienna,

Studienkennzahl lt. Studienblatt /
degree programme code as it appears on
the student record sheet:

UA 066 664

Studienrichtung lt. Studienblatt /
degree programme as it appears on
the student record sheet:

Masterstudium DDP Urban Studies

Betreut von / Supervisor:

Abstrakt

Vor dem Hintergrund sich gegenseitig beschleunigender ökologischer, sozialer, wirtschaftlicher und politischer Krisen ist es inzwischen allgemein anerkannt, dass wir unseren derzeitigen zerstörerischen Lebensstil nicht aufrechterhalten können. Regierungen in aller Welt haben die Notwendigkeit zu handeln in Pläne, Strategien und andere politische Verpflichtungen umgesetzt. Doch diese Klima- und Umweltpolitik ist unzureichend oder sogar kontraproduktiv. Diese These zeigt die problematischen Wurzeln eines Großteils dieser Politik auf, die oft auf einer anthropozentrischen, technokratischen und reduktionistischen Auffassung von "Nachhaltigkeit" beruht. Sie plädiert stattdessen für die Annahme einer "Multispezies-Nachhaltigkeit" im Sinne von Rupprecht et al. (2020), die unsere menschliche Verflechtung mit der übrigen Natur anerkennt.

Die vorliegende Arbeit leistet einen Beitrag zur Entwicklung der Multispezies Nachhaltigkeit. Sie gibt einen Überblick über die jüngsten akademischen Entwicklungen, die sich auf das Multispezies-Denken beziehen und vom Posthumanismus bis zum traditionellen ökologischen Wissen und von Fragen der Multispezies-Gerechtigkeit und -Repräsentation bis zur radikalen Stadtpolitik reichen. Über den theoretischen Beitrag hinaus nutzt die Studie den Fall Madrid, um die Multispezies Nachhaltigkeit in einem städtischen Umfeld zu operationalisieren. Sie führt eine argumentative Diskursanalyse der kommunalen Klima- und Umweltpolitik durch, die durch Experteninterviews ergänzt wird, um die Entwicklung der Nachhaltigkeitsdiskurse im Laufe der Zeit zu verstehen. Die Ergebnisse zeigen, wie wachstums- und status-quo-orientierte Diskurse über Nachhaltigkeit vorherrschen. Hoffnungsvoller stimmt die These, dass sich allmählich eine Verschiebung hin zu sozialeren und ökologischeren Erzählungen abzeichnet, die eine Chance für eine Multispezies Perspektive bieten. Die Untersuchung hebt mehrere ermutigende Entwicklungen hervor, die den Weg für die Anerkennung nicht-menschlicher Entitäten ebnen können, insbesondere im Zusammenhang mit der stark organisierten Zivilgesellschaft von Madrid.

Die Arbeit endet mit einem Aufruf zum Handeln, zum Lernen aus bestehenden Praktiken und zum Erfinden neuer Praktiken sowie zum Wagnis, sich außerhalb des Konventionellen zu bewegen.

Stichworte: Multispezies Nachhaltigkeit, Anerkennung nicht-menschlicher Entitäten, Nachhaltigkeitspolitik, Klimakrise, argumentative Diskursanalyse, Stadt Madrid.

Abstract

In the context of mutually accelerating ecological, social, economic, and political crises, it is by now generally recognized that we cannot uphold our current destructive lifestyles. Governments worldwide have translated the need to act into plans, strategies, and other political commitments. Yet this climate and environmental policymaking is insufficient, or even counterproductive. This thesis points at the problematic roots of much of this policymaking, often based on an anthropocentric, technocratic, and reductionist conception of ‘sustainability’. It instead argues for the adoption of ‘multispecies sustainability’ along Rupprecht et al. (2020), which acknowledges our human entanglement with the rest of nature.

The current work contributes to the development of multispecies sustainability. It provides an overview of recent academic developments that relate to multispecies thinking, ranging from posthumanism to traditional ecological knowledge and from questions of multispecies justice and representation to radical urban politics. Beyond a theoretical contribution, the research uses the case of Madrid to operationalize multispecies sustainability in an urban setting. It conducts an argumentative discourse analysis of municipal climate and environmental policy, complemented with expert interviews, to understand the evolution of sustainability discourses over time. Its findings show the way growth- and status quo-oriented discourses on sustainability prevail. On a more hopeful note, the thesis also points at a gradual shift towards the adoption of more social and ecological narratives, providing a window of opportunity for multispecies perspectives. The research highlights several encouraging developments that can pave the way for the recognition of other-than-human entities, especially in the context of the strongly organized civil society of Madrid.

The thesis ends with a call to action, to learning from existing practices and imagining new ones, and to daring to tread outside of the conventional.

Keywords: multispecies sustainability, other-than-human recognition, sustainability policy, climate crisis, argumentative discourse analysis, City of Madrid.

CLIMATE POLICY FOR WHOM?

Analyzing challenges and opportunities for multispecies sustainability in the context of Madrid



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Date of submission: September 1st, 2023

“It is inside these multispecies entanglements that learning and development take place, that social practices and cultures are formed. In short, these relationships produce the possibility of both life and any given way of life. And so these relationships matter.” – Thom van Dooren

“We cannot solve our problems with the same level of thinking that created them.” – Albert Einstein

Cover photo: the Madrid Río park and the Manzanares river after its renaturalization; the convergence of two discourses.

Preface

Before you lies the result of a one-and-a-half-year process: my 4CITIES master's thesis. This process was arduously long, turbulent, and at times discouraging; but above all, it was incredibly inspirational. I was first captivated by the field of multispecies thinking more than two years ago, through two particular instances: a work project I conducted with the Amsterdam-based Embassy of the North Sea, that explores granting legal personhood to the North Sea; and Julia Watson's beautiful book 'Lo-TEK: Design by Radical Indigenism' on traditional ecological knowledge. These chance encounters led me into a whole new world of multispecies sustainability, of conviviality with other-than-human species within the larger web-of-life, of starting to see and listen to these other entities. I hope this work has the same captivating effect for you, reader.

I would like to make a few acknowledgements. Firstly, I hereby express my gratitude to my dear supervisor Rosa de la Fuente. Without your unfaltering belief in this work, it might never have been done. I would also like to thank my other professors over the past two years, for opening unexpected doors of research directions and for expressing their sincere interest along the way. Thank you to my interviewees, for providing me with such intimate insights on a topic that they are as passionate about as I am and for inspiring me to keep pursuing my ideals – as activist, as academic, as politician, or as citizen. Last but not least, unmissable are my fellow 4 citizens: only together could we make it through; our shared knowledge and excitement was the best possible fuel.

Some practical notes: most of the research was conducted in Spanish; where quotes from documents or interviews are included, they are my own translation. Unless otherwise mentioned all images are my own, except for the included cover pages of analyzed plans. And finally, some reflexivity: this thesis is largely based within a western European setting. When speaking of 'our society' or of 'we', it is this Global North context that is referred to, and most specifically us groups of more privileged and powerful human beings.

May you leave inspired.

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1. Introduction



Urban community garden *Esta en una plaza* in Lavapiés, February 2023.

“That’s the big power of nature, at the basis we are part of it and it does us all well to see her”

– Carmen, Más Madrid

1.1 The current polycrisis

We are currently living multiple interlinked crises, including of mass species extinction and biodiversity loss, ocean acidification and pollution, climate emergency, rising socio-economic inequalities, displacement of humans and other species, and violent conflicts over scarce resources. This so-called ‘polycrisis’ situation threatens all beings and their complex relations within societies and eco-social systems (Hokkanen, 2020; Steffen et al., 2018). What’s more, the current state of affairs impacts entities beyond strictly living beings: rivers are caged into human-made canals and carry with them the weight of polluting substances, mountains are cut open for the construction of road networks and mines, and forests are cut down for plantations that will further exacerbate current inequalities. Many of these crises are at least in part anthropogenic; in the current Anthropocene era, humans deem themselves as a separate and more able actor than other species (Crutzen & Stoermer, 2000). We thereby seem oblivious to the way we are inherently entangled with the rest of the planet; by destroying it, we are also destroying ourselves.

The past decades and especially in most recent years, there seems to be increasing recognition of the need to take action in light of these intersecting socio-ecological crises. A global movement of climate activism and other bottom-up insurgencies (see Ernstson & Swyngedouw, 2018), complemented with a growing scientific body of evidence (see Steffen et al., 2018), have pushed governments worldwide to political commitment. The COVID-19 pandemic, which underlined our human entanglement with other species and the precariousness of our current growth system, accentuated the urgent need for change. On various scales, ranging from the urban and regional to the national and supranational, governments and institutions have taken incremental steps towards addressing climate change and environmental crises. This has resulted in the proliferation of collaborations, strategies, and agreements. An especially illustrative development in this regard is that of climate emergency declarations (CEDs). Since 2016, national and regional governments across Europe have declared climate emergency (Howarth, Lane & Slevin, 2022). This political move seems to be the culmination of the formal recognition that we cannot continue within the prevailing unsustainable growth paradigm.

However, this supposed sense of urgency does not seem to be effectively translated into policy practice. Climate and environmental policymaking, despite substantial efforts, thus far is insufficient, and *de facto* leads to little structural change. There seems to be some form of cognitive dissonance, in which policymakers and political leaders worldwide call for a rethinking of the current system but in practice

contribute to the prevalence of this same system¹. The false premise of human exceptionalism prevails, and with it the blind belief that we will be able to ‘fix’ all problems through strategic, rational management and through the development of new technologies. Hereby, the dogma of Humans (or Society) as directly oppositional to Nature persists. The unfaltering lust for ‘progress’ results in further deterioration of human well-being *and* the well-being of everything surrounding us. We seem to be stuck in an endless cycle of consumption and destruction.

1.2 The emergence of multispecies thinking

Still, there are hopeful developments that challenge this status quo of human-centrism. The past decades have seen a move practically and in policymaking towards renewed appreciation of the fact that we as humans are one element in the larger ‘web-of-life’ (a term that comes from world-ecology theory, see Moore, 2015). In several parts of the world, from New Zealand and India to Bolivia and Colombia, nonhuman natural entities such as rivers and mountains have been granted legal personhood (Winter, 2019). In Ecuador, ‘rights for nature’ have been institutionalized in the Constitution (Escobar, 2011). Many of these cases stem from a context of traditional ecological knowledge (TEK), in which humans and the rest of nature have historically and culturally been considered interwoven. While more holistic conceptions of the Human-Nature relationship remain largely unconsidered in Western politics, the landscape could be slowly shifting: with the recent legal recognition of saltwater lagoon Mar Menor, Spain is the first European country to formally recognize other-than-human agency.

Simultaneously, there is a growing academic body of work on what can be clustered as ‘multispecies thinking’. These movements stem from fields as diverse as anthropology, political science, sociology, geography, environmental humanities, postcolonial theory, and feminist theory, and call for the recognition and inclusion of other-than-human entities. Scholars in these fields argue for the empirical and ethical need for extending concepts such as ‘justice’ and ‘sustainability’ to also include natural entities such as nonhuman animals, trees, and rivers (Celermajer et al., 2021; Rupprecht et al., 2020). They call for a move away from binary, reductionist, anthropocentric thinking and towards thinking that is based on dependencies, entanglement, and complex relations. Such propositions challenge deeply engrained cultural and political-economic paradigms of anthropocentrism and unbounded growth. Fully embracing multispecies thinking will have considerable implications for the way we construct our human lives. Yet, oftentimes, we live in multispecies locales and are dependent on interaction with other-than-human entities in our daily lives already, so it is rather a matter of acknowledging and formally planning for this conviviality (Rose & Van

¹ In Spanish this is called *retardismo climático*: recognizing the urgency of climate change and committing to action while in practice consciously exacerbating the climate crisis (see e.g. Catanzaro, 2023).

Dooren, 2012; Rigby, 2018). What's more, although sometimes actively sharing a space with more types of inhabitants will entail sacrifices, more often than not it in fact results in mutual joy and awe (Tsing, 2015).

1.3 Research gap and guiding questions

Hence, multispecies thinking is rapidly developing and gaining traction across and outside of academic fields. Yet much remains to be researched. The empirical and theoretical value of other-than-human recognition is clear and its concepts have been adopted across environmental and social movements, but work needs to be done on its operationalization. Where many of these practices already exist in day-to-day life, it is necessary to focus also on a policymaking level, as this is arguably where concepts evolve from a single niche development into more widespread ideas. How can policymakers and planners practically implement ideas of multispecies conviviality and inclusivity in the current Western context that generally remains so stuck in Human-Nature binary thinking? What is the role of bottom-up movements, of supranational organizations, and of local governments in the articulation of multispecies sustainability? What kinds of obstacles are there in current policies; what are ideas and practices that stubbornly persist and thereby block the way for other kinds of ideas? Understanding how certain *discourses* on sustainability are formed – discourses that in practice often reproduce current exploitative, growth-oriented ideals – and by what powers they are sustained is crucial in paving the way for new, regenerative, multispecies discourses on sustainability. The current thesis aims to do exactly that: understand the ontological and epistemological root of current climate change and environmental policy, to contribute to formulating more fruitful approaches towards socio-ecological transitions based on multispecies thinking.

It does so specifically from an urban focus. A focus on the city-level aims to fill an academic gap: as illustrated in the literature review, there is little research as of yet on multispecies inclusion in *urban* (climate) policy. Possibly an even stronger justification for the urban focus is its practical relevance: aside from the obvious fact that the largest part of the global population nowadays is urban and will continue to urbanize (World Bank, 2023), cities at the basis of their existence are built on unsustainable practices of land exploitation and degradation, contamination, and capital accumulation – often hand in hand with degradation and dispossession in rural or semiurban areas. Urban areas are the exemplary manifestation of the conceptual Human-Nature binary. Cities have been constructed and (re)produced as if humans can live independently of their natural environment, while in fact it is becoming increasingly clear that cities and their environments are inextricably interwoven. An illustration of the latter: cities are susceptible to floods, droughts, and other extreme weather conditions; they are home to a diversity of plants, trees, and other-than-human animals; they depend on fertile land and a stable climate for affordable food production; and the pollution produced in cities knows no borders and travels through water and air to surrounding areas. As such, recognizing the role of other-than-human entities in urban policymaking specifically is key to any

kind of climate change or sustainability effort. The city level is precisely where our multispecies dependency seems to have been most forgotten.

The thesis is driven by the following research question:

In what way do discourses in municipal climate and environmental policy in subsequent city governments of Madrid inhibit or enable the adoption of a multispecies conception of sustainability?

The research takes a single-case study approach, focusing on Madrid because of its geographical, economic, political, and institutional contexts. It uses a combination of argumentative discourse analysis of policy documents and expert interviews to come to a full understanding of the evolution of sustainability discourses in Madrid over the past two decades. This work thereby hopes to illuminate how dominant discourses and narratives politically construct the questions of climate change and biodiversity loss, speculating that this is done in a certain anthropocentric way while failing to recognize other pluralistic, multispecies aspects of the phenomenon. The main *a priori* hypothesis is as follows:

In the service economy-based metropolis of Madrid, discourses in which sustainability has been framed in terms of economic growth and development prevail, perhaps briefly interrupted by more socially and ecologically-oriented discourses during the progressive Ahora Madrid government between 2015 and 2019.

The primary research question is supported by a number of sub-questions. The first stems naturally from the main question: *what discourses on sustainability can be identified in Madrid climate and environmental policy?* This is answered through a demarcation of most relevant institutional agreements and subsequent discourse analysis of these texts, also noting the way these narratives have evolved over time. The analyzed texts are determined based on the overview of Madrid's sustainability policy landscape that is created as first step in the research process. A second sub-question is *how and by what influences are these discourses maintained or challenged?* The current research does not provide a thorough answer to this question, but rather offers some initial directions for further analysis based on the expert interviews and additional academic and media sources. The third sub-question relates to the hopeful and forward-looking character of this thesis: *what could multispecies sustainability look like in the context of Madrid?* This entails deepening the opportunities already present within discourses in current policies and imagining the practical operationalization of recognizing other-than-human agency in an urban context.

1.4 Structure

The text is structured as follows: the literature review that follows this section consists of firstly an overview of the current social, ecological, political, and economic paradigm that our Western society is currently in, to create a common basis of understanding. This is followed by outlining current climate and environmental policy globally, bringing to light the highly problematic and counterproductive premises that this is built on. The literature review concludes with a description of various more hopeful empirical and academic directions towards socio-ecological transitions. Because multispecies thinking and other-than-human recognition are relatively recent propositions (in the academic realm!), the current work devotes a major section to this theoretical part.

The thesis then moves on to put the vast body of literature on other-than-human recognition into practice. Chapter 3 is the methodology section, which starts with a recognition of my personal researcher positionality, and goes on to describe the chosen case study and utilized methods. It also includes a reflection on the way this methodology was implemented in practice. Next, Chapter 4 constitutes an extensive description of the results of the research, as well as their analysis. It is structured along the sub-questions of the research question, with a preliminary section that sketches the sustainability policy landscape of Madrid. Chapter 5 is then a discussion of these results, including directions for further research. Chapter 6 is a brief conclusion.

In sum, this work is a theoretical and empirical contribution to a rapidly developing field of multispecies and other-than-human thinking. Yet beyond that, it is also a work of activism. As long as we humans keep selfishly inflicting pains upon our other-than-human kin and environment, rivers will keep bleeding, mountains will keep crying, and forests will keep disappearing. This thesis is a call for radical change, much more structurally than current policies are steering towards. It is a call for daring to reimagine our current world order in order to move towards social and ecological transitions. At the same time, it is a plea to recognize the encouraging developments that are already happening, in our own cities and far away. It hopes to inspire mayors, academics, and activists alike.

2. Literature review



Urban community garden *Adelfas* by Vallecas, April 2023.

“Any transformative measure towards ecological sustainability has to tackle these economic interests because they are the main causes of the current ecological crisis”

– Erika, *Ecologistas en Acción*

The past decades, human-induced climate change, biodiversity loss, and land degradation have become well-established processes in terms of public and political recognition, as well as in the academic landscape. In a time of simultaneous social-ecological, environmental, and humanitarian crises, there seems to be a general consensus that we cannot uphold our current growth and development patterns and must move towards different types of world models. The current thesis contributes by exploring ways of living that dare to alternate from conventional destructive modes, pulling in particular from a growing body of research on *multispecies* (rather than anthropocentric) realities. This extensive literature review will give an overview of the current paradigms in sustainability approaches – mainly on the policy level – and consequently problematize these. It will furthermore shine light on longstanding traditions and newer formulations of multispecies realities, and introduces work on hope and imaginative thinking as valuable ways forward. Through the above, this section hopes to argue for the theoretical and empirical urgency of exploring other-than-human recognition on an urban policy level.

The literature is broadly categorized per theme – although there is much overlap between these themes and so some literature is cross-referenced in various sections. The following themes will be discussed:

- The current socio-ecological-political-economic paradigm
- Prevailing sustainability approaches
- Rethinking and reimagining: multispecies approaches

Each of these subsections ends with a part that recapitulates the respective contents in relation to the relevance and urgency of the current thesis.

2.1 Sketching the current paradigm

To understand the complex entanglement of ecological and social crises and consequent contemporary sustainability efforts, this section sketches the general social, economic, political, and ecological paradigms that we are operating in – as theorized from a critical geography and political ecology perspective. Recognizing the Anthropocene (or multiple-cenes) and neoliberalist capitalism as our current politico-economic world order helps to underline the urgency of the debate on more holistic, inclusive approaches towards social and ecological crises.

On a critical postcolonial note, the current polycrisis situation may recently be felt more tangibly in the Eurocentric, Global North world, but has prevailed in other parts of the world for many centuries (Santos, 2022). In fact, since the start of colonialism through the conquering and exploitation of people (and other-than-human entities), this same polycrisis situation – “the existential experience of inhabiting a landscape of collapsing foundations, where the dominant feeling is that things are falling apart” – has been prominent for a long time for many entities in the Global South (reference to Achebe in Santos, 2022, p.22). We must thus, in our process of imagining alternatives, also turn to the long experience of the Global South in coping with the ‘ruins’ of things fallen apart; the last part of the literature review will consider this in the discussion on non-western perspectives.

2.1.1 Anthropocene

Since the introduction of the idea of a new *human*-directed geological age by Crutzen and Stoermer in 2000, there is a consensus across disciplines that we currently live in the Anthropocene era. This has been supported and further formulated by a range of scholars (see Zalasiewicz et al., 2015; Swyngedouw, 2011; Chakrabarty, 2009), whereby it is generally accepted that the transition from the Holocene into the Anthropocene era started taking place in the last century. This thesis does not fully dive into the development of this concept; it rather uses the Anthropocene as highlighting the extent of human impact on our surroundings. Schlosberg’s (2019) description of the Anthropocene is useful as starting point: “human beings now influence, if not control, the ecological makeup and direction of the planet” (p.55); humans have expanded their impact from individual places to altering entire global environmental systems.

The fact that the human being has been the primary driver of world systems the past decades is due to the hierarchical position we have placed ourselves in. To start at the basis: anthropocentrism, or human-centeredness, relates to the hyperseparation of humans from other species and instrumentally reduces any and all nonhuman to its usefulness for humans. This thinking is based on the falsely constructed idea of human exceptionalism. It has been argued that anthropocentrism in many of our current societies arose during the period of industrialist expansion of the eighteenth and nineteenth centuries, through the hegemonic imperialist human-centric worldview that was then formed (Kidner, 2014). On the other hand, some researchers point at a much earlier birth of such an anthropocentric, exploitative relationship with other-than-human nature. Wallerstein (1974) and Moore (2016), amongst others, argue that Cartesian dualism and the Baconian belief in scientific mastering of the earth in fact took shape as driving forces of society as early as the sixteenth century, during the birth of ‘modern’ Europe and, one could argue, of capitalism. This turn to capitalism largely had to do with changes in land use, as nonhuman nature was increasingly used for wealth production rather than as pure subsistence (Merchant, 2003). Either way, the views that arose as part of the capitalist and later industrial symbolic system still frame present-day Western

society: the separation of ‘nature’ from ‘society’ allows for the exploitation and cheapening of humans and nonhuman natures (Moore, 2015). As such, the nonhuman came to be defined as resource without its own meaning or value, thus making it available to be conquered and exploited along the interests of the powerful (Plumwood, 1993).

Needless to say, the concept of Anthropocene does not entail that *all* human beings equally alter the nonhuman natural environment. Rather, it is a minority of people who exploit both other peoples and the rest of nature (Steffen et al., 2018). The uneven impact of human groups on Earth processes is captured by different conceptualizations of the Anthropocene, ranging from Moore’s (2016) ‘Capitalocene’ and Haraway’s (2015) ‘Chthulucene’ to Whyte’s (2017) ‘Eurocene’ and Tsing’s and Haraway’s (2016) ‘Plantationocene’. These alternative formulations highlight the distorted power relations amongst humans and between humans and the nonhuman and stem from feminist, postcolonial, indigenous, and neo-Marxist perspectives. It hereby becomes clear that a discussion on multispecies sustainability is not only about the equal recognition of *other*-than-human agency, but also of underrepresented *human* agencies – a discussion about justice, about intersectionality. The above highlights that the formulation of the Anthropocene is an ongoing process. However, notwithstanding the value of alternative formulations, this thesis adheres to the use of the original concept for the sake of highlighting the explicit opposition between humans and the other-than-human – although it will touch upon the subject of injustices amongst human beings later on.

2.1.2 Neoliberalist capitalism

Another set of beliefs that forms the structure of contemporary policymaking is that of neoliberalist capitalism. As briefly mentioned above when sketching the Anthropocene, capitalist functioning of society is based on an anthropocentric conception of our other-than-human surroundings, on the inherently exploitative outlook on less powerful humans and nonhumans. According to Moore (2013, 2015), who works within the growing field of World-Ecology, capitalism is built in its foundation on a violent historical relationship towards the web-of-life – the entanglement of living and non-living entities that make up life on Earth. Capitalism thus shapes relationships based on domination, power, and non-reciprocity (Moore, 2015). Many scholars argue that environmental and social degradation are in fact intrinsic components of capitalism, saturating its never-ending need for growth and expansion (Daly, 2013; Moore, 2015; Harvey, 2014). As in the formulation of ‘Anthropocene’, it is hereby again crucial to recognize the pluralism of these structures: not all humans dominate equally, and the most dominating ones are often white and male (see feminist scholars such as Plumwood, 1993).

The economic and political paradigm of neoliberalist capitalism is based on an epistemological paradigm of technocratic, natural sciences-based knowledge production (Rigby, 2018). Marcuse (1941, 1961), amongst others, describes how technologies are used to exert power and domination. Although there

are many constructive uses of technology, it currently persists in its dominating form. Horkheimer and Adorno (1944 [1972]) argue that ‘reason’ (the legacy of the Enlightenment) has trapped us in blind domination: domination of other humans, of nature, and of ourselves. In our technocratic, mechanistic world, objects are reduced from dynamic, connected, interdependent parts of a whole to separate, unchanging entities. Humans and nonhuman nature alike are commodified and externalized. This ideology furthermore creates a reality in which its ‘solid’, bounded parts are in constant struggle rather than being connected, and actively created inequalities are rendered fully natural (Hokkanen, 2020; Ingold, 2008). A socially constructed hierarchical existence thus goes unquestioned (or rather: any space for questioning and debate is removed); structural injustices are depoliticized.

The neoliberalist capitalism paradigm that we live in also accentuates the role of the urban scale. In fact, neoliberalism can be seen as inherently urban, and the urban as inherently neoliberalized (Brenner, 2004; Harvey, 1989; Brenner & Schmid, 2015). Urban spaces are both critical sites and critical vehicles for capital accumulation. At the same time, these processes of urbanization and exploitation have stretched out across places and territories (the spread of ‘urban fabric’ into what was formerly – or is still – perceived as ‘rural’). Brenner (2004), later with Schmid (2015), captures this as the process of ‘planetary urbanization’, in which the spread of neoliberalism and urbanization have become interwoven. The urban scale has become increasingly relevant as ‘statehood’ in itself underwent a process of rescaling, resulting in a more multi-layered and less national-centric form of statehood that brings the urban scale to the forefront (Brenner, 2004). Historically, but even more so in the past decades through this neoliberalization of the urban, the city has become the epitome of the Human-Nature or Society-Nature dichotomy, whereby the ‘urban’ represents society and (capitalist) ‘progress’ and is placed in direct opposition to the non-urban representing the ‘natural’ (Rigby, 2018). This further accelerates processes of environmental degradation, climate change, and biodiversity loss that are entailed in capitalist production and consumption (Ernstson & Swyngedouw, 2018).

2.1.3 Relevance?

This first section aims to explain the foundations of our current society, thereby creating a common basis of understanding that the rest of the thesis is built on. The combination of neoliberalist capitalism and anthropocentrism has resulted in a paradigm of limitless growth and extractivism. Many present-day human societies are based on practices of domination, exploitation, and destruction of human and other-than-human ways of life, fueled by the false premise of human exceptionalism. This works to exacerbate socio-ecological crises. Additionally, the intertwining of these paradigms highlights the importance of conducting analyses at the *urban* scale, as this is precisely where processes of capitalism are most accentuated and where humans have arguably distanced themselves most from other-than-human nature.

2.2 Prevailing sustainability approaches

The previous section established the current paradigms of Anthropocene and neoliberalist capitalism; these are thus the frames that we are operating in. The current section narrows down to the way present-day sustainability policies play out within this context, sketching the most dominant approaches in climate and environmental policymaking and concurrently problematizing these approaches.

2.2.1 *Apparent action...*

The finite nature of resources on Earth and the according urgency of climate change and environmental degradation have been on the political agenda at least since the 1972 ‘Limits to Growth’ report of the Club of Rome (López Ruiz, 2013; Meadows, et al., 1972). More than half a century ago already, triggered at the time by discussions on (human) overpopulation and the detrimental impacts of pesticides (see literature by Ehrlich, 1968 and Carson, 1962), this report was a call to international collaboration to change the economic system. ‘Sustainable development’ as such entered global discourse with the so-called Brundtland report of 1987, written by the World Commission on Environment and Development and published by the United Nations (UN). The latter report, titled ‘Our Common Future’, defines ‘sustainability’ as “Meet[ing] the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland, 1987, p.41). This remains the benchmark definition when referring to sustainability (Rupprecht et al., 2020).

Since then, along with the coining of the term ‘Anthropocene’, there has been growing awareness of the effects of climate change and the urgency for some form of response as human actors. The call for change has led to seemingly hopeful political action and momentum over the past decades. One recent materialization of this urgency is the phenomenon of climate emergency declarations (CEDs); within a few years, thousands of local and national governments worldwide declared a climate crisis (Ruiz-Campillo, Broto & Westman, 2021). These CEDs have worked to create a general heightened sense of urgency, redefining climate change from a technical challenge to a broader narrative (Howarth, Lane & Slevin, 2022).

2.2.2 *...yet inadequate policymaking*

Notwithstanding this seeming political action, in practice, climate and sustainability policy persistently fails to adequately approach the matter (Rupprecht et al., 2020; Howes et al., 2017). We, humans, do not seem to grasp the full weight of the changes we are inflicting upon the functioning of the entire global system. There seems to be a certain inertia regarding climate change: although there is an increasing *on paper* recognition of the urgency to act through for instance CEDs, we are not *de facto* acting as if we live in a global climate emergency (Gills & Morgan, 2020).

Starting with CEDs themselves, there has been much critical scholarly response on this seemingly positive political development. Howarth, Lane, and Slevin (2022) point at the way a ‘climate emergency’ narrative may marginalize other, everyday emergencies experienced by socially or economically vulnerable groups – pointing at the lack of an integral socio-ecological approach in current sustainability policy. Other scholars focus on the motivations and discourses informing CEDs in the first place, showing that declarations are often more of a symbolic move (as response to local activism and concerns, or with the aim of positioning a government within the international political arena) rather than having deeper intended practical outcomes (Ruiz-Campillo, Broto & Westman, 2021). Furthermore, Nissen and Cretney (2022) argue that simply declaring climate emergency often ignores the temporal and spatial complexity of the context and reinforces the status quo.

So, formal CEDs are not enough; yet, as argued by scholars from diverse academic fields, the climate emergency is as urgent now as ever and is likely to result in increasing catastrophic effects. According to a group of the world’s leading climate scientists, current self-reinforcing feedbacks could push the Earth system over a planetary threshold, thereby preventing stabilization of the climate and causing serious disruptions to ecosystems and societies (Steffen et al., 2018). What’s more, the current state of affairs is projected to result in at least four degrees global rise in temperature by 2100, with levels of CO₂ experienced last 15 million years ago when sea levels were more than 20 meters higher than they are now (Hokkanen, 2020; Cléménçon, 2016; De La Vega et al., 2020).

As also mentioned by some of the above criticism on CEDs, what lacks is an *integral* approach (Moore, 2015). Most sustainability approaches tend to focus on separate entities instead of on relationships and connections within the larger web-of-life (e.g. focusing on the extinction of a single species or on the contamination of a single entity instead of recognizing their embeddedness within the wider ecosystem). The lack of a holistic perspective also applies to climate policy in itself, which is often developed in a silo (alongside other ‘silos’ of biodiversity, green infrastructure, water management, etc.) rather than as integrated in all other policymaking (Hokkanen, 2020; Moore, 2015; Van Dooren, 2014b).

This limited, narrow approach can largely be attributed to the deeply engrained anthropocentrism in sustainability policy. In recent years, scholars from various fields within the natural and social sciences alike have pointed at the inherent anthropocentrism of current approaches to sustainability and climate change as major problematic aspect. Starting with the Club of Rome report (1972), that has as subtitle ‘A Report (...) on the Predicament of *Mankind*’ (emphasis added), climate and environmental discussions have been primarily limited to human beings. In the Brundtland (1987) definition of ‘sustainability’ described above, the human is considered the sole agent and party of interest, completely overlooking the way we interact with and depend on other species with different sorts of agency (Rupprecht et al., 2020; Van Dooren,

2014). Although not explicitly limited to humans, the report reduces other-than-humans to natural systems and considers ‘development’ as its main objective (Rupprecht et al., 2020; Springett, 2013).

Diminishing the nonhuman to its deemed use value for humans results in a highly reductionist form of policymaking, in which other-than-human actors and stakeholders are largely underrepresented in decision-making processes regarding sustainability questions² (Plumwood, 1993; Rupprecht et al., 2020). Where other-than-human nature is recognized at all, it is considered only in utilitarian terms, usually entailing an unfavorable outcome to the other-than-human being in question (Davidson, 2013). This is also notable in legal terms: regard for ‘nature’ generally seems to be limited to the human right of *access to nature*, an obviously anthropocentric approach that does not ascribe any agency to other-than-human nature in itself³ (Pickering, Bäckstrand & Schlosberg, 2020). Climate change strategies are hence dominated by the notion that humans can and should control the environment (Plumwood, 2002).

Adding to this is literature on the way modernist and neoliberalist thinking has permeated climate change approaches. Notable is research by Head & Gibson (2012), who show that the way we generally respond to climate change very much fits within the modernist ‘project’. The expression of this is the nation state (in itself a political expression of modernity) that tries to ‘fix’ or ‘manage’ climate change (Head & Gibson, 2012). In this sense, climate change adaptation is merely considered another risk to manage within the capitalist, neoliberal business-as-usual (Hickel, 2020). Adaptation and mitigation are rendered technical interventions, where the focus is on preparing infrastructure for increasingly frequent and intense ‘disaster events’ (Cameron, 2012; O’Brien, 2011). This materializes in the excessive focus on modernist, hard infrastructure in ‘adapting’ to a changing environment (Lopes et al., 2018). Illuminating here is the concept of ecological management or ‘eco-managerialism’, where ecology has been permeated with managerial concepts of technical rationality and utility value, and other-than-human nature is turned into an object of capitalist exploitation that can only be driven by ‘objective’ natural sciences (Luke, 1999).

The prevailing approach to climate change from within the modernist, neoliberal paradigm is highly problematic and counterproductive. Modernity creates a separation between people and climate change in both its articulation of the ‘problem’ and its proposed ‘solutions’: it is made abstract, which in turn results in feelings of disempowerment (Head & Gibson, 2012). Delimitating climate change as a technical intervention excludes the broader political, social, and economic context of the issue (Cameron, 2012; Moore, 2015). Büscher and Fletcher (2015) zoom in on specific so-called sustainable models used within climate policy such as payment for environmental services. They hereby point at the contradictions of such

² Needless to say, many *human* actors also remain largely underrepresented or unheard in the political decision-making arena. Debates on human and other-than-human justice should not be seen as mutually exclusive.

³ This is a valuable first step towards recognizing human dependency on and need for other-than-human nature (see for example the case of environmental tribunals in various countries), but remains limited to a utilitarian, anthropocentric frame.

a ‘sustainable’ model of accumulation, highlighting the inherent self-destruction in turning ‘nature’ into capital. More generally, Escobar (2004) highlights the ineffectiveness of current climate change practices because they are currently dominated by the same rhetoric that caused climate change in the first place, namely development and modernization dogmas.

2.2.3 Deconstructing ideas of sustainability

To understand why current approaches to climate change are failing, it is illuminating to look at the ways in which the idea of sustainability and environment has been consolidated in different discourses that are prominent in policymaking. Recognizing that discourses are all part of diverse approaches with sometimes directly opposing underlying values is crucial in order to understand the massive discrepancies and contradictions between sustainability policies. These diverse approaches have been categorized in various ways. ‘Ideas’ of sustainability seem to range from more pragmatic, conservative approaches to growth-oriented terms such as ‘green economy’, and from limited to specific themes such as decarbonization and energy transition to more holistic, transformational moves towards ‘ecoemancipation’ and justice (Wences, 2023⁴; Bringel, 2023⁴; Hajer, 1993 and 1995). The methodology section will expand on two such categorizations that are used as inspiration for the codes in the discourse analysis of this thesis.

The vast range in underlying conceptions of sustainability highlights that approaches to climate and environmental change can vastly differ in their values and strategies⁵. However, it can be difficult to distinguish between approaches because they often use similar terminology – the same ‘signifiers’ with different ‘signifieds’, if you will (Barthes & Duisit, 1975). This is yet again a reminder of the limits of our current (anthropocentric) vocabulary, of the need to reinvent and reimagine to be able to distinguish status quo, growth-driven approaches from more transformational, multispecies approaches (Bringel, 2023). Furthermore, deconstructing ideas of sustainability to understand their underlying values helps to recognize the historical discourses that have resulted in their current paradigms, placing contemporary approaches within their sedimentation processes (Moore, 2015).

The implication of such a diversity in approaches to sustainability is that, while some discourses are indeed more radical and call for deeper social, legal, and normative transformations, others in fact rather contribute to the current destructive system (Rupprecht et al., 2020). For these latter approaches, ‘sustainability’ has in itself become a part of the capitalist wheel of production, consumption and exploitation – as also portrayed previously on approaches that fit within the current capitalist paradigm. Bringel and Wences (2023) add to this by arguing that some current forms of sustainability, especially those

⁴ Breno Bringel and Isabel Wences were speakers at a seminar in March 2023; refer to bibliography.

⁵ Needless to say, this range in underlying ideals and values is also visible beyond the scope of policymaking (in for example environmental movements).

that fit within the ecological modernization discourse, largely reinforce current forms of domination. ‘Green economy’ and ‘decarbonization’ discourses that are gradually becoming the new consensus of global geopolitics lead to yet again new forms of extractivism, for instance renewable energy-related land extraction in the Amazon region (Bringel, 2023). Wences (2023), amongst others, terms these kinds of practices ‘colonial environmental extractivism’. Particular discourses and ideologies surrounding ‘sustainability’ or ‘ecological transition’ can thus become an extension of conventional extractivist and colonialist practices, with the only difference being their use of a particular ‘green’ discourse as justification. These dynamics highlight the complexity of the eco-social polycrisis that we are in.

2.2.4 Post-political condition of sustainability policy

Much of the above failures of policymaking – the failure to act in an integral manner, to realize the subjectivity of current discourses, and to recognize the structural transformations that are necessary to steer us away from the current pathway of environmental and social catastrophe – can be seen in light of the post-political condition of current sustainability policy. ‘Nature’ and according sustainability policy have been reduced to consensual policy-making and technical-managerial ‘solutions’-thinking, reinforcing the anthropocentric, neoliberalist status quo outlined in the previous section (Swyngedouw, 2011). To expand: current top-down climate and environmental decisions are falsely presented as consensus and as representative of all affected parties, while in fact they ignore the inherent pluralism and heterogeneity of the city (Mouffe, 1995). ‘Consensus’ thus always entails the exclusion of certain groups (in the current case, the exclusion of other-than-human groups) and leaves no space for inherent conflict and opposition; sustainability policy is depoliticized and any alternative is silenced (Swyngedouw, 2011). As such, in this post-political neoliberal consensus, the eco-managerial approach of the current anthropocentric, natural sciences-based regime prevails, fueled by the underlying paradigm of growth acceleration and extraction (Dikeç & Swyngedouw, 2017).

Mouffe (1995) further highlights the nonessentialism of political agents; they are not pre-constituted, but are rather constantly (re)producing their identities based on the sedimentation of previous experiences and meanings (Massey, 1995). This also has to do with the lack of incorporating historical processes and decolonial perspectives in sustainability research, failing to recognize the sedimentation of human and more-than-human processes that leads to current discourses (Moore, 2015). So, anything natural or semi-natural – including the concept of nature – is inherently political (Swyngedouw, 2011). We thus need to disentangle the underlying political agendas of current ‘consensus’ sustainability politics.

2.2.5 Relevance?

This section has shown the anthropocentric, utilitarian, reductionist, and exploitative nature of contemporary climate and environmental policy. Although there may seem to be increasing political and societal recognition of the urgency of climate change, many conventional top-down approaches merely work to reinforce power structures and processes that further accelerate it. There is no space to question the dominant ideas of (neoliberal) ‘sustainability’ in the current post-political condition. This calls for radical rethinking of the current configuration of ‘politics’, with a need for more imaginative thinking and new epistemologies. As such, this thesis tries to disentangle the way nature and humans have been shaped as separate groups in current formulations of climate change and ecological sustainability.

In a time of a plethora of sustainability approaches that seemingly overlap yet are in fact starkly opposing in motivations, it is crucial to understand underlying discourses. By revealing distortions and opportunities in current climate change policy, the current thesis could perhaps, in the words of Dikeç and Swyngedouw (2019), be seen as one of the “contemporary forms of urban uprisings that have politicized [is politicizing] the urban landscape in new ways” (p.4) – albeit in academic form. Sustainability politics must be repoliticized; the following section will illustrate in what ways this can be and is already being done.

2.3 Rethinking and Reimagining

The previous two sections aimed to problematize current policymaking approaches to climate and environmental change and highlight the need for alternatives. This section provides some answers to precisely the latter, introducing different ways of thinking and practicing sustainability that sketch a more hopeful present and future. Sustainability in itself is thus not a ‘lost’ term (as argued by some scholars; see e.g. Fergus & Rowney, 2005 and Bolis, Morioka & Sznclwar, 2014); it simply needs to be reimagined. While for a long time the conservative idea that we cannot change the current capitalist world order persisted, recent times – especially triggered by the COVID-19 pandemic – have shown that it *is* in fact possible to question seemingly solidified beliefs and reconfigure our predominantly capitalist societies; there *are* alternatives (Santos, 2022; Bringel & Pleyers, 2021). Moreover, global crises can in fact provide windows of opportunity for transformation (López Ruiz, 2013). As such, not only the recent pandemic (a more ‘classical’ crisis situation in the sense that it is seemingly temporary), but also the structural ecological and social crises of climate change can be seen as opportunity to reassess the current world order and its underlying neoliberalist, developmentalist values (Pelling, 2011).

We must reconceptualize rather than try to ‘fix’ the nonhuman environment, and reassess the foundations of our relationships with this environment that are currently driving towards inequality and destruction (Robin, 2018). As formulated by Head and Gibson (2012): we need to “reframe climate change debates away from simplistic discussion of ‘problems’ and ‘solutions’ (a typically modernist way of thinking

that forever tempts technocentric investment) towards a more uncertain, but lively sense of encounter between humans, things, plants, animals, technology” (p.705). This entails, on the one hand, learning from existing practices and knowledge that recognize a multispecies reality – sometimes based on indigenous knowledge in Global South contexts, but also on inadvertent practices in everyday life (Head & Gibson, 2012; Lopes et al., 2018). A crucial process hereby is storytelling, recognized by various (feminist and critical) scholars as crucial in understanding different perspectives, picturing other presents and futures, and refusing essentialist thinking (see Wahlstedt, 2021; Haraway, 2016; Rose & Van Dooren, 2016). These stories and knowledges help us to rethink contemporary sustainability politics (Hokkanen, 2020).

On the other hand, structurally changing our destructive system requires the skill to imagine *beyond* the currently known, completely rethinking contemporary economic, political, legal, and social systems to incorporate a more integral multispecies perspective. Castoriadis (1987) writes on the way dominant ‘imaginaries’ in a certain society can be shifted when contested from various directions. Harvey (2000) contributes from a Marxist perspective in his *Spaces of Hope*, calling for radical utopian imagining and rethinking of our relationship with nature as response to the human injustices in contemporary society. Noteworthy is also a recent literary and artistic movement called ‘Solarpunk’, which takes hope rather than despair as its basis in reimagining a world of interconnections between nature and community in the face of climate change, social inequalities, and political-economic crisis (see a.o. Anderson-Nathe & Charles, 2020 and Johnson, 2020). This section draws on a range of such movements, complemented with theoretical debates and empirical work, to highlight alternative directions in coping with the current state of polycrisis.

2.3.1 Posthumanism and the posthuman turn

A key theoretical frame that provides inspiration for this thesis is posthumanism. Although posthumanism as concept is contested and some associated scholars (including Haraway) have explicitly distanced themselves from the movement, its broad propositions are nonetheless a useful basis for departure. It is thus used as umbrella term; many of the scholars and movements discussed in following sections align in some way with its main premises.

As Celermajor et al. (2021) formulate, “a core feature of posthumanist approaches is the recognition of human beings’ inextricable embeddedness in biological and technological worlds” (p.123). Key is ‘entanglement’, based on the idea that humans are inherently entangled with the nonhuman. A central figure in the movement is Latour. In *We have never been modern* (1991), he focuses on the misconception that entities are *essentially* social or natural before any form of interaction. He argues that they rather jointly constitute complex networks in the world. Latour (2005) further develops these ideas of co-constitution and embeddedness in his Actor Network Theory that highlights multiple agencies in networks. Haraway builds on these concepts: in *When species meet* (2008), she tackles the myth of human exceptionalism and seeks

to move beyond the Human-Nature dichotomy. In line with Latour, she argues that the human and nonhuman must instead be considered as mutually constituting the world. These claims of co-constitution, embeddedness, and relationality are supported by empirical evidence (Head & Gibson, 2012).

From a posthumanist perspective, it is sometimes irrelevant to argue over how ‘human-induced’ versus how ‘natural’ climate change is in the first place, as this form of conceptualization puts humans outside of the natural system under analysis (Head & Gibson, 2012). However, it is undeniable that humans are powerful agents when it comes to impacting earth surface processes and thus climate change. This debate does not mean to relativize all actors to an equal level of significance and power; it rather means to “make this issue of power and agency a question, instead of an answer known in advance”; it does not erase humans from the equation, but aims to understand the *full* equation (Mitchell, 2002, p.53). We must thus constantly assess in what situations the human difference is relevant, and in what situations the privileging of humans is problematic (Head & Gibson, 2012). It is thereby useful to work with Plumwood’s (1993) theory of mutuality, which recognizes both continuity and difference (without hierarchy) between humans and other-than-humans.

Essentially, posthumanism thus calls for moving beyond the Human-Nature binary and instead recognizing the intrinsic entanglement of the human with all its surroundings: humans *within* nature instead of as versus nature (Moore, 2015).

2.3.2 Inspiration from political economy approaches

Several fruitful contributions towards formulating a more integral, holistic approach to sustainability questions stem from political science and environmental politics. Many of these movements have overlapping propositions, albeit from different starting points. This section expands on contributions that are deemed most relevant to the current thesis, namely: ecologism, urban political ecology, and radical urban politics.

Whereas there are dozens of different environmental movements, all with their own sub-strands, it is not within the scope of this research to provide a full overview of these; rather, it briefly touches on one specific movement that is of relevance. A prominent ideology in political theory since the 1960s and a key basis of other environmental movements is ‘ecologism’ (Hoffman & Graham, 2015). Ecologism is the merging of environmental and socio-political issues, of ‘classic’ environmentalism and ideas of social ecology (López Ruiz, 2013). Where environmentalism is driven by concerns of the effects of environmental degradation on *humans* and according obligations to conserve ‘the environment’, ecologism rather springs from the recognition that ‘ecology’ or ‘nature’ is of value *in itself* (Hoffman & Graham, 2015).

Whereas some of the research within ecologism still seems to be operating within the limited frame of a Human-Nature binary, other contributions move beyond this dichotomy. Baxter (1999), for instance,

argues for the position “that the world of nonhuman nature has value in itself, irrespective of its contributions to (or, for that matter, detractions from) human well-being” (p.3), from a moral as well as a political point of view. Asara (2020) furthermore provides an interesting contribution with her work on the role of ecologism in the Spanish *Indignados* movement, highlighting the way environmental aspects are closely intertwined with socio-political issues and constitute an integral aspect of everyday life. Ecologism has provided inspiration for later environmental movements by its integral perspective and its focus on human and other-than-human entanglements, along similar lines of thought (although more linked to the social realm) as for instance ‘deep ecology’ movements.

Another relevant strand of research is that of urban political ecology. Originally introduced in the late 1990s and further articulated over the years (see Swyngedouw, 1996 and Heynen, Kaika & Swyngedouw, 2006), urban political ecology highlights the ecological and the environmental as key for understanding urbanization processes. Hereby, the material cannot be seen as separate from cultural, social, political, and economic processes in the city – an idea that links back to Moore’s (2015) point on the historical sedimentation that leads up to the production of discourses. Ernstson and Swyngedouw (2018) try to understand the ‘urbanization of nature’, in which social categories such as money and gender become intertwined with material assemblages such as water, green space, and food. They focus on the way social forms of power actively pull the nonhuman into processes of uneven socio-ecological (re)production – Brenner’s (2004) urbanization may be planetary, but highly uneven. Hereby, they aim to move beyond techno-managerial essentializations of ecology as ‘natural’ and the urban as ‘social’. By providing cases of political activism, grassroots insurgencies, and emancipatory politics from all over the world, they aim to provide “political hopes” in the face of what they term “the accelerating process of planetary and socio-ecologically deeply uneven urbanization” (Ernstson & Swyngedouw, 2018, p.3). Many of the cases highlight the value of grassroots socio-environmental organization in advancing any kind of transformational change (see for instance chapter 8 by Myers).

This focus on the bottom-up also links to another strand of research: that of radical urban politics. Peiteado Fernández (2020) states that radical urban politics aims to expose the grievances and injustices that are constantly (re)produced in and through the urban, and points at the value that political contestation can have in the emancipation of otherwise excluded groups. Although he focuses especially on contestation of established politics that comes from *outside* of these institutions, the need for radical urban politics in some form of political interruption against established injustices – in this case towards other-than-human entities – is greatly valuable for the current work. His thesis furthermore highlights the way agency in the urban context can be redefined through activism and disruption in order to contest the neoliberal hegemony, looking at the relationship between a heterogeneous urban landscape and the production of space by combining various theoretical approaches. This also brings us back to the post-political character of current

sustainability policymaking. In line with Castells' (1993) call for urban social movements to accelerate progressive urban struggles and contribute to paradigm shifts, urban insurgencies all over the world are working to repoliticize the city (Dikeç & Swyngedouw, 2017). These highlight the value of alternative urban spaces in including other actors in the political arena (Peiteado Fernández, 2020).

This thesis essentially looks at the impact of extra-institutional disruption and contestation of the anthropocentric paradigm *within* urban politics rather than at the disruptive activism itself, as such taking a slightly different approach. It focuses on the way official discourses on sustainability and climate seem to have (or have not) adopted narratives from the grassroots and social movements level. Thereby, the subject of other-than-human actors is of a slightly different caliber than other cases: the inclusion of such actors is not only a matter of injustices and aggressions towards these entities, but also has to do with our human ignorance in knowing how to listen to nonhuman political voices in the first place. The section on representation and recognition touches on this challenge.

2.3.3 Justice

Another field of research from which to reimagine current policymaking approaches to climate and environmental change questions is that of justice. One strand is environmental justice. Much of this research centers on the way environmental inequities reinforce social inequalities between groups of people. Environmental justice is traditionally conceptualized through three kinds of justice: distributive justice (equal distribution of environmental 'goods' and 'bads'), procedural justice (fair, equitable, and accessible institutional processes), and recognition justice (recognition of particular groups and collective identities) (Malin, Ryder & Galvão Lyra, 2019).

More recently, a fourth kind of justice has been opted: restorative justice, or repairing Native and Indigenous peoples' relationships with the land (ibid.; Schlosberg, 2013). Especially the latter tenet of justice reflects a growing move to pull the debate beyond only humans, to take on a more integral understanding of the relationship between people, their surrounding nonhuman environment, and justice (see for instance Schlosberg, 2019 on environmental (in)justice in the Anthropocene and the collection of articles by Apostolopoulou & Cortes-Vazquez, 2019). Particularly restorative justice also relates to literature on the colonial aspects of environmental policymaking⁶ (see e.g. Whyte, 2017 on settler colonialism).

⁶ It lies outside the scope of this research to provide an extensive overview of environmental movements from a postcolonial perspective. However, a noteworthy concept in this regard is 'ecological debt', which is used to point at the accumulated debt that Global North countries owe Global South countries as a result of environmental injustices and crimes (pollution and waste production, environmental degradation, and limitless resource extraction) that have been committed over the course of centuries. For further reading on the topic, refer to articles by Timmons Roberts & Parks (2009) and Warlenius, Pierce & Ramasar (2015).

All four tenets of environmental justice can be extrapolated to include the other-than-human. Recognition justice, for instance, is key to ‘seeing’ these entities in the first place, and procedural justice is then necessary to ensure equal access to political decision-making processes. A related concept that could be applied to the current case is ‘Right to the City’. Originally introduced by Lefebvre (1968 [1996]) and later built on by Harvey (2008), amongst others, this entails recentering humans – and arguably other-than-humans (see e.g. Steele, 2021) – in processes of city-making, replacing capitalist forces that currently reproduce social and environmental injustices.

Building on this existing literature, an interesting development is the rise of the term ‘multispecies justice’, a discussion that links to granting rights and legal personhood to other-than-human natural entities. Based within the field of environmental politics, Celermajer et al. (2021) provide a solid overview of the development of the concept from various movements and scholarships, including work on animal rights, environmental justice, political ecology, posthumanism, and indigenous philosophies. By explicitly focusing on the ‘multispecies’, Celermajer et al. (2021) “contest the exclusive classificatory politics of anthropocentric justice theories that purport to expand beyond humans by recognising the value of certain other entities” (p.120).

In their article, Celermajer et al. (2021) try to imagine what multispecies justice would look like when institutionalized in politics. They hereby recognize the strong resistance by the current (colonial) liberal hegemony, stating that, nonetheless, “the importance of deconstructing and decolonising the hegemony of liberal political discourse is crucial, and is part of a larger project for multispecies justice to rework a politics of knowledge and practice of political communication” (p.119). Crucially, multispecies justice does not mean to take the human actor out of the equation; it rather aims to broaden the discussion, by recognizing injustices amongst other-than-humans as well as humans and focusing on their entanglements.

A key challenge in institutionalizing multispecies justice is how to know the needs of and communicate with other-than-human entities (Celermajer et al., 2021.). This essentially comes down to questions of representation and inclusion of nonhumans in practice.

2.3.4 Representation and recognition

There is an ongoing debate on how to operationalize the inclusion and recognition of other-than-human actors in policymaking. One common form of such representation is legally recognizing the personhood of other-than-human entities so that they enter the political landscape as rights holders (see for instance Eckersley, 2011) – in contrast to previously discussed anthropocentric formulations of *human rights to nature*. This has been done in various cases in different parts of the world. A commonly referenced case is that of New Zealand, where since 2014, three rivers and lands have been granted legal personhood (Winter,

2019). These actions are part of reconciliation efforts with Māori and other ‘iwi’ (tribes), as such linking directly with multispecies (Indigenous) justice literature as well as building on postcolonial theory (Parsons, Fisher & Crease, 2021). Another notable case is the Ecuadorian Constitution of 2008, the first (and as of yet only) to formally adopt a ‘rights to nature’ approach (‘nature’ considered in the form of Pachamama) and thereby posing a radical turn away from the anthropocentrism of modernity (Escobar, 2011). The Constitution is based on the *Buen Vivir* approach to living, and has guided some real-life situations from a multispecies perspective (see Ordóñez, Shannon & d’Auria, 2022 on a practical implementation of *Buen Vivir*). Bolivia has adopted a similar approach. Building on these cases, Youatt (2017) argues for granting personhood and rights to nature as a move towards creating an ontology of ‘collective personhood’.

Although there is a lot to say in favor of granting rights and personhood to other-than-human entities, there has also been criticism. As posed by Celermajer et al. (2021), “both frameworks [of rights and of personhood] risk reinscribing anthropocentric assumptions that may replicate existing exclusions” (p.130), thereby retaining hierarchical binaries and failing to capture the full diversity of beings and their interwoven relationships. As early as 1977, Rodman pointed at the way granting rights or personhood to nonhuman beings is anthropomorphic. Latour (2004) builds on this inherent anthropocentrism of granting rights, stating that the category of ‘subject’ remains reserved for humans: even with the granting of personhood, the second-order exclusion of other-than-humans persists because they rely on (the translation and choice of inclusion by) humans. He furthermore argues for the need to move beyond the idea of representation, seeing ourselves not as *representatives* but rather as *diplomats*: rather than creating a common language, our role as human beings is to formulate ways forward that are positive or satisfactory for all involved parties (Latour, 1993 and 2004; see especially the way he formulates his ‘Parliament of Things’).

Notwithstanding this valid criticism of anthropomorphism, granting rights remains important because, within the confines of our current institutional handholds, it is a concrete step on the path to institutional inclusion in a context where nonhuman actors and stakeholders remain largely underrepresented in decision-making processes (Rupprecht et al., 2020). The granting of rights to other-than-humans is valuable because rights allow for no trade-off (as rights are non-negotiable), and rights holders are considered the moral source of the claim, so that other-than-humans become perceived as agents rather than mere objects (Celermajer et al., 2021). It is thus a step towards multispecies justice.

Still, there is the need for imagining new forms of representation (or to move beyond this term, as Latour would argue) so that we can move towards a multifarious political community (also see work on environmental and ecological democracy in Pickering, Backstrand & Schlosberg, 2020). Two valuable contributions in this regard are by Haraway (2008) and Meijer (2019), who write respectively about interactions between humans and (mainly) domestic animals and about understanding and incorporating

nonhuman animal voices in political practices. In any case, it is important to recognize the inclusion of other-than-human species as a continuous learning process, where agreements can never be ‘perfect’ (as in accounting for *all* interests) (Van Dooren, 2019). We must rather work towards new forms of representation that are situation-dependent and provisional (ibid.).

2.3.5 Traditional ecological knowledge

In many cases, also illustrated by urban insurgencies all over the world that question the status quo (Ernstson and Swyngedouw’s (2018) ‘political hopes’), we do not so much need to imagine new ways forward but rather need to acknowledge what is happening already. There is ample empirical evidence in favor of approaches to climate and environmental change that recognize more-than-human, relational agency rather than remaining within binary frameworks (Escobar, 2011; Rupperecht et al, 2020). Much of this work takes place outside of a western (European) context and falls within what can be termed ‘traditional ecological knowledge’ (TEK) – also relevant in the previously described cases of granting rights to nature in Ecuador, Bolivia, and New Zealand. Head and Gibson (2012) explain how, in some cases, “indigenous and non-western communities hybridise ‘tradition’ with ‘contemporary’ politics”, forming what they term “differently modern” practices (p.708-709).

The point is not to romanticize indigenous practices, but rather to learn from the way many societies have been able to combine the past with the future. It is in this regard fruitful to look at First Nations and Indigenous academics (such as Graham, 1999 on Aboriginal worldviews in Australia and Whyte, 2017 on Indigenous approaches to conservation in the US). Furthermore, many of such approaches grant valuable insights into more sustainable and holistic practices that reject the anthropocentrism of western modernity (what Escobar, 2011 terms the ‘biocentric turn’; see also Rose et al, 2003). As such, in many places, humans already live according to knowledge and principles through which they maintain relationships with other-than-human entities within a wider ecological community; it is rather dominant Western technocratic planning regimes and approaches to climate adaptation that need to ‘catch up’ and learn to reimagine their relationship to other entities (Robin, 2018).

2.3.6 Multispecies sustainability

The above work on justice, forms of representation, and traditional ecological knowledge comes together in the term ‘multispecies sustainability’, a main tenet of the current thesis. This section explains the concept and subsequently expands on examples of cases in which multispecies sustainability is present in many urban contexts.

Multispecies sustainability is the application of multispecies thinking to sustainability. Starting point is that the current sustainability concept as proposed in the Brundtland report is reductionist. It remains

binary and resource- and human-focused, failing to capture human entanglements with the more-than-human (Rupprecht et al., 2020). The concept has conceptual, analytical, and ethical limits. As such, the current conceptualization of sustainability is problematic because it limits the transformational potential of sustainability efforts in practice. By focusing only on human needs and well-being, it fails to acknowledge humans' intrinsic interdependence and entanglement with those of other beings and entities; the current conceptualization of sustainability thus makes it inherently impossible to meet its own conditions (Rupprecht et al., 2020). In line with the previous discussion on the limits of anthropocentric climate policy, this lack of a multispecies perspective explains why the majority of present-day sustainability goals are failing (Howes et al., 2017).

Davies and Riach (2018) were one of the first to broaden sustainability into a multispecies context, taking 'multispecies' as a concept beyond the realms of social sciences and humanities that it had thus far been explored in. Building on this, Rupprecht et al. (2020) further conceptualize 'multispecies sustainability'⁷. They provide the following definition: "meeting the diverse, changing, interdependent, and irreducibly inseparable needs of all species of the present, while enhancing the ability of future generations of all species to meet their own needs" (p.5). They propose six guiding principles and consecutively apply the concept to various cases. These principles include that 'multispecies well-being' depends on the agency of all members and thus requires "stakeholders that represent needs of other species in human multistakeholder spaces" (p.5) – an aspect that comes to the forefront in discussions on other-than-human representation. Another principle links back to the discussion on posthumanism and climate policy, stating that the maximizing of only human well-being is not logical as well-being is inherently relation-based (and not resource-based; Rupprecht et al., 2020). Rupprecht et al. (2020) advocate for multispecies sustainability both for its practical necessity and its normative value.

There are various academic sources that adopt a multispecies sustainability perspective in understanding urban issues, moving beyond the problematic conception of 'city' versus 'nature' (Hinchcliffe, 1999). Contesse et al. (2021) show the way nonhuman actors already play a key role in many sustainability transformations, and argue that we can use that knowledge to promote other kinds of transformations. Cities have in fact always been multispecies locales; an anthropocentric view only gradually became dominant during the past centuries (Rigby, 2018). For example, Konijnendijk van den Bosch (2016) advocates for recognizing the agency of trees (and other nonhumans) in urban forest governance, using Latour's Actor Network Theory to show the way trees contribute to placemaking. Head and Gibson (2012) further show the way more-than-human ontologies are already a part of everyday life in (sub)urban and rural settings alike – think of people dealing with mice or struggling with water supply.

⁷ Also see their day-to-day work at the Multispecies Sustainability Laboratory on <https://multispecies.city/>.

Another approach comes from social-ecological systems theory: Kennedy (2022) argues for taking a multispecies perspective when understanding ruderal and spontaneous vegetation (including weeds and unplanned green) in cities. All of these cases recognize the interdependencies between humans and other-than-human species, as much in urban questions as in any other context. They furthermore highlight the intuitive nature of entanglements between humans and nonhuman others.

2.3.7 Planning and policymaking for multispecies sustainability

Once we have recognized the need to reconceptualize sustainability towards a multispecies perspective, what does this entail for the institutional and political approach to the climate and environmental crisis? Houston et al. (2018) call for more-than-human planning practices, that involve multispecies knowledge production processes and new policy tools that integrate other-than-human agency in order to produce climate adaptive, just, inclusive cities. Rose and Van Dooren (2012) similarly pose that, to create cities as places of multispecies conviviality, this conviviality must be accommodated and planned for. They argue that “[c]onviviality thus requires that we make an effort toward inclusiveness, that we endeavor wherever possible to make room for that other in our activities in shared places” (2012, p.17). Rigby (2018) also speaks of multispecies conviviality, demanding “more bio-inclusive practices of urban sustainability” (p.77). Tsing (2015) writes on the wonders of collaborative living with other-than-humans if we dare to immerse in unexpected encounters. Interesting in this regard is a growing number of multispecies approaches in architecture and urban design (see for examples Wahlstedt, 2021).

Head and Gibson (2012) state that we need to find ways to translate and operationalize the theoretical and empirical knowledge in other parts of the world (what they term ‘amodern’ approaches, also discussed as TEK) to fit into the field of Western climate and sustainability policymaking. This translation of knowledge entails the ontological reframing of many of our human assumptions and norms (Gibson-Graham, 2008). As Tsing (2012) summarizes, we need to recognize that “human nature is an interspecies relationship” (p.144). Furthermore, it is crucial to move beyond clear dichotomies of power, shifting from a public versus private understanding to a polycentric, networked form of sustainability governance that includes human *and* other-than-human elements: a ‘cosmopolitics’, in line with Latour’s (1993) Parliament of Things (Head & Gibson, 2012). In addition to ontological reframing, we need epistemological reframing, including new methodologies such as multispecies ethnography (Gibson-Graham, 2008; Rose & Van Dooren, 2012). Such methodologies aim to account for diversity and conviviality in the multispecies city (Locke & Muenster, 2015). All of this requires moving away from the idea of ‘fixing problems’ in the city towards a more dynamic, exploratory, and imaginative approach (Van Dooren, 2014a).

There are more examples of how to go about multispecies sustainability in ‘policy’ practice. Do Thi and Dombroski (2022) write on the way nonhuman entities are involved in practice in climate change

adaptation in Vietnam, an example of moving from current approaches that prioritize mastery and control over the environment towards diverse, more-than-human adaptation strategies. Similarly, Yates (2021) expands on how to incorporate traditional Māori ontologies and cultures of holistic ecological well-being (read: including the well-being of the other-than-human) in planning practices and tools. Highlighting also the legal aspect of multispecies sustainability in practice, Espinosa (2015) examines the process by which rights of nature in Ecuador were constitutionalized, analyzing the campaign and its dominant discourses. The focus in much of this work is on building on strategies already used, rather than reverting to modernist, technocratic developmentalism and infrastructure as is often done in climate change adaptation and sustainability measures (Lopes et al., 2018).

The operationalization and institutionalization of a multispecies perspective, in like manner to the move towards multispecies justice, will encounter institutional, legislative, popular, and violent resistance. It is, more than only a cultural challenge, an objection towards the current material, political, and economic order that is entirely built on the exclusion and domination of other-than-human entities (Celermajer et al., 2021). Despite these difficulties, the above work and hopefully the current research provide hope for a future in which multispecies sustainability is at the basis of (urban) policymaking.

2.3.8 On terminology

As the realm of multispecies sustainability and justice is a relatively new academic field, there are various terms that are used to refer to similar objects. ‘Nonhuman’, other-than-human’, ‘more-than-human’, ‘actants’, and ‘multispecies’ are used alongside each other and have slightly different connotations, as well as having to do with individual researcher preference.

‘Nonhuman’, although commonly used, is sometimes the less preferred option because it can seem to lie in an extension of the Human-Nature binary, opposing the ‘human’ to anything that is ‘not’ and that thus has a connotation of being less (being ‘not’ something rather than being in itself). The term ‘more-than-humans’ is mainly known from research by Puig de la Bellacasa (2017) and has been adopted widely within the field. ‘More-than-human’ is a useful term because it places the emphasis on the way the human is *entangled* and inherently cannot live separately from other entities: in terms of microorganisms that make up our body, but also in terms of all the entities that constitute and impact our lives. Another term that is sometimes used is ‘actants’. Stemming mainly from posthumanist theory, this term also refers to entities such as artificial intelligence, moving beyond the natural and living into the realm of technology (see for instance Leino, Karppi & Jokinen, 2015). The current research limits itself to natural (as in material and biological) entities.

In this thesis, the preference goes to ‘other-than-human’. I choose to use mainly this term (although sometimes interchangeably with ‘nonhuman’ or ‘more-than-human’) because, whereas it is true that most

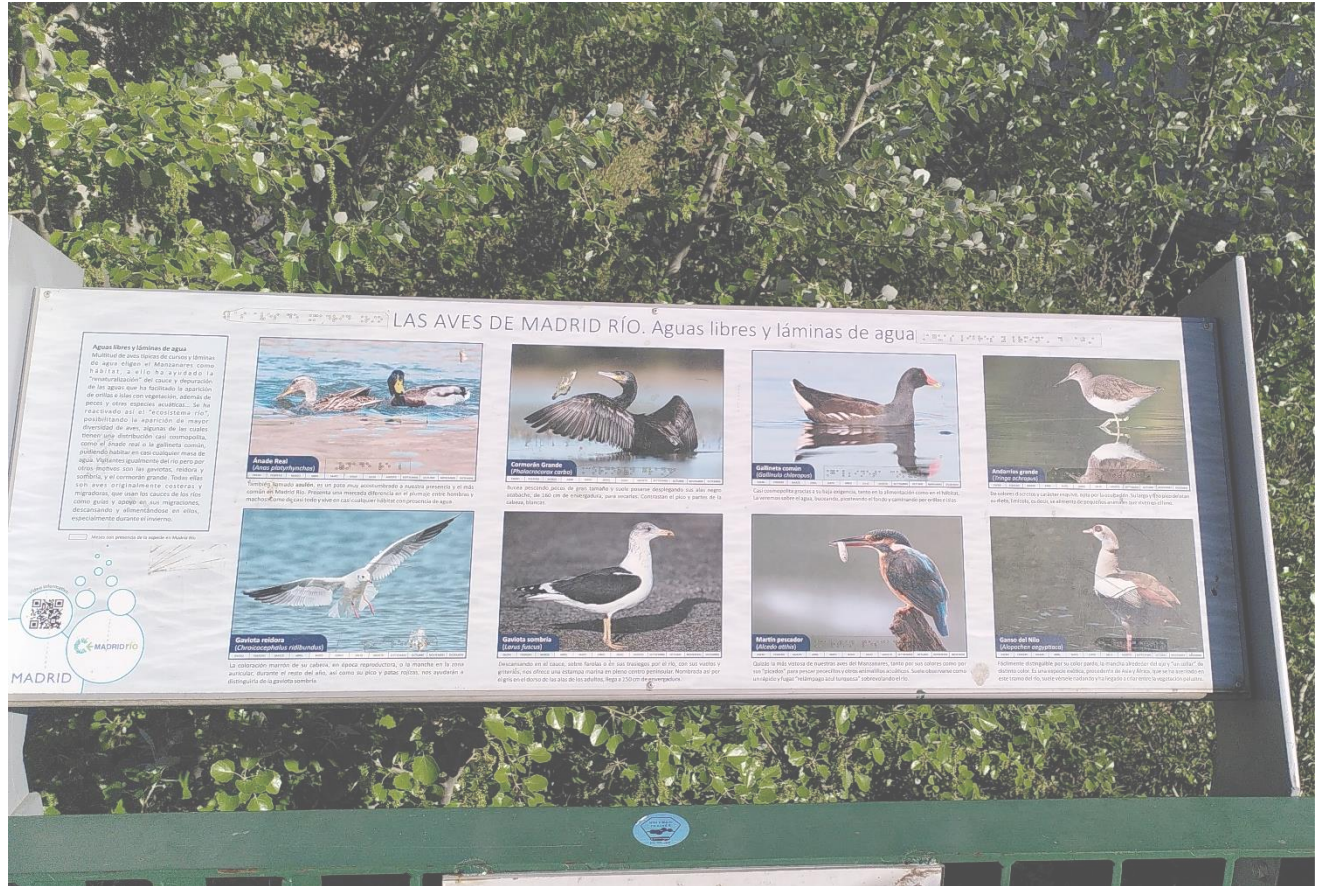
other-than-human entities are also inextricably entangled with the human and thus cannot really be seen as ‘other’, this thesis aims to analyze whether these other entities are recognized as individual agents at all, independently of their relation to humans. This thesis also builds on the concept of ‘multispecies’. Although the term strictly speaking only refers to ‘species’ and thus would not include other-than-human entities such as rivers or mountains, I nonetheless choose to use it because, as phrased by Rupprecht, “multispecies is much better at conveying the idea of nonhuman life to a broader audience” (personal communication, July 6th, 2023).

2.3.9 Relevance?

Where the first section of the literature sketched the political and economic context of this research, and the second section focused on deconstructing the problematic aspects of this context (especially looking at present-day sustainability approaches), this third section poses an array of hopeful developments that can help in moving towards structural socio-ecological transformations. It has provided an overview of the theoretical, empirical, and moral necessity for ‘alternative’ world models based on posthumanism and political economy approaches. It subsequently introduced the concepts of multispecies sustainability and multispecies justice, especially the former of which constitutes the backbone of this thesis.

By outlining practical cases of a multispecies (policy) perspective and shining light on noteworthy theoretical contributions, as well as recognizing the value of imaginative and exploratory approaches, the section shows the urgency and potential in adopting a multispecies, inclusive approach to sustainability. At the same time, it is clear that there remains an enormous amount of theoretical and empirical work to be done in operationalizing the multispecies sustainability concept on an urban scale. The current thesis analyzes the barriers and opportunities to adopting such a multispecies approach in climate and sustainability policy on the city-level, focusing on a European case (in contrast to non-European, non-western cases discussed previously). It is thereby a contribution to the necessary ontological and epistemological reframing of our societies.

3. Methodology



Information sign on bird species of the Madrid Río park, April 2023.

“The renaturalization of the Manzanares river became a symbol for other projects”

– Gorka from Más Madrid

This thesis aims to provide an understanding of urban climate and environmental policy through underlying narratives that inhibit or enable the adoption of multispecies sustainability. It does so through a longitudinal, single-case study analysis, pulling from an array of qualitative methods and research traditions. The current section outlines the *how* and *why* to answering the central research question. It starts by explaining the particular research perspective that lies at the basis of this work, followed by an overview of the methodological framework and methods used, and ends with a brief reflection on the research process in retrospect.

3.1 Researcher positionality

To recognize the value of this thesis, it is crucial to recognize my positionality as a researcher because it has unavoidably influenced the research starting points and outcomes. As highlighted by Rose (1997) and especially recognized amongst feminist geographers, any kind of knowledge production is *not* neutral nor universal. The way I conduct the current research is influenced by the sedimentation of my previous experience, both as researcher and as human being, and I thus aim to here include a process of reflexivity of my privileges and prejudices – my own ‘onto-epistemological inquiry’, as per Williams (2013).

My personal understanding of reality is perhaps most clearly articulated through my critical perspective on current environmental policymaking and call for imagining alternatives (rooted partly in post-Marxist tradition). The research is thus fueled by the supposed shared understanding of the immediate urgency of (government) action regarding climate change and environmental degradation. Furthermore, having grown up in contexts where ‘humans’ and ‘nature’ as binary was the norm has undoubtedly limited my ability to imagine truly multispecies realities. This is reflected in my limited acquaintance with more inclusive, non-anthropocentric vocabulary.

This deconstruction of my positionality as researcher is partly based in poststructuralism. My understanding of meanings and reality as constantly (re)created through particular practices and relationships has fundamentally shaped the research; without it, I might not have undertaken an approach so focused on discourses and practices. I hereby draw inspiration from theorists such as Foucault (1978), Derrida (1998), and Deleuze (2002 [2004]). Although anti-essentialist and poststructuralist approaches are becoming more common in many fields of social sciences, positivist approaches remain the mainstream (Hokkanen, 2020). Yet, a move away from a worldview of fixed meanings and (structuralist) binary oppositions is crucial to understanding almost any social phenomenon. Williamo and colleagues (2018) argue that positivist, reductionist conceptions of the world are part of the cause for the current inertia

regarding the climate emergency – as also shown in the literature review. By conducting research, I am myself formulating and reproducing particular discourses, advocating for certain knowledge and excluding other narratives. I thereby try to understand the discourses, *and* the bodies of knowledge and practices that produced these discourses.

To sum up, in line with Haraway (1991) and Rose (1997): this research is not objective, and I do not claim it to be. I do, however, hope that it can spark a different point of view on depoliticized mainstream climate politics, questioning the so often unquestioned underlying belief systems, and that it will eventually contribute to an expanding field of research on critical, multispecies environmental policy.

3.2 Case study approach

The thesis takes a single-case study approach, focusing on the context of Madrid. Whereas a comparative approach would have been fruitful to shine light on contextual differences, limiting to a single case is most logical for the current thesis because it allows for an in-depth analysis of the various scales that impact urban sustainability policymaking, thereby sketching a full understanding within the boundaries of the limited scope of this work. Within the case, I use a longitudinal analysis to discern the potential change in discourses regarding sustainability *over time*. By comparing climate change and environmental plans at different points in time, the research illuminates the way political developments at various scales have impacted the adoption of a multispecies approach (or lack thereof) in urban sustainability policy in Madrid.

The choice of this particular case was made for a number of reasons. Firstly, Madrid is a classic example of various converging environmental challenges: it increasingly struggles with heat waves and according droughts and water management issues; on the other extreme, intense rainfalls lead to vulnerability to floods (City of Madrid, 2016b and 2021). The Iberian Peninsula is also one of the main biodiversity hotspots in Europe (in terms of both species richness and endemism), which is now being threatened because of environmental degradation (ibid.; Williams et al., 2000). Furthermore, because of its geographical positioning and heavy road transport, air pollution has been an issue for years. As a result of these factors, the city has several relevant sustainability policies and plans suitable as unit of analysis.

Secondly, the political municipal context of Madrid makes it an interesting case to analyze changes in policy over time. For several years, Madrid, like the rest of Spain, seemed to be lagging behind in terms of environmental politics when compared to neighboring European countries – an ironic situation given that environmentalist values and support for ecological action was generally shared throughout Spanish society early on (López Ruiz, 2013). The city then saw a leftist ‘government of change’⁸ between 2015 and 2019,

⁸ Termed as such because of the radical break from decades of conservative Partido Popular governments that this Ahora Madrid government entailed.

the consolidation of political insurgencies the years before – most notably the 2011 national 15-M movement (*‘los indignados’*) that arose as call for structural change after the 2008 recession (Fernández Casadevante, Morán & Prats, 2018). This led to the emergence of a progressive urban regime that allowed for more substantial steps in climate and environmental policy and contributed to the climate emergency declaration in 2019 (Medina-García, de la Fuente & Van den Broeck, 2021). Additionally, Madrid has a history of strong neighborhood movements and grassroots resistance, which makes it interesting to look at the way bottom-up initiative (in addition to national and supranational developments) impacts the urban policymaking level (Fernández Casadevante, Morán & Prats, 2018). The usually relatively conservative government (regarding sustainability) and the progressive social movements – that can sometimes formalize into political parties – provide for an interesting combination of discourses. Moreover, with its (human) population of around 3,5 million people and a productive structure dominated by the services sector (close to 90%), Madrid is precisely the encapsulation of a large, technocratic, economic development-driven city (City of Madrid, 2021).

A third justification for the case study of choice lies in its national context: Spain is the first country in Europe to grant rights to an other-than-human natural entity with the legal recognition of Mar Menor. Following a citizen-driven initiative, the Spanish government passed a law in 2022 that granted legal personhood to this saltwater lagoon in the southeast of the country (Greenpeace España, 2022). Last but not least, one could argue that it is valuable to conduct research on multispecies sustainability particularly in a Western, Eurocentric context because this is precisely where the dualism between Humans and Nature is most pronounced and where anthropocentric approaches most strongly dominate in comparison to some non-European contexts that see a more diverse range in TEK (such as the Buen Vivir principle in South America, Nations and indigenous knowledge in the US and Canada, and Māori practices in New Zealand).

Taking municipal policy specifically as unit of analysis can be justified because of its dual focus on the *urban* and on the *policy* level. As to the latter: while much of my used literature highlights the role of grassroots and bottom-up mobilizations in any kind of transition, this thesis chooses rather to focus primarily on the top-down government level to understand the way these practices have consolidated (or failed to) in formal policy – one could say the formal ‘results’ of the bottom-up. Moreover, however diminished the power of the (urban) government has become in the current era of privatization, it continues to play a key role in setting the political and legal frameworks within which other actors may operate – thus playing a crucial role in facilitating societal transitions. The focus on the governmental level also has to do with the fourfold tenets of environmental justice introduced in the literature review, where top-down policies play a role in both ‘recognition’ of particular (other-than-human) groups and institutional ‘procedures’ for their inclusion (Schlosberg, 2013). Lastly, where some work has been done on the underlying discourses in

international climate policy (see mainly Hokkanen, 2020 who analyses the imaginaries at the root of the UN response to the climate crisis), there seems to be a gap when it comes to the city-level.

Regarding the urban: yes, the national, international, neighborhood, and regional scales are important, yet the city scale is chosen precisely because it is where all of the above come together: (supra)national legislation and political moments impact a city's political playing field as much as do the grassroots, the neighborhood movements, and large corporate players. In addition, the urban environment seems to be *the* place most removed from multispecies thinking through its inherent 'conquering' and consequent alienation from 'the natural'; it is the epitome of the Human-Nature dichotomy (Ernstson & Swyngedouw, 2018).

3.3 Methods

This thesis uses a combination of qualitative methods to provide a full understanding of the research question: *In what way do discourses in municipal climate and environmental policy in subsequent city governments of Madrid inhibit or enable the adoption of a multispecies conception of sustainability?*. It demarcates the various discourses and narratives that are dominant in contemporary sustainability policy and the way these impact the adoption of multispecies discourses. This is done through the analysis of sustainability plans and other political commitments on a Madrid city-level, in addition to briefly analyzing relevant (supra)national and local movements to understand the way these discourses are formed and sustained. Textual discourse analysis is complemented with a second unit of analysis, namely that of expert interviews with people influential in the formulation of discourses that lean towards a multispecies perspective. As such, a more real-life, 'in-field' dimension is added to the thesis. The current section will explain and justify the use of such a double-tier methodological approach.

3.3.1 Argumentative discourse analysis of policy documents

The first phase of research consists of an initial collection of secondary data to understand the sustainability context of the case at hand. A broad range of texts – retrieved from official government websites and archives, media sources, websites of organizations, blogs, and academic journals – is collected and reviewed through a document and media scan. This results in what will be termed the 'sustainability policy landscape' of Madrid. Sketching and understanding the institutional context of Madrid in terms of sustainability policy then makes it possible to discern the most relevant and influential municipal plans and commitments over the past years. As such, this first step is a tool to understand the case context and is simultaneously a data collection process.

Next, the most relevant texts are analyzed through the lens of argumentative discourse analysis, the primary data analysis method used in this research. Discourse analysis in itself is a suitable method because it studies language in relation to its social and political context, illuminating the way other-than-human entities are actively excluded or included in sustainability policy. This thesis uses a qualitative discourse analysis method over a more quantitative method (such as content analysis). Whereas the latter often reflects a more realist approach that supposes text directly reflects thoughts and ideas, the former rather looks at *representations* of a social world and how these are constructed (Rapley, 2018). Language is seen as a vehicle for actions, or representations of reality, and is *not neutral* but rather entails complex epistemological power dynamics (Potter, 1996). As highlighted during the literature review, it is essential to critically analyze the different discourses and ideologies that underlie climate change rhetoric, as significantly contradictory approaches can – on the surface level – use overlapping terminology (Bringel, 2023; Hajer, 1995).

According to Hajer and as used in this thesis, a discourse is “an ensemble of ideas, concepts, and categories through which meaning is given to phenomena” (1993, p.45). It is built on social constructs, which are themselves formed through a highly political process of framing ambiguous social phenomena based in the sedimentation of historical understandings of those phenomena. Discourses become taken-for-granted and dominant in their meaning, but in fact are constituted of practices and concepts that can only be disentangled through critical analysis (Head & Gibson, 2012). This aligns with the post-political condition of contemporary sustainability politics outlined in the literature review; through a discourse analysis, I aim to repoliticize the debate.

This research chooses to use *argumentative* discourse analysis (ADA) because of its empirical rather than purely linguistic focus. ADA goes beyond text only and expands to consider 1) the social and political practices that construct and reinforce certain social constructs that are highlighted through the analysis, and 2) the positions that are being supported or criticized, especially focusing on the positioning between various groups of actors (Hajer, 2002). The use of ADA in this thesis is inspired by work on what Fischer & Forester (1993) term the ‘argumentative turn’ in policy analysis, recognizing the selective nature of policy arguments and the intrinsic link between power and language in policymaking. It follows similar methodological lines as Hajer (1995, 2002), who sets out a framework for conducting ADA and uses it in the analysis of environmental discourse. As mentioned previously, such research is based in a poststructuralist ontological approach that views meanings and discourses as constantly being (re)formulated, rather than as positivist unchanging realities.

ADA involves the use of *storylines*, or narratives that combine various discourses of similar ways of conceptualizing the world (e.g. ecological, economic, and scientific discourses about climate change) into one single coherent ‘story’, graspable to the ‘non-expert public’ (Hajer, 1993). By applying an ADA to sustainability plans in the case of Madrid, the thesis sheds light on the various storylines in contemporary

climate and environmental policy and their impact on the adoption of multispecies sustainability. It thereby also analyzes the way these clusters of discourses are actively produced and reproduced, with formational practices coming both ‘from below’ and ‘from above’. Another reason to opt for the use of storylines is that this research aims to highlight the power of storytelling in itself, highlighting the years of sedimentation that lie at the basis of narratives that currently dominate politics. The thesis hopes to create space for imagining other kinds of stories through analyzing what stories are currently told and why.

The current work demarcates five central storylines (or codes) along which to categorize during the data analysis process, conducted using MAXQDA software. For the formulation of these storylines, it draws inspiration from the conducted literature review and initial readings of the collected data, as well as from two other approaches specifically. Hajer (1993, 1995) demarcates two storylines in his analysis of discourses and policymaking on acid rain: 1) traditional pragmatism, focused on the human health issues and direct threats associated with climate change (such as pollution) and relying heavily on ‘expert science’ as a response; and 2) ecological modernization, in which environmental policy is integrated as fundamental part of societal modernization and production, considering ‘issues’ such as climate change fixable within the current capitalist system. Bringel (2023), who focuses especially on the Latin American and Spanish contexts, uses comparable formulations when speaking of ‘projects’ (which can be understood as storylines) of ecological transitions. Instead of focusing only on government response, he looks at various kinds of actors. He distinguishes 1) business-as-usual, which aims to maintain current levels of growth and power and is mainly led by corporate actors; 2) ecological modernization, which adopts terms such as green economy in an opportunistic manner and is largely government-steered; and 3) a transformational move towards a new socioecological order, based on both social and environmental justice and with a large role for civil society.

The current research builds on both of these categorizations, focusing on a government perspective (along Hajer) and especially geared towards the urban scale. It develops a new framework of five storylines within sustainability policy, proposed *a priori*⁹ and gradually broadened to encompass sub-codes and additional codes¹⁰ that came up during the data analysis process. The first four fall within the larger storyline of a Human-Nature dichotomy; the fifth rather adheres to a storyline of Humans *within* Nature. The central codes or storylines that are used in this thesis are:

- i. **Storyline of growth:** climate and environmental policy is considered a tool to further accelerate neoliberal economic growth in a city, for example through boosting the city’s image to increase its intercity competitive position. Sustainability measures are used primarily for the sake of

⁹ Also termed structured or deductive codes.

¹⁰ Also termed emergent or inductive codes.

fostering new economic development, in line with the paradigm of neoliberal, extractionist growth and with little transformational content. This storyline is linked to the idea of ecological modernization: economic growth and sustainability measures can go hand in hand, and ‘sustainability’ can even be conducive to this growth. The city government takes a step back and seeks collaboration with the private sector (e.g. through public-private partnerships). There is a blind trust in technological and scientific advances, innovations often driven by corporate actors.

- ii. **Storyline of *curbing negative impacts*:** sustainability policy aims to limit the negative impacts that climate change is having on humans (in particular: the most privileged and powerful), most notably by focusing on human health issues. Climate change and biodiversity loss are ‘othered’ and perceived as problems that need to be tackled. Sustainability measures are limited to what must strictly be done to meet top-down requirements or to maintain the current level of economic growth and a desirable level of services and welfare. The city government is a prominent actor and plays an important role in using regulation to limit the deterioration of environmental ‘issues’, essentially taking an eco-managerialist approach towards sustainability.
- iii. **Storyline of *ecosystem services*:** the value of ‘nature’ is recognized, but only in equation to its usefulness to humans. Only the parts of ‘nature’ that directly contribute to human well-being are included in discourses and the rest is considered of no value or not recognized at all. In this storyline, sustainability policy is framed in an opportunistic manner, advocating for concepts such as ‘ecosystem services’ and ‘nature-based solutions’ rather than recognizing the structural ontological changes and sacrifices that humans have to make to allow for a deeper socio-ecological transition.
- iv. **Storyline of *human inclusion*:** sustainability policy explicitly comes up for more socio-economically vulnerable people who are in some cases more directly affected by climate change and environmental degradation, aiming to spread the burden evenly across humans (‘climate justice’). This storyline entails a class aspect, with an approach that takes as starting point social values and the ‘common (human) good’ rather than commercial interests. It does not include other-than-humans in the necessity to spread the burdens and responsibilities of current eco-social crises evenly.
- v. **Storyline of *multispecies perspective*:** sustainability policy aims to ensure the well-being of humans *and* other-than-human entities, adopting a multispecies perspective and recognizing the complexity of intergenerational entanglements and power relations in the current web-of-life.

These five storylines can be plotted on a graph, as shown in Figure 1.



Figure 1: the five storylines plotted on a graph to highlight differences in underlying values.

In sum, the focus of this thesis is explicitly on discourses and the way these are (re)produced in policymaking: how does the City of Madrid frame sustainability in policy regarding climate and environmental change? An analysis of the content of environmental policy in practice (as in: how much of what is stated in political commitments is actually carried out?) is largely outside the scope of this work. Conclusions on the latter would require a completely different kind of research that would entail analyzing policy documents from different municipal departments (for contradictions and priorities) and more empirical, in-field research on the effectiveness and coherency of policies.

Interestingly, on a final note, the four storylines within the traditional anthropocentric paradigm align to a certain extent with the political economy conceptualization of urban regimes, which Stone (1989) introduced to categorize coalitions of formal and informal relations that aim to achieve similar goals in urban governments. The comparison can be noted as follows: (i) *growth* links to ‘development regimes’; (ii) *curbing negative impacts* links to ‘maintenance regimes’; (iii) *environmental services* links to ‘middle-class

progressive regimes'¹¹; and (iv) *human inclusion* links to 'lower-class opportunity regimes'. It is relevant to use the urban regime framework when analyzing the different storylines as this illuminates the way general shifts in the Madrid urban regime as a whole in part align with a shift in the type of sustainability discourse that prevails. During the analysis process, urban regime theory is used briefly as tool for understanding the evolution of storylines.

3.3.2 Interviews with relevant actors

After the discourse analysis of sustainability policy and related documents for the Madrid case, the research process leads into a primary data collection method in the form of 'expert'¹² interviews. This second phase of research aims to add a more practical dimension to the thesis, discussing findings of the discourse analysis with key players in the sustainability landscape of Madrid and people involved in the formation of analyzed documents. Both semi-structured and unstructured interviews are used, depending on the interviewee in question (Brinkmann, 2014). With experts interviewed because of their involvement in a particular project, the preference goes to a semi-structured approach that starts with predetermined questions but leaves space for other questions that arise on the spot. On the other hand, with the one or two experts interviewed because of their birds' eye overview of sustainability developments in the Madrid context during the past years (or decades), the interview is conducted rather as a conversation, with a bidirectional sharing of knowledge and research insights that allow for unexpected directions. The interview data (recordings and notes taken during the interview) is then analyzed by retrieving segments and quotes relevant to the current research question and by discerning patterns and themes that appear across interviewees.

The interviews focus mainly on comparing the findings of this research with the personal experiences of interviewees in sustainability policymaking in praxis, examining whether they recognize the way particular discourses or storylines are more prominent than others. This phase of research functions to provide a fuller understanding of how discourses have entered the political arena, shedding light on the way dogmatic discourses are maintained or challenged by a variety of influences. Additionally, this part is more exploratory, trying to collectively imagine ways to move towards a multispecies conception of sustainability policy – if agreed that this is a desirable direction. By referencing existing initiatives in Madrid that in fact contribute to a multispecies, other-than-human-inclusive production of the city, the interviews are constructive discussions on possible ways to link climate and environmental policy with multispecies sustainability in the future, as well as on challenges towards this objective. This data is not subject to a

¹¹ In the sense that it aims to bring about ecological transitions through consensus on the positive aspects of measures.

¹² Thereby recognizing that 'expert' is a controversial notion, as it can be argued that everyone is an expert based on their own lived experience (e.g. expertise on being a father, expertise on playing the cello, etc.).

discourse analysis, but rather aims to provide a complementary perspective on findings from the first phase of research.

The interviews provide perspectives from four different realms: the political (to understand the way certain discourses are prioritized, also towards the public), the municipal administration (to gain perspectives from people who have developed and practically implement the plans), civil society (to provide a non-institutional, ‘bottom-up’ perspective), and the academic (to complement or contradict the current work). Interviewees – or ‘conversation partners’, as it were – are chosen because of their supposed alignment in some way with multispecies sustainability or their experience with imaginative thinking and are therefore by no means representative of Madrid’s environmental policymakers as a whole.

Table 1 lists the interviewed experts. Hereinafter, interviewees are referred to and referenced by their first name. Interview questions include reflecting on the current state of Madrid sustainability and ecological transitions, the feasibility of or opportunities for multispecies sustainability in this context, and the significance of key political moments. Appendices II and III are an overview of most common questions and extensive summaries of conducted interviews respectively.

Name	Function and relevance to multispecies sustainability
Breno Bringel	Research professor at Universidad Complutense de Madrid and State University of Rio de Janeiro. Works with social movements, socio-ecological transitions, and rights for nature; active within Latin American and Spanish contexts.
Carlos de Mingo Rojo	Head of Technical Unit of Studies of the Department of Environmental Education and lead of the <i>huertos comunitarios</i> program within the City of Madrid. Knowledgeable on the institutionalization of the community gardens program, as well as on municipal discourses in environmental education.
Carmen Gutierrez	Más Madrid; head of communication of environmental affairs during Carmena administration (2015-2019). Has seen the development of environmental plans during Carmena from close by, as well as having followed sustainability developments in Madrid for years as journalist.
Erika González	Expert on water projects at <i>Ecologistas en Acción</i> .

	Was one of the two authors of the plan for the renaturalization of the Manzanares river; has closely followed the development of the project.
Gorka Ascasíbar	Más Madrid; focused on district level (Retiro) during Carmena. Exploratory talk for finding the right match for a longer interview. Has seen the shift in plans from Carmena to Almeida.
José Luis Fernández Casadevante “Kois”	Sociologist, writer, activist, and expert on food sovereignty. Works with social-ecological transitions (also specifically within the Spanish policy context); active in neighborhood movements.

Table 1: overview of interviewed experts.

3.4 Reflection on research process

Some challenges regarding the outlined methodology came up during the research trajectory. First of all, it sometimes proved hard not to attach normative judgement to the content of analyzed policies. Even though this thesis in its theoretical contribution argues for the need to adopt a multispecies perspective and is thus inherently normatively tainted, in no way claiming to be ‘neutral’, the research itself seeks to understand what other *discourses* are at play and – to a lesser extent – how these are sustained. Particularly during the interviews, which were conducted with people specifically (assumed to be) involved with multispecies practices, there was sometimes a heavy normative ordeal on analyzed policy. At the same time, this points at a more general limitation of working with discourse analysis as method: by merely analyzing the discourses used in the documents, this thesis provides little conclusion on the actual political commitment behind proposed measures¹³. Nonetheless, (argumentative) discourse analysis remains a powerful method aptly suited to the current research because of its focus on the evolution of concepts and ideas and because of its especial attention to underlying dynamics of power that keep certain discourses in place.

More practically, a main obstacle was the abundance in information. The initial data collection process and the according description of the sustainability policy context of Madrid proved more complicated than expected. ‘Climate and environmental policy’ is sometimes difficult to locate; urban policy, within the larger context of European Union (EU), national, and bottom-up developments, turns out to be a maze of strategies, ordinances, plans, projects, and programs. These often lack a clear indication of starting date or author, and relate to a mix of topics in which ‘sustainability’ can just as well be air quality

¹³ For example, at first sight, Plan A seems to propose similar measures in terms of air quality as previous plans. Only through interviews and external sources does it become clear that this is in fact the first time these measures have been set up with any commitment to truly achieving the set targets (Carmen, 2023; Fernández Casadevante, Morán & Prats, 2018).

as it can be the redevelopment of a neighborhood. This has to do with a general challenge of working with policy documents, which can be hard to pinpoint to specific administrations; oftentimes, a plan or project is the result of the sedimentation of work done over the course of years rather than in a single moment under a new mayor. Expert interviews provided some insight into these processes. Eventually, a selection of documents deemed most all-encompassing and relevant to the subject at hand was analyzed.

Similarly, the data analysis process proved challenging at times. To start, various additional codes emerged during the coding process, such as *Urgency*, *(Human) Quality of life*, and *Individualization*. These new codes point at the prominence of certain topics (thematic codes) or overlap with the initial five storylines or main codes. The five code descriptions above are thus the product of continuous reformulation and expansion. Linked to this, the analysis unexpectedly resulted in various types of codes. As explained by Kuckartz and Rädiker (2019), many codes are either *in vivo* codes (straightforward: the text uses the exact words or a direct synonym of the code) or analytical codes (requires a higher level of abstraction: the text implicitly means the code). Additionally, evaluative codes are used to point out for example a critique of the previous government.

The research was thus a process of constantly reevaluating underlying motivations and approaches.

4. Results and Analysis



Urban community garden *Esta es una plaza* in Lavapiés, February 2023.

“We’ve lost this [reconnection with nature] in Madrid and in many other cities that are driven by real estate speculation and the dictatorship of the car, the automobile, where children know the names of cars but don’t know the names of any trees in the city”

– Breno, professor at Complutense University

Over the course of months, I became familiar with the political, social, and ecological contexts of Madrid, analyzed the most relevant sustainability policies of each consecutive city government since 2003, and conducted interviews with people involved with these policies in more or less direct ways. The current section is the result of this deep-dive into Madrid’s sustainability policymaking over the past two decades.

The section is structured according to its pluriform aim, namely:

- a. To visualize the ‘sustainability policy landscape’ of Madrid: the system of projects, plans, and strategic moments that relate to discourses on climate change and sustainability, focusing centrally on the city-level but also including relevant projects on a national and supra-national level;
- b. To give an overview of most prominent discourses and how they have changed over the past two decades;
- c. To understand why these changes have occurred: by what or whom were existing discourses challenged or maintained, and new ones introduced?;
- d. To analyze the way these discourses could enhance or inhibit the adoption of multispecies sustainability.

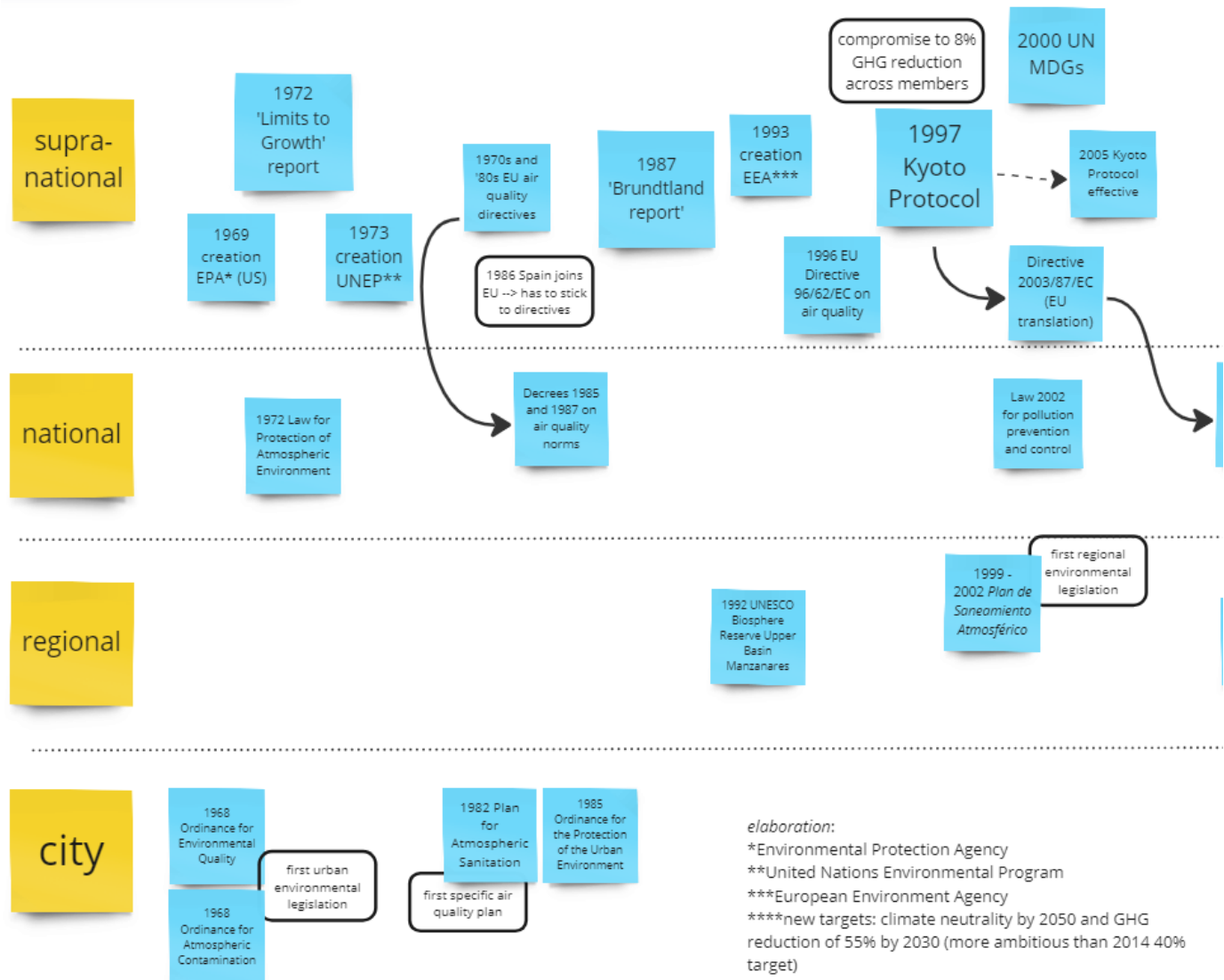
This structure relates to the various tenets of the research question, seeking to answer the sub-questions proposed in the introduction. The last section leads into a discussion on answering the main research question (*In what way do discourses in municipal climate and environmental policy in subsequent city governments of Madrid inhibit or enable the adoption of a multispecies conception of sustainability?*).

4.1 Madrid sustainability policy landscape

Sketching the sustainability policy context of Madrid.

Part of the research process, before diving into the analysis of discourses itself, was to understand the political and sustainability contexts of Madrid. This section visualizes the various projects, plans, and other key political moments that have had an impact on sustainability policymaking in Madrid the past decades. It does so through two different figures, both by no means exhaustive. Both figures are structured chronologically. Together, they represent the Madrid sustainability policy landscape.

The first, figure 2 [across two pages], provides a multiscalar perspective, including agreements and developments at a supranational, national, regional¹⁴, and city-level and the way these relate to each other. It zooms out to a broader timescale of six decades to understand the gradual sedimentation of policies. The visualization is designed so that order of relevance to the current thesis becomes clear – the larger the shape, the more relevant.



1965

Figure 2: Madrid sustainability policy landscape – a multiscalar perspective. Pt. 1

¹⁴ Regional level refers to the Community of Madrid, one of the seventeen autonomous communities of Spain. It is here included (as opposed to in comparisons between scales elsewhere in this research) because there are some cases here in which regional-level policy directly links with urban-level action.

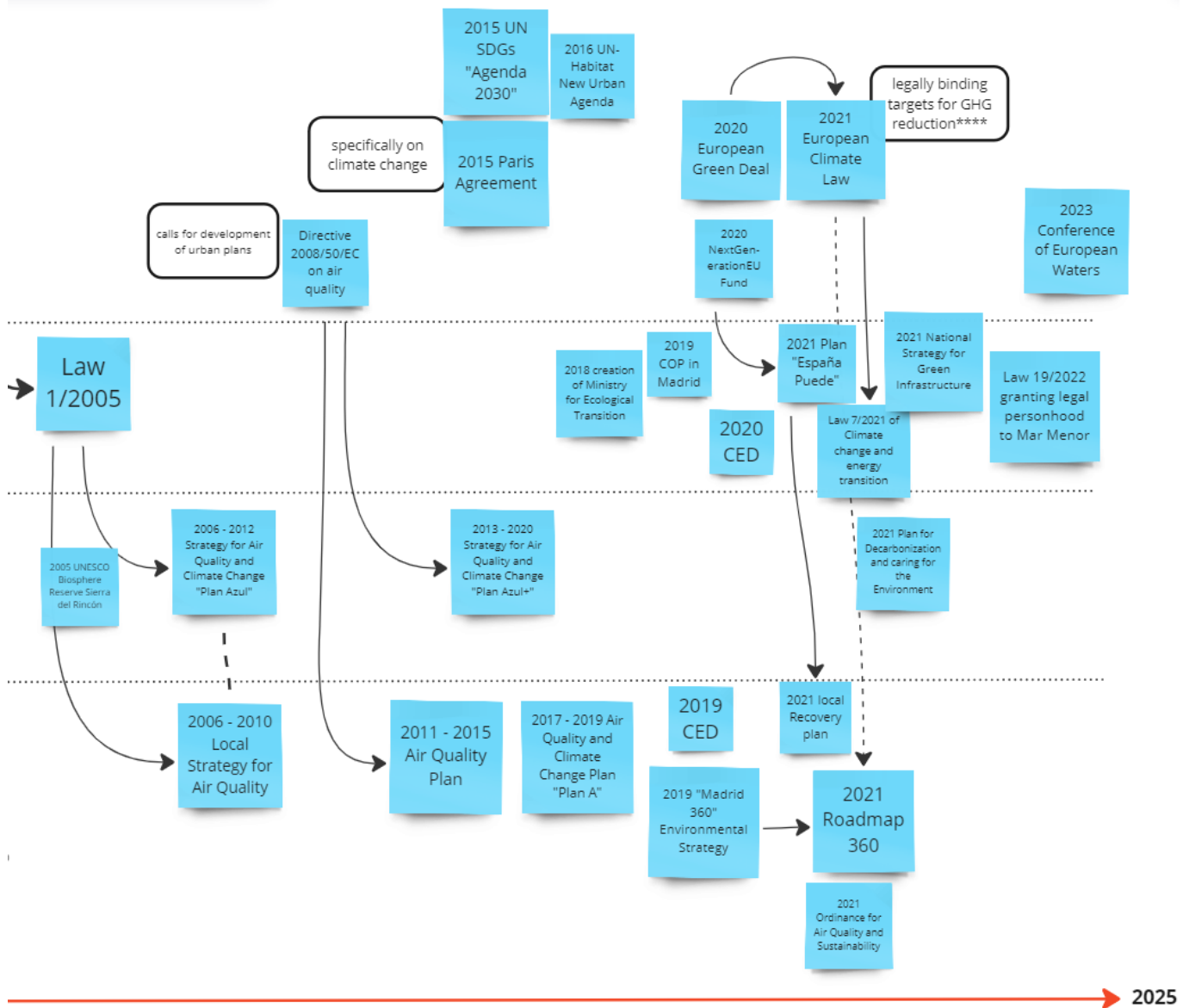


Figure 2: Madrid sustainability policy landscape - a multiscalar perspective. Pt.2

The second figure, Table 2, narrows down to the Madrid city level, highlighting important political decisions and commitments throughout the past twenty years. The document scan used to devise this table was simultaneously the data collection and selection process for the second step of the research, the discourse analysis of most relevant documents. Documents that were eventually analyzed in the ADA are marked in orange.

YEAR	PLAN	MAIN FOCUS
1997	Madrid General Plan for Urban Planning	Also on sustainability: need to consider the city as urban ecosystem and mitigate environmental issues

		Measures include pedestrian access, bicycle lanes, connecting green zones
1997	Opening of the Migas Calientes compost plant	- Compost plant for organic waste from public gardens and parks - Adopted in a designated information sheet on composting in 2012
2004 - 2015	Tunneling of M-30 and Madrid Río projects	- Calle 30 project: tunneling of the M30 highway (ring) - Madrid Río project: redesigning the Manzanares river area. Connecting two sides through bridges, pedestrianization, and new green space - Used as international 'best practice'
2005-2011	Municipal Plan for Water Demand Management	- Focus on efficient and responsible management of water demand in the city - Related to 2006 Ordinance on Management and Efficient Use of Water
2006-2010	Local Strategy for Air Quality of the City of Madrid	- Focus on suspended particles and GHG - Aiming to comply with 1996/62/CE Directive (<i>sobre Evaluación y Gestión del Aire Ambiente</i>)
May 2007	Guide for a sustainable garden 'Much more than a garden'	- Description of the 'sustainable garden' - Aimed at private houses
June 2007	Criteria for a sustainable garden in the city of Madrid	- List of specific measures for sustainable gardening - Aimed at public gardens and green zones
2011-2015 (approved 2012)	Air Quality Plan of the City of Madrid	- Continuation of the previous air quality plan - Consolidating what was done so far and aiming to reach established norms - Focus on road traffic
Start 2012, renewed in December 2021	<i>Madrid Compensa</i>	- Tree planting project - Corporate aspect: collaboration with companies to offset their emissions
September 2015	Launch of <i>Decide Madrid</i>	Innovative online participation platform
December 2015	Strategy for integrated sustainable urban development of the city of Madrid	Strategy developed to apply to FEDER funds round 2014-2020 (European cohesion funding)
2016	Municipal Program for Urban Community Gardens (<i>Huertos Comunitarios</i>)	- Formalization of existing program led by <i>Red de Huertos Urbanos de Madrid</i> and <i>Federación Regional de Asociaciones Vecinales</i> - Based on principles of agroecology
2016	Start renaturalization of Manzanares River	- Plan proposed by <i>Ecologistas en Acción</i> - Has been adopted by EU as reference project and has been implemented in various other cases
2016	Plan (and project) Madrid + Natural	- Linked to Plan A - Focus on nature-based solutions, such as green corridors to connect green spaces

		• Renaturalization of the Manzanares river and the community garden program are part of this • Collaboration with Arup company
2016	<i>Fondo de Reequilibrio Territorial</i>	• Fund (to be renewed in following years) for tackling spatial vulnerabilities between neighborhoods and districts of the city • Includes sociodemographic studies
2016	Plan Madrid Recupera (MAD-RE)	• Linked to Plan A • Subsidy scheme for building renovations • Also broader: local energy production, water management...
Approved 2017	Plan A: Air Quality and Climate Change Plan	• Special attention to citizen participation • Focus on achieving European targets • Also includes broader environmental topics such as adaptation
2018-2030	Green Infrastructure and Biodiversity Plan	• Linked to Plan A • Focus on green and blue infrastructures as essential backbone of the city
2018	Basic Guide for the Design of Systems for the Sustainable Management of Rainwater in Green Zones and other Open Spaces	• On capturing of rainwater
2019	Madrid 360 Environmental Sustainability Strategy	• Strategic document defining objectives and key actions • Focus largely on mobility and on 'green'
2019-2030	Plan Madrid Recupera: Strategy for Urban Regeneration	• Continuation of earlier MAD-RE plan • Subsidy scheme • Focus on public space and on mobility
September 2019	Climate Emergency Declaration by Madrid	• Madrid declares climate emergency • Plan that is developed accordingly is not taken up
December 2019	Madrid hosts COP 25	• Madrid is host instead of Santiago de Chile
July 2020	<i>Acuerdos de la Villa</i> agreement	• Measures for the recovery of Madrid post-pandemic • Develops a new Ordinance on air quality
2020	SURES Plan (<i>Plan de desarrollo del Sur y del Este de Madrid</i>)	• Redevelopment plan for vulnerable neighborhoods in the city • Focus on mobility, culture, and gender-based violence, a.o.
2020	<i>Barrios Productores</i> program	• For-profit extension of <i>huertos comunitarios</i> program • Goal: promote neighborhoods' green economy, produce job opportunities • Through productive urban agriculture units on empty municipal plots
2021	Roadmap to climate neutrality by 2050 ("Roadmap 360")	• Linked to Madrid 360 plan • In response to new 2020 EU standards and C40 requirements

March 2021	Ordinance 4/2021 for Air Quality and Sustainability	• Main challenges: improve air quality, reduce pollution, boost energy efficiency and promote electric mobility • Builds on previous regulations regarding air quality
June 2021	Recovery, Transformation and Resilience Plan of the city of Madrid	• Linked to national plan “España Puede” • Specific lines of action to steer investment • Funds from NextGenerationEU
November 2021	Strategy for the Localization of the Sustainable Development Goals of Agenda 2030	• Linking existing urban development to SDGs • Use of narratives such as climate neutrality and circular economy
2022	Start of crisis situation regarding the expansion of Metro 11	• Protests against planned logging in Madrid Río as part of expansion of metro line • Consolidated in neighborhood collective <i>Yo defiendo este árbol</i>

Table 2: timeline of political moments and commitments related to sustainability in Madrid.

The combination of Figure 2 and Table 2 leads to a number of insights. First of all, Figure 2 highlights the unmistakable impact of supranational agreements on sustainability and climate change commitments in Madrid on a local scale. It becomes apparent that several national, regional, and city-level plans and laws at least partly stem from the need to comply with international requirements. Thus, already, the EU – and to a lesser extent the UN – seem to emerge as influential actors in shaping sustainability discourses by shaping policies on a local Madrid level. Figure 2 also shows the increasing political engagement with sustainability and climate change in Madrid (both city and region) during more recent decades. In line with this, Table 2 shows an increment in the number of plans that explicitly adopt the term sustainability in their name or in their content¹⁵. Furthermore, this second figure shows the evolution of terminology used in urban policies, moving from isolated topics such as air quality and sustainable gardening in the early 2000s to the increased use of more encompassing terms such as ‘climate change’ and ‘environment’. This provides a first hint at evolving discourses.

Politically, Madrid – both the city and the Community – has been dominated by the conservative Christian-Democratic Partido Popular (PP). The regional Community of Madrid has known PP leadership since 1996; the city of Madrid between 1991 and 2015, and again since 2019 (Fernández Casadevante et al., 2018). PP domination on the city level was only interrupted between 2015 and 2019 during what came to be known as the ‘government of change’ of the left-wing Ahora Madrid party (ibid.). This political sketch

¹⁵ Whether the gradual growth in political commitments on the urban level is the result of an actual increased interest in sustainability issues in Madrid or rather a reflection of a more general shift in governance scales and an increasingly proactive attitude on behalf of cities (see on the rescaling of statehood into subnational spaces Brenner, 2004) lies outside the scope of this research. Most likely, it is a combination of both.

provides an interesting backdrop to sustainability developments, unavoidably playing a role in the production and selection of discourses.

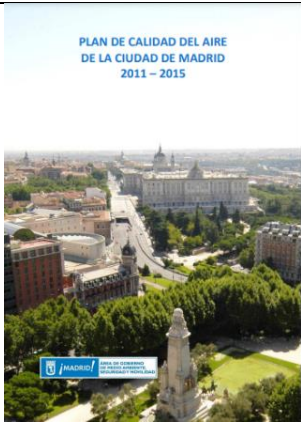
4.2 Evolving discourses

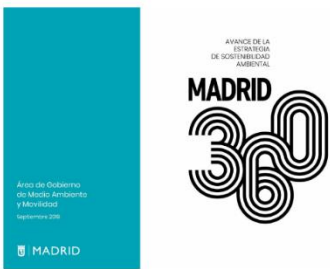
Answering sub-question: What discourses on sustainability can be identified in Madrid climate and environmental policy?

This section is the culmination of the main data analysis work of the current thesis: the discourse analysis of environmental and climate change policies. What follows is a brief description of this part of the research process.

Table 3 is an overview of the analyzed documents. These were chosen because they were deemed most relevant based on the initial document scan and supported by other works on environmental policy in Madrid (most notably *Ciudades en movimiento* by Fernández Casadevante et al., 2018), as well as forming a representative sample (at least one major document per city administration). Per consecutive city government, the main overarching climate change or environmental plan – as far as there was one such plan¹⁶ – was analyzed, sometimes complemented by related plans or projects that were especially relevant to the research. In addition to plans and strategies, two key political moments were analyzed: the climate emergency declaration by the City of Madrid in 2019, and the national law that granted legal personhood to the Mar Menor in 2022. The former was included because it is an apparent culmination of political willingness to recognize the urgency of the climate crisis; the latter because it is the first innovative case of formally recognizing other-than-human agency in Europe.

¹⁶ In some cases there was no single overarching sustainability plan; here, air quality strategies were chosen as unit of analysis because they linked most with climate change and other environmental topics.

	Cover page	Document name	Date approved	Length analyzed document
RUIZ-GALLARDÓN mayor Alberto Ruiz-Gallardón <i>Partido Popular; in office 2003-2011</i>		Local Strategy for Air Quality of the City of Madrid	2006	283 pages
BOTELLA mayor Ana Botella <i>Partido Popular; in office 2011-2015</i>		Air Quality Plan of the City of Madrid	2012	229 pages
CARMENA mayor Manuela Carmena <i>Ahora Madrid; in office 2015-2019</i>		Plan A: Air Quality and Climate Change Plan	2017	195 pages
		Madrid + Natural: Natural solutions for adapting to Climate Change	2016	13 pages [complemented in the analysis with the ARUP document of 38 pages and the project website]

ALMEIDA mayor José Luis Martínez-Almeida <i>Partido Popular; in office 2019-2023</i>		Green Infrastructure and Biodiversity Plan	2018	Summary: 30 pages
	¹ Text: Minutes of the municipal meeting in which climate emergency was declared - BOAM núm. 8.516 5 de noviembre de 2019 ² Punto 24. Aprobar la proposición n.º 2019/0000665, presentada conjuntamente por la concejala doña Inés Sabando Nadiel, del Grupo Municipal Más Madrid y por el concejal don Alfredo González Gómez, del Grupo Municipal Socialista de Madrid, con el visto bueno de sus Portavoces, en la redacción resultante de integrar en la misma la enmienda transaccional con n.º de registro 2019/0000687 presentada por los Grupos Municipales del Partido Popular, Ciudadanos-Partido de la Ciudadanía, Socialista de Madrid y Más Madrid, interesando que se establezcan los compromisos políticos, normativos y recursos necesarios para garantizar la reducción progresiva de gases de efecto invernadero y que se ponga en marcha, a la mayor brevedad posible, un Plan Municipal específico de lucha contra el Cambio Climático, todo ello en los términos, y con los objetivos y actuaciones que se indican en la iniciativa. ³ Siendo el acuerdo adoptado del siguiente tenor literal: ⁴ "EXPOSICIÓN DE MOTIVOS ⁵ Los Grupos Municipales de Más Madrid y PSOE, haciéndose eco de las propuestas de las organizaciones englobadas dentro de la Alianza por el Clima, se dirigen al resto de los grupos políticos con representación en el pleno del Ayuntamiento de Madrid para instarlos al reconocimiento del estado de emergencia climática en el que nos encontramos mediante la adopción de la presente moción y las medidas que de ella se deriven. ⁶ El Ayuntamiento de Madrid reconoce que el planeta, así como los seres vivos y los ecosistemas, se encuentran en grave peligro, prueba de ello son los recientes informes sobre el estado de la biodiversidad del IPBES y sobre el calentamiento global de 1,5 °C del IPCC, que alertan de un rumbo que lleva a la extinción de una gran parte de los ecosistemas terrestres. Un millón de especies están amenazadas por la actividad humana. También se está al borde del punto de no retorno frente al cambio climático. No responder ante la crisis ecológica y civilizatoria supondría la muerte de millones de personas, además de la extinción irremplazable de especies imprescindibles para la vida en la tierra, dadas las complejas interrelaciones ecosistémicas.	Minutes of the municipal meeting in which climate emergency was declared - BOAM núm. 8.516	2019	19 paragraphs
		Madrid 360 Environmental Sustainability Strategy	2019	84 pages
		Roadmap 360	2021	60 pages

NATIONAL SCALE		Law 19/2022 for the recognition of legal personhood of the Mar Menor lagoon and its basin	2022	5 pages
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Table 3: overview of analyzed documents.

These documents were analyzed with the help of MAXQDA software. Figure 3 gives an impression of the coding work in MAXQDA and the used codes (the five basis storylines¹⁷ and additional codes, including their occurrence); Figure 4 is a representation of the way the new emergent codes are linked with the original *a priori* codes.

¹⁷ The five storylines or main codes: 1) growth, 2) curbing negative impacts, 3) ecosystem services, 4) human inclusion, and 5) multispecies perspective.

Code System		1312
Multispecies perspective	+	35
Traditional Ecological Knowledge		1
On representation		3
Entanglement human-nonhuman		18
Other-than-human recognition		14
(Human) Quality of life		19
Urgency / Failure so far		41
Structural change / transformation		60
Daring to experiment		9
Integral perspective		14
Carbon focus		53
Individualization		31
Eco-managerialism		30
Focus on 'science' and 'measurements'		28
Efficiency		39
Regulation		41
Ecological modernization		106
Political		9
Applauding previous government		12
Multiscalar collaboration		25
Critique of previous government		4
Human inclusion		40
Make information accessible		5
Anti-discrimination / climate justice		5
Participation		24
Ecosystem services		121
Aesthetics		6
Exploitation		2
Awareness / sharing of information		65
Accountability		7
'Green' / 'Environment' / 'Nature'		66
General info		9
Growth		60
Receiving funds		1
Collaboration with 'stakeholders'		13
Marketing / city image / competitiveness		51
New development		24
Investing money		6
Curbing negative impacts		77
'Othering' of climate change		30
Focus on health		66
Stick to top-down requirements		42

Figure 3: insight into the coding process in MAXQDA; all codes are included here.

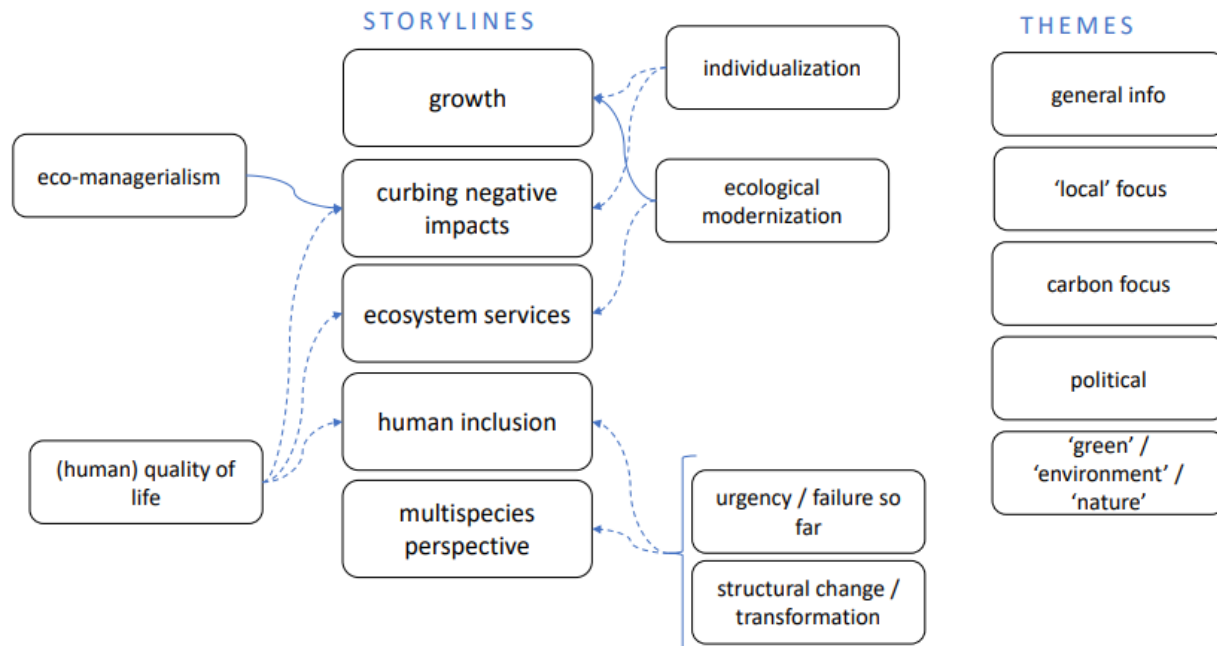


Figure 4: visualization of the way emergent codes are linked to the five a priori codes (storylines).

Per document, frequencies of each code and sub-code were analyzed; Appendix I is a table of the absolute and relative frequencies of codes for the first analyzed document, giving an insight into this analysis process. Below is a result of the analysis, organized chronologically. The sub-section of each document includes a textbox with a brief overview of most prominent codes¹⁸ – in order of descending occurrence – and of main themes. Where relevant, additional information is provided on specific projects that took place during the same timeframe (within or outside the scope of the plan at hand), presented as separate textboxes.

4.2.1 Local Strategy for Air Quality 2006-2010

OVERVIEW:

- Main themes: traffic, health, urgency, economic value
- Discourses: curbing negative impacts, eco-managerialism, growth, ecological modernization

Madrid's 2006-2010 air quality strategy was developed alongside the regional Air Quality and Climate Change Strategy (2006-2012) of the Community of Madrid, the so-called *Plan Azul*. A striking aspect of the city-level plan is that it does not include 'climate change' in its title. This is reflected in its limited content on the subject: of the 54 measures, only two are focused on the "fight against climate change" (City of Madrid, 2006, p.258). This formulation illustrates the way 'climate change' is othered as an entity far

¹⁸ Codes are included in the textbox if they make up >5% of the total frequencies (including sub-codes).

removed from humans, that needs to be ‘fought’ against – completely in line with technocratic, solutions-oriented approaches.

This kind of discourse fits within the storyline of *curbing negative impacts*, where climate change is strictly perceived as problem that must be tackled and removed to avoid any negative effects on the current state of affairs. Such an approach is completely different than one that takes a more holistic, integral perspective and recognizes humans as part of this changing climate. The storyline of curbing negative impacts also becomes apparent in the description of the strategy’s objectives (Chapter 7): the development of the plan seems to be primarily driven by the current and potential (human) health risks of various contaminants, with discourses on health repeatedly appearing throughout the document, and partly driven by the need to comply with top-down (EU and national) requirements. Last but not least, many of the road traffic measures (the main bulk of the plan) rely on regulations, pointing at an eco-managerialist discourse that aims to keep the general status quo in place.

Another storyline that is prominent in this document is *growth*. Throughout the entire plan, there is a discourse of ecological modernization. This is clear from the start: “showing (...) that it is possible to decouple economic growth from environmental degradation” (City of Madrid, 2006, p.9). This reliance on technology to enable new developments and further growth, thereby fueling the current economic system, is also apparent where the plan proposes to reduce emissions at the Valdemingómez trash processing plant through ‘new technologies’ – without any specification on what kind of technology is referred to. Furthermore, some parts of the strategy include discourses of city marketing. Renewing the municipal fleet is seen as contributing to the “environmental image of the city administration” (ibid., p.162). Moreover, one of the proposed measures under ‘fight against climate change’ is the joining of international initiatives and networks such as ICLEI, in order to “strengthen the city of Madrid’s presence in city networks for climate and air quality” (ibid., p.259). There seems to be an implicit aim of improving the city’s competitive position internationally. On the other hand, the plan simultaneously highlights the value of learning from other cities through such international networks, recognizing the need to share knowledge.

The document ends with an economic valorization of the environmental benefits of the strategy – again a link to the storylines of *growth* and *curbing negative impacts*. The value of environmental measures taken is reduced to monetary, managerial, technocratic terms. The analysis concludes that the strategy is economically viable and attractive, as such considering ‘climate change’ as potential avenue for economic development.

Madrid Río and tunneling of the M-30

In addition to the 2006 air quality strategy, there is a noteworthy dual project that took place under Ruiz-Gallardón. Between 2004 and 2015, the Manzanares river in the south of Madrid was redeveloped through the tunneling of the M-30 highway (the *Calle 30* project) and the subsequent redesign of the riverbank into a public park (the *Madrid Río* project) (Urban Sustainability Exchange, n.d.). The latter connects the two sides of the river and included new pedestrian areas and green space. According to interviewees, the projects were largely driven by concerns of leisure, utility, and (human) safety – in contrast to the reasoning behind the later renaturalization project.

4.2.2 Air Quality Plan 2011-2015

OVERVIEW:

- Similar to previous strategy
- Main themes: mobility, ‘green’, emissions reduction, health
- Discourses: ecological modernization, growth, curbing negative impacts, eco-managerialism

The air quality plan developed for the period 2011 until 2015, again alongside the regional strategy at the time (the *Plan Azul+*), largely aligns with the previous air quality plan – at least in terms of content. Similarly, the majority of measures focuses on road traffic and mobility. On the other hand, in terms of discourses, the aims and measures of the plan are presented slightly differently. Where the 2006-2010 strategy equally focuses on regulation (the storyline of *curbing negative impacts*) and on *growth*, this later plan primarily leans towards the latter. There is a tendency in the document towards relying on new technologies and innovations that will allow for current levels of growth to continue rather than taking measures that would in any way compromise or limit growth, adhering to a strong discourse of ecological modernization rather than eco-managerialism.

The introduction sets a precedent for a prominent discourse of city marketing throughout the rest of the document, with repeated statements on Madrid as “one of the most dynamic cities of Europe” and on its “tradition of being at the forefront of the fight against atmospheric contamination” (City of Madrid, 2012, p.1). The focus is on what is already being done rather than on the urgency to do more (as in the previous plan). Another discourse that feeds into the storyline of *growth* is the aim to involve relevant ‘stakeholders’, highlighting the potential of joint procurement and public-private partnerships in for instance the development of electric vehicles. This collaboration is consolidated through the *Mesa de Movilidad*, a method for participation with ‘specialized professionals’ and ‘sector representatives’. Although arguably innovative, this discussion table is not exactly inclusive towards all humans – let alone to other-than-humans

– and rather limits itself to scientifically or economically interesting ‘partners’ (in line with the capitalist, reductionist management of sustainability questions).

In addition to growth, there is also some reference to the storyline of *curbing negative impacts*. This is partly visible through the repeated focus on the need to stick to top-down requirements, with the latter seeming to be one of the key drivers for the development of the plan in the first place. This again overlaps with a *growth* discourse: in addition to using ‘sustainability’ as potential route for new growth, much of the document focuses on how to maintain current levels of growth. For instance, a main theme is how to decouple economic growth from (NO_x or other greenhouse gas (GHG)) emissions that are perceived as threat to growth, rather than questioning this type of economic growth in itself. Furthermore, many of the proposed measures emphasize values of efficiency (to reduce costs), (human) safety, and (human) health – clear facets of eco-managerialism and maintaining the status quo.

‘Green’ and ‘nature’ are included for example in the measure on so-called *ecobarrios* and in the public-private collaboration *Madrid Compensa*. However, they are largely limited to their use value for human health and for ‘revitalizing’ the city (through green zones and tree coverage), or to the use of new technologies for increased energy efficiency or renewable energy and sustainable modes of transport. There is thus some hint at a storyline of *ecosystem services*, but it seems to be rather framed in terms of growth and of curbing negative impacts. Another storyline that appears briefly but is barely extrapolated is that of *human inclusion*, here limited to improving accessibility of public transport.

Madrid Compensa

Introduced in 2012, *Madrid Compensa* allows public and private organizations to offset their GHG-emissions by planting trees (City of Madrid, n.d.c). By 2017, almost 15.000 trees had been planted (City of Madrid, 2019a). The project was renewed late 2021 under Almeida. It seems to be driven largely by corporate (growth) and ecosystem services motivations.

Last but not least, striking about this plan is its terminology: where nonhuman nature is considered, it is referred to as “natural heritage” (“*patrimonio verde*”), which is here understood as parks, green zones, and tree coverage (City of Madrid, 2012, p.133). Prominent is also the need to then ‘conserve’ this natural heritage. These conceptualizations are interesting because they point at a clear human role in maintaining the ‘natural’ environment the way it is now, going as far as to ascribe some sense of human ownership or active contribution to the forming of this ‘heritage’. This can be contrasted to a multispecies perspective, which recognizes human contributions to its other-than-human environment but thereby primarily points at the agency of this environment in itself rather than labeling it as a passive entity reduced to human conceptualizations.

4.2.3 Plan A: Air Quality and Climate Change Plan

OVERVIEW:

- Overarching sustainability strategy
- Main themes: mobility, emissions reduction, health, structural change
- Discourses: ecological modernization, curbing negative impacts, growth, eco-managerialism, ecosystem services

Plan A is the overarching climate change strategy developed during the Carmena government; various other sustainability plans during this period fall under or are linked to this document. Some of the key objectives of the plan fit into the need to comply with top-down requirements, namely with European and national legislation on air quality, World Health Organization (WHO) recommendations on suspended particles, and Paris Agreement and Global Covenant of Mayors (GCoM) targets for GHG emissions. It thereby proposes measures centered along mobility, focusing on private transport, public transport, and soft modes of transportation, with a focus on the development of new technologies and changes in citizens' individual behavior. An ambitious measure regarding mobility is 'Madrid Central', which relies heavily on regulation to steer towards less emissions from transport and so takes an eco-managerialist approach¹⁹.

So far, the plan could be seen as a continuation of previous air quality plans, with a central storyline of *curbing negative impacts* that largely centers on human health, and a heavy reliance on new technologies and ecological modernization. On the other hand, the plan seems to be more encompassing, and also includes measures on climate change adaptation, citizen awareness, and urban regeneration – topics that were included previously but to a considerably lesser extent. It presents itself as 'innovative' because it for the first time more integrally links air quality to climate change. In terms of urban regeneration, measures aim for "low-emission and energy-efficient urban management" (City of Madrid, 2017, p.121), using an eco-managerialist discourse of efficiency and regulation to 'regenerate' the city. Here, there is also a storyline of *growth*, using carbon neutrality for the regeneration and revitalization of neighborhoods in the city (and thus fostering new investment) – including the development of the MAD-RE (*Madrid Recupera*) plan²⁰.

Throughout the plan, there is a narrative of othering of climate change – as in previous documents. Climate change is portrayed as external threat that we (human city dwellers) must assess our vulnerability to and build up resilience towards. At the same time, there are parts in which our human entanglement with and dependence on our other-than-human natural surroundings is more prominent, such as in the part on

¹⁹ According to interviewee Carmen, a low-emission zone for traffic was originally proposed as early as during Ruiz-Gallardón but was never put into practice at the time.

²⁰ MAD-RE exists since 2016. It is mainly a subsidy scheme for building renovations, although Plan A outlines it as a much broader plan that also focuses on local energy production, green mobility, water management, and renaturalization, a.o. (City of Madrid, 2016a). MAD-RE was continued in the following government as *Plan Madrid Recupera: Estrategia de Regeneración Urbana 2019-2030* (City of Madrid, n.d.e).

environmental education and awareness. This education is proposed with the aim to “forge awareness about the importance of caring for the environment and people’s health” (City of Madrid, 2017, p.141), built on storylines of *ecosystem services* and of *curbing negative impacts*, and to a lesser extent *human inclusion* (focusing on equitable participation).

4.2.4 Madrid + Natural

OVERVIEW:

- Main themes: ‘green’, renaturalization, NBS, efficiency, health
- Discourses: ecosystem services, eco-managerialism, curbing negative impacts, human quality of life, multispecies perspective

The Madrid + Natural (‘Madrid más Natural’) plan and project coincides with the third line of action of Plan A, namely ‘adaptation to climate change’. It advocates for the use of Nature-Based Solutions (NBS) to connect green spaces and contribute to the city’s resilience. The following sentence from the municipality website project description is illustrative of the various storylines that are present in this plan: “NBS in the face of climate change are an opportunity to imagine a Madrid in which the green and the blue are protagonists, generating a surrounding that is kinder to people and more resistant towards external impacts” (City of Madrid, n.d.d, par.4). Green and blue as ‘protagonists’ seems to point at a *multispecies* storyline, recognizing green and blue themselves as actors. However, the formulation remains vague and aligns with an anthropocentric perception of ‘nature’ as one single other instead of as specific entities (such as a tree or a river). This othering of climate change and environmental degradation is also visible in the second part of the sentence: ‘resistance’ towards ‘external impacts’ clearly places humans outside of the ‘natural’ and is part of a storyline of *curbing negative impacts* and damage control, also linked to a prominent discourse of eco-managerialism (regulation and measurement).

The storyline that constitutes the backbone of the whole plan is *ecosystem services* (more than 30% of the coded segments). In the above quote, ‘green’ and ‘blue’ are used to contribute to *human* quality of life and to protect this *human* city from ‘external’ impacts. Throughout the document, there is repeated mention of the benefits of ‘nature’, both in its positive impact on human health and as “instrument” for climate adaptation (City of Madrid, 2016b, p.2). It is noteworthy that these (human health and climate adaptation) are seen as two separate spheres in the first place; there seems to be a complete disconnection of humans from climate change. What’s more, much of the vocabulary used – such as ‘solutions’ and ‘instruments’ – highlights the technocratic and solutions-oriented approach that is taken. Additionally, the plan speaks of the high social acceptability of its measures because of its “high number of benefits, economic

efficiency and environmental sustainability” – another framing of ecological issues in terms of anthropocentric value (ibid., p.4).

Renaturalization of the Manzanares

The renaturalization of the Manzanares river was a plan developed by NGO *Ecologistas en Acción* in 2016. It consisted of firstly opening the dams (that had been placed in the river in the ‘50s to give it a more ‘central European’ character, according to Carmen) and secondly small interventions to facilitate the formation of islands. The process turned out to be so fast that additional interventions after the opening were unnecessary. It was originally agreed that one stretch of the river (around Arganzuela) would be closed off again for the rowing association, an agreement pushed for by the political (right-wing) opposition (Erika, 2023). Eventually, the effects of the project were so visible so quickly that this stretch was reopened, with public and political support (across parties!). The renaturalized river has attracted many species of (native) birds, plants, trees, and fish.

Notwithstanding its centrally human focus, Madrid + Natural also leans towards a *multispecies perspective*. One of its main proposals is the renaturalization of the Manzanares river. Apart from the multispecies nature of the project’s purpose (creating a green corridor for other-than-human species, a.o.), there also seems to be a multispecies perspective in the formulation of the project. For instance, the river is recognized as having its own agency: “After the opening (...) the river has developed independently” (City of Madrid, 2016b, p.12). Another apparent move towards multispecies sustainability is on the scale of buildings, where the plan proposes green roofs as a refuge for biodiversity. On the other hand, a deeper analysis reveals that the narrative is rather of *ecosystem services* and improving human quality of life than of truly

recognizing other-than-humans.

In addition to the brief document by the municipality and the project description on their website, Madrid + Natural consists of an extensive overview of proposed measures in a document developed by Arup, a transnational company focused on sustainable built environment. This document was also analyzed but considered to a lesser extent than the City document, as it seems to be rather a reflection of the company’s standpoints than of the city government itself. In fact, a large part of the document seems to be an enumeration of international best practices with little contextualization to the case of Madrid (e.g. on river naturalization, there is no mention of the Manzanares river). Furthermore, in addition to a prominent storyline of *ecosystem services* (with benefits ranging from emissions and temperature reduction to aesthetics), the plan seems to be driven by a *growth* storyline. There is much talk of the way proposed measures can be used for city or company branding and attracting investment, as well as the way they can enhance city ‘revitalization’. Last but not least, there is a discourse of *curbing negative impacts*; NBS are proposed as being a (cost-)efficient intervention that does not disturb the current state of affairs too extremely.

4.2.5 Green Infrastructure and Biodiversity Plan

OVERVIEW:

- Main themes: ‘green’, conservation, participation
- Discourses: ecosystem services, multispecies perspective, curbing negative impacts, eco-managerialism, human inclusion

The Green Infrastructure and Biodiversity Plan was developed as complementary to Plan A. Where the latter focuses primarily on air quality and the reduction of (carbon and other GHG) emissions, this plan focuses rather on the ‘green’ and ecological aspects of sustainability (Gorka, 2023) – similarly to Madrid + Natural. A key difference with previous plans is the shift in terminology: from green ‘space’ to green, blue, and brown “infrastructures” (City of Madrid, 2018, p.3). The plan argues as follows:

“The network of natural or seminatural spaces, as well as tree coverage and other environmental elements (...), needs to stop being considered as equipment and needs to start being considered as INFRASTRUCTURE, given the importance it has as source of benefits for the city” (ibid., p.8).

The phrasing is slightly ambiguous: on the one hand, there is recognition of our human entanglement with our other-than-human natural environment, which points at a *multispecies perspective* storyline. On the other hand, terms such as ‘benefits’ are a clear reflection of a storyline of *ecosystem services*, where any ‘natural’ element is ascribed no agency of its own and is instead placed in equation to its value for humans. Similarly to the Air Quality Plan 2011-2015, there is repeated talk of ‘conservation’ of ‘natural heritage’: again a clear reduction of the other-than-human world to its human value. A narrative of *ecosystem services* further becomes clear in the plan’s mission statement, which uses words such as “management” and “progressive improvement” of the “urban ecosystem of Madrid”, “for the use, enjoyment and well-being of its citizens” (City of Madrid, 2018, p.5). Here, there is also a storyline of *curbing negative impacts* and eco-managerialism: the ‘urban ecosystem’, in itself a term that reinforces the Human-Nature binary because it

Huertos Comunitarios

Adopted in both the Madrid + Natural and the Green Infrastructure and Biodiversity plans, the *Huertos Comunitarios* is the formalization of an ‘alegal’ phenomenon of forming community gardens on unused public or private land in the 2000s that was largely driven by neighborhood associations (including Kois). Its institutionalization started under Botella, which allowed for government funding and facilitation (Carmen and Carlos, 2023) – similarly to the older *huertos escolares* program. It is based on the conditions that it has to stay community-based, not-for-profit, and built on agroecology principles. Currently, there are at least 58 gardens; the project slightly stagnated during the pandemic (City of Madrid, 2022a; Carlos, 2023).

only refers to the ‘natural’ and does not include humans therein, needs to be managed and optimized to ‘fight’ and adapt to climate change in the best possible way.

This plan takes on an integral approach, even more so than Plan A – not necessarily because it says so explicitly, but by for example considering green infrastructure, the ‘fight’ against climate change, and biodiversity as interlinked topics. Some parts of the text seem to better recognize the multilayered composition of the city, pointing at the complexity of natural and semi-natural elements and thereby moving away from reducing these to simple, techno-managerialist terms. Still, overall, the text is very much anthropocentric and presents humans as most important and as separated from other entities. An interesting method that it uses is the *Mesa de Árbol*. As opposed to the *Mesa de Movilidad* in the 2011 air quality plan, this ‘discussion table’ on trees is not limited to a public-private collaboration but also includes neighborhood associations, universities, and NGOs, thus aiming for a more representative form of participation. Here, the plan also leans into a **human inclusion** storyline. Notwithstanding, trees themselves are left out as actor.

On a final note, the Green Infrastructure plan contains a large part on awareness and environmental education. What distinguishes it from other plans in this regard is that where Plan A (and previous air quality plans) focuses on awareness about climate change in the first place and its impacts on human health, the focus here is rather on educating people about the benefits of the environment and its value to the city. It thereby uses a narrative of **ecosystem services** (and some recognition of other-than-human value and thus multispecies sustainability) rather than one of curbing negative impacts.

4.2.6 Climate Emergency Declaration

OVERVIEW:

- Main demand: carbon neutrality by 2040 (if possible by 2035)
- Main themes: emissions, urgency, participation, scientific evidence
- Discourses: ecosystem services, human inclusion, curbing negative impacts, multispecies perspective

Madrid declared a climate emergency on September 25th, 2019 (Europa Press, 2019). The CED had been proposed by Más Madrid and PSOE earlier that year (under Carmona), but was only approved under the PP government of Almeida a few months later. It was in part a reaction to demands by a so-called ‘Climate Alliance’ of environmental movements. This thesis includes an analysis of the according motion text. The minutes of the municipal meeting in which the CED was approved were analyzed because, although of slightly different nature than the previously analyzed plans and strategies, it was initially hypothesized that the CED was an important political moment in terms of formal recognition of the urgency to act. Additionally, the text is a useful reflection of prominent discourses used to justify this urgency.

The text declares a state of climate emergency, and calls for the adoption of according measures to be devised in a consequent plan²¹. Throughout, there is much recognition of the urgency of climate change. There is some talk of loss of biodiversity and restoration of degraded ecosystems, as well as some recognition of species interdependency and “complex ecosystemic interrelations” (City of Madrid, 2019b, par.6), hinting at a storyline of *multispecies sustainability*. Notwithstanding, other-than-human entities are not ascribed agency of themselves. Overall, the narrative remains anthropocentric and limited within a Human-Nature binary, whereby the focus is largely on the way humans *need* other species in order to survive as humans – an *ecosystem services* storyline. Additionally, much of the text seems to be centered on the need for a more incremental (urban) government role in order to maintain our current lifestyles in the face of climate change: a storyline of *curbing negative impacts*. The primary focus on ‘scientific evidence’ over more ethnographic, qualitative indicators points in a similar direction, highlighting an eco-managerialist, top-down approach.

A last storyline that is apparent in the CED rhetoric is of *human inclusion*. The text repeatedly talks of participation, democracy, and climate justice, taking care to include the most vulnerable groups of people. This is in line with a broader tendency of linking social and ecological aspects (for example through measures on local economy and food sovereignty), which gradually entered the sphere of discussion during the Carmena administration.

4.2.7 Madrid 360 Environmental Sustainability Strategy

OVERVIEW:

- Overarching sustainability strategy
- Main themes: mobility, health, ‘green’, emissions, scientific evidence
- Discourses: curbing negative impacts, growth, ecosystem services, ecological modernization, human inclusion

“Madrid 360” is the overarching environmental sustainability strategy developed under the Almeida government. It includes a description of the key objectives and lines of action to be further developed in separate plans. Similarly to previous plans, the central focus is on the reduction of GHG. When addressing air quality, this is again mainly driven by health concerns. Additionally, air pollution is coupled to its impact on forests and the acceleration of climate change, connections that were hardly made in the first two analyzed air quality documents. Throughout, there is also a narrative of eco-managerialism, with a high reliance on regulations, natural sciences, and quantitative data, as well as a focus on efficiency (one of the

²¹ The demand was that this plan would set out to achieve climate neutrality by 2040; these ambitions were lowered when the according Roadmap 360 was eventually developed in 2021 (Carmen, 2023).

main axes of the strategy). All of these fit within a narrative of *curbing negative impacts* of climate change, whether on humans directly or on the utility value of ‘nature’ for humans.

The latter links to a second prominent storyline, that of *ecosystem services*. Although not as present

Bosque Metropolitano

Part of ‘Madrid 360’, *Bosque Metropolitano* envisions a 75-km-long ring of trees around the city. After an international competition for ideas between 2020 and 2022, five parties were selected to each develop one stretch of the green infrastructure (City of Madrid, n.d.b). Main objectives include making a healthier and more livable city, mitigating heat island effects, and fighting against climate change (City of Madrid, 2022b).

as in plans proposed during Carmena, there are a few places where this narrative comes to the forefront, such as where green infrastructure is categorized as ‘services’ and where “improving the environmental quality of public spaces” is considered a measure to promote health (City of Madrid, 2019a, p.60). Furthermore, one of the main measures in terms of ‘green’ is the so-called *Bosque Metropolitano*, which entails planting a ring of trees around the city for example to compensate for emissions at events. The ‘success’ of this project is measured by the number of trees planted in the city – a clearly reductionist and utilitarian approach.

Growth also comes to the forefront as prominent storyline. Many of the objectives rely on (future) technology and innovations, a clear ecological modernization perspective. In fact, one of the axes is ‘intelligent’ and calls for “smart systems” and other innovations to improve efficiency and productivity (City of Madrid, 2019a, p.60). The first axis, ‘sustainable’, seems to refer more to economic sustainability (and thus maintaining the present growth system) than any deeper ecological values. Moreover, the strategy aims for the ‘global’, along narratives of city marketing and competitiveness. Interestingly, each of the objectives and actions is coupled to according Sustainable Development Goals, “aligning with 8 of the 17 objectives” (ibid., p.19).

There is also some reference to *human inclusion*, with a repeated mention of developing an inclusive city in which anyone can participate and no one is discriminated against. The strategy emphasizes communication, spreading awareness, and accessibility of the document itself; this could also be seen to link to a discourse of *human inclusion*, as well as to *ecosystem services*. Last but not least, the strategy underlines the need to adapt the city’s legal framework to enable necessary transitions, seemingly recognizing the structurally transformative nature of measures in question.

Barrios Productores

The *barrios productores* (‘productive neighborhoods’) program was set up in 2020 as a for-profit extension of the not-for-profit *huertos comunitarios* (interviewee Carlos). It is geared towards “promoting the green economy of neighborhoods and generating employment” (City of Madrid, n.d.a).

4.2.8 Roadmap 360

OVERVIEW:

- Main demand: 65% reduction of GHG by 2035, climate neutrality by 2050
- Main themes: transport, energy, health, structural change
- Discourses: curbing negative impacts, ecological modernization, growth, ecosystem services, human inclusion

As part of Madrid 360, the city developed a Roadmap to Climate Neutrality by 2050. This was set up at least partly in response to international requirements (a.o. the Paris Agreement, European Green Deal, and C40 goals). Parts of the strategy take over EU vocabulary, which seems to be largely *growth*-oriented: the European Green Deal is presented as a “growth strategy for the EU that leads to a (...) competitive economy” (City of Madrid, 2021, p.4). Furthermore, rather than structurally rethinking and questioning the type of growth, the plan calls for a continuation of current economic growth, similarly to early air quality plans: there is a need to “detach economic growth from increased energy consumption and emissions” (ibid., p.9). A storyline of *growth* is also prevalent in the focus of Madrid’s city image.

Linked to maintaining current economic development, another prominent storyline – even more so than growth – is *curbing negative impacts*. To start, Climate Change (here often referred to with capital letters) is completely othered, with repeated phrases such as ‘fight against...’, ‘security in the face of...’, and ‘stop, revert and mitigate the effects of...’ (rather than any move towards adapting to changing realities). It also seems largely reactive to international agreements and direct local threats, rather than proposing considerable changes. Moreover, there is a strong eco-managerialist discourse, based on the conviction that enough government (and corporate) steering can limit climate change in order to continue with the current state of affairs. Thereby, there is sometimes mention of inclusivity, equity, social cohesion, and attention to high vulnerability neighborhoods. This points at a *human inclusion* storyline.

Furthermore, a storyline of *ecosystem services* is interwoven throughout the text. There is an extensive focus on tree-planting projects, which are used to achieve the carbon neutrality goals through their emissions-offsetting function. The roadmap argues for the way trees will increase “nature and biodiversity in the city with all the associated benefits that this entails” (City of Madrid, 2021, p.13). It aims to “promote green infrastructures that facilitate the functioning of ecosystem services (...) among other co-benefits” (ibid., p.56). Generally, the document only looks at and ‘sees’ the aspects of ‘nature’ that are deemed useful to humans. Our human dependency on our other-than-human environment is recognized, but only to the extent that this environment directly impacts our health and quality of life.

The roadmap recurrently seems contradictory in its formulations. Sometimes, it recognizes the need to work more integrally – within the municipality, but also through “public-private-social collaboration” (City of Madrid, 2021, p.58). What is termed the ‘citizen sector’ or ‘organized society’ – including the community-level – is thus recognized as additional relevant actor. At other times, however, agency seems to be limited to governments and private sector, and the plan remains very much in a silo in which climate change is seen only as environmental challenge. Another discrepancy: although parts of the document recognize the urgency of transformational, incremental change, other parts seem to reinforce the current system and remain limited to technocratic, eco-modernist conceptions of this change. For example, the plan calls for “*technically feasible* socio-economic changes” (emphasis added; *ibid.*, p.11) and works on a reactive, threat-to-threat basis.

Yo defiando este árbol

Separately of the above climate plans, a conflict has currently manifested along the Manzanares river. Part of the planned expansion of metro line 11 is a stop in Arganzuela in the middle of the Madrid Río park, which entails the cutting down of more than 1000 trees (Pimentel, 2023). Local neighbors have organized into an ongoing protest in defense of the trees, supported by left-wing parties. In collaboration with *Ecologistas en Acción*, they have formally requested the (regional) Community to recognize the tree corridor as a *bien de interés cultural* (good of cultural interest) – for historic, landscape, health, social cohesion, and environmental reasons.

4.2.9 Mar Menor legal recognition

OVERVIEW:

- Main themes: urgency, scientific evidence, participation, legal innovation
- Discourses: multispecies perspective, ecosystem services, human inclusion

Spain recently passed a law granting legal personhood to the other-than-human natural entity Mar Menor, an *unicum* in the European context (Greenpeace España, 2022). Located by Murcia, this largest saltwater lagoon in Europe has for years been exposed to pollution from fishing, agriculture, and tourism. In light of failing top-down conservation measures, professor Teresa Vicente instigated a citizen-driven bill (*iniciativa legislativa popular*) in 2020 calling on the lake’s legal recognition, and after two years managed to gather more than half a million signatures (Álvarez, 2021). The initiative was then voted in by national Congress in April 2022 (with the only opposition coming from Vox, similarly to the Madrid CED case on an urban scale), and transformed into a law that was passed in September 2022 (Greenpeace España, 2022). Although of completely different nature than other analyzed data, this thesis nonetheless includes the resulting law because of its high innovative character and relevance to the topic at hand.

Throughout the text, a *multispecies perspective* storyline dominates (more than 40% of the coded segments). The law recognizes the need to extend rights to other-than-human natural entities, based on scientific evidence and in line with an ecocentric reading of the law. The latter reveals that “article 45 of our Constitution has been interpreted by the Supreme Court in the sense that Nature as ecosystem is the unit that integrates the human being as one element, and as such, enables development of the person” (Law for Legal Personhood of Mar Menor, 2022, preamble, par.7). This explicitly states that humans are an integral part of nature and are not destined to dominate it for their own interests only.

The text furthermore underlines the right of Mar Menor to exist and evolve naturally, in line with the ‘ecological law’ or natural order of the lake and its ecosystems, as well as the right to be restored by governments and surrounding human inhabitants. It then provides a description of how the Mar Menor ecosystem will be governed in practice through three complementary organs: a Committee of Representatives (comprised of mainly public employees and initiators of the proposal bill), a Monitoring Commission (the ‘guardians’ of the lagoon, comprised of one person from each bordering or affected municipality) and a Scientific Committee.

The law recognizes the entanglement of ‘social’ and ‘environmental’ elements, as well as of socio-environmental, ecological, and humanitarian crises. It thereby takes on a more integral understanding than previously analyzed documents and moves beyond strictly defined boundaries between the Human and the Natural. Sometimes this boundary is blurry: the text narrates the way the lagoon is intertwined with the local cultural identity in the region of Murcia and is as such part of a complex multispecies reality. Humans in the region thus essentially *use* the lagoon for their identity formation (aside from subsistence uses), leaning into an *ecosystem services* narrative in which the lagoon needs to be ‘conserved’. The law also links slightly to a *human inclusion* storyline, underlining the participation and representation of all groups of people. On the other hand, the Mar Menor is considered for much more than its utility value and recognized intrinsically, thus moving beyond discourses of services into a *multispecies perspective*.

Categorization according to urban regime theory

The above sections are an overview of the main sustainability discourses that arose during the analysis of plans and policies of Madrid. A useful framework for understanding the evolution of particular discourses is urban regime theory (along Stone, 1989). Seen through this lens, based on the discourse analysis of the current research and supported by previous academic work (see for instance Medina-García & de la Fuente, 2019 and Velasco & de la Fuente, 2016), consecutive governments of Madrid could be broadly categorized as follows:

- Ruiz-Gallardón (2003 to 2011) seems to fit within a development regime, considering the central focus on growth and economic valorization in the air quality strategy devised under his rule. This seems to be combined with a maintenance regime because of the proposed large government role (in line with an eco-managerialist, ‘curbing negative impacts’ storyline with a focus on health).
- Botella (2011 to 2015) would also fit in between a development and a maintenance regime; the former because of the large focus on attracting (foreign) investment and collaboration with the private sector in 2011 air quality plan, and the latter because of the prominent government role and lack in heightening of ambition compared to the previous document. This points at aiming to maintain the current state of affairs.
- Carmena (2015 to 2019) seems to be a middle-class progressive regime, considering the large focus on ecosystem services as well as on awareness and acceptability of proposed measures amongst the public – especially in Madrid + Natural and the Green Infrastructure and Biodiversity plans. At the same time, some of the plans during this time also include the storyline of human inclusion, leaning rather towards a lower-class opportunity regime.
- Almeida (2019 to 2023), similarly to previous PP governments, seems to be a combination of a development and a maintenance regime. There is much focus on growth, mainly through the development of new technologies and innovations, while at the same time, many of the measures seem to be aimed at curbing negative impacts and maintaining the status quo. Even when the narrative of ecosystem services appears (for example in the *Bosque Metropolitano* project), which points at a slight shift towards a middle-class progressive regime, this narrative often seems to be coupled to taking the most minimal and efficient measures in order to sustain the current state of affairs.

Table 4 recapitulates the main findings of the discourse analysis, as well as adopting the preliminary categorization of city administrations along urban regimes.

	Urban regime	Document	Main storylines
RUIZ-GALLARDÓN mayor Alberto Ruiz-Gallardón <i>Partido Popular; in office 2003-2011</i>	Development regime; Maintenance regime		• Curbing negative impacts • Growth
BOTELLA mayor Ana Botella <i>Partido Popular; in office 2011-2015</i>	Maintenance regime; Development regime		• Growth • Curbing negative impacts • <i>Ecosystem services²²</i> • <i>Human inclusion</i>
			• Curbing negative impacts • Growth • Ecosystem services • <i>Human inclusion</i>

²² In italics: less common storylines.

CARMENA mayor Manuela Carmena <i>Ahora Madrid; in office 2015-2019</i>	Middle-class progressive regime; potentially: Lower-class opportunity regime		- Ecosystem services - Curbing negative impacts - Multispecies perspective
			- Ecosystem services - Multispecies perspective - Curbing negative impacts - Human inclusion
ALMEIDA mayor José Luis Martínez-Almeida <i>Partido Popular; in office 2019-2023</i>	Development regime; Maintenance regime; potentially: Middle-class progressive regime	¹ Text: Minutes of the municipal meeting in which climate emergency was declared - BOAM num. 8.516 8 de noviembre de 2019 ² Punto 24. Aprobar la proposición n.º 2019/800065, presentada conjuntamente por la concejala doña Inés Sabariego Nadal, del Grupo Municipal Más Madrid y por el concejal don Alfredo González Gómez, del Grupo Municipal Socialista de Madrid, con el voto bueno de sus Portavoces, en la redacción resultante de integrar en la misma la enmienda transaccional con n.º de registro 2019/8000067 presentada por los Grupos Municipales del Partido Popular, Ciudadanos-Partido de la Ciudadanía, Socialista de Madrid y Más Madrid, interesando que se establezcan los compromisos políticos, normativos y recursos necesarios para garantizar la reducción progresiva de gases de efecto invernadero y que se ponga en marcha, a la mayor brevedad posible, un Plan Municipal específico de lucha contra el Cambio Climático, todo ello en los términos, y con los objetivos y actuaciones que se indican en la enmienda. ³ Siendo el acuerdo adoptado del siguiente tenor literal: ⁴ "EXPOSICIÓN DE MOTIVOS ⁵ Los Grupos Municipales de Más Madrid y PSOE, haciéndose eco de las propuestas de las organizaciones englobadas dentro de la Alianza por el Clima, se dirigen al resto de los grupos políticos con representación en el pleno del Ayuntamiento de Madrid para instarlos al reconocimiento del estado de emergencia climática en el que nos encontramos mediante la adopción de la presente moción y las medidas que de ella se deriven. ⁶ El Ayuntamiento de Madrid reconoce que el planeta, así como los seres vivos y los ecosistemas, se encuentran en grave peligro, prueba de ello son los recientes informes sobre el estado de la biodiversidad del IPBES y sobre el calentamiento global de 1.5 °C del IPCC, que alertan de un rumbo que lleva a la extinción de una gran parte de los ecosistemas terrestres. Un millón de especies están amenazadas por la actividad humana. También se está al borde del punto de no retorno frente al cambio climático. No responder ante la crisis ecológica y civilizatoria supondría la muerte de millones de personas, además de la extinción irremplazable de especies imprescindibles para la vida en la tierra, dadas las complejas interrelaciones ecosistémicas.	- Ecosystem services - Human inclusion - Curbing negative impacts - Multispecies perspective
			- Curbing negative impacts - Growth - Ecosystem services - Human inclusion

			• Curbing negative impacts • Growth • Ecosystem services • Human inclusion
NATIONAL SCALE	N.a.		• Multispecies perspective • Ecosystem services • Human inclusion

Table 4: summary of main findings of the discourse analysis.

4.3 Interpreting the evolution of discourses

Answering sub-question: How and by what influences are these discourses maintained or challenged?

Having provided an overview of and analyzed the discourses that came to the forefront during the discourse analysis, this section now aims to understand by what influences these discourses persist at a local level; why are some more prominent than others? Essentially, this is the *argumentative* part of ADA (along Hajer): through what practices were these discourses constructed, and what positions are being reinforced or criticized? To analyze this, it is useful to work per scale of influence, moving from developments at the international, UN, EU, and city-network scale (clustered as the single category ‘supranational scale’) to the national scale and finally the city-level scale²³.

All these spheres of influence include entanglements of human and nonhuman agents, with a focus on what is especially relevant to the Madrid case. This section is built on the conducted interviews, as well as complementary academic documents, project websites, and media sources, in trying to understand the results of the discourse analysis. It is outside the scope of this research to provide an in-depth analysis of the impact of each of these influences; here, they are provided in initial form, a potential step up to further

²³ The regional level (the Community of Madrid) is found to overlap largely with the national and urban levels here and thus not considered as separate scale.

research. The aim is to provide a glimpse into the complexity of the way discourses in sustainability at the municipality level are produced and sustained, rather than a complete factual overview.

4.3.1 Supranational level

The supranational scale is a plethora of human individuals, international institutions, regulations, reports, geopolitical developments, crises, and more. As discussed in the literature review, two historical reports that have hugely shaped our present-day understanding of ‘sustainability’ are the 1972 Limits to Growth report and the 1987 ‘Brundtland’ (Our Common Future) report. These were devised by the Club of Rome and by the World Commission on Environment and Development (sponsored by the UN) respectively; the first is a recognition of the unsustainable nature of the current growth system, the second introduces the concept of sustainable development (Ekins, 1993). These reports shaped consequent environmental movements, as well as early legislation on environmental issues. At the time, legislation was largely centered on air quality, a result of the prominence of acid rain in public discussions – an actor in itself (Hajer, 1995).

In addition to its role in the Brundtland report, the UN played a role in shaping discourses through the Kyoto Protocol that was adopted in 1997, the first state-level commitment to reducing greenhouse gas emissions. It furthermore formulated the 2000 Millennium Goals (MDGs) that included environmental aspects, and later the 2015 Sustainable Development Goals (SDGs). The latter, also known as the Agenda 2030, moved towards a more integral economic-social-environmental understanding of sustainability (a discourse that becomes apparent in the Madrid case from Plan A onwards). Terminology such as the SDGs can also become used as part of the branding of sustainability plans, such as seems to be the case with the Madrid 360 plan (Fernández Casadevante, Morán & Prats, 2018). Last but not least, the UN is key for creating spaces for negotiation and discussion through the yearly Conference of the Parties of the United Nations Framework Convention on Climate Change (COPs), through which notably the Paris Agreement was adopted in 2015. The latter marked the start of the move to net-zero emissions globally, steering discourses towards a mainly carbon focus.

Another highly influential international institution is the EU, mainly through the setting of requirements to be translated to a national level, the (re)production of specific discourses, and financial support to national- and city-level projects. Early on (in the last decades of the previous century), the EU developed directives and regulations on air quality, with an underlying storyline of curbing negative impacts and a focus on health. More recently, especially relevant is the European Green Deal approved in 2020, which eventually led to the European Climate Law that was passed in 2021. These set new legally binding targets of climate neutrality by 2050 and 55% reduction of GHG by 2030, more ambitious than goals previously established in 2014. This legislation is illustrative of a general focus in EU narratives on energy (renewables and efficiency). A clear discourse thereby, that has undoubtedly transferred to city-level policy

as well, seems to be of ecological modernization combined with some ecosystem services and eco-managerialism: relying on regulations and technology-driven innovations, partly based on using ‘nature’ (e.g. through Nature-Based-Solutions), to eventually contribute to ‘green growth’ and an improved competitive position of the EU. This is clearly visible in the Madrid 360 plan. Another noteworthy development was the post-pandemic NextGenerationEU Fund, which translated to the national *España Puede* plan and on a local level to the Recovery, Transformation and Resilience Plan of the city of Madrid. At superficial analysis, these seem to be a mix of discourses of curbing negative impacts (mainly focusing on health) and growth (aiming to attract investment and contributing to the city image).

In addition to the EU and the UN, Madrid seems to be influenced by discourses in the various cross-border city networks it is a member of. Part of the 2006-2010 Air Quality Strategy was to join ICLEI²⁴ – which (at the time) was largely limited to the spheres of energy, waste, and transport, clearly translated to the focus areas of Madrid. Plan A names sticking to requirements by the Global Covenant of Mayors for Climate and Energy (GCoM)²⁵ as part of its objectives. C40²⁶, the international climate mitigation and adaptation network, seems to have had an impact mainly on the Roadmap 360 (and the Recovery Plan that stems from around the same time), which was partly developed to comply with the C40 ‘Deadline 2020 Initiative’. Interestingly, Carmen (2023) notes that Madrid’s role has evolved: where the city became an international point of reference during Carmona (on projects such as the renaturalization of the Manzanares, Plan A, and Madrid Central), it has now reverted to a more decentral, passive role and takes on a following rather than a leading position.

There are a couple influential developments on an international scale that transcend any single institution or country. The 2008 financial crisis, an assemblage of people, banks, mortgages, and national debts, amongst others, had a major impact on southern European countries – including Spain. On a Madrid city-level, this has undoubtedly impacted the narrative in the 2011-2015 Air Quality Plan under Botella, in which there is a clear storyline of economic growth, city marketing, and attracting foreign investment. This is especially poignant in comparison to the previous air quality plan, where the city government takes on a much stronger and proactive role; in 2011, the government had become a weakened player and is more dependent on the private sector, resulting in a larger storyline of growth (rather than eco-managerialism).

The COVID-19 pandemic, of a whole different nature, shook up the world and brought renewed attention to discourses of health, preventing and protecting cities against the threats of ‘nature’ and ‘climate change’. This possibly explains the prominence of a curbing negative impacts discourse in the 360 plans

²⁴ ICLEI – Local Governments for Sustainability.

²⁵ The GCoM was formed in 2016 by the formal bringing coming together of the Covenant of Mayors and the Compact of Mayors.

²⁶ C40 Cities Climate Leadership Group.

under Almeida. On the other hand, the pandemic also instigated some sense of the urgency to structurally transform our political, social, and economic systems.

This urgency to transform seems to have retreated to the background with the start of the war between Ukraine and Russia. Especially the subsequent energy crisis considerably impacted European, national, and regional discourses. Energy sovereignty and security has moved to the forefront, and the discussion on renewable energy and more structural transformations has become of lesser priority (this was also confirmed by Erika, 2023). Carlos (2023) states that the COVID-pandemic, the war, and their consequent crises seem to have had more impact in terms of the development and implementation of municipal plans than have changes in city government (illustrated for example in the stagnated growth of community gardens).

The above description of influence factors shows the complexity of these influences and highlights the entanglement between humans and other-than-humans. Institutions and movements are made up of people, legislation, and ideologies, whereby they seem to take on an agency of themselves – the whole becomes more than the sum of the individual parts. Geopolitical developments are rarely driven by a single actor, although sometimes individual humans play a key role. In the case of the pandemic, in which the virus in itself is a seemingly clear nonhuman agent, a more holistic understanding shows that it can in fact not be seen separately from the way humans have distorted their treatment of other animals, from the bat that carried the virus (see e.g. Ruis-Aravena et al., 2022), from globalized forces of capitalism that feed into the existence of nonhuman animal markets... In short: the way discourses are formed is highly intricate, and highlights in itself the more-than-human and integral perspective needed to grasp such phenomena.

4.3.2 National level

Many of the developments above play into discourses on the scale of Spain. Higher tier requirements were translated into national legislation; city networks helped shape some of the national environmental strategies and plans.

López Ruiz (2013), who writes about political ecologism in Spain, states that the 2008 financial crisis and subsequent recession highlighted the need for reconfiguration, constituting both a need and opportunity for radical change. This provoked large-scale social mobilization. The *Indignados* or 15-M movement that formed in Spain in 2011 was largely centered around democracy and involved political, economic, and social demands – similar to other global movements at the time (Peiteado Fernández, 2020). The years following 15-M were characterized by politicization and mobilization in Spain, with growing activism and strengthening of existing social movements (López Ruiz, 2013). This demand for change increasingly materialized on an institutional level, boosted by the unexpected European success of the newly-created left-wing party Podemos and epitomized through a wave of left-wing municipal governments

in 2015 (Peiteado Fernández, 2020). The insurgence of public mobilization and progressive politics undoubtedly left its mark on sustainability discourses on a local level as well, for example in the increasingly social character of policies under Carmena.

Another major development on a national level was the recent granting of legal personhood to the Mar Menor. As previously explained, this was an *unicum* in the European context. The Mar Menor is now part of a continent-wide network of waters, all represented by groups advocating for the granting of rights to these bodies of water (see for instance Embassy of the North Sea, 2023 on the first Conference of European Water Bodies that will be held in September 2023 in Murcia). Beyond Europe, it is illuminating to consider the Mar Menor case in light of international cases of granting legal personhood to nonhuman natural entities; these international precedents have undoubtedly influenced discourses on the national level. It will be interesting to see the way this law goes on to impact discourses on a local level in Madrid; potentially someday the Manzanares river could obtain its own rights. In any case, the legal recognition of Mar Menor is a precedent in terms of juridical innovation and is a first move towards a more multispecies way of thinking politically and culturally.

Last but not least, an important influence in the development of multispecies thinking in the specific context of Spain is its close ties with Latin America (Breno, 2023). In many South and Central American contexts, it is much more common to speak of rights for nature and personhood of for example rivers – often based in a context of traditional ecological knowledge (TEK). Close academic and activist contact has led to cross-pollination of these ideas to the Spanish context.

4.3.3 City level

On the scale of the city of Madrid, there are various factors that will likely have influenced the types of discourses in the analyzed plans. Firstly, as described above, the recession after 2008 presumably influenced the 2011-2015 Air Quality Plan. Moreover, the *indignados* movement from 2011 on gradually strengthened the grassroots and activist social fabric of Madrid; where political action failed or lacked, social movements instead triumphed (López Ruiz, 2013). In Madrid, this culminated when the Ahora Madrid coalition under Carmena was elected into power in 2015, in itself partly the result of social movements and thus more connected with the city's civil society (Velasco & de la Fuente, 2016). This likely explains the increased openness towards the institutionalization of 'bottom-up' initiatives, such as the renaturalization of the river in 2016.

Specific human individuals and the movements they have formed played a key role in the shaping of these discourses. The CED in 2019 was largely in response to demands by Greenpeace, *Ecologistas en Acción*, and other environmental movements. These movements, complemented by activist work and neighborhood movements, contributed to shifting the narrative in sustainability towards more social

(inclusion) and ecological directions, introducing terms such as climate justice. On the contrary, in the first half of the 21st century the discourse was rather limited to health aspects. When ‘green’ was included at all, it was perceived in terms of aesthetics. In addition, sometimes an individual (or group of individuals) played a key role in a certain project or proliferation of a discourse, including Inés Sabanés (head of Environmental Affairs and Mobility during the Carmona administration and politically responsible for a.o. Madrid Central and the Manzanares renaturalization), Santiago Martín Barajas and Erika Gonzalez from *Ecologistas en Acción* who proposed the renaturalization of the river plan, and Koïs and others from the neighborhood movement who played key roles in the community garden program.

There are also various other-than-human actors that have likely influenced sustainability discourses in Madrid. These include the mosquitoes that were (in addition to the bad smell) part of what drove the renaturalization of the Manzanares river, and the variety of trees, birds, insects, and fish that reappeared along the river after the opening of the dams. Regarding the latter, some of these species became a symbol for the renaturalization project in themselves and came to stand for a multispecies perspective, such as in the clash between the ‘barbo’ (barbel, a type of fish) and the ‘barco’ (boat) in the rowing conflict – the fish won (Carmen, 2023). Trees mainly play into narratives of ecosystem services, and play a key role in the current *Yo defiando este árbol* conflict. Another unmissable nonhuman actor in the Madrid city identity formation is the automobile. Many discourses of growth and curbing negative impacts center on maintaining the current car-driven regime in the city. Even in seemingly progressive projects such as Madrid Río and the tunneling of the M-30, the car is in no way impeded in its priority to the city.

4.4 Space for multispecies sustainability?

Answering sub-question: What *could* multispecies sustainability look like in the context of Madrid?

Having analyzed the storylines prominent in climate and environmental policy in Madrid over the past decades, as well as having contemplated the way these discourses have been produced and maintained, the current section will now delve into the existing opportunities for the adoption of multispecies sustainability in Madrid. This leans into the second part of the research question, namely what discourses enhance the adoption of a multispecies perspective; the full research question will be answered in the discussion.

To start with, there are some projects that already truly seem to recognize and ascribe agency to other-than-human entities. The renaturalization of the Manzanares is a prime example. The river was recognized as having value and agency in and of itself. Additionally, the many species of birds, fish, insects, and other nonhuman animals that the river has attracted are a good example of multispecies conviviality in the city (Rose & Van Dooren, 2012; Rigby, 2018). It is interesting to contrast this to the earlier Madrid Río project, which was rather done from a modernist and aesthetics perspective; the architect was in fact

outraged by the renaturalization of the river later on (because of the lack of straight lines, etc.; Gorka and Erika, 2023).

The renaturalization project was also important for showing the way discourses that may at first seemingly clash with established interests and existing discourses can in fact enter the conventional norm of acceptance. It is powerful to see the way the conflict with the rowers played out: by the time the dams were reinstalled to close off one section of the river again, the river had renaturalized to such an extent and a process of identification had taken place on behalf of the humans surrounding it that this reclosing led to massive public (and political) protest (Erika, 2023). As Carmen (2023) puts it: “suddenly all the Madrileños realized the value of the renaturalization of the Manzanares”. Visibilization of other-than-human entities is thus key for the human valuing and acceptance thereof.

Of course, there is also a discourse of ecosystem services at play; a flowing (rather than still-standing) river attracts less mosquitoes, and ‘serves’ humans in a utilitarian sense because of its aesthetic value and the human benefits of being outdoors. However, there are also many species and entities in the new river ecosystem that barely have any impact on humans. The renaturalization project is an apt illustration of human entanglement with the other-than-human: we share the same space, our lives overlap in some ways, and yet in some other ways we can live independently. Yes, we may as humans be focused on and usually convinced by the elements of the other-than-human that we can see and that directly impact us (we are selfish beings after all), but this does not mean that we cannot co-exist with the other elements (invisible to us) in the larger web-of-life.

When discussing the hypothetical granting of legal personhood to the Manzanares river, Breno posed that this could be difficult because there is not (yet) such a strong sense of identification with the river as in some cases in Latin America or New Zealand. He calls for a move of “reconnection with nature” alongside the renaturalization processes. On the other hand, in the Western, urban, technocratic context of Madrid, one could argue that such processes are indeed well underway but might simply take more time than in a case such as the Atrato river in Colombia, that has been granted legal personhood in a context historically diffused with TEK.

It remains to be seen what the recent noteworthy development regarding the Mar Menor will have on discourses in Madrid. Albeit on a national scale, the granting of legal personhood is likely to promote an inclination towards multispecies sustainability on a local level as well. The law is built on a progressive discourse of recognizing the agency of the lagoon and the other entities in its ecosystem. When compared with international cases of granting of rights to other-than-human nature, such as in Ecuador, Bolivia, and New Zealand, it could be hypothesized that these latter cases are much more based in the accumulation of Indigenous and traditional ecological knowledge. Notwithstanding, the reasoning behind the Mar Menor

case in fact seems to be quite similar and has much to do with the way the lagoon is intertwined with the local cultural identity in the region of Murcia; TEK may still play a role in the Spanish context after all.

An interesting discourse that comes to the forefront in the law is also of the responsibility we have as humans to actively interfere in order to repair the damage we have inflicted upon the lagoon; Mar Menor has the *right to be restored*. Looking at what is happening in practice, however, there has also been some scepticism: Carmen from Más Madrid, for example, points out that no one actually dares to limit the agriculture that keeps contaminating the lagoon (especially under the current right-wing government in the area). Furthermore, also in terms of discourses, sometimes the text still seems to be stuck in anthropocentric terminology. For instance, when speaking of ‘inhabitants’, the text only refers to humans, whereas this term could be used in a much more inclusive manner. Notwithstanding these minor criticisms, generally, the Mar Menor remains an important case for its experimental and innovative nature in juridical terms and for its immense symbolic value.

Moving back to the city of Madrid, there are various other developments towards multispecies sustainability. To start with, the other-than-human is now discussed at all. Up until a decade ago, anything environmental was often limited to the ‘threats’ of climate change and bad air quality; since then, our human entanglement with the other-than-human has been increasingly recognized. This was a gradual development: from the *ecobarrios* and conserving ‘natural heritage’ in the 2011 Air Quality Plan, where ‘nature’ was mentioned but still limited to tree coverage and other ‘green’, to the first introduction of ‘biodiversity’ and recognizing ‘green and blue as protagonists’ in Madrid + Natural, to the shift from ‘green space’ to ‘green infrastructure’ in the Green Infrastructure and Biodiversity Plan.

Almost always, ‘nature’ remains othered from us humans, but at least the complexity and interconnectedness of this ‘nature’ is increasingly recognized – for instance in the Green Infrastructure plan. The latter also demonstrates a promising shift in the discourse surrounding awareness and education, which has moved from solely focused on the (health) risks and threats of climate change to a more integral form of environmental education that focuses rather on visibilizing benefits. Additionally, even though it may seem like the current Madrid 360 plan and according roadmap have reverted to a much more reductionist approach towards ‘nature’ based on merely the discourse analysis, in practice many (non-political) government officials in the municipality in fact still consider the guidelines of previous environmental plans, thereby providing some continuity that transcends political changes (Gorka and Carmen, 2023).

As in the renaturalization of the river, many of the measures in the Green Infrastructure and the Madrid + Natural plans are still largely based on the idea of ecosystem services. Sometimes there is a fine line between ecosystem services and a multispecies perspective, for instance with the ‘green infrastructure’ concept: on the one hand, ‘green’ is recognized as an essential element in the functioning of the city; on the other hand, it is still considered as separated from humans and is used as umbrella term for all ‘green’ rather

than recognizing the pluriverse of separate entities that fall under this. The latter phrasing is also prominent in Madrid + Natural: although it is an encouraging development that ‘green’ and ‘blue’ are coined as protagonists, their use remains quite vague rather than speaking of specific other-than-human entities such as the Manzanares river.

Often, the discourses used in analyzed plans seem to be far removed from a multispecies perspective. In Madrid + Natural, although promising on a surface level, at a closer look many of the discourses are rather a combination of curbing negative impacts and ecosystem services. Where green roofs are mentioned in support of biodiversity, for instance, the choice of vegetation is rather based on pragmatism (low maintenance species), ornamental value, and the extent to which it lets humans interact with the ‘green’ (i.e. prioritizing fruits and vegetables). The underlying rhetoric is very much centered on humans and using nature to enhance their quality of life, as well as exploiting nature for its benefits. Furthermore, one could criticize the use of the term ‘biodiversity’: is this not an anthropocentric term in itself that further reinforces the constructed distinction between ‘humans’ and ‘animals and plants’, unless we start considering the human species as included?

As such, even the most progressive (multispecies) plans and strategies are largely anthropocentric. Traffic and mobility measures developed in Plan A (as well as in other plans), for instance, only take into account *human* health, *human* safety, and direct or indirect impacts on *humans*. Climate change is still depicted as threat, as a distant other that needs to be fought. Generally, the social and environmental remain to be presented as two separate dimensions. On the one hand, more recent plans such as Plan A and the Roadmap 360 include more on topics such as energy justice and recognize differentiated vulnerability between neighborhoods. However, more considerably, there is insufficient recognition of the way environmental degradation, biodiversity loss, extreme climate events and so on are intrinsically linked with our social system; ‘sustainability’ is not a separated ecological topic, but an inherent dimension of our everyday social spheres. Sustainability policy in Madrid, although somewhat more integral and holistic than a decade ago and now often implemented through various departments simultaneously, still operates largely in silos.

Nonetheless, when considered on a larger timescale (beyond the past four years in which maintaining the status quo is once again the norm), there seems to be a gradual shift in current policies – and in the city generally – towards more multispecies recognition. Out of the analyzed documents, especially the Green Infrastructure plan and the motion text for the CED hesitantly seem to move towards a multispecies perspective. Moreover, even if not always adopted explicitly in formal documents, there are ample projects that show that the ecological and the social indeed go hand in hand. The community gardens project has since its start chosen for principles of agroecology. The *Yo defiando este árbol* movement, although largely steered by anthropocentric and utilitarian conceptions of trees (Breno, 2023), does show

the way people in Madrid are increasingly connecting and identifying with other entities. There are various energy cooperatives, sustainable architecture groups, and food sovereignty initiatives that contribute to shaping discourses ‘from below’ (ibid.). On top of this, there are tightly organized neighborhood movements in which social and ecological urgencies often converge in the fight for justice (Kois, 2023). All of these developments highlight the power of grassroots and community-driven movements in (re)producing the city and the discourses that it builds on, maybe even more so in a city like Madrid.

There are all kinds of opportunities. It would be relatively simple to change terminology to more bio-inclusive wording, for instance by enlarging the concept of ‘inhabitants’ to also include other-than-humans. Often we fail to do so currently because we are still stuck in binary modes of thinking. The Green Infrastructure plan, for example, recognizes the conviviality of various plants, animals, and soil organisms, but fails to recognize that humans are also tightly entangled within that web – this would be an easy extra step to make. Concepts such as ‘circular economy’, that are currently increasingly used (a.o. in the Madrid 360 Strategy), could be expanded to take on a wider, more multispecies meaning built on relations and entanglement rather than limiting it to flows of materials. Mobility measures could also be broadened to a multispecies perspective, by considering noise, air pollution, and safety considerations not only for humans but also for other-than-human species such as birds, cats, rats, and trees.

5. Discussion



Information point for *Yo defiendo este árbol* in Madrid Río park. Source: <https://yodefiendoestearbol.blogspot.com/2023/03/nuestro-punto-de-informacion.html>.

“The huertos program created an ecosystem in which the involved associations knew what their rights and powers are and the city knows how to facilitate”

– Carlos from the City of Madrid

Argumentative discourse analysis has proven a valuable method for understanding the evolution of sustainability discourses in climate and environmental policy in Madrid over the past two decades. Especially in a time of depoliticization and conflation of completely opposing ideas of sustainability, it has been crucial to bring to the forefront the underlying practices and power dimensions that reinforce prominent discourses. The current section reiterates main findings of this thesis, answers the central research question, and points out opportunities for further research.

5.1 Shifting discourses, pluriform influences

In terms of content, where initially the focus in analyzed documents was largely on air quality – limited to human health – plans gradually recognized the urgency of climate change, and have come to encompass broader topics such as biodiversity and green infrastructure. This is reflected in the way storylines increased or decreased in importance. Where the first two air quality plans show clear discourses of curbing negative impacts and growth, with the 2006-2010 plan built mainly on the former and the 2011-2015 plan mainly on the latter, ecosystem services gradually became more prominent. Its presence culminated in the Madrid + Natural and Green Infrastructure and Biodiversity plans during Carmena, but also later on during Almeida remains. This highlights the way a new discourse can be introduced into the discussion and permanently nestle itself within the policy landscape on sustainability.

Also during the Carmena administration, some hints at a multispecies perspective entered public documents. Narratives on human inclusion come to the forefront through the introduction of topics such as climate justice in Plan A and Madrid 360, and are especially pronounced in the CED. The latest documents, both 360 plans, maintain more social and ecological aspects than plans a decade ago but largely revert back to mainly curbing negative impacts and growth storylines. Illuminating in this regard is the Spanish term *‘retardismo climático’*: after negation, this conscious decision to not take substantial action seems to be the newest way to postpone climate action and is largely applicable to the inertia of the most recent PP government in Madrid (Carmen, 2023; see also Catanzaro, 2023).

These shifts in discourses can be explained through a variety of factors, some outlined previously. The shift from curbing negative impacts to growth storylines between the first two air quality plans can likely be attributed to repercussions of the 2008 financial crisis. The emergence of ecosystem services is undoubtedly linked to EU advocating of the matter. Additionally, an increased focus on ecosystem services and human inclusion during Carmena could also be seen in terms of urban regime theory: as middle-class

progressive regime, there was a more proactive attitude towards social and ecological themes than during other (development and maintenance regime) governments. This also aligns with the way Carmen (2023) speaks of Madrid's position in international city networks over time, taking on a more active example role during Carmona and reverting to a decentral, passive role afterwards. Furthermore, as argued by Velasco and de la Fuente (2016), any crisis leads to the shifting of power positions and the appearance of new actors with according practices and discourses in the political arena, reinforcing the conviction that new (ecological and social) discourses at the time were partly a result of the recent financial and political crisis situations.

5.2 Multispecies sustainability and the conflation of discourses

As to multispecies sustainability, although the analyzed documents overall remain very much stuck in a neoliberalist, anthropocentric paradigm, there is hope. The case of Mar Menor is likely to provide inspiration in terms of legal, cultural, and policy-level innovation towards other-than-human recognition and inclusion – both nationally and internationally. The renaturalization of the Manzanares is a major step in the visibilization of and reconnection with other-than-human nature in the city. And movements such as the community gardens and *Yo defiendo este árbol* are proof of an increasing awareness that we as humans are mutually dependent on other entities. It seems like there has been a gradual shift: from perceiving climate change primarily as threat, to recognizing it as opportunity (in line with ecosystem services and growth storylines), to now perhaps moving towards a holistic understanding of climate change of which we humans are one aspect amongst many other entities.

Sometimes it can be difficult to strictly differentiate between discourses, as shown in the way a multispecies perspective overlaps with other storylines in the case of the Manzanares renaturalization. The project has a plethora of tangible human benefits – key for its acceptability in a generally conservative political setting – but alongside that massively benefits other-than-human entities as well, and results in increased human identification with the river. This highlights a valuable learning: multispecies sustainability does not mean that humans need to selflessly prioritize other-than-humans before themselves; it rather means recognizing our entanglements and mutual dependencies. Recognizing the conviviality that is often already present can be a win-win scenario for all entities.

There are more cases in which storylines go hand in hand. For instance, 'participation' falls under human inclusion and 'awareness' falls under ecosystem services (sharing information of the benefits of environmental measures, in line with a middle-class progressive regime). However, it could also be argued that both are sometimes overlapping, and in fact also link to aspects of multispecies sustainability such as visibilization and active involvement of other-than-human entities. Similarly, the Arup (2016) plan for Madrid + Natural repeatedly speaks of 'experiencing nature'. On the one hand, this is highly reductionist

and even consumerist (in line with the capitalist notion of the ‘experience society’); on the other hand, this thesis has shown that humans *need* to see and ‘experience’ other-than-human nature to recognize its value.

This goes to show that, although this thesis argues for the strong normative and empirical need to adopt more discourses of multispecies sustainability, these perhaps cannot exist fully without also other kinds of discourses. Human inclusion and ecosystem services, if articulated in a broader sense, both fit well into a multispecies perspective. Curbing negative impacts could partly be extended to include other-than-humans, for example by considering the health of other entities as well. An eco-managerialist discourse is also in part necessary, in terms of government steering of the unavoidable alterations of some parts of present-day life. Similarly, there is certainly some truth in the ecological modernization idea of technological developments that will help us and the nonhuman environment, although blind faith that these will ‘solve’ the ‘crisis’ are obviously ungrounded. In sum, it is important to refrain from labeling certain discourses as ‘good’ and others as ‘bad’; it is rather valuable to understand the way they arise, overlap, and allow for opportunities in terms of a multispecies perspective.

5.3 Government role in a landscape of social movements

A major source of inspiration, also highlighted in almost all interviews, comes from the bottom-up scale. Community organization and neighborhood movements seem to be especially present in the context of Madrid. The CED (although not very influential in practice, but of symbolic value and with considerable funding connotations), the community gardens program, the Mar Menor recognition, and the renaturalization of the Manzanares all show the power of citizen- and NGO-driven initiative in demanding action from local or national governments. As such, Ernstson and Swyngedouw’s (2018) ‘political hopes’, Castells’ (1993) social movements, and Peiteado Fernández’ (2020) urban insurgencies *can* successfully contest established politics and become institutionalized in formal policymaking. Furthermore, social movements are often much more versatile and susceptible to taking up inspiration from other contexts, such as knowledge exchanges within Europe (Kois, 2023) or with non-European contexts (Breno, 2023). The community and grassroots scale of Madrid thus seems to hold considerable power in repoliticizing the debate on sustainability and climate change.

To allow for such movements, the municipality could explore taking on new kinds of roles, taking responsibility by setting the regulatory frameworks and long-term visions but at the same time facilitating an autonomous public space for (non-commercial!) community initiative (Breno and Koïs, 2023). Especially in a time when city governments can flip into a new political direction so quickly, the persistence of many ideas and projects lies in civil society – as well as in the knowledge that remains amongst civil servants at the municipality. As formulated by Koïs (2023), there is potential for more public-community (over public-

private) collaborations. It seems like during the government of Carmona some first steps were made in working more closely together with civil society groups.

More generally, it is crucial that the municipality start stepping out of its comfort zone, daring to use more imaginative methods and to take risks with projects that are perhaps not as clear-cut or predictable as the ordinary. There are some instances where the city has done so in the past, for example through the more participatory (yet still anthropocentric) *Mesa de Árbol* in the Green Infrastructure plan, the 2017-2019 *Imagina Madrid* project that worked with feminist and artistic perspectives to re-imagine public space²⁷, the *Decide Madrid* online participation platform launched in 2015²⁸, and to some degree the renaturalization of the river. However, throughout the analyzed documents, discourses of eco-managerialism and curbing negative impacts are always to a more or lesser extent prominent. Instead of pursuing this line, it is key that the city think in the longer term and work on a more proactive and integral rather than reactive basis (Breno and Kois, 2023). To truly move towards systemic social and ecological transitions (that include moving towards multispecies sustainability), the city government must dare to step out of the status quo. Ample historical examples of ‘extreme’ government-led transformations that were also deemed impossible (such as the introduction of the automobile and the evolution of natural gas) show that such change *is* possible.

5.4 Answering the research question

In sum, the adoption of multispecies sustainability is complicated in the Madrid context by various persistent discourses. On the one hand, growth has always been a prominent storyline in the formulation of sustainability policy, invariably linked to the car-centrism of the city and the adamant preoccupation with foreign investment, city marketing, and technological innovation; capitalism thrives. On the other hand, there is a tendency towards curbing negative impacts, which results in maintaining the status quo and doing the bare minimum in the face of climate change. Hereby, ‘nature’ often remains reduced to its human health value or to its value in adapting to the threat of climate and environmental change. These findings largely correspond to the initial hypothesis.

Nonetheless, unexpectedly, many of the current discourses also hold potential and sometimes already border on a multispecies perspective, including human inclusion and ecosystem services storylines across documents. The same ‘nature’ that is often reduced and externalized is at the same time much more seriously considered than it was previously. Projects such as the renaturalization of the Manzanares river highlight that appreciating an other-than-human entity for its utility value can in fact go hand in hand with a process of identification with and recognition of this entity in itself. Moreover, the recognition of the Mar

²⁷ See for more information the project website <https://www.imagina-madrid.es/es/english>.

²⁸ See for more information the (Spanish) platform website <https://decide.madrid.es/> or the description by the OECD Observatory of Public Sector Innovation <https://oecd-opsi.org/innovations/decide-madrid/>.

Menor in national legislation is likely to set a precedent for other natural entities in the country, including in Madrid. As such, there is hope in what is happening already, and in what is still possible. Even if many of the current formulations and initiatives may still be largely human-centric, the current decade seems like a moment of major opportunity for the adoption of a multispecies perspective more broadly across Madrid policies. This shift would perhaps be pushed not as much by formal supranational institutions (such as by the EU in the adoption of ecosystem services in the previous decade), but rather by cross-pollination and inspiration from social movements within Madrid and all over the world.

5.5 Further research

The current research could inspire various directions for future research. For one, it would be interesting to delve deeper into the way certain discourses on sustainability (potentially focusing on multispecies discourses) are introduced in a particular case study and eventually become part of the mainstream narrative. The current section on potential supranational, national, and local influences is rather a first speculative insight into this than the result of an in-depth analysis. This could be done using a multi-level perspective, analyzing the way various ‘influences’ – as termed previously in this paper – can have repercussions and spread discourses across various scales. Hereby it would also be relevant to look at the international spread of practices (as also advocated by Kois and Breno). A specific angle in such an analysis could be to continue with the use of urban regime theory, analyzing what governance circumstances are most conducive to multispecies perspectives. Moreover, although there is ample justification for the focus on municipal plans and legislation (i.e. it constitutes the formalization of developments on an urban level and provides for a concrete unit of analysis over time), the research could be extended to other kinds of sources, such as news items on projects, non-governmental reports and evaluations, and blog posts.

A different approach to untangling the way discourses enter the political arena would be to use more qualitative methods, trying to understand the subjective valuing of specific discourses. Breno (2023) suggests using ethnography to analyze the perceptions that people have of the Manzanares river (in the Madrid context), to understand in what way a process of reconnection to other-than-human nature may be taking place. In an extension of this, it would be fruitful to conduct a research project on the reasoning behind the legal recognition of the Mar Menor – what is the interplay between cultural and environmental values, how is traditional ecological knowledge perhaps formulated differently in a European context?

Linked to the Mar Menor case, it would also be interesting to deepen the operationalization of multispecies thinking and conviviality from an ethical perspective. The Mar Menor law includes the lagoon’s right to be ‘restored’. This opens the door to a discussion on our role as humans: how much responsibility do we have to actively repair what we have disturbed, to intervene in relationships of other beings when we have fundamentally altered the ‘natural’ processes of life on earth (such as killing and

consuming)? Is there any such thing as returning to a ‘natural order’, for instance in the case of the lagoon? Interesting literature on the topic is for example by Puig de la Bellacasa on more-than-human ethics (2017). Related to this is an ongoing debate about native versus nonnative (other-than-human) species. Various analyzed plans and projects prioritize the introduction of native species. Is this preference merely utilitarian, in light of lower maintenance costs and higher resource-efficiency of native species, or rather for an intrinsic value of the ‘native’? Sometimes, the discussion shifts into an outrightly hostile character towards nonnative species, thereby largely ignoring the life value of these species themselves and the human origin of the immigration of many ‘foreign’ species (see in this regards Fernández, Moreno & Suárez-Domínguez, 2022 on the framing of monk parakeets in Madrid).

Another direction for future research lies in the realm of linguistics and regards a discussion on terminology. As becomes overwhelmingly clear in the current thesis, policy is still largely stuck in binary and human-centric vocabularies. Multispecies sustainability cannot truly be operationalized without a reconsideration of current language (see for instance Moore, 2013). Terms such as ‘biodiversity’ and ‘conservation’, although seemingly in favor of recognizing other species, can in fact reinforce current us-versus-them thinking of Humans versus Nature rather than humans-within-nature. What lies at the basis of such terminology? Is the use of ecosystem ‘benefits’ over ‘services’, of green ‘infrastructure’ versus ‘space’, truly moving beyond anthropocentric conceptions of nature? How can we form a more inclusive language – in itself a human production (or only recognized as such)?

Finally, opportunities for further research lie in the limited scope of the current research. It would be fruitful to include a second case study, especially one in a context where TEK has more prominently transmitted to a policy level, such as Quito. Furthermore, as previously mentioned in the methodology section, this thesis is limited in its data: both analyzed documents and interviews could be expanded in the future. Including policy beyond the obvious ‘ecological’ sustainability plans and interviewing a more diverse array of experts would respectively provide a fuller understanding of the government’s priorities and discourses and provide more insight into the way anthropocentric sustainability discourses are sustained. This would allow the research to more considerably move ‘beyond silos’.

All of the above links to the need for more research on the operationalization of the multispecies city. How can we produce a city that includes other-than-human entities as well, how do we plan for conviviality? The Multispecies Sustainability Laboratory, amongst other groups, is doing valuable work in this regard.

6. Conclusion



The Manzanares river by Casa de Campo park, April 2023.

“Look at the potential of what is already there and try to see what would be possible”

– Koïs, activist

This thesis provides a comprehensive review of current debates in multispecies thinking and other-than-human recognition, and proceeds to contribute to this growing body of work with a case study on climate and environmental policy in Madrid. The in-depth analysis of sustainability discourses in urban policy and how – and through what influences – these have developed over time and across scales provides valuable insights into the way the current system complicates the adoption of multispecies sustainability, while also pointing at hopeful avenues for its gradual introduction.

Partly through the sustained power of grassroots and community-level movements, as well as through national and international incentives, there seem to be small steps towards seeing climate change not as external threat, nor as commercial opportunity, but rather as intrinsically interwoven with our own lives – humans as within nature instead of as opposed to nature. Cases such as the renaturalization of the Manzanares river and the granting of legal personhood to the Mar Menor show that people care, that they can succeed in enforcing top-down action through collective mobilization, and that they are able to reconnect and identify with other-than-humans such as trees and rivers. These cases also highlight that the municipal and national government are indeed capable of legislative and political innovation, of imagining beyond what is already known, of taking necessary steps into what is as of yet unknown but ecologically and socially highly necessary.

The city of Madrid has recently seen elections, with a majority for the Partido Popular and thus the continuation of Almeida as mayor (El País, 2023). Notwithstanding these results, this recent election could be a moment of opportunity for new political and municipal directions. There seems to be a growing momentum towards a more holistic conceptualization of sustainability, and various analyzed cases have shown that other-than-human recognition and appreciation is no longer a merely left-wing topic; multispecies thinking has moved beyond political ideology. The current research has provided some practical recommendations on ways to move towards multispecies discourses.

There is no simple way forward, and the route towards ontological and epistemological reframing of our current anthropocentric societies will be full of obstacles and surprises. Yet it is absolutely imperative that we take this route, to ensure the well-being of future generations of humans *and* of all other entities in the web-of-life that we are entangled within. This thesis strives to have provided critical yet hopeful perspectives for governments and civil society alike in the move towards (or return to) generative, inclusive societies – for we may never lose hope.

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Appendices

Appendix I: Code frequencies example

Below is the code frequencies analysis in MAXQDA for the Local Strategy of Air Quality 2006-2010, as illustration of the process that was done for all documents. Codes and sub-codes are presented in the same manner; marked in yellow are the most prominent codes that are then discussed in the Results section.

Segments with code

	Frequency	Percentage
Carbon focus	6	4.00
(Human) Quality of life	3	2.00
Eco-managerialism	7	4.67
Focus on 'science' and 'measurements'	5	3.33
Efficiency	8	5.33
Regulation	10	6.67
Ecological modernization	15	10.00
'Green' / 'Environment' / 'Nature'	5	3.33
Human inclusion	3	2.00
Make information accessible	0	0.00
Anti-discrimination / climate justice	0	0.00
Participation	0	0.00
Ecosystem services	2	1.33
Aesthetics	0	0.00
Exploitation	0	0.00
Awareness / sharing of information	3	2.00
Accountability	1	0.67
Growth	10	6.67

Receiving funds	0	0.00
Collaboration with 'stakeholders'	1	0.67
Marketing / city image / competitiveness	8	5.33
New development	2	1.33
Investing money	0	0.00
Curbing negative impacts	11	7.33
'Othering' of climate change	6	4.00
Focus on health	13	8.67
Stick to top-down requirements	9	6.00
Multispecies perspective	0	0.00
Traditional Ecological Knowledge	0	0.00
On representation	0	0.00
Entanglement human-nonhuman	1	0.67
Other-than-human recognition	0	0.00
'Local' focus	0	0.00
Urgency / Failure so far	7	4.67
Structural change / transformation	7	4.67
Daring to experiment	0	0.00
Integral perspective	2	1.33
Individualization	5	3.33
Political	0	0.00
Applauding previous government	0	0.00
Multiscalar collaboration	0	0.00
Critique of previous government	0	0.00
TOTAL	150	100.00

Appendix II: Interview questions

During the interviews, I used a rough interview guide. These questions were used as a starting point for conversation, in addition to specific questions related to the work of the interviewee. Not all questions were covered in every interview.

- What is your role?
- Tell me about the process of What was its impact?
 - ...the climate emergency declaration
 - ...the renaturalization of the Manzanares river
 - ...the institutionalization of the *huertos comunitarios*
- What do you think of the granting of legal personhood to Mar Menor?
 - Do you think something like this would be possible in the city of Madrid?
- What do you think of the concept of multispecies sustainability? Do you think this would be possible or applicable to the case of Madrid? What would the city need to change?
- What do you think of the role of civil society and of social movements in Madrid?
 - How do you see the balance between ‘top-down’ and ‘bottom-up’?
- (How) Have you seen governments shift in their approach to sustainability over the past years?
- In light of constantly changing political spectrums (mayors), is continuity in municipal approaches possible? Are political plans and strategies worth analyzing at all?
 - Can ‘sustainability’ move beyond one political color?
- What do you think of city networks?
- What is your general sentiment / outlook on Madrid? What gives you hope, what makes you more pessimistic?
- What do you think of my research findings; do you recognize this? Where are my results lacking?

Appendix III: Summary of expert interviews

Below are the extensive summaries of conducted interviews. Some comments: notes in brackets [] are by author; where the ‘current’ government is mentioned, the previous Almeida government is referred to (before the recent elections).

Interview #1: José Luis Fernández Casadevante “Kois”

Sociologist, writer, activist, expert on food sovereignty

April 27th, 2023

- How to move towards multispecies recognition: “it is possible, there’s cities that are advancing in a much more accelerated and significant form than Madrid, such as London” (recently launched their rewilding strategy) – “there’s cities that are trying to reconceptualize their relationship with nature, integrating it as much more central factor”
- During Carmena there was much more recognition of ‘nature’; Madrid was coming from decades of not very ambitious nor transformational environmental politics
 - In these 4 years many significant steps were taken
 - Because of the limited timeframe of this government and often a lack of continuity, many of these politics have not led to the deeper, more structural change that they could have (in terms of reconceptualizing our relationship with nature etc.)
- The most influential / powerful measure during Carmena was the renaturalization of the river
 - One of the main projects that still stands today
 - This project showed that it was economically viable: you don’t even have to invest, but just let nature be and renaturalize
 - Huge symbolic value: new relationship between the city and the river. Very successful, valuable project
 - Small steps towards different forms of understanding, inviting people to establish new relations
- Other measures under Carmena:
 - Reintroduction of sheep flocks in Casa de Campo
 - Plan was to dismantle Valdemingomez. Would have been the first of its kind of project in Europe, asks for a more radical and ambitious new form of waste management
 - Concrete plan was ready (until 2030) but dismantled by new government, that lack sensitivity for these kinds of issues

- Waste management is not even up to EU standards
- In Madrid there is a strong neighborhood movement (barrios) and strong insurgencies, because of such a 'hostile' [political] environment
 - This is apparent in the *huertos comunitarios* movement, which has now been consolidated into a formal measure and is no longer linked to certain political parties
 - This is an example of public-community collaboration (instead of public-private)
 - We need to look at the grassroots to not get depressed: “look at the potential of what is already there and try to see what would be possible”; “trying to see the tree in the seed”
 - If these environmentalist movements would have the legal frameworks, means (money, facilities), support, they could lead to much more incremental and radical transformations
 - Also important neighborhood movements that call for justice for southern parts of Madrid (compensation for the working class people who live in these areas with all the contaminating and harmful infrastructures); current government of Almeida symbolically held onto Carmena’s plan but has not done anything in practice
 - [*Fondo de reequilibrio territorial* under Carmena and *Plan SURES* under Almeida]
 - In general: much potential in trying to operationalize / formalize public-communitarian cooperation forms
- Vallecas Project: led by local neighborhood movements (should be led by government but is not). Plays into existing potential for transitions. Integral vision: energy as main focus point, but also look at care, mobility, food, consumption, gardening
 - Set up *Oficina por la transición justa*; a.o. helps people reach government subsidies, helps with organizing co-financing for these (complicated for many people)
 - Importance of public activities for awareness and information on e.g. subsidies, so need to make these kind of events more accessible
 - Need to democratize access to subsidies, organize the neighborhood movement, and generate ways that these subsidies get to the people that need them
 - The ecological and social often converge! Both urgencies
- CED in 2019: because of a (social movement) wave from the rest of Europe
- Legal recognition of / granting personhood to other-than-human entities (based off Mar Menor example): very interesting
 - Costs effort to transfer these kinds of new relations with our environment into legal terms (because these relations are artificial); entails legal innovations
 - Companies are also recognized as legal entities
 - Good to start debate, brings the public debate to a different level

- Have rights, so they *have* to be defended
 - “Colonization by the market of the imaginary has become naturalized. We have to make an effort to repopulate our minds with new imaginaries again”
 - Also interesting: environmental trials and court cases
 - Case of Italy: protecting trees
- In an urban context, legal personhood would have mostly symbolic value (e.g. granting rights to the Manzanares river)
 - Leads to small steps: different mentality, concrete steps that help us understand in our daily lives: what could the city look like?
 - Example of London: declaration of urban national park has mostly a narrative function (symbolic), promoting a different way of understanding
- Current movement *Yo defiando este árbol*: interesting in terms of mobilization, but in Italy and the UK they are taking it one step further by also looking at how to establish rights for trees that will be cut down
 - How to find a balance to not always only be reactive? Instead of reactive when something happens, our approach should be more integral
 - “at the basis, what we need to do is take more proactive steps towards understanding the link – between society and nature, city and natural surroundings...”
- There’s a risk when it comes to prioritizing environmental injustices over injustices amongst humans; think of the dynamics of gentrification (especially green gentrification)
 - Risk on the other hand: fall into a paralysis (e.g. when considering gentrification)
 - “Gentrification is not an independent variable but rather serves to accelerate processes that are already existing”
- On eco-social transitions: we should understand these kinds of transitions rather as anthropological than as technical or technological; require massive cultural changes. We should ask ourselves: what is a good age expectancy, what kind of quality of life can we aspire within the current massive ecological crisis (or call Anthropocene, Capitalocene...)? It’s a fact that this will lead to a number of restrictions: living with less energy, less resources...
 - There’s a psychological factor: requires a change in the understanding of our own lives
 - These transitions cannot be imposed on people
 - These transitions have to come from changes in the economic system and in the urban environment: how do we understand the city, the territory, the relationship with natural parks, agricultural parks, public spaces...

- Since COVID-19 there has been inertia. We went back to how we were living before, there is no proactivity to look for other forms of living, of understanding, that could even make us happier eventually
- Need to shift scale: rather than thinking in terms of urban / rural, we need to think more integrally in terms of ecosystems and bioregions
- To overcome climate polarization and putting off eco-social transitions as a leftist topic, we need to establish a relatively autonomous public sphere in which debates can arise. These are social debates that relate to everyone, and cannot be reduced to cultural issues (e.g. family values)
 - Need to think in intergenerational and long-term processes
 - E.g. the building of cathedrals
- Need to use our imagination, as well as looking at what is already there and what we have already done in the past (such as the creation of libraries – very equalitarian)
 - How can we translate the knowledge and social infrastructure of collective mechanisms to other contexts?
 - Governments can also use imagination. Need to look at existing public policies: “utopias already exist. If we would take the best elements of all the cities with the best practices and combine them in one place, we would have an alternative city”
 - Eg Bologna: office of civic imagination
 - Focus on community neighborhood networks, tap into collective creativity and imagination
 - Deliberative democracy
 - Create methods to discuss and weigh scarce resources such as land (conflict of uses: renewable energy, ecosystem, food production...)
- EU and city networks could play a role in facilitating cross-pollination between these kinds of projects, facilitating the translation of practices to different realities. Now often these community projects are built on informal networks
- *Bosque metropolitano* project: very pragmatic (as to be expected from current government). Not a bad idea in itself, but hardly implemented and at a very slow pace
 - Still, if the government continues to be rightwing, these will be the kinds of initiatives that we will need to defend, even if they are so lacking (because there is nothing else)

Interview #2: Carlos de Mingo Rojo

May 5th, 2023

Works on community gardens program at the municipality; responsible since 2018

- Number of *huertos* is rapidly growing (even excluding the municipal and school ones, only focusing on community gardens)
 - *Huertos escolares* (school gardens) program: started in 2005
- The COVID-pandemic slowed down the plans on community gardens and the starting of new gardens. The pandemic and the Ukraine war had more influence on the plans than the change of municipal government
- Additionally, responsible for the program of environmental education (*educación Ambiental*) through the gardens. This program was renewed under the current government and the idea is that it keeps growing. This is for the general public
 - In the end it is always geared towards certain groups. There are two projects aimed at school children: one through the *huertos escolares* program and a project that is geared towards ‘sustainable Madrid’ (about recycling, improving the environment, healthy food, food waste...)
 - *Huertos comunitarios*: more aimed at an adult public, more social, neighborhood oriented
 - Many projects on food, but also mobility, informational sheets for parks and rivers, etc.
 - *Huertos escolares* program falls under the department of environmental education (and not environment)
- New program, from a different department (urban development instead of environment): *barrios productores*
 - This idea started in the previous government but was only materialized now
 - In the *huertos comunitarios*: give away municipal (empty or green) land without profit; must have social impacts; is for auto-consumption
 - In the *barrios productores*: can still be for educational or social purposes, but can also be for profit: products can be sold. Very different: not necessarily green zones, but rather *parcelas de equipamiento* that are given away (pieces of land that are meant for a social service construction at some point and are in the meantime used as *huerto*)
 - This program started because sometimes there is no association in the neighborhood that is willing to start a *huerto* without any profit, or the plot is too big
- On the institutionalization of *huertos*:
 - *Huertos* started during Botella, around 2012
 - Was sometimes even on non-public lands; no facilities, no infrastructure for water etc. Was ‘alegal’

- After 2 years of negotiation: neighborhood association and people who started the *huertos* agreed with the municipality on how to legalize and facilitate
 - Also agreed on conditions: has to stay community-based, public and open to anyone, non-profit, free to join
 - The program grew (because of available resources) – and all depends on the enthusiasm of the people; the point was not that it would be run by the municipality but by the city
- The *huertos* program: created an ecosystem in which the involved associations knew what their rights and powers are and the city knows how to facilitate
- At the beginning: clearly a *social* movement. Using empty space to enhance neighborhood activities
 - At the same time, also improves nature
 - From the start: the project has an ecological basis. This in turn leads to awareness on agriculture and on food, on alternative, more sustainable ways to live
 - Various aspects that contribute to the ecosystem
- On the climate emergency declaration: mostly had monetary implications. Its impact was consolidated through:
 - During Carmona: plans for air quality and for healthy food; under Almeida: continued with these plans for air quality and for food (also Milan Pact)
 - Roadmap for climate neutral in 2050
 - In other departments: used to check on the state of things (e.g. on SDGs)
- On the legal recognition of other-than-humans:
 - Mar Menor: a very far-stretching step, very rare
 - In Madrid: various levels of protection (for nature); similar to national parks on Spain national level. In the city: maximum protection for historical parks, various protected trees (higher level of protection). Cerro Almodovar (archeological reasons for protection), Manzanares river...
 - It would not be impossible to imagine this in an urban context, but it's a shame that it would have to be done because things have gone too far (as with Mar Menor); would have been better if had never had to happen
- A big obstacle is national legislation, more than political parties. It is very hard juridically to give public space to a 'random' group of people or association
 - The *barrios productores* program took four years to arrange juridically; it's much easier to give away space for non-profit purposes
 - It is much more a legal question (how to arrange things) than a political question

- The Constitution of Spain includes protection of the environment. People have the right that the environment be protected by the government
 - At least this is included; in many other countries it is not
 - Many times, air quality legislation is based on these principles
 - The laws “are made for avoiding damage to the environment”. But in fact they are not made enough to spread awareness amongst people on the *extent* to which the environment should be protected; maybe that’s the problem. “We haven’t been able to do this, that the people understand that there are aggressions towards nature”. “We see it as something very external. In the city we don’t see the way we contaminate the rural environment. Many people in the city think that the rural environment is less contaminated. We have an idyllic vision of contamination; there is much contamination that we don’t see that is in fact polluting the rural environment (for example by nitrates).” In the city it’s more controlled.

Interview #3: Erika González

May 24th, 2023

Ecologistas en Acción, focus on water

- Works on stopping the deterioration of water ecosystems (many challenges in conservation); have been overexploited massively, mainly for agriculture (out of which most goes abroad); fighting against infrastructures that are going to be built etc.
- Other work: reinforce parts of rivers that are currently flowing naturally in national reserves in mountains etc. (preventing future exploitation), and alongside that renaturalizing urban stretches of rivers
 - Manzanares was the first experiment of this. The project was so successful (the improvement was so visible and spectacular) that they copied this process to other cities
 - Mainly work by Santiago Martin Barajas
 - By now have developed more than 15 proposals for renaturalizing rivers
 - Inspired by the case of Burgos and by other European cities
- Developed proposal in 2016, under Carmona government
 - “the government more favorable to environmental policies allowed for a window of opportunity”
 - Representative of the area (of the city) also helped to push for the project

- Not only presented the plan to the government in ruling but also to other political parties because knew that it would be complicated – set up a media campaign of awareness and visibilization
- Complicated topic: the rowing school
 - PP, Ciudadanos, VOX... used this to counter the plan
 - It was then agreed that the rowing school would be maintained. “This was a measure so that the plan would pass” (although completely incompatible with the plan)
 - Lucky because gate that was supposed to keep the pool closed was broken for a few months. As a result, ‘nature’ also reached this stretch. By the time it was going to be closed again there was a big campaign
 - All had to do with the huge visibility and success of the project. If the process would have been slower it would have been different
 - Neighborhood mobilization
- Now there is a consensus amongst political parties in favor of the project
 - Initial fears and discourses used by the right: will result in less water, more rats, more mosquitoes...
 - Forests came up, many types of vegetation and birds
 - The population that lives nearby: very happy with it (separately from political color)
 - “Obtaining the recovery of these ecosystems doesn’t have anything to do with ideology”. A proposal for *public* policies, preventing space from being taken over by capital etc. is not political
- Overall: “very happy with the project, both with the response of the river and the response of the people”
- Comparison with Madrid Río project:
 - Barely any link
 - The architect of Madrid Río found the renaturalization outrageous: no straight lines, etc. The type of design in Madrid Río is very ‘urban’: very linear, made of stone... there are trees but the types have nothing to do with the river
 - It’s good that public space has been reclaimed; many people use and appreciate it. On the other hand, Ecologistas en Acción has criticized many other aspects of the project: it cause a massive debt, and tunneling of the road is not actually tackling or aiming to decrease road traffic but rather facilitating it. Madrid Río does not have anything to do with recuperating a natural space in the city. The people behind this plan had zero interest in the canal (the water) that was in its middle

- “yes, Madrid Río was maybe more aimed towards reclaiming this public space for the people, but renaturalization has more of an integral vision: it’s also for the people, and the people highly appreciate having a natural space, a natural river in this park – as much for the rest...forests, birds, seeing how everything changes throughout the seasons, as for fighting the heat island phenomenon, and for enjoyment: people see and understand better what is happening in the river, birdwatchers... So the renaturalization has an environmental objective, but also very much a social objective, the two go hand in hand”
- On the granting of legal personhood:
 - One of the objectives that the renaturalization had was identifying its own ecosystem, spreading awareness on natural spaces and how necessary they are and creating a territorial link between the people of Madrid and this river (in the same way that when the rowing part was cut off again, the people felt personally hurt: “an aggression towards the river was also felt as an aggression towards people’s lives”). This is a process, takes time
 - “A proposal of granting rights to the river could fit from the point of view of rights as ecosystem, as living nonhuman being, it could be backed up by these people because they would experience harm to the river as harm to themselves”
 - “now it’s something that could fit, but before that this whole process of identification, civilization, valuing, incorporating the river as something part of us had to take place”
- There is no major momentum that the renaturalization project led to, no move towards sustainable change in Madrid at an institutional level, although at the level of population there are some changes. At institutional level the project is accepted because it does not harm key economic interests of the city of Madrid and the investment that had to be done was very low, with very high political gains because of the public appreciation
 - Nothing apart from this project will happen institutionally, because this would require touching interests. Instead, the city develops large urban development projects (e.g. Chamartín), which will have a huge environmental impact and pollution through transport, energy, etc. They will not slow down these kinds of processes
 - The city also will not stop the use of vehicles any more than what is obliged by EU requirements
 - They will keep the vehicle as a key aspect of this city (electric vehicles will not do much)
 - “Any sustainability policy that touches economic interests – as do almost all of them if they want to have any effect on the ecological crisis – will not be passed”

- On the other hand, in the cases that the population has a strong sense of identification and clear sense of the benefits of having these trees or green spaces, they will come to their defense
 - Protecting the trees, *huertos comunitarios*...
 - If the people do not have such a good sense of these benefits or if this clashes with other interests: the support is not so clear
 - E.g. if private vehicle would need to be limited, this would see much resistance on a citizen level
- “I don’t see a favorable context for sustainability policies that are effective and really touch economic interests and are complicated to set up”
 - Some are possible, if they are very simple to set up and do not threaten other interests and clearly improve people’s daily lives. It has its limits
- On the role of NGOs (like Ecologistas en Acción):
 - NGOs can seduce the government into certain measures that they clearly see the political and economic benefit of (and no confrontation with economic interests), “but any transformative measure towards ecological sustainability *has* to tackle these economic interests because they are the main causes of the current ecological crisis. This will only be achieved through institutions, that are obviously backed by strong economic interests, so this would have a very high political cost. This can only and exclusively be obtained through a strong social mobilization”
 - E.g. cutting down trees has now temporarily been stopped because of its high political cost. If not, would not have been halted
 - The key role of EeA is articulate and contribute to the mobilization of the masses, contributing to social mobilization that demands and that has a high political cost
- On the climate emergency declaration:
 - Greenpeace, EeA and others presented a demand to the Spanish government about the insufficiency of the measures that were being presented for global warming
 - The CED is useful for symbolic recognition... but in practice, does not make much sense. Does not have anything to do with the policies in practice
 - The EU focuses mainly on energy transition (not very ecological)
 - Now, especially with the Ukraine war: has led to a few steps back. Energy security is now at the forefront again (renewables discussion has moved to the back)

- Renewables: not conceived as much as an option against climate change but rather seen in terms of energy sovereignty and production (this is a very different discourse – also prominent on EU level)
 - These infrastructures can also have a huge impact on the land...
- Our work is more difficult every time; the government has much power through media channels etc. to transmit certain discourses and thereby can convince the people that certain measures are against climate change and ecological crisis while they are in fact hardly contributing
- On the national government: took some more favorable political steps in terms of environmental conservation, for example regarding the wolf, regulating invasive species, and a national parks program
 - But by improving the environment it does not mean that they are necessarily contributing to the ecological transition that we need, to replace the current environmentally destructive model that we are in by a new model. The improvements have their limits, and other measures that are being taken contradict them
 - There are no limits to agro-intensive expansion. This leads to deteriorating ecosystems
 - Allowing for large urban developments, large new infrastructures for energy and transport through which you destruct and fragment the land and its natural values
 - No real restriction on GHG; rather investing in international trade and in fact contributing to emissions
 - Major economic interests are at play. Most measures are taken for certain sectors of the population (with larger purchasing power, with direct corporate interests...)
- “In Madrid it would be very complicated for an ecological transition to take place, [it is] an absolutely unviable city in ecological terms because there is a part of the population that absorbs many more resources than the territory is capable of providing – in terms of water, food, energy. Madrid, including the surrounding region, is a ‘sinkhole’ of resources, and it’s a massive producer of waste”
 - “It would be possible to be a bit less environmentally destructive, but only through policies that would be the antithesis of the ones currently taken” – at the level of emissions, transport, public services (against private vehicle), recovering environmental zones, energy and food production
 - “I don’t see that in the short-term, even with all the current political parties in Madrid (the ones currently in power but also other parties), there is any combination of parties that is

capable of taking on such policies that would be very confrontational with certain interests and very confrontational with what the largest part of the Madrid population would want”

- Even if a coalition of PSOE and Más Madrid would win, they would have a more environmentally interested plan, relating to transport and renovation of housing to become more energy-efficient, but still the key plans of large investment (e.g. the plans promoting new urban developments) would not be stopped
- This is largely similar to other cities, but not all cities are as unsustainable as Madrid and smaller cities have a larger margin to maneuver in and function better within the biophysical limits of the planet [planetary boundaries]. But also in many other places there is a lack of political willingness
 - E.g. Barcelona is more involved in this (although it also has its contradictions: tourism, big events), yet still does not fully have the political willingness
 - Link to power and interests
 - In other places: maybe more is possible, could do interesting things, but “I don’t see any city that truly functions within its biophysical limits”

Interview #4: Breno Bringel

May 25th, 2023

Research professor at Universidad Complutense de Madrid and State University of Rio de Janeiro

- His work: geopolitics of ecological transitions – much research in Brazil, developing a research agenda on social movements and agroecology, focus on Latin America. Looking at socio-ecological transitions from an integral perspective. The latter: linked to ‘interspecies ethics’. Worked on this mainly in spaces of activism and public discussion
- ‘interspecies ethics’: in Latin America: a bit of a different theme. In Europe: stems more from animal rights movements, debate on relation humans with nonhumans is comes from this; in Latin America: intrinsic part of indigenous and ecological movements and communities, also rethinking our position as humans within the world / civilization. This leads into different discourses. There: more dialectic, fluent (fluid) in incorporating e.g. rights for nature and for animals. Here: is rather a movement from outside the mainstream / institutionalized, push for inclusion. Larger barriers and hierarchies even within social movements
- A very important factor (in context of Europe, something that provides hope): inspirations. How do certain discourses arise here? – very inspired by practices and discourses in other places

- especially link Spain – Latin America (mostly between certain movements in the Basque country, Catalunya... that have more internationalist and international movements)
- Ecologist movement: big in Madrid, key part of the anti-globalization movement. In the 90s: ecologist movements in Madrid knew that you had to act locally but also linked to the global → much inspiration from Latin America
 - Large movement on linking ecological debt to external debt (and external relations) of states: *Quién debe a quién?*
 - Practices such as agroecology are developed in dialogue with practices in other places
 - Was active in the process of the first environmental initiatives in Madrid (early 2000s), even before the *huertos* movement and before talk of the need to reconnect with our natural environment
 - E.g. BAH! collective (*Bajo el Asfalto está la Huerta!*)
 - E.g. *huerto rural* initiatives at the Complutense university 13 years ago, where many of these discussions (on interspecies justice etc.) were already there
- We need to analyze and understand these inspirations, these knowledge transfers. How are practices and discourses in Madrid influenced by others, how do they get here?
 - Sometimes through activism
- “Yes, [it *is* possible to move towards a more holistic conception in Europe as well even though we are more removed from traditional ecological knowledge], but this can only happen if there is also a parallel process in society of a broader movement towards reconnection with nature”. “We’ve lost this in Madrid and in many other cities that are driven by real estate speculation and the dictatorship of the car, the automobile, where children know the names of cars but don’t know the names of any trees in the city”. We’re completely distanced
 - Efforts of renaturalizing the river and the rest of the city should also include efforts of our reconnection with nature. There is the idea that walking through the park on the weekend will get us this, but this is not true; it’s a more radical idea of how to form the city
 - So: interspecies ethics and rights for other-than-humans should be looked at and developed in parallel to our human reconnection with nature
 - “has to do with: how to connect right to the city with ecological justice?”
- Interesting initiatives in this regard that function in parallel to each other but are actually moving in the same direction:

- Initiatives of agroecology, community gardens, food sovereignty: “there is a collective awareness on these topics that is much more permeable to ideas of how to connect with other species and how to decentralize the human”
- Initiatives like *entrepatrios* [a housing cooperation that is based on social, anti-capitalist values, completely auto-sufficient and self-managed]
 - First example of communalization of life in all its aspects
 - These spaces generate other forms of living and thereby question our broader human position in life
- Energy communities
- Architecture, urbanism
 - Sustainable architecture companies? – there are a couple in Madrid, e.g. *distrito natural* [collaborative, ecological, emission-free housing agency]
 - Ecological and democratic urbanism
- “all this to show that other-than-human rights and interspecies ethics are not isolated topics”. If these initiatives structure and organize, the movement could accelerate
 - there could be more progress in Madrid but there are already many spaces in which it is happening / moving forward already
- On institutionalization of *huertos comunitarios* and the role of a city government:
 - The city government has a very central role; we tend to focus a lot on the role of states in such transitions but not enough on that of municipalities
 - Differentiated political institutions play different roles and at some points feed back into each other. This can lead to positive creative convergences or sometimes to clashes and slowing down
 - Crucial point of urban planning and role for the city: there will not be a (ecological) transition nor any consideration of these kinds of themes in Madrid if there is not also a metabolic change of the system. Community-led initiatives cannot do this alone
 - Has to do with responsibility and competences of the city government: access to water, forms of governing it, conflicts with canals, privatization, pollution, waste, mobility...
 - E.g. debate on the Madrid-30 (clash between Carmena and PP)
 - E.g. BiciMAD and bike paths
 - Double role of the municipality: to have a vision and encourage change from there on (responsibility, as mentioned above), but also to create spaces for autonomous experiences (bottom-up) that can have much potential. How do these relations form?

- Many factors that influence whether something is institutionalized: change in political leadership, but also collaboration and relations
- Always take a relational perspective; relations and organizations are always plural, multidimensional
 - Same as in the case of multispecies ethics – is not only an animal rights movement but also related to ecologism, feminism, anti-capitalism, care...
- Need to conduct a structural analysis of urban policies to see if political changes still matter in terms of sustainability and ecological transitions
 - Look at analyses by organizations such as the *observatorio metropolitano*, look at large projects such as MARES
 - Look at role of European vocabulary and grammar in shifting discourses in Madrid
- On legal recognition of other-than-human entities: important political strategy in contexts in which it really generates relations with these entities
 - Would not really work in the case of the Manzanares river because there is not such a strong relation of the people with the river
 - Still an important political step: shows that rivers mean something, that they have value and importance of themselves, people relate with them
 - Renaturalization not only as politics of regenerating nature but as reconnection with that nature, and that is what's lacking here in Madrid
 - Still, projects like the Manzanares river allow for the river to become visible in the city in a different way, to be more present
 - Need for more qualitative, empirical research: what does the river mean to you? What is it for you? (Because now it can sometimes be difficult to tell why people act or feel a certain way)
 - This has been done in Colombia with the rio Atrato (asking questions like 'What is the river to you?')
 - Need for more ethnographic work. Important to do this in addition to work on policies and discourses – contrast this with subjectivities, personal... not common work in Madrid
- On *Yo defiende este árbol* movement: very anthropocentric rhetoric, nothing to do with rights of the tree itself
 - More conservationist
 - Linked to environmental services. "Always thinking: why is it good for man? We are at the center"

- There is hope
 - This is one of the main battles and questions currently. It is an emerging movement and there is much to advance but it is possible to change
 - Many progressive movements are also anthropocentric, developmentalist
 - This movement [on recognizing other-than-human nature] has not yet resonated throughout all of society, but has advanced in terms of starting the conversation and spreading awareness
 - E.g. through movements of veganism (which can be individualist but also has potential in questioning consumerism etc.)
 - Important changes in activist cultures and generational changes. People currently view these topics differently, a lot depends on the younger generations

Personal Communication: Gorka Ascasíbar

June 8th, 2023

Exploratory talk with someone from Más Madrid to put me in contact with the right person for a longer interview

- In general: Madrid has a long-standing tradition of right-wing conservative governments and is a very centralized city; during Carmona, some of the mandates were shifted to the district level, a.o. remodeling of public and green spaces
- Currently the most important division working on sustainability and climate change: *Área de medio ambiente*. Also important, a.o.:
 - Waste management department
 - EMT (municipal transport company)
- Opposing framing: climate change as opportunity (left-wing) versus climate change as threat to personal freedoms (right-wing)
 - A few years ago in Madrid: right-wing media framed air quality and climate change measures as limiting personal freedom, turning it into an ideological question. Now we are past this debate, as the government has been ‘forced’ to adopt certain measures by the EU
- There is not necessarily *much* grassroots / bottom-up movement, but it is steadily resistant and consistent
- Tunneling of the M-30 (as part of the Madrid Río project): was done with a modernist vision

- These kinds of mega infrastructure tunneling projects are not really done anymore nowadays, because it is a big investment into private vehicle use
- There is a debate on this project: controversial because of private vehicle encouragement but at the same time it created much space for green infrastructure
- On role of the city government:
 - Of course, lots of plans see a longer build-up before the actual approval, e.g. Madrid Central: measures had already started before Carmena. But (changing) governments are still relevant, because of for example more district power and different priorities
 - Very important function of the government: limitations and regulations regarding climate change – whether through legislation or by public opinion
- Renaturalization of the Manzanares river (project) became a symbol for other projects – see Green Infrastructure and Biodiversity Plan. Has not officially been adopted by the current government but is nonetheless taken into account on the civil service side
 - This plan is complementary to Plan A (which focuses more on air quality)
 - Current Plan 360 connects a lot to the previous plan

Interview #5: Carmen Gutierrez

June 14th, 2023

Currently active at Más Madrid and involved with Madrid environmental policies for the past fifteen years, largely in communication and journalism roles

- Renaturalization of the Manzanares river
 - Important role of Inés Sabanés: ambitious politician and with environmental goals
 - River was originally closed in the ‘50s to give it a more ‘central European’ image
 - The project plan consisted of firstly opening the dams and secondly a number of small interventions to facilitate formation of islands
 - In the end: the process was so fast and easy that within a few months the islands were created naturally, there was no need for interventions (artificial islands)
 - “nature was able to return to the city simply by removing obstacles” – as soon as you let nature ‘loose’ there was an explosion of bird species, plant species, fish species
 - Very fast evolution! Also in terms of water quality
 - Political opposition used the rower dispute to hold onto and to start a campaign against the renaturalization

- It was agreed beforehand that a part of the river would be closed off again for the rowers (around Arganzuela)
 - But there was such strong opposition by the citizens, who had developed a relationship with the river, the baby ducks, the birds, etc. that it was not possible, so the dams were reopened
 - “suddenly all the Madrileños realized the value of the renaturalization of the Manzanares”. People realized that leaving a part closed for the rowers was incompatible with the renaturalization (eg the fish could no longer pass), so it had to be complete. Everyone understood that it was better – for the sake of the Manzanares, for Madrid, and for all the biodiversity that it had accumulated
 - “the renaturalization had many advantages and the people had had time to see them with their own eyes”
- How it became so successful (also in terms of political backing)
 - “Although often these kinds of discourses [of renaturalization] are painted off as something progressive or leftist, I think that deep down all of us like seeing a tree, seeing a river, birds... so I think that all the madrileños that passed by the river and that were able to observe the nature in their own city...our feeling of being a part of nature, biofilia, imposed itself also onto people who maybe had a different political view”. So, more than political stances, people like seeing trees, rivers, and this is super powerful – even the people who were initially against become in favor
 - “that’s the big power of nature, at the basis we are part of it and it does us all well to see her”
 - Was considered unimaginable at first but was done
 - Big learning process. “The government was brave to start such a project” and with the rowers, both the government (who took the final decision to reopen) *and* the people saw that it would have been a loss – much public support
 - Became a choice between the “barbo” (barbel) and the “barco” (rowing boat)
- Renaturalization of the river was part of Madrid + Natural larger project
 - *Huertos comunitarios* project also falls under this. Started illegally, but then neighborhood associations got involved and was gradually formalized: “civil society forced the municipality to make the process of granting of unused spaces easier for community gardens”
 - “the first community gardens came under Ana Botella, thanks to the citizen impulse. The civil society was the one to insist on needing these spaces. On the

other hand, in the case of the Manzanares river, it's done by the government (Carmena), but it's also civil society that asks for it [in the form of Ecologistas en Acción]"

- “often, in Madrid, it is civil society itself that demands for these changes. We have to listen and be attentive to these demands because these are the actors that know the field and they have big ideas”
- Part of current election program of Más Madrid: recuperate and renaturalize all the abandoned green spaces within the Madrid area, a.o. in Villaverde south of the Manzanares
- Currently under Almeida: although there is less support for and dissemination of environmental policies, the City has a good team of government officials that are still leading steps in the right direction. For instance, the Green Infrastructure and Biodiversity plan and the knowledge that went into this is still at the basis of much work
 - RED ARCE was a good part of the plan (green corridor to connect natural spaces in the city). Currently, the government officials still keep it in mind but it is no longer a priority
- “the recent government (of Almeida) considered its main biodiversity policy to be the *Bosque Metropolitano*”: green ring around the city
 - Good in theory but difficult to implement in practice. But even more: it's a problematic idea that you can foster biodiversity with just a green ring. You have to *connect* green areas. But PP does not consider any form of such a plan, because it would involve taking away space from cars to develop green spaces etc.
 - In the new government, it is not sure what influence this project will have
- On climate emergency declaration (CED):
 - There were various CEDs at the time (also on a national level), was happening everywhere and so Madrid also wanted to do it. Was negotiated by the opposition at the time (PSOE and Más Madrid) – although was initially meant to be done during Carmena, but there was no time
 - Has been ignored under PP. Its main point was to develop a plan to achieve climate neutrality by 2040. Now: with the roadmap 360, they have moved the goal to 2050, thereby lowering the ambitions – and even then, not sure if they will make it
 - In general: much criticism on the roadmap: “It's very vague, not very ambitious. They place a large part of the responsibility for achieving climate neutrality in 2050 in the *national* energy mix – they place all their expectations and hopes here...”
 - Overall very disappointing

- In the CED they proposed more measures on solar energy / renewables etc. but they did not adopt any of this in the current roadmap
- On the way sustainability has developed across governments:
 - “the city is progressing, society progresses, because it’s a global movement. It’s a natural process of society to be innovating and moving forward, e.g. through renewal of vehicles. But there’s an inertia of society to keep things the way they are, and especially when PP is in power this inertia becomes more pronounced. And sometimes even *despite* this, advances are made”
 - Term from Spanish-speaking literature: ‘*retardismo climático*’ (linked to this inertia)
 - Many of the current measures (by Almeida) seem completely counterproductive: for example, always thinking in terms of more parking spots for private vehicles (e.g. by Bernabeu, by Retiro...). This goes against any advances, prevents it. But at the same time, there are some advances that happen of themselves and despite all of this
 - So: PP has for sure strengthened inertia instead of advances, but the great revolution happened during Carmena. For the first time, substantial measures were taken to improve air quality. Suddenly the government dared to take measures that might be unpopular but were actually effective. “this for me was a revolution: suddenly what had to be done was actually being done” – for example through a anti-pollution protocol
 - For the first time, an air quality plan was developed with the aim of actually achieving it. This had previously never been the case (ambitious plans were developed but never actually with the aim of achieving them)
 - The first low-emission zone of Madrid was already developed by Gallardón. But it was never put in practice
- On the legacy of the Carmena government:
 - “Even though they’re not in government anymore currently, I believe they have left an imprint that will keep on being felt by coming governments”
 - E.g. low-emissions zone: started by Más Madrid. Taken over by Almeida, who continues part of what was in Plan A (although less ambitious measures)
 - Once things have been done, although they might be lowered in ambition later on, something of them remains
 - “there has been an improvement during those four years that will not only reflect on those years but will in some way also pass on to future years”
 - E.g. *huertos comunitarios*

- E.g. renaturalization: first PP was opposed to this, but now they defend it and they say they want to continue it
- Ahora Madrid government was conducive to (also long-term) sustainability policies of the city. “I feel very proud of this”
- The ambition has now been lowered again, back to inertia (e.g. the roadmap)
- In city networks, Madrid now takes a decentral, more passive role. On the other hand, during Carmena, Madrid became an international point of reference (about Plan A, Madrid Central...)
- Now: very often the words that the municipality uses (in terms of climate change a.o.) remain empty
- “I think that for the city of Madrid, the environment is like marketing”
- In terms of Mar Menor: no one dares to actually limit the agriculture that is contaminating the lake, especially not a party currently in power like PP
- Not very optimistic about the future of Madrid because of the cycle of right-wing governments
- We can take really substantial steps, like with the Manzanares project. This is a huge jump
- Things will keep advancing because all of society will keep advancing and developing, but I’m not optimistic nor at a city-level nor nationally
- With PP everything will be slower, less ambition in terms of climate change and biodiversity
- “Even when governments are not environmentally sensitive, my hope lies in civil society; they achieve things” (such as the *huertos comunitarios*)
 - “in the end civil society has a seed to plant for advances”