MASTER THESIS

MSc Sustainable Development — Earth System Governance

MULTISPECIES JUSTICE

Philosophical and political considerations for multispecies futures

Rosalie Le Grelle

Supervisor Dr. Agni Kalfagianni

Utrecht University
Faculty of Geosciences
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ABSTRACT

The consequences of climate change, such as the massive decline in biodiversity and the increasing magnitude and frequency of extreme weather events, have challenged the western theorisation of a disentangled relationship between humans and nature, with interdependence all the more evident. This dichotomous imaginary, cemented by the philosophies of the enlightenment, makes the interrogation of our anthropocentric ontology almost unimaginable.

The emerging field of Multispecies Justice (MSJ), however, gives the possibility to think differently and reconfigure biocentric individualism around questions of ontology, ethics, and justice. This disruptive potential is due to the fact that MSJ profoundly interrogates western anthropocentric knowledge creation by having the ambition to practice *relational* ontologies. This research proposes an in-depth analysis of MSJ's potential by conducting a theoretical, as well as an empirical, analysis.

The first part of the research included explorative and philosophical research for the consolidation of MSJ, considering that its literature is rather fragmented. Jointly, artistic research was conducted to probe the possibility of shaping multispecies imaginaries by building bridges between art and science. Secondly, by using the findings of this first analysis, this research addressed the concretisation and practicability of MSJ by conducting political scientific research that analysed the extent to which MSJ is reflected in sustainable governance practices. Through the integration of the results of the theoretical as well as the empirical analysis, this research laid a foundation to cement Multispecies Justice in our collective imaginary by giving innovative ways to reconceptualise a justice that encompasses all living beings of the Earth.

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Image 1. The organic space in VR — between utopia and dystopia.

LIST OF ABBREVIATIONS

CBD — Convention on Biological Diversity

CDA — Critical Discourse Analysis

CoP — Conference of the Parties

GBF — Global Biodiversity Framework

IPCC — Intergovernmental Panel on Climate Change

HKU — Hogeschool voor de Kunsten Utrecht

MSJ — Multispecies Justice

VR — Virtual Reality

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1. All images are stills from the video captured by Jos Witteveen on the day of the immersive experience at the HKU (March 12, 2022). To consult the full visual documentation https://vimeo.com/731683049 can be consulted. Jos filmed and edited images of the virtual world as well as images of the physical world.

ACKNOWLEDGMENTS

1. INTRODUCTION

Forest and wildfires in California, Australia, and Greece, floods in Western Europe, Indonesia and India, a deadly cyclone in Mozambique, hurricanes, and storms in the US. In the last decade and the last two years even more critically, natural disasters and extreme weather events have become frequent phenomena (AFP, 2020; AFP 2021; Anguiano, 2020; Michaelson, 2021; Reuters, 2020; Watts, 2021). We could almost imagine that nature is trying to *communicate* something with us. Indeed, climate change challenges the disentangled relation western society has with nature, as the consequences of climate change emphasise their ingrained interdependence. Many disciplinary scholars have questioned this detachment and western dichotomy between humans and nature. However, it has become a more pivotal question with the development of the environmental crisis (Gebara, 2020). As the concept of the Anthropocene demonstrates, humans are not spectators of natural disasters but can and are influencing the latter (Biermann, 2019). Even though the Anthropocene puts forward the interdependence of nature and humanity, hence challenging the modern binary and western perspective, it does not seem to truly overcome it, as it still places humans at the centre of the analysis (Kirksey, 2019). If we ought to stop environmental destruction and hence respect nature seriously, a radical, new imaginary regarding our relationship to nature should be explored.

The need for a new imaginary in human-nature relations is central in the emerging field of Multispecies Justice (MSJ) (Van Dooren et al., 2016). Even though this field is still in development, and many unanswered questions and arguments among its scholars remain, the concept of Multispecies Justice seems to have the potential to truly disrupt our biocentric individualism (Celermajer et al., 2021). It does this by challenging key issues regarding current western conceptualisations of justice (Celermajer et al., 2020). More specifically, it challenges anthropocentrism as an inherent part of the latter: the idea that solely humans are subject to justice because we would be the only ones possessing language, consciousness, and agency (Celermajer et al., 2021). Putting these very much debatable considerations aside for the moment, the issue with this line of thinking is that it positions humans in a hierarchical relationship with their environment, and all non-human beings, giving us superiority. More importantly, it has created the idea, well established in our collective imaginary, that humans are separate and disentangled from all other living beings. MSJ challenges this binary (human/nature) and hierarchal perspective by decentralising humankind and placing its existence as interconnected and in relation to other living beings. This concept has thus the subversive ambition of practising *relational* ontologies instead of biocentric ones (Celermajer et al., 2020). Hence, when natural disasters and weather events are presented as nature trying to *communicate* something with us, a Multispecies Justice perspective is not solely regarding this as a metaphor for demonstrating the dangers of climate change but explores how we can view this as an intersubjective communication between *all* beings. For this reason, MSJ can be considered as a concept with the potential of truly surpassing this problematic dichotomy.

1.1. RESEARCH OBJECTIVE

1.1.1. Problem definition and knowledge gap

The field of Multispecies Justice has, until now, mostly explored and attempted to create new imaginaries around fundamental philosophical questions based upon (and criticising western understandings of) ethics, ontology, and justice. However, theoretical research to thoroughly understand the underlying values and beliefs, as well as accounting for all debates in MSJ, is lacking, and the different interpretations of this concept are therefore fragmented. This leaves the definition of MSJ somewhat ambiguous, with no characteristics of the notion of Multispecies Justice that exist in detail. Consequently, a theoretical understanding of MSJ is valuable for the consolidation of the concept. Furthermore, to determine to what extent Multispecies Justice has the potential to cement itself in our collective imaginary, it is fruitful to analyse the normative understanding one might have of this concept and hence if the concept echoes further than its niche academic realm. Hence, theoretical research to lay the basis of a normative understanding is beneficial not only for the consolidation of MSJ but also to activate multispecies imaginaries in environmental sciences and western sciences more broadly.

Aside from the lively philosophical debate engaged within the field of Multispecies Justice, its questioning also entails political considerations as MSJ aims to reconfigure conceptualisations of justice. Indeed, since concepts of justice guide politics and institutions, MSJ also needs research on the *concretisation* and *practicability* of its concept (Celermajer et al.,

2021). However, MSJ lacks political scientific research. If MSJ has the potential to disrupt, rethink, decolonise our western conceptualisations of justice and transform ontological questions, research also needs to go beyond theoretical considerations. Hence, we ask ourselves, since this field is relatively recent but picked up by many different disciplines, are there existing examples of practices in MSJ?

In non-western parts of the world, different knowledges and practices in ethics regarding other living beings have existed for a long time. It is, therefore, essential to underline that MSJ is not a novel western invention but rather a criticism of western conceptualisation of justice inspired by other and different forms of knowledge (such as Indigenous knowledge) (Celermajer et al., 2020). However, because of the growing interest in the West concerning the field of multispecies together with the pressing concern of the decline in biodiversity, the question of practices in MSJ in the West becomes more compelling. To what extent has the concept of MSJ been taken up by sustainability governance? Is MSJ even reflected in governance arrangements at all? These more practical questions are relevant to study through the discipline of political sciences. Indeed, political theory and governance have the capacity to demonstrate concretely the abstract conceptualisations that live within society (Heywood, 2015). An analysis of governance practices around MSJ would hence enable us to determine to what extent MSJ is already cemented in our collective imaginary.

Concluding, this research will mainly be analytical: conducting theoretical research that will lay the basis for a normative understanding and empirical research to understand to what extent sustainable gov-

ernance practices have picked up this concept. Both types of research will enable a consolidation and concretisation of the concept of MSJ, laying the foundation to cement MSJ in our collective imaginary.

1.1.2. Research questions

To consolidate the notion of MSJ and determine to what extent MSJ is already cemented in our collective imaginary, the following central research question (CRQ) that guided this study is the following:

CRQ — *What defines Multispecies Justice theoretically, and to what extent is this definition reflected in sustainability governance practices?*

To be able to answer the central research question, the research was conducted in two parts. The first part is focused on the theoretical exploration of the notion of MSJ and enabled a more concrete understanding of the concept. Because MSJ's debate is rooted in philosophical and ethical questions, explorative, contemplative, and philosophical research was conducted to explore how MSJ could be defined and characterised. Hence, the first part of this research is guided by the following sub-question (SQ1):

SQ1 — *What defines Multispecies Justice theoretically?*

The second part of this research was focused on the concretisation of MSJ. More specifically, it aimed to understand to what extent MSJ is already cemented in our collective imaginary and reflected in sustaina-

bility governance practices. To do so, the focus was set on governance and political theory. The following sub-question (SQ2) guided the second part of the research:

SQ2 — *To what extent is Multispecies Justice reflected in sustainability governance practices?*

The second sub-question was interrogated through the research of examples of governance practices that reflect a different and more equitable human-nature relationship. Moreover, to explore to what extent MSJ is reflected in current global governance arrangements, empirical research was conducted on the Conference of the Parties (CoP) 15 Convention on Biological Diversity.

1.1.3. Scientific and societal relevance

Modernity, with its universal understanding of humans as rational agents, assured of their capability and detached from nature, has been dominating the imaginary of fundamental questions around ontology, ethics, and justice (Chakrabarty, 2012; Peet & Hartwick, 2015). What makes the challenge of climate change such an original one is that it questions the western hegemonic understanding of humankind by demonstrating the interdependent influence humans and nature have on each other. Climate change, with its devastating consequences such as the massive decline in biodiversity, pushes us and demonstrates the need to rethink and reconfigure our collective perception and imaginary regarding human-nature relations. As shown above, MSJ has this disruptive potential, as it is not afraid

to critically look at knowledge creation, ontology, and ethics. Hence, MSJ, by truly having the ambition to reshape those imaginaries, is a crucial and highly relevant research area for the societal challenges we face today.

Moreover, environmental and sustainable sciences have shown the past decades the urgency and seriousness of climate change that goes hand in hand with rising geopolitical tensions, wars, and refugees (Ahmed, 2018; Biermann & Boas, 2011). As is well known and called upon repeatedly, these devastating facts demonstrate the need for radical shifts and action on every front. Unfortunately, scientific research proves that the current frameworks that should enable action are failing miserably (Clémençon, 2016; Salleh, 2016; Shove, 2010; Zeng et al., 2020). Indeed, to allow actual societal transformations, it is essential to create new imaginaries that contribute to positive future aspirations (Brand, 2016; Pelzer & Versteeg, 2019). As Hajer & Versteeg (2019) demonstrate, we currently lack positive future imaginations while there is a pressing need for them. Therefore, developing concepts such as Multispecies Justice that dare to go beyond all sets of beliefs, from rethinking the principles of our existence to imagining and suggesting subversive ways to think about integrity, morality, and justice, is crucial for the development of innovative idioms to conceptualise, support and guide necessary transformative actions.

Looking at the field of sustainable development more specifically, MSJ is highly relevant as it questions the integration of justice in sustainable development's conceptualisation to date. The Brundtland report *Our Common future* in 1987 (where the concept of sustainable development was first theorised)

initially integrated justice in a relatively novel way, for example, with the inclusion of intergenerational justice (Heinrich et al., 2016). Its practice, however, still demonstrates a rather narrow, anthropocentric, and western understanding of justice (Agyemen, 2014). By exploring and analysing philosophically as empirically a conceptualisation of justice that decentralises humans, this research will contribute to a reconfiguration of justice much needed in the field of sustainability. Additionally, since it is a field drawing from many different disciplines as well as inviting non-scientific fields to the table, its development is relevant for diverse spheres of society, from sciences to arts, to humans, as well as to all other living beings.

2. THEORETICAL FRAMEWORK

The theoretical framework of this research includes different theories and concepts that will be guiding this research. These theories and concepts have been chosen carefully for their relevance and capacity to enable a better understanding of Multispecies Justice. They have guided the development of the methodologies, the theory-driven literature searches, and the analysis of the results. First, the theory *queer ecofeminism* and the concept of *intersectionality*, derived from feminist theories, are discussed. The ethical components conducting this research were guided by the theory of decoloniality and are presented hereafter. Additionally, as the concept of *imaginaries* has already been mentioned above and has been a continuous guide in this research, a specific understanding of this concept in the context of MSJ is demonstrated. Lastly, the choice for the perspective coming from the discipline of philosophy of language is explained.

2.1. FEMINIST THEORIES

2.1.1. Queer Ecofeminism

Ecofeminism is a broad term that connects the dynamics of the exploitation of nature and the domination of men over women (Burgart Goutal, 2020). This lens focuses particularly on structures of power and the prioritisation of knowledge. More specifically, *queer* ecofeminism questions binary categories that are socially constructed and found in the creation of knowledge, such as women/men, nature/culture or ratio/emotion (Plumwood, 1986). Since the objective of this research is to surpass dichotomy and question knowledge creation, ecofeminism has guided the artistic process in challenging, more specifically, the binary category of art/science commonly linked to ratio/emotion, but also more broadly in the understanding of Multispecies Justice and the binary of nature/culture it tries to overcome.

2.1.2. Intersectionality

Theorised in 1991 by Kimberlé Crenshaw, intersectionality is a concept that draws parallels between the different forms of oppression. Created out of a need to underline the correlations of discrimination dynamics of gender and race, intersectionality grew as a framework of analysis that recognises the multiple identities in inequalities, surpassing universalist understanding of structures of domination (Crenshaw, 2017). Using this perspective in MSJ puts at the forefront the structures of discrimination across the lives of all beings while underlining their differences (Tschakert et al., 2021). Moreover, it provides tools to properly decompose the western conceptualisation of justice.

2.2. DECOLONIALITY

Decoloniality theory has been used in majority in Latin-American movements to denounce forms of

oppression based in colonial history. Its criticism lies in the western hegemony of culture and knowledge. Hence, its ambition is to look beyond Eurocentric forms of knowledge and superiority that perpetuate racial, gender and geological inequalities (Mpofu, 2017). To do this, dynamics of power asymmetries and knowledge formation are central points of analysis in decoloniality theory. Since the field of MSJ understands modernity and western knowledge as the root of the disentanglement of human-nature, decoloniality theory contributed to reflections concerning knowledge creation, enabling critical thinking and considerations regarding the ethics of this research (Section 3.3.). It allowed highlighting the origins of this concept, which has been shaped and inspired through practices and philosophies of Indigenous communities and enabled the valorisation of the plurality and diversity of knowledge.

2.3. IMAGINARIES

The concept of imaginaries is used in different disciplines of social sciences but finds its origin in human geography as *urban imaginaries* (Lindner & Meissner, 2018). Imaginaries, more broadly, should not be understood as an antonym of reality but as the collective representation that society has around identities and their social environment (Schuurman, 2021). However, imaginaries also refer to the imagination of potentially better futures. As defined by Astrid Mangus in a panel discussion about social imaginaries, imaginaries can be understood as a "collectively shared image of the future that guides decisions in the present and therefore also guides what the present looks like" (Anticipatory Governance, 2022). Interestingly, this definition underlies the *performativity* of images of the future in the present, hence

acting and affecting the present and future. The pertinence of this concept for this research lies in the fact that it helped guide our understanding of what stimulates and activates our imaginaries differently. More specifically, the concept of imaginaries has accompanied how to enable thinking and reconfiguring imaginaries around ontology and relationality to nature.

2.4. PHILOSOPHY OF LANGUAGE

Since the first part of this research was focused on philosophical and explorative research, it is evident that the research took a philosophical angle. Philosophy of language is a more specific branch of philosophy that analyses questions of language. More specifically, this research drew from *the linguistic turn*, consisting of the philosophies of Ludwig Wittgenstein and John L. Austin (Ambroise & Laugier, 2009). This stream of thought has as a starting point the performativity of language. Meaning by the latter that the words we use, as ordinary and insignificant they may seem, affect and contribute to the material reality. Hence, this branch of philosophy tackles questions of ethics through ordinary and everyday language (Davies, 2003; Diamond, 1991). This angle permitted a greater focus and critical view of notions such as 'environment', 'multispecies', and 'non-human beings', that stand in sharp contrast with the common language many Indigenous communities use (Kimmerer, 2013). Moreover, it added a semantic component to the material and empirical analysis conducted in this research.

3. METHODOLOGY

Since this research was conducted in two separate parts, each containing its sub-question, different methodologies that are in sync with the theoretical framework were selected. The first part of this research contained three different methodologies: a literature review, in-depth interviews and artistic research. The literature review and interviews were conducted to provide a broad contextualisation of MSJ. How this literature review was directed and how the interviews were organised and structured are explained in detail below. Furthermore, since artistic research is a rather unconventional method, an extensive description of the thought and design process, as well as a description of the artistic projects and literature that inspired this project, are presented in this chapter. The second part of this research, complementing the first part, was empirical research and thus demanded yet another methodology. This consisted of a brief literature review to create an overview of governance practices in MSJ and a Critical Discourse Analysis on a recent international governance agreement closed during the Conference of the Parties (CoP) 15 of the Convention on Biological Diversity. The pertinence of these methods and the description of the case selection, data collection and analysis are described below. Finally, limitations concerning these different methodologies are also discussed in this chapter.

3.1. PART I: EXPLORATIVE, PHILOSOPHICAL, AND CONTEMPLATIVE RESEARCH

The first part of this research, guided by the SQ1 — *What defines Multispecies Justice theoretically* — used and applied multiple methodologies and sources. First, a literature review together with in-depth interviews was conducted. How this data was collected and later analysed is presented in section 3.1.1. Furthermore, artistic research was conducted. The creative process, as well as the projects and literature that inspired the development of this methodology, are presented in section 3.1.2.

3.1.1. Literature and interviews

3.1.1.1. Data collection

Firstly, to be able to pave a way in the somewhat fragmented literature of MSJ, a literature review was conducted. The literature review enabled an in-depth exploration of the fundamental issues in MSJ literature but also a broader understanding of the contributions from the different disciplines to this field. The literature search was theory-driven, meaning that the theories and concepts of the theoretical framework were the starting point for the search of diverse literature sources. In parallel, in-depth interviews were conducted with scholars of the field as well as with artists working on multispecies affairs. These interviews aimed to understand better the scholars' vision and normative understanding of the potential and theoretical knowledge of MSJ. To

have a holistic perspective of this scholarship and go beyond traditional knowledge, it was necessary to approach people that practice MSJ in various ways. Therefore, this research included one interview with an Australian scholar, Danielle Celermajer, two interviews with artist-researchers, Špela Petrič and Ravi Agarwal, and an interview with an indigenous scholar Sophie Chao. The reason for the first interview is that MSJ has been proliferating in Australian academia, and significant Australian authors have been setting the stage for thinking about multispecies futures. Moreover, the choice to do interviews with artist-researchers is because the disruptive potential of art is argued to be in line with the conceptualisation of MSJ: knowing and listening differently for the stimulation of a new collective imaginary. Lastly, being aware that MSJ is not an original western invention, it was imperative to include a perspective of Indigenous knowledge, ergo the choice to interview Sophie Chao. Since the interviews were conducted to get a better understanding and contextualisation of the field of MSJ, it was important to enable an open discussion, to see what the interviewees would put to the forefront around MSJ themselves.

Consequently, the interviews were semi-structured and included solely open-ended questions. Interviewees were contacted through their email addresses found online. They were informed about the research as the reason for the interviews and were told they could always ask for more information should they have additional questions. Moreover, the official consent form for interviews of Utrecht University was sent a day in advance to the interviewees to ensure informed consent and privacy. The forms were signed by the interviewees before the start of the interview. The literature review and interviews were conducted simultaneously, which enriched the research since it fed sources, ideas and concepts to both methods. Both sources were mainly used to disentangle philosophical debates and conflicts in MSJ and set the stage for the forthcoming of this research.

3.1.1.2. Data analysis

The collected data from the interviews and literature were analysed together through the means of content analysis. Content analysis is an adequate method for analysing qualitative data and crossing different sources (Verschuren & Doorewaard, 2010). The content analysis was done with the help of observational categories to temporarily classify the qualitative data roughly, permitting an understanding of the underlying meanings of the information. The categories were hence used rather as guidance instead of strictly categorising the qualitative data. Each observational category was attributed analytical questions to describe the categories more in detail. Guided by SQ1 — *What defines Multispecies Justice theoretically* — the categories were constructed to enable a theoretical exploration of the notion of MSJ and a more concrete understanding of the concept. The categories to enable the content analysis of the qualitative data are depicted in Table 1.

Observational category	Analytical questions
Nature/origin/roots of MSJ	☐ Where does the concept come from, and in what streams of thoughts/disciplines is it embedded? ☐ What is the essence of MSJ? What are its core characteristics?
Scope of knowledge of MSJ	☐ Positionality regarding knowledge ☐ What areas of knowledge does it cover? ☐ How do we study it? How do we practice it?
Set of beliefs	☐ Values/principles MSJ is embedded in ☐ Ethical positionality ☐ The dominant narrative of MSJ
Epistemic justification	☐ Right /coherence of set of beliefs, are these beliefs justified? ☐ On what epistemic foundation are these beliefs built?

Table 1. Observational categories with analytical questions.

3.1.1.3. Limitations

Since the literature review and interviews were only used for a broad contextualisation and understanding of the MSJ concept and set the stage for the forthcoming parts of this research, the search in literature was limited to the important authors and concepts deriving from the theoretical framework. Concerning the interviews, the number of interviews was also limited to four. More generally, since this first part of the research is exploratory, its research design was kept broad and flexible. Howbeit, this also meant a wider window for missteps such as the semi-structured interviews that never completely guaranteed the receptivity aimed at the interviewees.

3.1.2. Artistic research (in collaboration with Vos van der Noordt)

Since artistic research is rather an unconventional research method, especially in scientific research, it was even more important to describe and justify this choice of method thoroughly. For this reason, this chapter will first expand (section 3.1.2.1.) on the choice for this method: what literature and other artistic research inspired the design of this research and how the theoretical framework guided this development. The following sections describe how data from this project were collected and analysed. Limitations and considerations regarding this data are discussed in 3.1.2.3. Lastly, because of its creative and artistic nature, no initial method that can be strictly followed exists. The creative process cannot be defined in advance and is consequently part of the methodology (Borgdoff, 2009). Hence, the last section of this section will go over the thought process and design of the research.

3.1.2.1. Why bring in the arts?

Beyond the fact that this research follows multiple lenses that question modern scientific knowledge creation, the field of sustainability more generally has also been calling for a different approach to knowledge production. The field of sustainability's specificity is that it deals with "wicked problems" and hence stumbles against value-laden issues (Kagan, 2018; Maggs & Robinson, 2016). As Miller (2013) notes rightly, key concepts in sustainability such as tipping points, planetary boundaries, or topics like Multispecies Justice that try to redefine the boundaries we set around human-nature relations are *all* value-loaded. This questions the dichotomy of object/subject in sustainability sciences and all disciplines of modern western science more generally (Kagan, 2015). As the work of Latour (1993) is entitled, we may in a way, have *never been modern* (Latour, 2012). Plumwood (2002) pushes this analysis further by showing the power asymmetries that come with what she calls the "myth" of object/subject since this distance created by the modern binary generates a science that is anthropocentric and hence only beneficial to humans. Miller (2013) hence calls for sustainability scientists to question the boundaries of their field of study if they want to proceed effectively and have a meaningful impact. However, considering the lack of trust and credibility climate scientists have had in the past, how can sustainability scientists create legitimate knowledge while at the same time reaching further than only the modern scientifical realm?

Maggs & Robinson (2016) demonstrate this problem with the Intergovernmental Panel on Climate Change (IPCC) example. To be able to perform their

role well (researching and assessing climate change and communicating this to policymakers), the IPCC made use of different methods to create spaces where science and politics could interact and discuss. In a way, this is an example of scientists trying to overcome the dualities of facts/values. However, the IPCC was quickly stormed with criticism about their, so to say, lack of objectivity. The latter example demonstrates the celebration of modern distinctions and the impossibility of overcoming them in such relevant international and political spaces. Maggs & Robinson (2016) explain this by the fact that this issue is not to be blamed on scientists or politics but that it is instead an *ontological* problem. De facto, there is a lack of challenging our collective imaginaries, set in anthropocentric and modern dichotomies.

The arts, however, have been challenging and deconstructing modernist assumptions for decades now (Benjamin, 2018). Unfortunately, this has always been cast aside by the scientific community as trivial or associated with the realm of entertainment rather than knowledge of true value and potentially relevant for scientific research (Castree et al., 2014; Maggs & Robinson, 2016). The latter can be explained by the fact that we have been lacking spaces where science and arts can interact and generate knowledge together. Some efforts to reach beyond the scientifical realm have, however, been made, particularly in the field of sustainability, since it is indeed difficult to ignore the fact that sustainability touches many different domains of knowledge. For this reason, many in the field have been advocating for interdisciplinarity and going even further for transdisciplinarity. *Transdisciplinarity* is a method that tries to reach beyond the scientif-

ic sphere by working together with societal actors (Kagan, 2015). However, as Kagan (2015) defends in her research concerning the coming together of arts and climate science, the perspective of transdisciplinarity does not go far enough in the sense that it only perceives transdisciplinarity as "working with practitioners" without truly transforming the culture of science. In contrast to this, Kagan's (2015) research demonstrates the value of bringing the arts into climate science and advocates for creating what she calls *spaces of possibilities*, where artists can leave behind their traditional role as "heroes of independence" and scientists can learn from the value of knowledge created in metaphorical, sensorial, phenomenological, and aesthetic forms. Creating these *spaces of possibilities* enables knowledge that can disrupt and provoke our modern biases with the potential of challenging the collective imaginaries set in cartesian and anthropocentric ontologies.

A successful example of this kind of artistic research has been conducted by Bendor et al. (2017), that questioned, just as Miller (2013), the representation and imaginary of the concept of sustainability. They created an installation where people could walk through and experience different scenarios aiming to question the imaginary around the concept of sustainability and explore this through sensorial experiences of their audience. Through pre- and post-experience surveys and group discussions, public engagement in this research was significantly high, enabling them to break through the scientific and social network. Their results evidently did not demonstrate or prove solid facts or some "universal truth" but did show the plurality of the concept of sustainability and, more importantly, the capacity of people to imagine different possible sustainable futures.

Coming back to the concept of Multispecies Justice more precisely, one of its central tenants is the need to create new imaginaries around human-nature relations. However, this task that touches upon the deepest part of existence and ontology seemed difficult (if not impossible) to achieve with solely conventional scientific knowledge production. Indeed, to be able to truly disrupt our collective representation regarding our ontology and our connection to nature, a turn to the arts seemed indispensable because of its subversive potential. To not only make use of different kinds of knowledge but truly conduct and produce knowledge differently, artistic research is argued to surpass the dichotomy of art and science by valuing both forms of knowledge (Borgdoff, 2009). Moreover, as Chaterjee & Neimanis advocate for (Celermajer, 2020), bringing art into scientific research leads to seeing and knowing differently and is hence truly subversive.

For this reason, together with the importance of bringing in the arts in sustainability sciences more generally, it was chosen to conduct artistic research. This enabled probing the normative understanding as well as the potential of Multispecies Justice. In contrast with more conventional research methodologies that are hypothesis-led or truly try to measure something, this artistic research strove to be a sensorial and emotional experience. This kind of knowledge has the capacity to evoke new imaginaries and provoke present collective representation. Hence, the knowledge researched was sensual and physical, or what can be called 'embodied knowledge' (Klein, 2010).

Guided by the theoretical framework of this research (described in chapter 2), and more specifically, the concept of Imaginaries, the project was constructed with the ambition of challenging the present images of the future and potentially also better grasp what can stimulate and activate these imaginaries. The artistic research, therefore, consisted of creating an experience that aimed to activate new imaginaries through telling a multispecies story. Forthcoming from an invitation of Isabelle Stengers and Donna Haraway hereafter to tell *other kinds of stories*, their perspective on narratives guided this research. Through *other kinds of stories*, Haraway and Stengers argue that since the wellbeing of the earth and all its habitants is at stake, we need stories that open possibilities of imagining different ways of being and becoming; stories that imagine different futures where everyone (as well humans as all other human beings) participate and are at risk with one another (Haraway, 2016; Terranova, 2016). Following Haraway and Stengers, the story was told through an *immersive* and *participatory* experience, where the participants were part and played an active role in the story. Consequently, there was room for the participants to fill in a part of the story themselves, thus activating their imaginaries.

To be able to create an experience that is truly participatory, an interactive performance was constructed. The latter entailed an experience where people had to interact with non-human beings. To do this, the relatively recent digital tool of Virtual Reality (VR), a computer technology that can make someone feel as if they are entirely somewhere else, was used. This tool was chosen because of its growing societal relevance but also because of the possibilities it can generate. Indeed, VR creates the possibility to enable utopian and dystopian worlds. Following the concept of Imaginaries (described in the theo-

retical framework of this research in chapter 2), VR can construct new imaginaries in a tangible form or shape where participants can, in fact, move around and interact in an artificial world. More interestingly, this tool can give the participant an *active role*. Nele Wynants, art and theatre scholar, describes this as inserting the spectator *into* the image, as the title of her book suggests *De binnenkant van het beeld* (2017). Through art history, she shows that interactive and immersive art practices such as VR can generate significant power and performativity since they can bring about the desire to evoke an authentic experience that goes beyond the limits of representation. Instead of being a spectator of the artwork, with immersive art experiences, one becomes and co-creates the artwork (Wynants, 2015; 2017). By being part of the environment, the narrative structures are generated less on causal relation logics (Wynants, 2017), enabling different, more open and consequently perhaps *other kinds of stories*. To give the experience an even more immersive form, the project was also built upon the concept of *performative mixed realities*: bringing the real as the virtual together with live performances (Weijdom, 2016; 2022).

With an underlining theoretical framework of decoloniality and queer ecofeminism (as explained in chapter 2), it was imperative to surpass and overcome dichotomies set in our collective representation by modernist developments (Plumwood, 2012; Stengers, 1995). One such binary in knowledge is art/science, commonly linked with reason/emotion. Even though it is important to underline the difference in the kind of knowledge the arts can provoke in comparison to science, it is also vital to, at a certain stage, try and overcome this duality. In this light, the artistic research also included a moment

of reflection: all participants received a post-experience questionnaire where they could express and reflect upon the experience. The responses to the questionnaire were considered as qualitative data and enabled a concreter understanding of the potential and promise of Multispecies Justice.

3.1.2.2. Data collection

As explained above, the experience was made using Virtual Reality (VR) since it allows working with utopian and dystopian imaginaries. Additionally, it gives the ability to disrupt the perspectives of the participant deeply (there are many possibilities in working with VR, such as making the participant very big or very small in comparison to its environment or removing the participant's ability to use his human/virtual legs/arms). Moreover, it is an excellent tool to tempt or seduce the participant to *act* and be set in motion; the virtual world is an environment where the participant can try out, play and co-create (Wynants, 2017). The immersive aspect of the experience was enhanced by combining the VR with a live performance of Vos van der Noordt, musician and student at de Hogeschool voor de Kunsten Utrecht (HKU) in interactive performance design, who was part of the whole process of the artistic design and programmed the virtual world that was created. Since this artistic research is explorative, the methodological framework was kept broad and flexible to ensure a maximum of space wherein the process could evolve, change and progress together with intellectual reflections and readings. Two test moments were scheduled to limit the barriers to the success of the performance. These moments included test participants and a moment of feedback and reflections with them. The test moments enabled

technical as aesthetical adaptions to the VR environment, changes to the storyline of the experience and other practicalities.

Furthermore, a post-experience survey was constructed with open-ended questions that allowed the participants to reflect on the experience. These responses were considered qualitative data and were expected to provide information on the imaginary of the participants regarding Multispecies Justice, their sensorial experience of the performance and if the latter altered their perspective. More specifically, the questions were constructed in a way that tried to understand the potential the promise of MSJ has, if this concept can be reflected in imaginaries and if it finds resonance with the participants. This not only enabled a better understanding of the present imaginary and normative understanding of Multispecies Justice but also enabled us to understand if the objective of the experience was reached, and if so, what in the immersive experience generated this.

Since Multispecies Justice is a concept of a new future imaginary, it was chosen to contact young adults between the age of 18 and 28. Additionally, young adults are usually more acquainted and familiar with digital tools and can thus manage them more easily. Moreover, to facilitate communication and reach as well as to engage with young adults already familiar with the concept of sustainability more generally, it was chosen to reawch out to students at Utrecht University in the Master of Sustainable Development and the Bachelor of Global Sustainability Sciences. The participants were contacted through posts on the Utrecht University online communication platform, BlackBoard. The post contained the following information:

ACTIVATING MULTISPECIES IMAGINARIES

An immersive and interactive experience in multispecies futures

For my master thesis research in Multispecies Justice I am conducting an artistic research project. This project is an interactive and immersive performance in virtual reality. The objective of this experience is to activate imaginaries of the participants in multispecies futures. Consequently, I am looking for students who would want to participate to this performance and hence contribute to my research. The performance will take place on Saturday 12 March 2022 at the HKU Theater. The experience will last about 15minutes, and the participants will be asked to answer written questions afterwards.

If interested please contact me at the following email address: r.m.r.legrelle@students.uu.nl with your name, studies (and track), age and nationality. Please don't hesitate to ask me any questions if you would want more information on the research. Thank you very much in advance for your help and response.

Warm regards,

Rosalie.

Additionally, an invitation to the extended network of both the performer and researcher was sent to ensure a diversity of the participants in terms of gender and race. They were contacted through their private email addresses and included students between the age of 24-28. This resulted in 25 people wanting to engage. Unfortunately, due to the limitations of the location's hours, only 11 people could participate. It was decided to give the least possible information to ensure a genuine and forthright reaction to the experience and honest responses to the questionnaire.

However, the participants were told they could always contact the researcher for additional questions, and a consent form was to be filled in before participating in the experience and again before filling in the post-experience survey. The post-experience survey ensured anonymity since it was sent via an online form that demanded only limited basic information from the participants.

3.1.2.3. Data analysis

The analysis of the qualitative data collected through the post-experience survey had a less fixed predetermined framework compared to conventional scientific research that uses strict classification and categories to enable logico-deductive processes. The qualitative data was analysed on the foundation of the literature review and conducted interviews (described in section 3.1.1.). However, to set a specific focus, two observational categories were used to conduct the content analysis of this particular data. One included the *epistemic foundation* of MSJ, which was also used to analyse the literature and interviews. This category was chosen to be used again since the data from the post-experience survey demonstrated the participants' perspective on MSJ's set of beliefs and ethical positionality and thus reflected if the participants judged these as justified and coherent. Do these participants confirm the central tenants of MSJ, and do they believe they are coherent, correct and justified? The second observational category was created to focus on the *potential of the promise* of MSJ. Is it a concept that finds resonance and hence has the potential to reshape imaginaries? To be able to extract the information concerning the imaginary of the participants and understand if this concept finds resonance with participants but can

also be justified, the following observational categories with correspondent analytical questions were utilised.

3.1.2.4. Artistic process

This section explains more in detail the immersive and interactive experience and how the creative process came to be: what other VR projects inspired this research, why some choices were made and what a live and interactive performance exactly entails. To give a better idea and contextualise the results of the post-experience survey that followed, this section will end with the underlying narrative of the experience and detailed steps of the performance to guide the reader through the experience.

3.1.2.4.1. Challenging the anthropocentric lens – VR projects inspiring this research

Two Virtual Reality art projects inspired this artistic research and led to some ideas for its implementation. Firstly, the VR experience *In the Eyes of the Animal* (2017) is a project that attempted to attract people, mostly teenagers, to go more into the forest instead of spending time behind screens. Remarkable is that this was done through the use of screens: a VR experience. VR usually projects artificial worlds that are imaginary and non-traditional environments, whereas this project re-created an existing forest in VR, however, through the eyes and senses of the animals and different species living there. This project took place in the forest itself, where walkers could put on the VR set and see what the animals of that forest would be seeing. The fact that the project took place in the same forest made it interesting because

Observational category	Analytical questions
Epistemic justification	☐ Right /coherence of set of beliefs, are these beliefs justified? ☐ On what epistemic foundation are these beliefs built?
Promise/potential of MSJ	☐ Does this concept resonate with the participants? Does it have the potential to realise its promise? ☐ Is it a concept that finds resonance and hence has the potential to re-shape imaginaries?

Table 2. Observational categories for artistic research.

it created an art project based on mixed realities since smells and sounds coming from the forests were also part of the experience. This multi-sensory aspect allowed a more immersive experience (In the Eyes of the Animal, 2017). More importantly, what inspired the artistic research in the context of MSJ, more specifically, is that it attempted to challenge the human perspective.

Similarly, however, with a different approach, the exhibition called (IM)POSSIBLE BODIES also played with and challenged the anthropocentric perspective. The exhibition was set at a festival where people could experience multi-sensorial interactions with other beings in VR, specifically cyborgs. The experience that inspired this artistic research, more particularly was the VR called *Polymorf Symbiosis* (van Acht, 2020). This experience was a performative VR installation that allowed the transformation of the human body, probing how cultural, technological and genetic properties between humans and other living beings can enhance the agency of other living beings. The experience tried to make the public dive into another body, hence perspective, to be able to challenge the human perspective and, more broadly, challenge the anthropocentric view we have regarding other beings.

With those projects in mind, the VR experience created for this artistic research entailed giving the possibility to participants to make themselves bigger or smaller in comparison to the world they were in and hence also the living beings surrounding them. Giving a scaling possibility to the participants was done to challenge their anthropocentric perspective and provide them with a sort of agency. Making themselves bigger meant taking a position of power

regarding the living beings they encountered; making themselves smaller meant taking a humbler position regarding their environment. Moreover, since this artistic research took place in a room, no natural sounds as in The Eyes of the Animal were possible. However, to enhance the immersive aspect of the experience, sound effects were added such as music created by Vos van der Noordt.

3.1.2.4.2. Artistic design[1]

3.1.2.4.2.1. A 'live' and 'interactive' performance

Because it was essential to this research to activate imaginaries and tell other kinds of stories, the experience was made as participatory, immersive, and interactive as possible. Following the theoretical framework (described in chapter 2) and, more specifically, the perspective of philosophy of language, *the linguistic turn* demonstrates that language is an imperative element in understanding but also to create the world around us. In *Imagining the post-fossil city: why is it so difficult to think of new possible worlds?* Hayer & Versteeg (2019) confirm the importance of language in imagining new worlds but also point to the fact that visualisation enhances that imagination. Consequently, both language and visualisation contribute to the activation of imaginaries.

For this reason, the VR experience created for this research included not only visualisation and sound effects but also spoken word, which is an oral poetic performance art. The spoken word was a multispe-

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1. For additional visual material about the immersive experience https://vimeo.com/731683049 can be consulted. It includes visual documentation of the experience that was captured by Jos Witteveen, a student in film and documentary at the HKU. Jos filmed and edited images of the virtual world as well as images of the physical world.

cies poem recorded and played at the beginning, setting the stage for the experience and at the end of the experience, reminding the participants of the story. The spoken word was meant to be a story guiding the experience. However, the spoken word was written

in a way that left enough space for the participants to attribute their meaning as well as to fill in the rest of the story. Additionally, to make the experience as interactive and genuine as possible, Vos van der Noordt performed live in VR, acting as a living being in the artificial world. The participants were unaware that Vos was taking this role during the experience. However, this made the interaction authentic because they (the participant and Vos) reacted livelily and immediately to each other. Nevertheless, this underlined the subjectivity of the experience even more since every interaction with each participant was distinct. Moreover, since other beings do not use the same language as we do, the live interaction did not include any words, only spoken word and sound effects were played throughout the room. For this reason, a collaboration with Meghan Dobbelsteen, a mime theatre student, was done to probe how the interaction was possible without language, trying to overcome anthropocentric communication.

3.1.2.4.2.2. Narrative of the experience

Even though the experience left a lot of space for the participant to experience and spontaneously interact with the living beings around them, a storyline was thought out to create and program the world in VR. The challenge during this process was to find the right balance between guiding the participants and the performer with a story and hence a predefined act while at the same time leaving enough space for

playfulness and spontaneous interaction. The guiding storyline was not only needed for the performer to establish his act but also for the participants to enable participation and action from them. Without any narrative guidance, the participants would have been (as was also confirmed with the test participants) too baffled, resulting in inaction or minimal participation. On the other hand, since the objective was to activate the imaginaries of the participants, not everything could be filled in for them in advance. Moreover, to enable a successful experience, the activation of the participants' senses had to be genuine and authentic. A storyline was thus created for and with the performer, Vos, to establish his act while at the same time not *telling* the story during the experience nor giving the participants information on what the concept of MSJ exactly entailed.

Thus, the underlying narrative guiding the creation of the experience was as follows: a living being (that appeared not as a known animal nor as a human), played by Vos, lives in an underground organic and utopian world where blue leaves are the core of its ecosystem. In that world, many other living beings live and can be perceived (however, those were generated by the computer and thus interacted in a limited way with the participants). Participants started in a futuristic environment with high rocks and buildings. By seeing Vos from afar, which was carrying blue leaves back and forth, the participants were lured out of curiosity into this underground, organic and utopian world. How the participants in this world reacted but, most importantly, *interacted* with Vos and its environment influenced the state of this organic world. The organic environment could suddenly become dystopian because of the participant's actions. To overcome the environment's dystopian

state and return to a utopian world, a humble, caring, and attentive interaction between the participant and Vos was needed. How that interaction was to be taken place was left open to the participant and the performer, enabling flexibility and space to move and interact sensually rather than rationally.

3.1.2.4.2.3. Detailed description of the scenario

The experience lasted around 20 to 25 minutes per participant. The artificial world constructed in Virtual Reality was not a true reflection of reality but was explicitly created for this experience following the narrative described above. However, hints of our material reality could be recognised but were not dominant. It is in that sense that the experience was metaphorical. The scenario that was written out and roughly followed by the performer Vos van der Noordt, Meghan Dobbelsteen and the researcher as directors following the performance behind the computer went as follows:

INTRODUCTION

The participant gets practical instructions before putting the VR set on. The participant[2] learns the tool to grab objects in the digital world and how to scale themselves, meaning they can become very big or tiny. Next, the participant puts the VR set on, and ambient music is played while the following text is spoken out. How will the participant behave with these tools (agency) they have?

no universe is only your own

sharing space is sharing thoughts

you are what's about to become

but who's to say who you are?

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2. Without knowing the gender identity of the participant, the neutral pronouns they/them are used.

Image 2. Participant experiencing the live and interactive performance.

PHASE 1 ÜBERMENSCH

The participant starts the experience in a vast futuristic space made for them. The participant can walk freely through the VR world. They can discover games and make things look different or disappear. They are the centre of this space and feel this through the agency they have in this environment and through the up-beat music that is played.

PHASE 2 ALONE WITH LEGO BLOCKS

Even though, at first sight, this space is fun and exciting, the participant should discover that the world is not very lively and hence is getting quickly quite dull. The objective of this phase is to give a feeling of loneliness and emptiness to the participant.

PHASE 3 TRANSITION: ENCOUNTER WITH NATURE

In this phase, the performer (a living being) appears. This appearance should trigger the participant: what is that moving creature doing in this dead space? The encounter with the living being is expected to set the participant in motion. By moving blue leaves back and forth by the performer, the participant should be led by curiosity to follow the living being to a whole other part of the world they are in. A space they were not able to see on their own before. This space is organic and lively. It is a mix of a utopian and dystopian world. As if this world was dystopian before but is now in the process of recovering again into harmony. This space should feel less dead than before because the participants experience that they are not alone; it is the home of the living being you just met. The objective here is to make to participant feel humbler and more hesitant.

Image 3. The organic space in VR — utopian state.

PHASE 4 ACTIVATING IMAGINARIES

This part of the experience should enable the participant to understand they have to 'act' in some way. Phase 4 could be set in motion by the performer making sounds and movements, but not necessarily. At this moment, contact between the performer and the participant is hesitant and sceptical. Indeed, the participant is somewhat of a 'guest' in the home of all other beings. Anyhow, let us not forget that the participants still have the agency to scale themselves.

PHASE 5 THE TEST

To achieve a utopian future, the participant shall have to build an equitable and humble relationship with the performer. However, this is not simple nor evident. If the participant shows an attentive and equitable reaction to the living being and they built a small connection, the world will begin to look more and more utopian. However, if this is not the case, the world will begin to turn into a more dystopian world (this can be a world where nature is in chaos, where temperatures are rising, forests are burning and so on). Hints can be through scaling; for example, if the participant scales themselves rather big and destroys the whole world by taking stepping over the organic world, the environment becomes dystopian.

PHASE 6 FAREWELL OR SEE YOU SOON

This is the last phase of the experience. Ideally, the participant should feel ridiculous about their first feeling. The objective is that the participant is the story's anti-hero and rethinks its perception and hu-

man perspective. Based on the participants' behaviour, the end will be based on a harsh and screaming farewell from the living being or a harmonious last dance with the living being.

At last, the following words are spoken.

no universe is only your own

not even when you think you're alone

a bond is what I am

3.1.2.5.   Limitations and considerations

Firstly, it is essential to underline that this artistic research was experimental and explorative, hence having many limitations regarding the lack of funding and technical knowledge. Indeed, to be able to set up a live performance without funding, limitations regarding the location, technical equipment and lack of expertise were expected. For this reason, the data collected was limited since the location (managed to be free of charge) was only available at certain hours and on certain dates. Even with the help of people like Joris Weijdom (professor at the HKU, researcher and designer of mixed-reality experiences who accepted to answer many of our questions), much time was lost getting acquainted with the VR technology and frequently occurring technical issues. Fortunately, many friends and people from the HKU could lend us material that made the process go a little smoother such as extra monitor screens, high rendering computers, sound systems and so on.

Moreover, some expected data was lost because of diverse reasons. Firstly, since the hours of the location were strict and no overtime was tolerated, it was asked explicitly to the participants to arrive on time. Time between the participants and time for the setting up and breaking off the experience was included in the schedule. However, the last participant arrived too late, and since the set had to be broken off, this participant could not join the research any longer. Additionally, it was known that one limitation during the experience could be that some people would feel dizzy and or nauseous when putting a VR set on. For this reason, participants were told beforehand that they should inform the team immediately if they would experience any of these symptoms so that the participant could be guided to take the headset off and stop the experience. The latter happened to one participant. Lastly, information on one participant was not attained since this person never filled in the post-experience survey.

As explained above, it is important to consider the fact that the tool of VR was not known by all participants and that it usually takes some time to get used to. Understanding this even more clearly after the scheduled test moments, emphasis was put on giving the participants a thorough explanation of the use of the controllers and the headset beforehand. A first explanation was given on arrival: when the participants were welcomed at the entrance, they were given a consent form to sign as well as practical and technical information regarding the VR tool. Subsequently, when they arrived in the room where the performance took place, another explanation was given to the participants. When they had the headset on, every participant got a live tutorial in VR where they could experiment with the tools they were explained and given. Consequently, a lot of energy and time was put into this expected limitation, trying to minimise the barrier to a genuine experience as much as possible. However, in the responses to the post-experience survey, some participants still expressed feeling too overwhelmed by the information given to them and felt limited in their experience by the lack of acquaintance with VR. It is important to note, however, that people not acquainted with VR were also more amazed by the environment they found themselves in, hence triggering their sensorial experience considerably.

Lastly, it is inevitable to notice the ambiguity of using a digital tool to create a multispecies experience. Not only because the production of a VR set makes use of polluting materials but also because it seems ambiguous to tell a multispecies story, one that includes interaction with *living* beings in an artificial digital environment. However, it seemed more important to engage with the current technological advancements rather than ignoring them and leaving them to other spheres of society. This ambiguity did lead to many reflections. For example, it was thought to create a VR experience in a natural environment instead of a closed room. Unfortunately, such practicalities were too complicated to engage with. However, it did set a foundation for an artistic experience that combined the arts with scientific research and dealt with a relevant societal topic, using a contemporary tool that can (and has the intention) to be further built and developed.

3.2. PART II: EMPIRICAL AND POLITICAL SCIENTIFIC RESEARCH

The second part of this research concerns an analysis of governance practices in Multispecies Justice and is guided by SQ2 *To what extent is Multispecies Justice reflected in sustainability governance practices?* This part of the research is more based on political theory and governance and is an empirical analysis compared to the normative and explorative research conducted in the first part of this research. However, the results and findings of the first part were used to be able to conduct the second part of the research. An empirical analysis with a Multispecies Justice perspective was made possible by including the normative understanding of the theoretical research that was established in part I. The empirical analysis was accomplished by conducting a Critical Discourse Analysis (CDA) on the post-2020 Global Biodiversity Framework (GBF) adopted during the Conference of the Parties (CoP)15 Convention on Biological Diversity. Why this text was chosen more specifically is explained in the case selection below. Before diving into the CDA, a short overview of governance examples of MSJ was searched in literature to give a contextualisation of the practicability of MSJ. How this literature review was conducted is explained below. At last, this chapter presents the specifics of the methodology of CDA and explains why this methodology is particularly interesting for this research.

3.2.1. Literature review

Before the CDA was completed, literature was consulted regarding the Convention on Biological Diversity (CBD) to understand the nature and history of this treaty. Following, literature was also consulted to give a short overview of examples of governance practices that reflect a different and more equitable human-nature relationship. However, this overview is not exhaustive and was only meant to give the reader an idea of what the practicability of MSJ could be and what components it would hence entail. It is with the abovementioned literature, together with the results of the first part of this research, that a Critical Discourse Analysis was conducted on the post-2020 GBF with a Multispecies Justice perspective.

3.2.2. Critical Discourse Analysis

Guided by the theoretical framework of this research, composed of a feminist, decolonial, and philosophy of language perspective, the method of CDA was chosen because of its capability of analysing the complexity of power dynamics manifested in discourses and language (Blommaert & Bulcaen, 2000). The method of Critical Discourse Analysis can take multiple forms but has at its core the recognition of its research object being as much a *semiotic* as a *material* one. Therefore, acknowledging the dialectic relationship between the semiotic and the social, political, cultural beliefs and power dynamics (Fairclough, 2013). Hence, CDA is not only about language but mostly about what discourses *mean* and *represent* (Agyepong, 2018), consequently demonstrating language's performativity. For this

research, more precisely and in accordance with the theoretical framework of this research, feminist and postcolonial CDA literature was consulted to be able to identify the social and political wrongs that are obstacles to a Multispecies Justice in the post-2020 GBF.

3.2.2.1.   Case selection

With the knowledge acquired from the previously mentioned analyses, the last part of this research consisted of conducting an empirical analysis using Critical Discourse Analysis (CDA) regarding the CoP15 Convention on Biological Diversity. This agreement is particularly striking for MSJ since the massive decline in biodiversity, or the sixth mass extinction (Briggs, 2017), is one of the issues that put the need for a new imaginary around our relation to non-human beings to the forefront. Moreover, the CoP15 is an intriguing meeting to analyse since its primary goal is to adopt the post-2020 Global Biodiversity Framework (GBF). This framework is supposed to guide actions through 2030 regarding biodiversity and is based on the rights and wrongs of the Strategic Plan for Biodiversity of 2011-2020 represented in the Aichi Targets (Corlett, 2020; Watson et al., 2021). Therefore, it is a highly pertinent framework to analyse for its prominence and relevance. Consequently, the CDA has been conducted on this specific framework.

3.2.2.1.   Data analysis

The collected data was analysed through a content analysis guided by the theoretical lenses and findings of part I. The analysis consisted of a study between the text of the post-2020 GBF and other elements from the abovementioned literature. A broad coding scheme with characteristics of MSJ was constructed based on the results of part I to analyse the content of the data with a Multispecies Justice lens (described in 4.2). Sentences were looked for in the agreement of the post-2020 GBF that conveyed MSJ idioms and meanings but also for sentences with differing, contrary or absence of MSJ characteristics. Hence, the broad coding scheme enabled a critical view of the agreement. The content analysis thus permitted to see if MSJ governance practices were reflected in the agreement but also enabled a critical MSJ angle on international governance.

3.2.3.   Limitations

Within the timeframe of this research, it was only possible to give a short overview of examples of governance practices of MSJ. A more exhaustive literature review would have been beneficial, especially the analysis of ethical-legal systems of Indigenous communities, to reach beyond western and capitalist systems. However, since this research is conducted and written with a western positionality, it seemed important to see if MSJ governance practices were at all reflected in the western legal systems. Concerning the post-2020 framework that has been chosen to be analysed, it is relevant to note that international government agreements are usually cases of soft law known to have limited impact (Abbott & Snidal, 2000). Moreover, since it is an international political agreement, it does not reflect what might be going on in more local or informal practices. However, it does provide an image of what is deemed prevalent in western governance practices and world views.

3.3. RESEARCH ETHICS

Choosing a topic that includes questions around ethics, justice and ontology evidently pose multiple ethical insecurities. However, this also demonstrates the importance of engaging and tackling those questions.

It is imperative to discuss the ethical issues concerning the researcher's positionality for investigating MSJ. The researcher's position includes western, Eurocentric biases and hence needs to stay continuously sharp in the acknowledgement of all intra-human differences while aware of its inability to overcome its situated knowledge completely. Moreover, positionality regarding all more-than-human beings and acknowledging their differences will require a continuous effort that engages in the decentralisation of the human perspective and a reconfiguration of thought.

This already starts with, especially when following the perspective of the linguistic turn described in the theoretical framework, questioning the terminology for *other living beings, non-human beings, more-then-humans, nature, environment* and so on. In this research, it was decided to avoid as much as possible the term *non-human* being because it underlines human exceptionalism. As if, as Kirksey and Helmreich (2010) explain, we would call women "no-men" or black persons "non-white". The terms *nature* and *environment* were used only in the context when most frequently used in literature or other sources. However, this research is entirely aware of the issues the words *environement* and *nature* entails, and the dichotomy it reinforces, such as

Biermann (2021) describes well. When these terms were used, it was to refer to a collective identity, although fully aware that it ignores the differences of all living beings. Hence, terms such as *more-than-human beings* (in the sense that 'more' pushes against human exceptionalism) or *other living beings* (that seems more inclusive, referring to subjectivity and plurality) were used most frequently and referred to as well animal beings, as plant beings, as soil beings, as wind beings, river beings, ecosystems and so on.

4. RESULTS

The results of part I are divided into two sections. The first section concerns the in-depth interviews conducted with scholars and artist-researchers of MSJ supported by a literature review. Both sources were analysed together and are presented below through the observational categories described in section 3.1.1.2. The latter analysis enabled a broad contextualisation of the concept of MSJ that set the stage for the results following thereafter. With the knowledge of the interviews and literature, the data coming from the post-experience survey that was filled in by the participants taking part in the interactive and immersive multispecies experience could be analysed. The focus of that research was to confirm the characteristics set by the literature and interviews. Additionally, it wanted to probe the potential the promise of MSJ has, if it can reshape imaginaries and if this resonated with the participants. At last, SQ1 - *What defines Multispecies Justice theoretically?* was answered.

4.1. RESULTS PART I: MULTISPECIES JUSTICE'S IMAGINARY

4.1.1. A contextualisation of Multispecies Justice[1]

Nature/Origin of Multispecies Justice

In explaining where the concept of Multispecies Justice comes from, both academic experts Sophie Chao and Danielle Celermajer notice a convergence of interests over the last ten years, from scholars from the field of multispecies, especially in Australian academia. The field of Multispecies Justice has thus a strong root in Australian academia. The latter can probably be explained by the extreme wildfires that hit the continent, raising the concern of the ex-

istence of more-than-human beings (Celermajer, 2021) together with the influence and knowledge of Indigenous Australians (Green, 2010; Fitz-Henry, 2022). More particularly, Danielle Celermajer described in the interview that multiple Australian academics were working on intra-human justice, however, without collaborating while having similar critiques and recognising the same patterns of systemic violence. Ranging from critical animal theorists, critical racism and gender theorists to environmental justice scholars, everyone was pointing out the same logic of violence yet without speaking to each other. The latter pushed Danielle Celermajer to start a Multispecies Justice research project at the University of Sydney, bringing research on animal and environmental justice together with research on human justice (Schlosberg & Celermajer, n.d.). Australian Academica, however, already had, as Sophie Chao also points out, some precedents paving the way for this project, such as the work of Donna Haraway on companioned species (Haraway, 2003) or Val Plumwood and her work on interspecies ethics (Plumwood, 2002). The results of this Austral-

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1. Full interview transcripts are presented in Appendix B.

ian research project can be observed in the many academic papers that have come out in the last ten years and even more in the last five years, as well as the different workshops, collaborations, and panels available on the subject (Linköping University, n.d.; Multispecies Salon, 2021; Schlosberg & Celermajer, n.d.; The Posthumanities Hub, n.d.).

However, it is imperative to point out that MSJ is not an Australian or Western invention. Consequently, Danielle Celermajer talks about Multispecies Justice having *different genealogies*. One that can be traced back to the West and others that can be traced back to Indigenous communities in the Global South. Indeed, Indigenous philosophies and decolonising theories have stressed that deeper and relational ontologies have existed and been practised for a long time in non-western parts of the world (Fitz-Henry, 2022; Winter, 2020). Nevertheless, acknowledgement and valorisation of this Indigenous knowledge and practice are relatively recent and, unfortunately, still rare (in western scholarship). By drawing inspiration from this knowledge and additionally putting knowledge production as a key component to the analysis, a central tenant of Multispecies Justice is the ambition to know differently and to question what kind of knowledge is valued and by whom.

Regarding its genealogy in the West, the results of the literature review demonstrate that MSJ's roots in the West go well beyond Australian academia. Before the work of multispecies also included the *justice* component, this topic was taken up mostly by anthropologists questioning their very discipline and object of their research. Major works such as the ones of French anthropologist Philippe Descola, Brazilian anthropologist Eduardo Viveiros de Cas-

tro, or American anthropologist Paul Rabinow already denounce the attachment of the modern western world to the supposed discontinuity between nature and culture (Descola, 2005; Rabinow, 1992; Viveiros de Castro, 1996). More particularly, the work of Descola and Viveiros de Castro in the Amazon question and revolutionise the very definition of anthropology, which is founded on the principle of diversity in culture and universality in nature. The communities they study, make them both recast the central question of anthropology by overcoming the binary logic set in the anthropological discipline. The title of Descola's work illustrates the latter perfectly: *Par-delà nature et culture*, literally *going beyond* nature and culture, hence overcoming the binary (Descola, 2005).

Even though Danielle Celermajer talks rightly about different genealogies, it is essential to note here that first iterations such as Descola and Viveiros de Castro's work come directly from studies of Indigenous communities in Latin America. This indicates and hence confirms the specificity of dichotomous logics ingrained in the modern western world and shows that the efforts to overcome these are massively influenced by and coming from Indigenous knowledge. The heritage of this anthropological reflection was taken over by ethnographers around 2010. More specifically, one significant work that consolidates this anthropological strand is that of Eben Kirksey and Stefan Helmreich (2010), which has now become a sort of manifesto for multispecies ethnography as a legitimate research field (Centre for the Humanities Utrecht University, 2015).

Apart from these critical theoretical works denouncing the nature/culture binary, other anthro-

pologists also practised overcoming the binary in their research: by combining the studies of human behaviour with nature, such as Anna Tsing with her ecological and economic analysis through matsutake mushrooms (Tsing, 2015) or Eduardo Kohn practising anthropology beyond humans through his work *How forests think* (Kohn, 2013). The need for creating a research field that would include nature in the analysis as legitimate subjects shaping cultural, political, and social organisation rather than as distant objects part of humanity's landscape was already expressed by French philosopher Dominique Lestel in 1996 and taken up again by Belgian philosopher Vinciane Despret in 2006 (Despret, 2006). These influences allowed the field of multispecies to develop a philosophical field that draws greater attention to the multiplicity of beings with agency and knowledge of their own. It has put to the forefront the interconnectivity and co-constitution of all living beings (Van Dooren, 2016). It is not surprising that philosophers dove into the debate since revisiting modern perception of nature/culture unavoidably leads to ontological questions. Indeed, Bruno Latour, for example, collaborating with scholars of this field, such as Haraway and Despret (Terranova, 2016), suggests that overcoming the binary logics set in modern western ontology would necessitate a complete *flattening* of ontologies. Meaning by the latter, a flattening out of every possible categorisation of species by focusing instead on the causal *relations* we share with all earth beings (Latour, 2004). Thinking beyond categorisation is essential if multispecies is to be practised, as Sophie Chao demonstrates the importance of a holistic approach through her research in West Papua, collaborating with Indigenous communities (Chao, 2021). Multispecies is thus anchored in an ontological question, radically recasting our ontology from the western divide and

means in practice, as Celermajer describes well in the interview, bringing attention and solidarity to all earth beings and their relationships.

Nonetheless, the political and legal aspect of multispecies, including the component of justice to the concept of multispecies, has been developed only recently in the last five years, pushed by social scientists in Australian academia (Kirksey & Chao, forthcoming). This political approach can be explained by the influence of more political streams of thoughts that have been including themselves and inspired the debate, such as the field of animal rights movement, environmental justice, and political ecology. Moreover, some philosophical reflections in the multispecies area have also been more politicised by influences of Indigenous philosophies, decoloniality, technology studies feminist theories such as ecofeminism and the ethics of the posthuman turn (Celermajer et al., 2021; Centre for the Humanities Utrecht University, 2015). These more critical perspectives have brought to the analysis some fundamental reflections such as questions of *power*, hence making Multispecies Justice not only an ontological question but also a political one. As Sophie Chao explains through the interview, an indigenous scholar herself, the perspective of decoloniality has indicated that our current conceptualisation of justice is not a neutral one and needs to be situated in a colonial framework since it has also been used in the past to legitimise violence. It is thus essential to not think of Multispecies Justice as an extension of justice to all living beings but to reconceptualise it entirely. Hence, political and legal concepts deriving from the western divide need to be as reconsidered. The latter is considered as the ethos of Multispecies Justice by both Chao and Celermajer; rethinking

the scope of justice in the idioms of relationality, reciprocity and co-becoming to go beyond the individual and autonomous subject so we can share this world more evenly. Reconfiguring justice, however, implicates complicated, difficult ethical questions: who gets to decide what is just and what is proportional? What counts as just, and what representation is desirable? What tools do we need to think beyond these categories?

As demonstrated above, Multispecies Justice is highly critical of the western divide and how the West has been producing knowledge. The way to untangle the complex questions Multispecies Justice engender is hence to be understood in *how* to research, explore and probe this complex knot. The following observational category, the scope of knowledge of Multispecies Justice, was thus a vital category to unravel to enable a better understanding of how to tackle the complex ethical and political MSJ questions.

Scope of knowledge of MSJ

When discussing in the interviews the position of MSJ in science and knowledge production with Sophie Chao and Danielle Celermajer, as well as with artists Ravi Agarwal and Špela Petrič practising multispecies through their artworks, one clear stance can be observed: Multispecies Justice necessitates a different relationship to knowledge. Some of the interviewees even call for a radical epistemological transformation. Danielle Celermajer, for example, indicates more particularly that an epistemological shift is required for the study of Multispecies Justice because of the need to call into question the extractive nature of modern western science. This demand is almost evident considering the fundaments of topics MSJ wants to tackle are based on western, dichotomous, and colonial knowledge formation, all at the heart of modern western sciences. Indeed, as Val Plumwood, an eco-critic and feminist scholar, already analyses in *Environmental Culture, the ecological crisis of reason* (2002), to ensure objectivity and credibility, the divide object/subject is essential in modern science production, which demands a distant stance from the scientist. Moreover, the modern scientist needs to take, at all times, an objective position. Objectivity implies emotional neutrality and hence cultivates a scientific culture of political and ethical disengagement. The story of artist Špela Petrič illustrated this well when she explained in the interview why she made a radical career shift: from being a biomedicine PhD doctor to a new media artist probing multispecies endeavours. Petrič explains that she never felt ethically challenged by practising lab-based science because the scientific culture and method she was taught demanded her to objectify the subject. However, the latter is taught to be the most ethical and respectful way to conduct research. Nevertheless, Petrič felt that resulted in a lack of responsibility in her practice, which is why she goes even as far as speaking of science as "outsourced of ethical challenges" (Petrič Š., personal communication, March 18, 2022). When Špela Petrič started practising the arts, however, she was confronted with many more conundrums making her engage ethically and giving her the possibility to address topics such as the relationality of other beings.

The disengagement and absence of responsibility modern science cultivate is precisely what Multispecies Justice tries to surpass. That is why Celermajer insists on the fact that "knowing is not a neutral activity" (Celermajer, D., personal communication,

March 17, 2022) and that we need to engage responsibly with the activity of knowing and producing knowledge. This starts with recognising your position as a knower to the known and acknowledging this relationship. Consequently, MSJ is studied and practised without distinguishing both. Celermajer emphasises this by explaining the need for porosity between scholarship and ethical commitments in life. It is, therefore, not insignificant that she started the interview by underlining the following: "In my life, I live on an intentional multispecies community in the Southeast of Australia. Living as part of a multispecies community is integral to my scholarship. I'm a materialist, so what I mean by that is that I don't believe that we make radical transformations in our epistemology or our ethics unless we change our embodied material engagement." (Celermajer D., personal communication, March 17, 2022). Therefore, MSJ cannot be anything else than a *commitment* that goes hand in hand with *responsibility*. According to Celermajer, if MSJ does not manage to do that, then MSJ would promise something that it cannot do. The impact, promise and potential of MSJ are thus monumental because its commitment goes further and beyond solely academic research.

This heritage is to be traced back to already mentioned Australian precedents such as ecofeminist Val Plumwood and Donna Haraway and her concept of ethical response-*abilities* and situated knowledge (Haraway, 2013; 2020). Drawing from Vinciane Despret and Isabelle Stengers, Haraway advocates for a responsibility that is not fostered by institutional frameworks or rights but from situated existences or, more easily put, lived experiences, evidently entangled with other species (Terranova, 2016). According to Haraway, these experiences and encounters demand a situated and ethically responsible response, which means that we need to learn how to be *responsive* and *responsible* in our multispecies encounters (Haraway, 2013). To do so, these encounters need to be considered affective and embodied experiences. Indeed, the second unanimous stance all interviewees declare is that a Multispecies Justice's study cannot be distinguished from *practice* and *experience*. This synergy hints at a materialist perspective (already pointed out by Celermajer): an epistemological transformation is only possible if accompanied by a material transformation. Sophie Chao explains in the interview how this can be done: MSJ's scope of knowledge needs to be pushed further if it wants to rethink ethical and justice conceptions. It, therefore, needs to acknowledge multiple forms of sciences and find common ground across different ways of knowing to enable new methodologies through questioning and comparing epistemological premises.

This effort can be noticed in multiple papers, panels and projects of MSJ that are done collaboratively with artists, Indigenous scholarship and activists (Celermajer, 2020; Fitz-Henry, 2022; Linköping University, n.d.). A call more specifically to include the arts in the study and practice of MSJ has been made by Chatterjee & Neimanis (Celermajer, 2020). They demonstrate that to overcome binary knowledge that disentangles human-nature relations, reactivation of imaginaries must use the disruptive potential of the arts. Writers such as Donna Haraway or Vinciane Despret are examples of philosophers turning to the arts. They disrupt the classical ways of knowing and practising philosophy by activating imaginaries around multispecies futures by telling ordinary *stories* (Despret, 2009; Haraway, 2016).

Telling stories is also what artist Špela Petrič insists on when describing the need for arts in MSJ. Her experience as a performance artist working together in collaborations with plant beings mostly demonstrates that telling stories via experiences with the public resonates and communicates better. Written down ideas, manifestos, and theories are complex for people to put into practice, especially in the field of MSJ, which asks for a radical transformation of our worldview. The arts are a performative practice; it is the work that will communicate with people, the artwork will take a life of its own, and it will not be the ideas or theories behind it that will echo through the public. By describing this, Špela Petrič demonstrates the immense potential of bringing the arts closer to science.

Collaborations have fruitful outcomes, especially for a field like MSJ, because the process and experiences benefit the public with whom it is communicated as the researchers studying and practising MSJ. As Kagan (2015) defines it, these collaborations create *spaces of possibilities*, where scientists can learn and value metaphorical, sensorial, phenomenological, and aesthetic knowledge and artists can practice more responsibly and understand better the societal value of scientific knowledge. Artist Ravi Agarwal confirms the potential of these collaborations through the interview and points out more specifically that this helps science to think "outside the box" (Agarwal, R., personal communication, March 18, 2022) rather than producing knowledge in a silo, in majority destined to fill the scientific knowledge gaps, ergo answering only to the Academy. Moreover, Agarwal illustrates this need by reminding us that significant scientific discoveries have always used intuition and creativity to enable *eureka* mo-

ments. Since MSJ promises to question imperative and relevant societal topics in-depth, it needs to meet with the arts and, more broadly, with other forms of knowledge that disrupt cartesian separations. MSJ hence asks us to start seeing what western academia is in a way already telling us: climate change makes the interwoven webs of living beings rather evident. Thus, knowledge production needs to shift its focus to the interconnectivity and co-constitution of all living beings and hence produce knowledge by co-creation with different disciplines and spheres of society.

The contributions and collaborations of the arts in MSJ can also be noticed when Sophie Chao and Danielle Celermajer were asked how to study and practice MSJ. Sophie Chao insists on trying to work with embodied and affective knowledge. Meaning by the latter that MSJ's scholarship needs to dare ask questions that think with those broader idioms, such as what does justice mean, feel, or even smell like? Having a background in ethnography, Sophie Chao also insists on a bottom-up approach, starting from everyday experiences rather than theorisation. Daring questioning theorisation's impact on our daily life is also part of this. Even though Danielle Celermajer also emphasises the impossibility of studying MSJ without practising and thinking with it in our everyday life, she stresses and hence criticises the multispecies ethnographers by declaring that MSJ also must dare to speak beyond local contexts. If the field of multispecies wants to truly become a matter of Multispecies *Justice*, then there must a be a sort of "non'-negotiability", Celermajer D. (personal communication, March 17, 2022) explains. Moreover, she nuances the criticism concerning the concept of justice, saying, "Justice doesn't have to

be the abstract modern and universalising concept that it is now. Justice could also be conceived in a more nuanced and context-specific way however speaking beyond local context" (Celermajer D., personal communication, March 17, 2022). A distinction between the concept and conceptualisation of justice can therefore be made: we could *conceptualise* justice in a more nuanced and context-specific way while at the same time acknowledging that the *concept* of justice has caused and been used to harm many minority groups in the past.

Finally, it can be concluded that the scope of knowledge of MSJ reaches beyond academia by searching for collaborations with other forms of knowledge to surpass dichotomies set in modern sciences, but most of all, to explore and experiment with methodologies, hence truly questioning our ingrained epistemological premises. To enable a legitimate epistemological transformation, MSJ cannot solely be theorised but also practised. A practice that is guided by an ethical engagement requiring responsibility and responsiveness. The ethical commitment demanded by the field of MSJ is naturally guided by a particular set of beliefs it follows. It was, therefore, interesting to add the following category to the analysis: the set of beliefs of MSJ.

Set of beliefs

As the above category already illustrates partly, the results of the interviewees and literature demonstrate a strong ethical commitment and responsibility when it comes to the study and practice of MSJ. The same can be observed in the results of this observational category; a strong ethical stance regarding central values and principles of MSJ. The central

values of MSJ can be determined by what brought all those different disciplines together in the field of multispecies: analyses of structural oppression and vital engagement to dismantle systemic violence. When Danielle Celermajer and Sophie Chao insist on taking into account the different genealogies of MSJ and thus recognising and valuing Indigenous knowledge as legitimate knowledge, or when Ravi Agarwal speaks about the absolute need of MSJ to, at all times, adopt a decoloniality lens, it indicates how these multispecies beliefs are addressed are always an ethical as political engagement. This ethical position has been put to the forefront by indigenous and decolonial scholars such as Erin Fitz-Henry and Christine Winter (Fitz-Henry, 2022; Winter, 2022). In a recent paper, Christine Winter reminds the MSJ field of the importance of solidarity and inclusion of all other systems of oppression. She demonstrates that this makes the strength and integrity of MSJ; including strongly and loudly social justice in the analysis makes MSJ a holistic perspective since multispecies *injustices* are part of the same violent regime (Winter, 2022). From a feminist perspective, this could be understood as expanding the intersectional framework: underlining the correlations between the different forms of oppression while recognising the multiple differences of all living beings. This goes together with another ethical element Sophie Chao emphasised through the interview; MSJ needs to acknowledge the risk of calling for justice beyond humans when many humans are still not treated as subjects themselves.

In order to conceptualise a justice that is in solidarity with all living beings, Celermajer demonstrates in the interview that a multispecies justice can only be built when including the subjects of justice in the

arrangements, regulations and concept of rights in itself. Indeed, this means including all living beings in the debate. However, this also means abandoning the conception of justice based on the autonomous subject for a justice conceived with the idioms of networks and relationality rather than individuality. This seemingly impossible task can only be achieved if the field has a radical openness to new methodologies, discussion, imagination, and much experimentation, according to Celermajer. This experimentation can already be found in concepts such as legal personhood or guardianship of rivers in New Zealand, India and Ecuador (Magallanes, 2018)[2]. Even though these conceptions seem still far from the ambition of a Multispecies Justice, these sorts of experimentations could be the impetus for a Multispecies Justice or are, in any case, the beginnings of developing a justice that pushes against human exceptionalism. Experimentation can also be found and done on a smaller scale, such as in the work of Špela Petrič, where she collaborates with plant beings (Petrič, n.d.). When Petrič talks about her practice of the arts in the interview, it becomes clear that this could contribute hugely to the experimentation of MSJ. By practising MSJ through art, she tells us, the utility is not straightforward anymore, and the ethical burden directly falls on the artist as a maker. This uncertainty in art practices is an opportunity to rethink instead of relying on recipes of how it is supposedly done. Choosing to subjectify her object led her to questions concerning the representation of plants, which is illustrated in works such as the *PL'AI* (or plant-machine), an artwork directly addressing plant representation in the sphere of algorithms (Petrič, 2020). This artwork demonstrates how she subversively plays with the representation of humans in numbers and the fact that we can do

the same with organisms, hence representing us all in the same way. In these spaces, opportunities to reconfigure the representation of other living beings, but also of ourselves, are presented.

MSJ is about creating these spaces of exploration, experimentation entangled with questions of care, and connectedness to recompose with the interwoven entanglements of all living beings. Instead of finding the right tool or solution, there thus seems to be a dominant narrative in MSJ that invites us to be in the exploration and experimentation and perhaps feel at ease with the fact that we are not directly in the capacity to give clear answers or solutions: a hint again to the heritage of Donna Haraway to *stay with the trouble* (Haraway, 2016). However, even more evidently, it shows the inspiration that the field of MSJ draws from the work of Isabelle Stengers in *Cosmopolitics* (1997). This critical work on modern sciences is a proposition that Stengers puts forward as the idea of *slowing down our thinking*, which means that we should be aiming less for solutions to overcome conflicts of epistemic and ontological problems but instead practice what she calls *bettering conflict*. This concept invites us to let go of the presumption of the possibility of a final peace or a pure egalitarian common. Instead, she is embracing that difference always entails divergence, disputes, and deliberation. A better place to start would be to understand the ontological premises that are giving rise to these conflicts (Stengers, 1997; 2007). For MSJ, we could start, for instance, by questioning how different actors in a situation understand what nature is? How do they understand their positionality in relation to what they consider nature?

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2. See section 4.2.1. for further explanation of these governance practices.

Considering all the above, it can be concluded that the dominant narrative of Multispecies Justice is ingrained in its ethical positionality: acknowledging the injustices of *all* living beings. Including plant beings, animal beings, river beings, and soil beings that are currently not considered subjects, but also specific groups of human beings that are also still not treated as subjects by political and legal systems. MSJ hence applies an intersectional and material perspective and believes in dismantling violent systems of oppression through radically different ways of knowing, experimenting and practice. To understand if these beliefs are justified and coherent, the following category has been analysed with the collected data: epistemic justification.

Epistemic justification

One of the analytical questions of this category included – what epistemic foundation are these beliefs built? The categories mentioned above already hint precisely at the fact that the epistemic foundation of MSJ is built on questioning the very nature of the epistemology of MSJ. indigenous scholar Sophie Chao believes this questioning especially needs to underpin the questions of *justice*. Meaning by this latter that MSJ can only be coherent when asking questions such as *what is just*, again, but through the perspective of MSJ, taking idioms of care, dignity and resurgence. Additionally, artist-researcher Špela Petrič points to questioning the epistemology of science as the justification and foundation of her work. Petrič believes modern sciences are missing *contextualisation*; her work hence questions modern sciences' extractive nature (of natural resources, money, and cognitive labour). Indeed, as Ravi Agarwal explains clearly, it is about going back to the

questions we ask, facing the questions we need to ask, positioning ourselves through the questions we ask, but most importantly, including and considering all living beings when asking questions. Hence, because MSJ's study cannot be distinguished by its practice, the epistemic foundation is based on the very act of questioning its epistemological premises.

4.1.2. Activating multispecies imaginaries: post-experience survey

With the abovementioned results from the literature and interviews in mind, the data collected from the post-experience survey[3] was analysed. The two observational categories set in the methodology (section 3.1.2.3.) were analysed simultaneously. The results of this research are hence presented in the order of the questions from the post-experience survey instead of the categories.

It is necessary to keep the following in mind when reading the results of this artistic research to fully understand the participants' statements[4]. First, the experience was set up in a way that participants were in the capacity to scale themselves. Meaning they were able to physically become very big or very tiny regarding the world they were in. Additionally, there were multiple 'living' and moving creatures in virtual reality. However, only one was played live by a performer in the same room. The latter was not given as information to the participants. The performer only communicated through the virtual reality by movements; the performer made no words or sounds. Lastly, the results stem from a post-ex-

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3. Full transcripts of the survey responses are presented in Appendix A.
4. To have a full understanding of the experience, it is recommended to consult the detailed steps of the scenario described in section 3.1.2.5.2.

perience survey sent one week after the experience. The post-experience survey asked the participants to take the time to reflect and think their experiences through while answering the questions.

The survey's first question asked to describe in detail the different spaces participants found themselves in or discovered during the experience. This was done so that the participants were obliged to take the time to remember and re-immerse themselves in the experience. Out of nine participants, seven described enjoying the world that was more 'organic' and had more references to nature. They described this environment as safer and more familiar because of the other beings they encountered there. The safe feeling was expected since the experience was created so that this world would have more of a utopian setting (calming sound effects, more colours, and so on). The relevant thing to note here is that some underlined that this space felt safer and more enjoy-able, particularly because of the *encounter* with the living beings they experienced in this space.

When asked explicitly to describe these encounters, more particularly with the live performer, all participants except one expressed and described the interaction with the living being as something enjoyable, although at times scary or uncomfortable, but as a central component to their feeling of 'belonging' and 'immersion' of this world. Words such as *joy, curiosity,* and *belonging* often came back. Participant 9 (P9), for example, shared the following: "Interacting with other beings definitely made me feel more at ease in this strange (and lonely) place. My first interaction was running behind an animal which was way smaller than me, which gave me a feeling like I was an intruder or big scary monster and I wasn't wanted there. My second interaction was the opposite. It made me feel like I kin-

Image 4. Researcher adjusting the VR set of a participant.

da belonged there and was learning things from this very wise creature or something. I did still feel 'new' there, because of the fact that he needed to teach me things. And then we kind of danced together, which felt nice, but also slightly uncomfortable." (Participant 9, anonymously written response, April 2022). What is particularly interesting in this statement is that they[5] describe a difference in interaction because of the scale: making themselves bigger in comparison to the world they were in made them feel as if it was more challenging to belong or to interact.

Moreover, interaction made some participants realise some aspects of the environment, making them more attentive to the space they found themselves in. For example, P1 described: "(…) But at the end I felt like I wanted to give it a hug and make sure that it stayed safe. Also, at the very beginning, when I saw it between the rocks collecting the blue stones, out of curiosity I started moving those things and putting them away. I later felt bad about it, cause I sort of didn't consider that they were not mine and maybe I shouldn't touch them. Also, I didn't think about the fact that the creature was going back and forth, collecting them and putting them in one place, which I would assume was some sort of work/effort that I didn't respect." (Participant 1, anonymously written response, April 2022). The collection of the blue rocks by the living

being that P1 describes was meant to demonstrate the ecosystem of the underground organic world, which the participant only realised after an encounter and connection with the living being.

The interaction with the performer made the participants realise and observe things around them. This observation demonstrates the importance of *relationality* to feel connected to their environment, confirming one of the central tenants of MSJ. Moreover, it shows that interaction and connection result in awareness and thus learning and reflection. The latter result upholds certain aspects discussed with the interviewees in section 4.1.1. Indeed, as Špela Petrič, artist-researcher of multispecies endeavours, described, her art practice that engages and collaborates with plants enables her to ethically question many MSJ challenges, which her scientific education had not been able to bring her (Petrič, Š., personal communication, March 18, 2022). Similarly, this interactive and immersive experience enabled the participants to understand and reflect on the space they were in and the elements and beings surrounding them.

Next, participants were asked if they had any idea why their surroundings became, at times, dystopian (burning trees, storms, scary sound effects and music). Participants were explicitly told beforehand that this experience was interactive and that they played a part in the experience. Even more importantly, they were told there was no right or wrong or no storyline they needed to figure out to discover 'what to do'. They just needed to *experience* it, however, as *an active participant*, not as a passive spectator that would *endure* the experience. However, three out of the nine participants perceived

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5. Without knowing the gender identity of the participant since it was an anonymous survey, the neutral pronouns they/them are used.

this experience as a *challenge,* as if they were in a game where it is expected to find a clear answer or as if they needed to solve a puzzle to win. It is evident through the answers of these three participants that for some, taking the position to experience of an active participant as was requested was an unnatural and difficult one to take. For example, P8 described the following: "(…) This is in line with me being confused about a number of things and feeling like ‘I'm not doing something right/the way it was intended'." (Participant 8, anonymously written response, April 2022). Although this experience was shaped to create an environment where a genuine experience could take place and where connection and interaction were the focus, this was not successful for these three participants. Even though this was only true for a minority, it illustrates well the complexity and radicality the MSJ perspective demands (as well from the participants as for the artists experimenting with MSJ) to slow down and subversively question, change the starting point of our thinking.

All other participants expressed significantly different thoughts. They described the reasons for this change of scenery (their environment becoming dystopian) because of their *own* behaviour. Some indicated they understood the dystopia as a metaphor for climate change, giving them a feeling of responsibility. Others believed they were being too sloppy, not attentive to their surroundings, or too self-centred, not interacting with the beings surrounding them. For example, P2 described the following: "At first, I didn't realise the threes were burning. I think because I was very disoriented about the whole experience and I was taking everything in. At the same time, I was trying to handle the controllers. So, you could say I was very focused on myself. I do think that this raining and fires happened because of that. I see a mirroring of real life; if humans are only focused on themselves and not on their surroundings, things go terribly wrong (for nature, the planet and thus eventually for all life)." (Participant 2, anonymously written response, April 2022).

These statements hinting at feelings of responsibility can be confirmed when looking at the answers to the third question of the survey. The participants were asked about their sensorial and emotional experiences when their surroundings became more dystopian and if these emotions pushed them to *act* in a certain way. Six participants responded that they felt worried and were concerned. They described starting to see and look around more attentively, pushing them to interact with the living beings surrounding them. Some explained this behaviour by the fact they initially felt more connected to this environment (the one that was more organic and utopian and where the living being was living) compared to the first environment they found themselves in (the vast, empty open space the participants started in): "(…) I felt sad when the trees were burning, because as I described earlier I really enjoyed the more organic space. (...) I also felt panicked because at the view of burning trees I felt very small and powerless. I wanted to do something but felt very unsure what and how. When I got a little hint from the other living creature, it made a lot of sense somehow

to move together and that seemed to solve the fire." (Participant 2, anonymously written response, April 2022).

In addition, P2 also described feeling small and powerless, however still resulting in a feeling of responsibility towards the world they are in, leading them to act. Moreover, the fact that the participant felt connected to this space probably added to them taking action and interacting with the living creature. The latter observation is in coherence with some inherent aspects of MSJ, and more specifically, the concept of *response-ability* of Haraway (Haraway, 2013), together with what Celermajer, an academic expert on MSJ, described in the interview as the *commitment* needed in Multispecies Justice (Celermajer D., personal communication, April 17, 2022). Indeed, the feeling of belonging and connection to their environment described by the participants, together with the fact they felt they were the reason (hence felt responsible) for the change of scenery (from a utopian to a dystopian environment), led them to a state of attentiveness and engaging in relationality and connection towards the environment and living beings.

Another question, more focused on the affective experience of the participants, asked them to describe their sentiments and impressions at the beginning and the end of the experience. All participants, except one, expressed a lot of confusion and overwhelming feelings and emotion (even the three participants mentioned in earlier questions that did not feel affected by the dystopian environment). P6, for example, described the following: "At the beginning before the VR headset I felt very curious and open to trying new things. After the experience, as men-

Image 5. Participant experiencing the live and interactive performance (2).

tioned before, I felt a bit emotional and overwhelmed, but not in a bad way, more so in a way that made me say 'wow' to myself. I remember standing outside back in reality and I almost shed a tear because what we have here in front of us is so preciously beautiful and delicate and the resolution or capacity that we have to experience it through or 5 sense (or more?) makes it truly magical and priceless." (Participant 6, anonymously written response, April 2022).

Participants explained this overwhelming or, at times, confusing feeling by the fact they were not able to find the 'way' or 'the solution'. Hence participants expressed a lack of stability in not being able to categorise or rationalise the experience. Generally, people came in with a mentality of *let's do this*, feeling curious and ready to *play* and were confused by the fact to find themselves startled and affected emotionally. The statement of P3 illustrates this well: "At the beginning I was excited because I had not tried VR before. I came in with the 'tasks must be done, results given' mentality. I left surprise because this was quickly changed to a 'you cannot give exact answers, so there is no need to try to rationalise everything. Moreover, I felt a connection with someone/something else through virtual reality and this was not what I expected." (Participant 3, anonymously written response, April 2022).

What is remarkable in these statements is the process of reflection that can be observed that is interwoven with the sentiments of interaction and connection

Image 6. The organic space in VR — utopian state (2).

they felt with the (fictional) living creature. Indeed, without having received any information on the concept of MSJ whatsoever (not before the experience and not before filling in the survey), participants managed through a sensorial and embodied experience to disrupt their binary logics of ratio/emotion by slowing down their process of thinking and thinking beyond only rational categories. Linking this back to concepts of MSJ explained through the literature and interviews described in section 4.1.1., this hints at the beginnings of practising a proposition like Stenger's in *Cosmopolitics* (1997), for example. Indeed, overcoming what modern sciences ingrained in binary logics have taught us would mean letting go of the presumption of final solutions through solely positivistic and rational knowledge (Stengers, 1997; 2007).

Furthermore, the same three participants that described the change of scenery more as a *challenge* or *game* did not express any emotional affection or responsibility regarding this sudden dystopian environment. They did indicate a state of vigilance, becoming aware of the change but did not link it to any sensorial experience. Consequently, feelings of belonging and relationality likely result in responsibility leading to interaction and care, whereas when these feelings are absent, a distant, more practical solution-based thinking is set into place, focused on *own* achievement. It is therefore not surprising that the answers of the same three participants to question seven, "now you have been able to reflect on the experience, what role or position would you give yourself in the story?" was that they thought they were the leading role or in any case the *centre* of the experience. This anthropocentrism can be confirmed for two out of these three participants in the second

set of questions that questioned more explicitly their view on nature, human domination and possible rights for nature and animals. These responses demonstrated that their behaviour and thoughts regarding the experience are in coherence with their views concerning animal and nature rights.

The answers of the other participants to question seven were less homogenous than the other questions. Four described a feeling of humbleness and associated this with the fact that they felt as if they were not the main character of the experience. What is particularly interesting is that some participants pointed out the *immersive* aspect of the experience to explain their humble feeling; they felt as if they were in an environment or an artwork that was not always theirs to act upon even though they were part of it. Hence, cultivating a sense of belonging but also humility. What the latter statements also demonstrate is the power of interactive and immersive performances that make the public no longer a spectator but a *participant*, making them truly part of the artwork. It underpins, for a part, the success of this experience since the creation of the experience was partly based and inspired by the work of Nele Wynants (described in section 3.1.2.1.), an art and theatre scholar, that describes immersive performances as a power that goes beyond the limits of representation by inserting the spectator *into* the image (Wynants, 2015; 2017).

Finally, the last question, which could only be answered if all other questions were filled in, briefly revealed the goal of the experience. The question was written as follows: "The performance had as a goal to make you experience a multispecies encounter. One where you had to pay attention, care, and

interact with the world surrounding you. Would you say, with some reflection, this goal was achieved? Would you say this makes you perceive the 'real' world surrounding you differently? If yes, please explain how and what exactly in this experience guided you to this reflection. If not, please explain why." Even if the answers to this question were evidently not homogenous since it was open-ended and the experience unique and subjective, only one participant stated that the experience had failed. Five participants clearly stated it was achieved while also making the limits of such an experience evident through their responses. For example, P1 expressed (what could be understood as a new phenomenological emotional connection): "The goal was definitely achieved in my case. I think that before the experiment, I had appreciated my surroundings, but actually only rarely had involved with them emotionally. After the experiment, I assume that other beings also have feelings and right to be safe and just be and I have no right to violate that. I think I appreciate the effort other beings make in our lives." (Participant 1, anonymously written response, April 2022).

Two other stated it was only partially achieved, finding it difficult to give a concluding answer since they were not directly able to associate it with anything from their material reality. The statement of P2 illustrates this well: pointing out the strengths of such an interactive and immersive experience as well as its limits: "So this goal was definitely achieved at the end of the VR experience, but I don't know if I extended my feelings to the 'real' world. When I took the VR glasses off, I felt straight back into reality, not really comparing the two worlds. The experience was still in my head for a little while, but mostly as a very new, unreal experience. Maybe this also has to do with the fact that it was the first time for me with VR glasses. So, a lot of attention went to just the technology and the awe of this tool. That takes up quite some brain space. So maybe if it wasn't my first time with VR glasses, I would have had a different awareness afterwards. But I do have to say that the fact I was really a participant (instead of let's say seeing a movie about burning trees/climate change) changes your feelings and mood at the end of such an experience! My thoughts stayed for a much longer time with what actually happened, because it was an active experience compared to a passive one." (Participant 2, anonymously written response, April 2022).

On the other hand, Participant 5, who was a participant that, at almost no question in the survey, expressed being affected by the experience and described the aim of the experience as not successful, still had a remarkable response to this last question. The end of their statement shows an interesting thought process: "I don't think it was successful multispecies encounter because I was paying a lot more attention to the things I was doing and trying to figure out my objectives and tasks. I interpreted the burning bushes, for example, as placeholders for the fire, that were linked to this quest I was on

(videogame influence). However, it lights up a question in my head now that I'm reflecting about the experience: how self-centred am I being on my life? Am I missing the multispecies perspective and seeing myself as the main character in the world?" (Participant 5, anonymously written response, April 2022).

From these results, it seems that the participants closest to experiencing a multispecies encounter were the participants committed and interconnected to their environment. However, even the participants who were not affected by the experience still reflected on the relationality they have with other beings and the position they give themselves in this world, hence questioning anthropocentrism. De facto, this validates, justifies and shows how a multispecies

imaginary echoed through the participants, more specifically, its fundamental idiom of *relationality*; a relationality created through a sense of belonging and togetherness that leads to interaction and results in responsibility, ethical commitment, and care. These results hence point to a coherent set of beliefs and positioning of MSJ, one that was understood and engaged with by the participants. Additionally, it shows the difficulty but, more importantly, the *potential* that lies in the promise of MSJ overcoming dichotomies of knowledge. Many statements demonstrate a process of reflection interwoven with an embodied and sensorial experience, bringing the participants to mention some key aspects and characteristics of MSJ. This is remarkable since the participants received no information on how the experience would unfold, what the fundaments of MSJ are or what the experience would try to bring to the forefront.
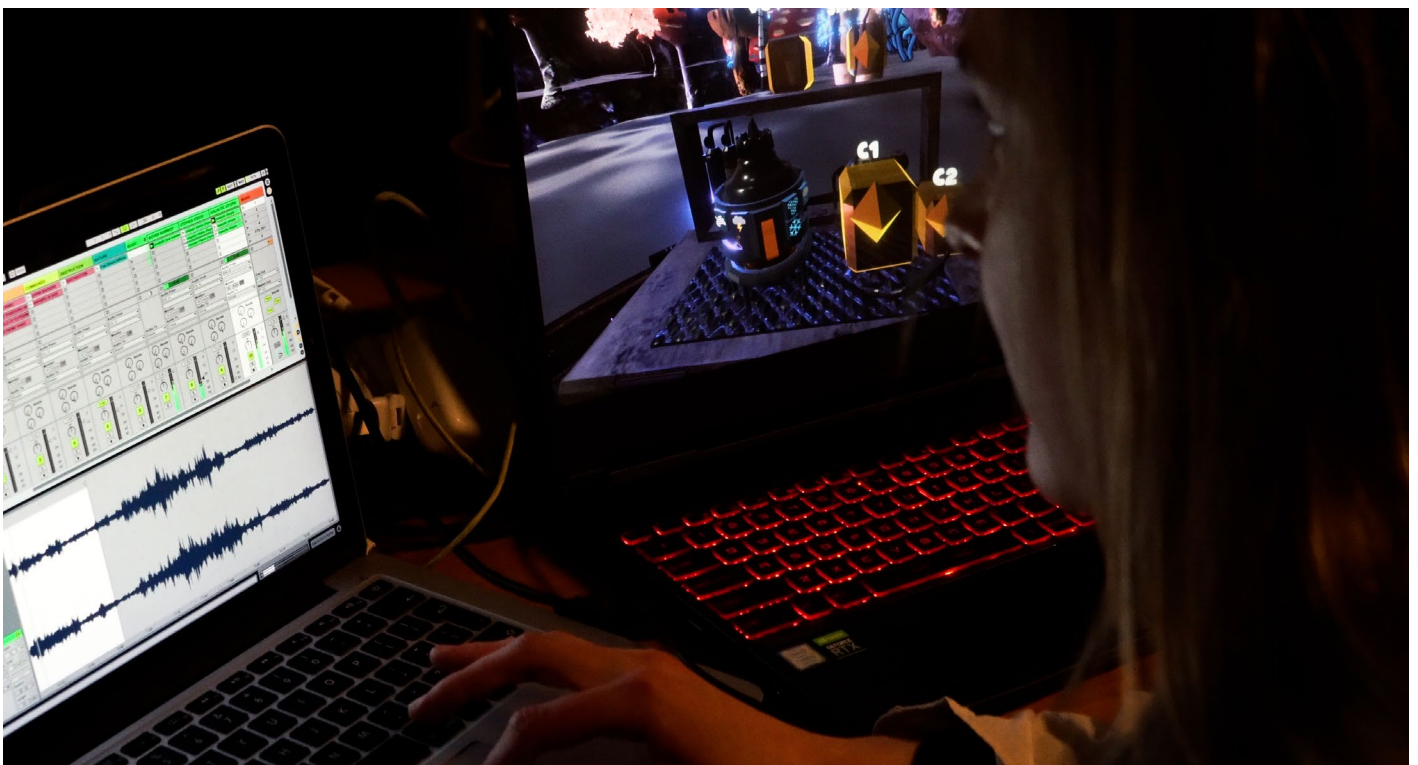
Image 7. Researcher managing the sound effects during the immersive experience.

Although the experience and hence the concept of MSJ found resonance with the participants, many expressed finding it difficult to relate this to practices in our modern society. Thus, the experience may have triggered new possible multispecies futures but did not truly reshape imaginaries since participants usually did not link this experience with material reality. Indeed, the radically different perspective and practice that MSJ demands can seem at times (and can also be observed in these results) an impossible task that is too immense to grasp or fully comprehend. However, these confused, heterogenous, and sometimes very disparate responses demonstrate the potential in the many possibilities MSJ offers; it demonstrates the malleability of imagining new multispecies worlds and futures. These results re-affirm the need for the field of MSJ to conduct experimental and explorative research in collaboration with different disciplines (also outside the academic realm) since the potential of multispecies explorations lies in its many creative possibilities.

Moreover, since MSJ is a concept that tries to overcome dichotomies of knowledge, the methodology (artistic research) was chosen in accordance. The results from this artistic research validate and reinforce the value of metaphorical, phenomenological, sensorial and aesthetic forms of knowledge. It demonstrates the power of disruption the arts possess, triggering and impacting people in a way that enables them to overcome some ingrained and set perspectives. More specifically, the results indicate that the *immersive* and *interactive* part of the experience was the most impacting and subversive one.

Consequently, it can be concluded, considering and acknowledging the many limits of this research (described in section 3.1.2.3.), that MSJ is a concept that has the potential to echo within society and that has, through its different approach to knowledge and radically different idioms to think with, the power to reshape practices, perspectives, thought processes

Image 8. Researcher and performer during the immersive experience.

and maybe ultimately, the capacity to reshape collective imaginaries.

Considering the results of the interviews, literature and artistic research, and hence answering the SQ1 of this research, Multispecies Justice can be defined theoretically with the following characteristics and idioms. Firstly, the literature and interviews demonstrated that MSJ's root has different genealogies, from Indigenous knowledge to western academia that has developed the concept from a western positionality in the last ten years. Moreover, its scope of knowledge is defined by subversively challenging the dichotomies of knowledge to overcome an anthropocentric perspective. It challenges knowledge production through a strong ethical commitment and responsibility that does not distinguish its study from its practice, reaching beyond the scientific realm. These are founded on a set of beliefs that understand the violence against more-than-human beings through the same system of oppression that discriminates human beings, hence applying a holistic and intersectional perspective of all living beings. MSJ's core belief is thus to bring attention to other living beings, understanding them as subjects that affect and stand interconnected with the human species. To recast this anthropocentric perspective, MSJ goes back to the root of knowledge production: challenging our epistemological premises underlying our ontological, ethical beliefs and collective imaginaries. The artistic research demonstrated that these beliefs are coherent and justified through the participant's sensorial, affective, and metaphorical experience (hence demonstrating the power of valuing other forms of knowledge). The participants' testimonies showed that encountering other beings and being affected by them brings a sense of respon-

siveness, attentiveness, and responsibility, hence putting relationality to the forefront. Through these idioms, MSJ has the potential to rethink and recast ontological and ethical representations, hence engendering many creative possibilities to reshape and rethink future multispecies worlds and imaginaries.

4.2. RESULTS PART II: MULTISPECIES JUSTICE'S POTENTIAL GOVERNANCE PRACTICES

The second part of this research was focused on the concretisation of MSJ. More specifically, it aimed at understanding to what extent MSJ is already cemented in our collective imaginary and hence reflected in sustainability governance practices. To do so, the focus was set on governance and political theory. The results for the second part of this research are divided into three sections. Firstly, a literature search presents a short overview of examples of governance practices in MSJ. Secondly, literature concerning the post-2020 Global Biodiversity Framework (GBF) written out in the context of the Convention on Biological Diversity (CBD) is presented to ensure a contextualisation for the reader as well as for the forthcoming Critical Discourse Analysis. Lastly, the results of the Critical Discourse Analysis on the post-2020 GBF are presented, and the SQ2 - *To what extent is Multispecies Justice reflected in sustainability governance practices?* will be answered.

4.2.1. Overview of existing governance practices in MSJ

Even though Indigenous communities have had legal and ethical systems that conceive of and lead to a closer and more entangled relationship with nature for centuries (Napoleon, 2013; Nursoo, 2018), the environmental crisis and what some call *the sixth mass extinction* has pushed many countries to review their legal systems to protect the environment (Wilk et al., 2019). Even though it is debatable whether these practices can be truly considered examples of MSJ governance practices (Tănăsescu, 2020), it is interesting to review them shortly to enable a practical and empirical understanding of MSJ.

The most common examples reviewed in the literature are what is called *legal personhood* for nature (Kothari & Bajpai, 2017; Magallanes, 2018; Tănăsescu, 2020; Wilk et al., 2019; Youatt, 2017). Legal personhood is the basis of rights and duties all human beings have just by being human (Kurki, 2019; Kurki & Pietrzykowski, 2017). It is based on the western conceptualisation of the autonomous subject and entails rights such as the capacity to sue, to own property, and so forth. This right can be extended to corporations or companies in law and has, more recently, in some parts of the world, also been extended to rivers, ecosystems, trees, or animals, changing nature from a passive object to an active subject in law (Wilk et al., 2019).

This idea came practically into question in 1970 when an organisation sued the company Disney for their plans in the Mineral King Valley that would destroy an essential ecosystem for a forest (Selmi, 2022). However, the Court of Appeal rejected this charge against Disney since they did not have enough legal basis on which they could argue for the protection of the valley. This case led Christopher Stone, in collaboration with his students, to ask the question: *Should Trees Have Standing?* (1972) (Stone, 2017; 2010). From this work, three important axes emerged: the right for nature to act in law through a representative, the right to ask for damages for nature and the right to restore nature. The latter work is one of the precursors for the idea of legal personhood for nature, which pushed the idea of agency and the right to act in law, as what has been known traditionally in the West, further (Tănăsescu, 2020).

Few examples of practically implementing legal personhood for nature exist. In 2008 Ecuador, inscribed legal rights for nature into its constitution, safeguarding the existence and the value of nature through article 71 "Nature, or Pacha Mama, where life is reproduced and occurs, has the right to integral respect for its existence and the maintenance and regeneration of its life cycles, structure, functions and evolutionary processes. All persons, communities, peoples and nations can call upon public authorities to enforce the rights of nature" (Rights of nature, 2008). The following article 72 ensures the restoration and the responsibility of human beings to protect and safeguard nature or *Pacha Mama*. Although this provides a constitutional safeguard for the value and importance of the protection of nature, it is questionable if these rights are truly breaking new ground in legal systems and governance prac-

tices. Indeed, international treaties and agreements (particularly the CBD) already mention this (Corlett, 2020). Additionally, research shows the poor effectiveness of these new rights, demonstrating a gap and disconnection in what is written in law compared to what is done effectively and practically (Tănăsescu, 2020).

Rights for nature with a more context-specific quality can be found in Colombia, for example. The constitutional court of justice granted the Atrato river legal rights after the Afro-Colombian community joined forces with the Indigenous community in the Choco region (Acevedo Guerrero, 2019). Similarly, the Ganges and Yamuna rivers in India have, per a recent ruling from the Uttarakhand High Court, the rights of legal personhood or a legal entity (Kothari, 2017). These cases call into question many practical and symbolic implications, even more critically when taking a MSJ perspective. Can other living beings be rightly and justly represented through a right conceived and constructed *by* and *for* the modern human? At first sight, it seems perversive to use a human voice to represent an entirely different living being with other ways of existence and communication (Kothari, 2017; Wilk et al., 2019). It has the risk of reinforcing human domination and superiority, underlining the binary logic of nature/culture.

When looking at the results of the first part of this research manifested (described in chapter 4.1.), experimentation for a MSJ should depart from the idiom of relationality and interconnectivity rather than the concept of the human subject. For this reason, it is interesting to look at the *Whanganui River Claims Settlement* in New Zealand that concerns the protection of the Te Awa Tupua River (Tanas & Gutwrith,

2021). What is especially relevant in this example is that even though legal personhood is also given to Te Awa Tupua, it is explicitly mentioned that the river is not perceived as a human entity but rather understood as an undividable whole, going from the Mountains to the river encompassing all its physical as metaphysical elements (Deleuil, 2020). Legal personhood is hence only granted to the river for a practical reason: the facilitation of opening different legal pathways for the Te Awa Tupua in future jurisprudences. This settlement hence recognises the lacuna in its legal system while trying simultaneously to overcome it. Moreover, what excitingly hints even more to a MSJ is that it departs from the relations and interdependence of all living beings from Te Awa Tupua, more-than-human beings as well as human beings (in the case of Te Awa Tupua, the Maori).

Consequently, this Act considers the whole biosphere of the Te Awa Tupua. Moreover, by including the Maori and their rights to this Act, it is a legal statement that also acknowledges the intersection of other systems of discrimination, as eco-feminists but more particularly the work of Christine Winter and Erin Fitz-Henry, have demonstrated in the results of part I (as described in section 4.1.1.). To be able to act through this law effectively, an institution and financial means have been set out called the Te Pou Tupua, with a mission to act in the interest of the Te Awa Tupua and represent them (Rodgers, 2017), which brings back the question of representativity and how legitimate and just that can truly be. As long as we do not manage to truly collaborate and include all living beings in creating laws and governance practices, can we pretend and deem a Multispecies Justice?

Putting this question aside for the moment, what can be observed with more assurance is that the *Whanganui River Claims Settlement* recognises Te Awa Tupua as a holistic view, whereas the example in Ecuador points to nature as an existence integral to itself. By describing so vastly all other beings that are not human and putting them in one category, it seems that this law will never be able to truly grasp the specifics of territories, ecosystems, and biospheres with the living beings that live and depend on each other. Moreover, this reinforces the binary nature/culture rather than underlining an interdependence between all living beings. Differently, the *Whanganui River Claims Settlement,* compared to the examples found in India or Colombia, shows a contrasting epistemological premise: the modern concept of a human subject compared to relationality. In conclusion, even though questions of representativity and ambiguities remain, these examples of governance practices do reflect a first gist of which pathways could be taken for a different and more equitable kind of justice, one that encompasses all living beings and recognises all systems of oppression.

4.2.2. The Convention on Biological Diversity: the CoP15 and the post-2020 GBF

The importance and rapid loss of biodiversity caused by humans came on the international political agenda in 1992 through the CBD, leading, one year later, to a multilateral treaty ratified by all United Nations member states, except for the United States of America (Corlett, 2020; Jones, 2021). On the international scene, this was considered a success since it was the first time that a treaty managed to promote biodiversity as *a common concern for humankind* (Corlett, 2020). In practice, this treaty provided an institutional framework to enable the development of governance practices regarding biodiversity (Chandra & Idrisova, 2011). Hence, 15 Conferences of the Parties (CoP) were organised to negotiate supplementary agreements such as the prominent Cartagena Protocol on Biosafety and the Nagoya protocol on Biological Diversity. Both protocols are legally binding but provide, in reality, much flexibility to nation-states (Richerzhagen, 2014). It has three main goals: the conservation of biological diversity, the sustainable use of the benefits of biological diversity and the equitable and fair distribution of those benefits. More specific objectives, the *Aichi targets*, to enable the implementation of these goals were determined during the CoP10. During this conference, a Strategic Plan for Biodiversity was also agreed to reach these targets for 2011-2020 (Tsioumani, 2020). The efforts made to reach those targets have unfortunately been quite slim compared to the continuous and destructive deforestation, overfishing, ocean acidification and coastal development. Consequently, no targets have been fully reached, and none of the three goals has been fully accomplished (Xu et al., 2021).

In prospect of the CoP15 and building on the Strategic Plan for Biodiversity to guide actions further, the post-2020 GBF was drafted (Tsioumani, 2020). The CoP15, named "Ecological civilisation: building a shared future for all life on earth", took place in Kunming, China, in 2021 (however, virtually due to the Covid pandemic) (CBD, 2021). During this CoP, the post-2020 GBF was provisionally approved. Because of the pandemic, a second meeting for the CoP15 is scheduled in December 2022 in Montreal to agree formally on the decisions made in 2021 (CBD & Mrema, 2022). Although the title of the

CoP15 is rather promising and hints at a multispecies perspective, the literature analysing the last protocols, agreements and CoP is less encouraging (Xu et al., 2021). The alarming numbers of biodiversity and the rising temperatures have, however, historically never been as catastrophic as today. Hence, it is relevant to analyse this framework that is supposed to guide the international governance agenda of the single and most important treaty regarding other living beings (Jones, 2021), to see if developments in literature and legal systems, as well as the successes and failings of the Strategic Plan for Biodiversity, will have altered, impacted the governance practices and maybe guided the international agenda to an extend where multispecies perspectives and practices are reflected.

4.2.3.   Critical Discourse Analysis of the post-2020 Global Biodiversity Framework

4.2.3.1.   Coding scheme

To enable a Critical Discourse Analysis (CDA), semiotic elements of the text of the post-2020 GBF and empirical elements of the abovementioned literature were analysed through the results of part I and the theoretical lenses described in Chapter 2[6]. To guide the analysis, a broad coding scheme was constructed based on the results of part I, depicting the characteristics and idioms of MSJ. The latter is presented in Table 3 on the next page. With these in mind, the research tried to find sentences in the post-2020 GBF that conveyed MSJ idioms or, to the contrary, were barriers to them.

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6.   For a broader explanation of the methodology applied for this research, the reader can consult section 3.2.

4.2.3.2.   Critical Discourse Analysis

Through the broad coding scheme and the above-mentioned literature, a CDA was conducted and resulted in multiple general critiques of the agreement and some specific critiques per section. The post-2020 GBF[7] is an agreed-upon first draft and the entirety of the framework, twelve pages long, was analysed.

The post-2020 GBF opens with a rather promising article: "Biodiversity, and the benefits it provides, is fundamental to human well-being and a healthy planet. (…) The post-2020 global biodiversity framework builds on the Strategic Plan for Biodiversity 2011-2020 and sets out an ambitious plan to implement broad-based action to bring about a transformation in society's relationship with biodiversity and to ensure that, by 2050, the shared vision of living in harmony with nature is fulfilled." (CBD, 2021). A holistic perspective is hinted at through the word *harmony*, underlying the importance of interconnectivity for the well-being of humans *and* the planet. However, one hiccup can already be observed in this first article. The adjective attributed to biodiversity, "the benefits it provides" already hints at an understanding of living beings as resources rather than living beings when understood from an economic and political perspective.

This suspicion is confirmed further throughout the decision since the term biodiversity, which should be considered living material being when taking a MSJ lens, is consistently defined as economic and polit-

Characteristic/Idioms of MSJ	Analytical questions guiding the CDA
Relationality	What does this imply for the relationship and interconnectivity of all living beings?
Overcoming binary logics	Are these legal decisions reinforcing the interdependence or rather fortifying and building upon the binary logics constructed in anthropocentrism?
Intersectional and holistic perspective	Are these decisions considering the other systems of oppression intersecting this injustice regarding other-than-human beings?
Questioning western, dichotomous representation of ontology and ethics	Is this subverting the western representation with have of ontology and ethics or is this instead perpetuating the current anthropocentric imaginary?

Table 3. Broad coding scheme for Critical Discourse Analysis with a MSJ perspective.

ical tools in this framework. This approach (which could almost be called a cost-benefit approach) perpetuates the distance and dichotomy of nature/culture since it does not acknowledge biodiversity as part of our ontology nor as a possible ethical component. Moreover, by underlining "the benefits of utilising such resources" (CBD, 2021) from a political and economic perspective, it is only the benefits of human needs that are put to the forefront, hence emphasising, even more, an anthropocentric perspective. By defining living beings in such a scientific and technical way, a sense of wonder that would participate in future imaginary of a cosmopolitics ethos and add an ethical and affective component to more-than-human casts aside any possibility of nature having inherent rights. As the critique of Burke (2019) on the term 'natural resource' in environmental law demonstrates, this depicts more-than-humans merely as *resources-in-waiting*.

Therefore, even though certain sections hint at interdependency and relationality, such as in article 7 when discussing other minority groups that are intertwined with the decline in biodiversity, it stands in sharp contrast with the other frequent terminology used, such as "development", "growth benefits for economic and social activities", hence demonstrating an inconsistency and incoherence with its targets (CBD, 2021). Moreover, when the decision hints at the idioms of MSJ, it is done through vast definitions without actually attributing a target or way of implementation.

Another element that stands in sharp contrast with MSJ, showing the frameworks' inconsistency with the idioms they supposedly strive for (*living in harmony with nature* by 2050), is that the framework ac-

knowledges all different forms of life but at the same time emphasises the right of states to dispose of their natural *wealth* and *resources* (meaning financial and natural resources) following their national interests (CBD, 2021). Evidently, this comes from a strict understanding of sovereignty; however, when taking a decolonial perspective, to be understood in its context. Indeed, and economic independence of states is a sovereignty right coming from the post-colonial period to ensure the freedom of western imperialism (Burke, 2019). However, it would be naive to ignore the neo-colonial relations concerning wealth and resources that remain and can be demonstrated by international trade agreements, CO2 emissions (considerably higher in western countries) and western oppression and violence done to Indigenous communities (Dorninger et al., 2021; Hickel, 2020; Trisos et al., 2021). Although comprehensible by its history, this national right seems, from a MSJ perspective, outdated and contrary to the framework's goal for 2050 since it has anthropocentrism as the basis of statism: the unquestionable fact that humans have the right to exploit nature.

The lack to overcome neo-colonial relations is also shown by how the post-2020 GBF decision outlines the vital participation of Indigenous communities. Even though Indigenous communities are mentioned several times, and their participation is mentioned as valuable in decision-making (CBD, 2021), a MSJ perspective demonstrates that the GBF lacks an understanding (or perhaps political courage) of what that inclusion of Indigenous communities and knowledge would truly entail. Including and respecting those communities would mean acknowledging nature as part of their kin (Shiva, 1998), or at least acknowledging the relationality those commu-

nities practice and apply with all living beings. The latter is, however, not effectively mentioned and only poorly discussed in the section on outreach and awareness (CBD, 2021). Consequently, it seemingly shows a lack of integration of a holistic perspective from these communities. Moreover, it shows a lack of valuing and collaboration with Indigenous knowledge, even though those communities have been co-habiting more "in harmony" with biodiversity than the western world (Fleck, 2022).

Furthermore, the post-2020 GBF mentions the importance of financial means to reach its goals for 2030 and 2050, attributing thus one article that advocates this (CBD, 2021). Unfortunately, literature on the CBD's history shows a significant lack of investment from nation-states (Richerzhagen, 2014; Xu et al., 2021). What can, however, be considered a positive note is a holistic vision the GBF has regarding the implementation of its goals; it is supposedly planned through all sectors and levels, including minority groups. Despite this, it is challenging to find any hint of MSJ idioms and characteristics reflected in this framework. Even though some attempts regarding the inclusion of minority and Indigenous communities can be noticed, it is far from acknowledging and implementing this holistically, and even less when more-than-human beings are described as resources-in-waiting for the prosperity of human beings. Hence, it can be concluded that the post-2020 GBF only perpetuates and reinforces the western divide of nature/culture, still a long way from applying a perspective that encompasses other living beings.

Considering the overview of examples of MSJ practices as well as the results of this CDA, SQ2 - *To what extent is Multispecies Justice reflected in sus-*

tainability governance practices? can be answered. Even though some positive MSJ attempts are reflected in sustainability practices, as the case of New Zealand demonstrated, the international community, on the other hand, seems far from implementing this imaginary in its political agreements, even in such relevant and urgent international settings as the Convention of Biological Diversity. Neither the financial means nor vision for 2050 reflects the idioms of MSJ. It can, however, be presumed, when looking at the examples of governance practices in MSJ, that multispecies practices might be found in more local contexts or informal spaces, where there is more room for experimentation and radicality usually absent in international political venues.

5. DISCUSSION: INTEGRATION OF RESULTS PART I AND PART II

Since multiple methods were used for collecting and analysing data, the research had to organise itself around a triangulation of sources: knowledge sources, content analysis and empirical cases (Verschuren & Doorewaard, 2010). This methodology capacitated a more holistic approach to the field of MSJ, consolidating the concept as well as a concretisation of its potential sustainable governance practices. Putting all sources and findings of SQ1 and SQ2 together, a final answer to the CRQ was accomplished through discussion and drawing conclusions below.

Firstly, it is crucial to come back to the ethics of this research (already discussed in section 3.3.). As the results have shown (more specifically in part I), it is necessary to acknowledge the multiple genealogies of Multispecies Justice and hence its roots in Indigenous philosophies. This research, conscious of its western positionality, has continuously tried to acknowledge the latter but is, however, aware of its impossibility to overcome every bias. Moreover, this research speaks *from* and *to* western academia, pushing efforts to overcome the nature/culture dichotomy ingrained in modern western sciences, which this research has shown to be outdated and problematic for *all* living beings on this Earth. How can, therefore, MSJ be addressed and implemented in the collective imaginary of the West and, furthermore, in sustainable governance practices?

The first part of this research started from the observation that the field of MSJ is fragmented and lacks theoretical research outlining and identifying MSJ's central characteristics and idioms to consolidate its definition. Through interviews and a literature review, this research was able to determine MSJ's

root and origin, set of beliefs and scope of knowledge. Building on that, artistic research constituted of an immersive and interactive experience in Virtual Reality (VR) which depicted a normative understanding of the participants on MSJ. This artistic research enabled to push MSJ's epistemic foundation further and probe the potential to shape multispecies imaginaries. The results of this first part of the research confirmed the fragmentation of the field since it found many snippets of Multispecies Justice in many different disciplines, also beyond the multispecies academic niche. Critical perspectives on anthropocentrism, research on the interconnectivity of all living beings on the Earth, reflections on human-nature relations and criticism on the human/culture dichotomy are to be found in the post-humanist field, in Anthropology, Technology studies, environmental justice movements, eco and bio art, Indigenous philosophies and so on. However, these are rarely going as far and in-depth as the concept of MSJ demands. More specifically, rare are the studies that focus on the *justice* component of MSJ. Hence, the literature concerning the field of Multispecies *Justice*, more specifically, is meagre. It seems that

until now, only Australian academia has managed to centralise research around Multispecies Justice, having a research project at the University of Sydney. Nonetheless, it is clear through the literature being published and the artistic projects being exhibited that MSJ idioms echo within society, especially when looking at the participants' responses to the immersive experience of this research. The field of MSJ is hence a recent and yet to be fully developed field, however, flourishing and promising. The explorative, contemplative and philosophical part of this research has hence been able to contribute to cement more profoundly and enabled a normative understanding of the theoretical research of MSJ.

The second part of this research was empirical and also contributed to the consolidation of the notion of MSJ but more particularly on its practicability in sustainable governance practices. Since MSJ is missing political scientific research on its concretisation and practicability, the empirical research questioned if MSJ idioms were reflected in governance practices. Through a short literature review that searched for examples of governance practices of MSJ in western legal systems, this research was able to find instances and attempts to include a relational perspective regarding the living beings of this Earth. Furthermore, to detect if MSJ idioms could also be found at an international level, a Critical Discourse Analysis was conducted on one of the most relevant frameworks that concern more-than-human beings, the post-2020 Global Biodiversity Framework of the Conference of the Parties 15 of the Convention on Biological Diversity. The results of this analysis demonstrated that this international text showed very little understanding of the importance of thinking through relationality or intersectionality. On the

contrary, the text perpetuates the nature/culture dichotomy and ignores the differences and localities of territories, ecosystems, and so on.

Moreover, also following a material perspective, the few semiotic elements reflecting MSJ are not followed by material components. When looking more closely at the history of the convention, the constant decline in biodiversity, and the lack of financial means the United Nations, as all nation-states attribute to the convention, the material reality of the framework confirms the semiotic analysis. Indeed, many governance scholars have already questioned the usefulness of these conferences. Biermann (2022), for example, describes how the increase in institutionalisation and regularity of the meetings have not resulted in concrete or more effective sustainable governance; on the contrary, the summits and conferences have been in decline regarding the ambition of their agreements (let alone of their implementation). Even though some statements declare essential points, the material and ethical commitment do not follow. It can hence be questioned if the design of these conferences is not outdated since they have a rather strict architecture and little effective outcome. Moreover, as was demonstrated in this research, the porosity of scientifical facts and value-laden issues is usually delegitimised, and room for valuing other forms of knowledge that would capacitate spaces of possibilities and creativeness is very limited.

Hence, even though academia and, more broadly, society is in need and seeks a more holistic understanding of the interdependence of all living beings, and that instances of MSJ idioms can already be found in law (as in the case of the Te Awa Tupua),

one of the most pertinent international texts that concern more-than-human beings directly is at a great distance of the idioms MSJ invites us to think with. This questions once again the distance and lack of communication between academia, policymaking and society. Indeed, as this research has demonstrated, our institutions are entrenched with problematic dichotomous ontologies, and this is perceived clearly through the frameworks of modern western sciences, where the Academy seemingly does not manage to overcome binary logics, usually solely addressing and speaking to itself, perpetuating the dichotomy of scientific facts/value-laden issues. Indeed, as described earlier in this research (section 3.1.2.1.), Maggs & Robinson (2016) demonstrated this fact through the example of the IPCC that worked siloed, distant from policymakers and the international political community since they would otherwise be cast aside as illegitimate. The core of this problem, as MSJ demonstrates, lies in our cartesian ontology and modernist assumptions in which our institutions are rooted.

Answers to how to overcome these dichotomous relations can perhaps be found in more innovative ways of conducting research that brings different spheres of society closer together to exchange and give the possibility to imagine new future worlds that encompasses all living beings and subverts binary logics. Examples such as this research's immersive and interactive experience might give a gist of how such pathways can be explored. Indeed, this research showed how valuing other forms of knowledge can lead to exciting results that might not foment a universal and transcendental truth but do engender a high engagement of participants, demonstrated by their reflection and imagination that can

be witnessed throughout their responses. It created a space where, compared to a siloed work of academia or policymaking, there is a possibility to co-imagine, co-create and trigger response-abilities of all spheres within society: from artists to academia, to politics, and society more broadly. This space of possibility might enable what MSJ demands: an epistemological transformation, subverting the questions modern sciences pose, to imagine and pursue new future multispecies worlds. Even though such MSJ explorations might seem for many challenging to conceive, we need to settle and be at peace with the fact that the outcome of such experimentation is difficult to predict. However, this uncertainty is what leaves room for imagination and malleability of the future. Possibly, MSJ attempts may unfold in unexpected ways; if more-than-humans cannot be contained in concepts such as legal personhood or the autonomous subject, perhaps it is those living beings that will bring a disbalance to our notion of justice hence pushing us to new avenues and pathways to imagine multispecies idioms, practices and worlds.

6. CONCLUSION

The first part of this research was focused on the normative understanding of theoretical components of Multispecies Justice. Since Multispecies Justice demands to look radically different at justice, ethics, and ontology, it was deemed necessary to turn to the discipline of philosophy to understand the underlining values, beliefs systems and epistemological premises of this relatively new field. Moreover, since many different disciplines addressed and inspired the field of Multispecies studies, the literature is somewhat fragmented, and a consolidation of the concept was necessary before looking into the practical implications of what a Multispecies Justice would demand. Diving into literature and talking to academics in the field, as well as artists experiencing and collaborating with other living beings, enabled an epistemological understanding of what this recasting of ontology and ethics means. Jointly, more explorative research in the arts made it possible to experiment with the new imaginary that Multispecies Justice advances. The artistic research was a way of conducting research following some essential aspects of MSJ, such as critically thinking about knowledge production. Trying to overcome dichotomies, this research explored the value of sensorial, metaphorical, and aesthetic forms of knowledge instead of conducting conventional, logico-deductive research.

The results from the first part of this research laid the basis for the second part, which focused on the practical implications of Multispecies Justice, hence conducting empirical research. This research entailed looking for governance practices of MSJ in literature. Additionally, a Critical Discourse Analysis was conducted to analyse if any MSJ characteristics could be observed in a recent international governance agreement, the CoP15 of the Convention of Biodiversity. This research enabled a better understanding of the state of MSJ practices in sustainable governance. Integrating the results of both the theoretical and explorative research with the results of the empirical research demonstrated the tensions and difficulties of what MSJ promises and the possible pathways to implement Multispecies Justice in governance practices.

Considering the limits of the research and following the results of part I and II, hence answering the CRQ — *What defines Multispecies Justice theoretically and to what extent is it reflected in sustainability governance practices?* to achieve a MSJ, a change in our collective imaginary is needed on all fronts: from our ontology to our governance practices with as a starting point an intersectional understanding of the violence done to all living beings. Through the central idiom of relationality and a holistic vision of theory and practice, while being context and local specific, MSJ practices can be explored and experimented with. The ways to achieve this are most certainly to be found in more innovative practices that try to overcome binary logic in knowledge production and create innovative frameworks and spaces of possibilities that are needed to guide necessary transformative actions.

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APPENDIXES

A. Post-experience survey

Activation of multispecies imaginaries:
An immersive and interactive virtual reality experience

Questions and Responses
Structured by question

Dear all,

Thank you so much for participating to the Virtual Reality (VR) experience Saturday the 12th of March. Hopefully, you all had some time to reflect on the experience. If this is not the case, I hope the following questions will be able to guide you in your reflection. All questions are open-ended, this means you can answer completely freely. Keep in mind that there is no right or wrong answer. However, it is important that you answer honestly and that you elaborate your answers as much as possible. Take your time to ponder the questions. Some questions contain sub-questions. Please take all the time you need to read and answer them all carefully. I recommend around 45 to 60 minutes but this all depends on the pace you feel comfortable with. If possible, I ask you to fill in the questionnaire at the latest for the 4th of April. If this is not possible for you, do not hesitate to contact me and we will set another date together.

The questionnaire consists of three sets of questions. The first set is about your profile as a participant (3 Questions). The second set concerns your experience of the VR performance (9-questions). The last set is about your general VR experience and your perception of the Multispecies Justice topic (5 questions).

By responding to this questionnaire you confirm, agree and understand the following:

* *I am satisfied with the received information about the research;*
* *I have been given opportunity to ask questions about the research and that any questions that have been risen have been answered satisfactorily;*
* *I had the opportunity to think carefully about participating in the study;*
* *I will give an honest answer to the questions asked;*
* *The data to be collected will be obtained and stored for scientific purposes;*
* *The collected, anonymously, research data can be shared and re-used by scientists to answer other research questions;*

- *I have the right to withdraw my consent to use the data;*
- *I have the right to see the research report afterwards.*

Lastly, I want to emphasise my appreciation for your active participation. Please let me know via email if you want me to share my thesis report and time of thesis presentation with you later.

Warm regards,

Rosalie

PART I

Multispecies imaginaries: your immersive and interactive experience in VR

The following questions (10-12) concern your personal experience of the VR performance. Please elaborate your answers as much as possible. Be aware that some questions contain multiple sub-questions. I kindly ask you to answer them all.

1.
You started the experience in a vast and open space. Later on, you entered a space that could be described as more organic, where beings were living. How would you describe those two different spaces and what different feelings and emotions were triggered by these?

Participant 1

The first space was quite overwhelming. I felt a bit like I was in a game and will have to run around or complete some tasks. Also, it gave a feeling of things not being real. I was very much aware that I'm in a different reality and it has nothing to do with the real world. In the second space, I really liked the fact that there were elements, for instance mushrooms, that I could recongnise from the reality and it felt more familiar. Despite the fact that I knew that it wasn't real, when I made myself very small, I sort of felt more real. Or something that I always wanted to experience in real life, so in my head it became a real-life experience.

Participant 2

The vast and open space was very surreal. Never in real life would I find myself in such a space. The more organic space was still surreal because it was VR, but less surreal than the first one. It felt really nice to see the first human/living being, and later more living creatures like animals and trees. It felt nice because I felt less alone, therefore happier emotions arised for me.

Participant 3

Both were surreal, this was my firs time using VR so there was a bit of a barrier of not just being stunned by a different world but by interacting with it. The first space felt more like a video game, there were cubes and since it was overall a darker blue setting I associated this with a mission. Did I need to collect the cubes and take them somewhere? It was as if there was a narrative already present and I had to piece together what to do, there was an urgency in

that setting. It also felt more violent, the structures that were further up that I can only describe as spaceships felt like a threat. Perhaps this was my association with video games, as missions tend to be about war, good guys and bad guys. This world felt cold which called for a callous, mechanic response.

In contrast the other world felt warmer and brighter, the narrative shifted from doing to exploring. But coming from the previous world I was already wary, there was a mission that I did not understand. My interpretation of the second world was welcoming but weary. This world reminded me of a fairy world, and this is not necessarily a good thing. In the fiction that I have read and assume pleasant worlds are based off of excessively pretty, warm and pleasant is actually a cunning trap. With that said, the instructions were also to explore, so I put this thought aside and did so. Since this world was less empty, there was less pressure to perform, to get out of there.

Participant 4
Awe, and the experience of stepping into a different world while staying connected with the world as we know it

Participant 5
The first space after the tutorial felt empty, like it was a stage before entering the real world. I went by really quickly through it and the feeling that remains is of emptiness or incompleteness. Like a first step after the tutorial. The second stage with the virtual nature and plants and the cat felt more like the real deal. The moment you actually enter a complete environment with movement and stimulus. That it when I really felt immerse in a virtual world.

Participant 6
During my time in the two different spaces, I had a variety of emotions but also a lot of different thoughts. I could say my experience was mainly marked by a curiosity of the unknown and unexplored. In the first space, perhaps because it had been so long since I had done virtually reality or perhaps because of the type of space it was, I did feel a bit nervous or anxious. It is quite overpowering how virtual reality truly takes over your experience and makes you feel as if you're in a new world. Within the first space, I felt awe for the stars and galaxies all around me but also small and alienated. One the one hand I was inspired by the mystery of the universe we live in, but also somewhat puzzled about what it all means. Simultaneously the structures of the first space were entirely alien and metallic looking which I didn't find cozy or inviting although it did sort of look interesting. In the second space, I felt a bit more comforted because I was surrounded by mushrooms which are one of my favorite foods which continue to fascinate me. I also could notice other nature such as the tree in front of me that I had to

paint with leaves and also the cat which was my favorite part because I love cats. The second space was by far a place I could have enjoyed hanging out in for much longer. It was still a bit alienating because the dimensions of the things around me were much different in relation to myself but it was neat nonetheless. I sort of felt like a ladybug or caterpillar crawling around because the mushrooms were bigger than me. I also remember thinking how nice would it be if mushrooms as big as houses existed that I could eat or climb on and smell.

Participant 7

the first space was more ordered, because you were provided an explanation about the controllers. the second space was more difficult to walk through. At first I did not know exactly what to do. I had to get used to being completey in charge, but it did make it more exciting.

Participant 8

The first space did not seem that vast and open to me, because I could adjust the size of myself and therefore make the space smaller in comparison to my virtual body size. It was also a bit more sterile/lifeless and therefore felt more like a very virtual place. The second space with the mushrooms, lights and the cat felt way more engaging and natural although the mushrooms were way bigger than the cat etc. It invoked a certain kind of wonder, like a dream that is not bound to the laws of physics/nature on the one hand but is still very much rooted in our "everyday world", so it still feels familiar.

Participant 9

At first, I was a bit alienated.. There was so much to look at, but I was not sure what to look for. But especially when entering the 2nd space, I felt more comfortable. However, both spaces did not feel very 'organic' to me, but rather 'weird'...? I was clearly in a 'game'-world and it kept on feeling like this. But the 2nd space definitely felt nicer, with the trees for example.

2.
At a certain moment, your surroundings became more dystopian (burning trees, heavy rains, etc.). Did/do you have a certain idea/feeling of why this happened?

Participant 1

I thought it was to make me aware of the problems that exist in the world and disasters that happen every day. I sort of assumed that it had something to do with the climate change/environmental degradation/pollution and that it was supposed to trigger my feelings, so I feel more concerned and motivated to do stomething about it.

Participant 2

At first, I didn't realize the trees were burning. I think because I was very disorientated about the whole experience and I was taking everything in. At the same time, I was trying to handle the controllers and not knock everything over in the room. So, you could say I was very focused on myself. I do think that this raining and fires happened because of that. I see a mirroring of real life; if humans are only focused on themselves and not on their surroundings, things go terribly wrong (for nature, the planet and thus eventually for all life).

Participant 3

At the time of the experiment I was flabbergasted, I was still struggling to fully understand the controls, like new limbs that were not intuitive yet. Immediately my response was, that I'd sloppily touched something or that I did something to activate the change. At the same time, since I was not actually feeling the rain and wind it was a quick acceptance of this new scenario. If I remember correctly I was also quite big in the simulation of the time, so instead of feeling threatened by the wind I was intrigued. In actuality I assume that the change in surroundings was a result of timing in the experiment.

Participant 4

No, not why

Participant 5

I saw it as a puzzle. Something is happening and I am suppose to interact with it. My first idea was to try to fight the heavy wind with the fire to protect from the cold. When I saw it wasn't possible, I thought that the objective (of this puzzle in my mind) would be to put out the fire. I saw it all as a challenge.

Participant 6

Well mainly because I have pre-conditioned information about the project being the creation of an SD student I could imagine or guess that it might serve as a metaphor to climate change and ecological destruction. But at the same time I really didn't know for sure why it was happening or what would eventually happen. I think I remember the cat becoming a bit scared or agitated but maybe I'm not remembering things as it happened. Although because I love thunderstorms I remember that at first I was sort of intrigued by it and it made me long for a really good thunderstorm.

Participant 7

I noticed the change of scenery, because my parter pointed it out. I did not notice this myself at first. So I do not have a idea of feeling by the change of scenery.

Participant 8

It did not really influence me a lot, but I was curious to see whether it would have an effect on the actions I could take or limit me in some way. For a short time I was thinking about what you meant to achieve with it, but I did not find an answer. This is in line with me being confused about a number of things and feeling like "I'm not doing something right/the way it was intended"

Participant 9

I thought I was experiencing a storm/extreme weather event. At first, I thought it was part of the game, and that I had to do something with it/react to it in some way. But then it was clear I just had to let it happen, and I suppose it was there to make me experience experience extreme weather?

3.
***What did you think or feel when your surroundings became more dystopian? Did this push you
to act in a certain way? Please explain how and why.***

Participant 1

I made me feel really sad and worried about the creature. I felt like the creature was asking me for help or was in such a distress that it couldn't contain itself and was crying out for help. Or at lest wanted me to notice the problem.

Participant 2

Yes it did. I felt sad when the trees were burning, because as I described earlier I really enjoyed the more organic space. And trees are not supposed to burn. I also felt panicked because at the view of burning trees I felt very small and powerless. I wanted to do something but felt very unsure what and how. When I got a little hint from the other living creature, it made a lot of sense somehow to move togehter and that seemed to solve the fire.

Participant 3

I did not feel attached to the world that I was in, I always felt like a visitor. So changing from one world to another did not mean much to me, it made me think "ok, what now?". Perhaps if the world that had changed to a dystopia was initially more familiar then I would feel maybe more grief or a lack of stability at the sudden change. The change also probably made me more alert, since it was a new scenario I had to see if the narrative of what I was supposed to do changed with it.

Participant 4

I felt the urge to rescue the living creatures including the trees, but did not find the tools to do so, which made me feel in a hurry to concentrate and do my utmost best to bring them and myself to a sefe space. Or find water to extinguish the fire. Then I tried to bring myself to ease, to observe, and wait for the next game element. My lack of skills to handle the controllers brought me in the game again.As in: this is not really happening.

Participant 5

I felt it was a challenge, like I needed to solve a problem. It wasn't clear at first what needed to be solved (I couldn't interact with the wind, for example, so it wasn't it). Because I felt challenged it pushed me to interact more with the environment, try to understand what was required and how to solve it. It put me in action mode

Participant 6

I suppose I wouldn't say that I felt that the experience necessarily felt dystopian primarily because that is a big concept to unpack and interpret. But I do remember the mood/theme/ambience certainly started to turn darker, more urgent and worrisome. I do remember that I felt compelled to help or stop it in some way or find shelter. I suppose the leaf painter could serve that function. I wish I could be a leaf painter.

Participant 7

I did feel an urge to take action. I chose to extinguish a burning three with a bucket of water. But I must say this was not my first priority. I was still exploring the world on my own. I only saw the three and chose to help out, because my partner mentioned it in the VR.

Participant 8

I would not have described it as dystopian if you had asked me after the experience, just different. Nobody died and there were no real consequences for me and I was in some magic wonderland, so I didn't emotionally connect to something dystopian going on. I do remember the music that was playing becoming more dramatic, so I was expecting something to happen somehow but I cannot remember anything happening that was really affecting me.

Participant 9

It was a nice change, because I remember little was happening. (I guess we're just used to constant action, and it was strange to feel like there was nothing much to do) But I still felt safe anyway, because I could not really feel the storm, and I knew it was a game. So I just let it pass, but didn't necessarily feel scared or anything.

4.

Did you feel, at any point in the experience, a responsibility towards the beings and the world around you? If yes, please describe why and when this feeling came up. If not, also please describe why.

Participant 1

It actually hard for me to say if I felt responsible. As I consciously reflect on it now, I think that maybe the fact that I connected the fire to environmental problem that I contibute to myself, then probably I did feel that I'm obliged to act. However, it wasn't the most pronounced feeling. I think I mostly felt sad and worried and wanted to help them so they can be happy again.

Participant 2

Not so much a responsibility towards the beings, but somehow I did feel very connected to them. I think because we were with not many in this gigantic world and that created a feeling of togetherness. As soon as the trees started burning I did feel a responsibility to resolve this problem, because trees themselves cannot and I as human do have the capacity so in that case I did feel like I had a responsibility towards the forest.

Participant 3

At no point did I feel responsible for the beings in the world, more a responsibility for "integrating" into my role, in doing so understanding the world I was in. The only being that was responsive to me was the mouse looking creature (from now on referred to as Din because I can). Din acted like a guide that taught me two dynamics of this new world. First by showing me where to take the leaves of the tree, and also with the movement exercises. Now that I think back at it, especially the tree exercise was a super cool Avatar (the 2009 movie) moment, because the world was so alien to me but caring for "nature" is still present.

Participant 4

Yes I did. The responsibilty of entering a world which exists with or without my appearence, and therefore be a friendly guest. This came up as soon as I walked through the rabbit hole.

Participant 5

Not really. It felt like I was playing a videogame, so I felt responsibility towards objectives and tasks. At the same time, I didn't feel that the surroundings and the cat were in danger at any point. The fire and wind were restricted to a certain area, that I took as this task. If it was spreading, the surroundings were have been part of my concern as well.

Participant 6

I certainly did but to what degree I can't tell. I had that feeling when I entered the second space or maybe it was in the first when I met the other avatar. But since its virtual reality I can't say I had the same emotional connection as I would have with beings in our everyday reality but still I hoped everything would be okay. I love cats and trees and nature and I wanted them all to exist and I feel that way in my everyday life. Also the avatar whose name I cant remember was very kind. I would say throughout my entire experience I wouldn't have wanted anything destroyed including the interesting artifacts in the first place even though they weren't 'alive'.

Participant 7

Yes and no. I felt the urge to help out. But due to the nature of other games i have played in the past i was under the impression that helping out would take me up another level or something. I did not help out because i cared about the beings in the world. I thought that by helping out, I would further my position and or possibilities in the VR.

Participant 8

I think that the world was too unreal to feel any real responsibility towards any beings, but I realized that the little lizard wanted something from me. Also, realizing that the lizard is controlled by a a person standing almost next to me and getting pointers on what to do next/guiding my focus (although necessary) lessened the immersion with the world considerably.

Participant 9

Yes, when I saw the little animal, I knew I wanted to follow him (but again, rather out of a 'game mentality' than because I felt a responsibility). But then when the fox was my own height and I saw he was doing things (taking care of a tree?) and he invited me to join, I did feel a bigger responsibility towards him and my surroundings.

5.

How would you describe the encounter you had with those beings? What emotions and feelings were triggered when interacting?

Participant 1

I think the interaction with the mouse was the one I remember the most. I was abit scared to "touch" it, as it looked a quite unnatural. I think the black colour made me feel a bit strange. Also, at some point when I wanted to touch mouse's hand I touched the tape that was indicat-

ing the space for me to move around and I got really scared and for a bit didn't want to touch the mouse. But at the end I felt like I wanted to give it a hug and make sure that it stays safe. Also, at the very beginning, when I saw it between the rocks collecting the blue stones, out of curiosity I started moving those things and putting them away. I later felt bad about it, cause I sort of didn't consider that they were not mine and maybe I shouldn't touch them. Also, I didn't think about the fact that the mouse was going back and forth collecting them and putting in one place, which I would assume was soem sort of work/effort that I didn't respect

Participant 2

In the very early stage, the first being I saw did not seem to want contact with me. That made me feel sad at that point because I thought we were the only two living creatures in the 'world' and I like social contact. (I believe this was still in the vast and open space.) Later, when the being (in the organic world) seemed eager to interact with me, it made me happy and also made me feel stronger. I think that also increased my consciousness, because I realized I was not alone, and I realized I was not the only one feeling sad about those burning trees. So perhaps it made me feel more awake and also increased my feeling of responsibility to do good.

Participant 3

The fact that Din responded to me being there made me feel like I was not alone, also that I had a guide. So I followed them. Din did not speak directly but it was interesting to be able to interact just by copying their movements. In the hand exercise it also felt like there was a stronger connection because at some point I also led the movements that Din and I were doing. For some time I also thought that Din was the one speaking but I quickly realized that this was not the case. I preferred to understand the world that I was in through what Din was showing me rather than what the voice recordings were telling me.

Participant 4

I was moved by their beauty and by their presence, as if entering a fairy tale, or the world of oceans under water. And surprised and happiness when a little creature tried to contact me.

Participant 5

My initial reaction was to try to interact with them. I wanted to approach the cat and touch it, or pick it up. I felt joy and curiosity. I didn't feel the same way with the mushrooms, though. They felt more like part of a background and didn't arise the same level of curiosity as the cat.

Participant 6

Well the avatar I met was very patient which to me was a sign of kindness and compassion. So I felt good about that. As mentioned before, I love cats so seeing a giant cat really made me

happy as well as seeing the mushrooms. So overall, despite being in a strange world I felt sort of fuzzy inside at times and generally positive.

Participant 7

Happy feelings, beceause during the VR expirience you are making connections with another individual.

Participant 8

My main feelings as a reaction to it were mainly confusion and awkwardness because I didn't know what was expected of me, but it was kind of obvious that something was expected of me. It made me feel uneasy about the whole experience at times, especially when realizing that there is a person in the room 2m from me that is controling the virtual lizard and other people probably watching my reactions and the whole thing on other screens.

Participant 9

Interacting with other beings definitely made me feel more at ease in this strange (and lonely) place. My first interaction was running behind an animal which was way smaller than me, which gave me a feeling like I was an intruder or big scary monster and I wasn't wanted there. My second interaction was the opposite. It made me feel like I kinda belonged there and was learning things from this very wise fox or something :) I did still feel 'new' there, because of the fact that he needed to teach me things. And then we kind of danced together, which felt nice, but also slightly uncomfortable.

6.
Could you relate this experience to any real-world experience you had? Or can imagine?
Please explain.

Participant 1

I feels to me that the things I did or happened there are very much mirroring how we treat animals and ecosystem. I thought about bees and the fact that we take away the huney that they make as if it's ours. I also think that in the end we are responsible for many of the disasters that happen to the ecosystems. With disasters I mean also for example burning grasses in the fields or cutting down the trees.

Participant 2

To continue on the last point (no.5): yes, I think it's very related to when you meet inspiring

people. In my case, when I meet people who have been vegan for a long time or who live in cohousing groups with very little environmental impact. When I meet such people, it always makes me feel more awake/alive. And it increases my desire (and responsibility-feeling) to live the most sustainable lifestyle possible, with little impact to animals and nature. Besides, I think the fire stopped because of the fact that the being and I moved together, so in that case it's very related to the real-world, because it shows that you're stronger together and have more impact as a group compared to on your own. And I do think this is what we learn in the real world when we are involved in any sort of group projects.

Participant 3

As I am writing this there are a couple of points that I have reflected on. First is that when I am completely alone, like in the first world, I am hyper focused on being watched and doing the things that I am "supposed" to do. I question what is expected of me at that moment. I think this is also why I like to study with noise in the background/other people because then I feel less pressure. There are others around me so I am not the focal point. Secondly, and more pertinent to this question. When I move to a new environment or there is a change in environment (like the change caused by the wind and rain) I go through a checklist of priorities. Am I safe and am I going to continue being safe or do I need to react? In this case I was safe so I could observe. However this is for surviving in the new environment. To enjoy it I have to connect with it, in this case it was facilitated by Din, who also told me the new narrative, showed me what I had to do. In real life it is similar, when I was younger and I changed schools the first step (facilitated by the school) was to have a "buddy" who would serve as a guide of how academics and social life works. Now, if I were to move to a new country/city I would have a similar approach, understand that I am safe and then try to find someone that is more local than me to explore with.

Participant 4

Yes. This experience can happen all the time when in contact with people, trees or other nature elements, and ofcourse with animals.

Participant 5

Now that I'm thinking, my reaction towards the cat was similar to my reaction towards pets. I always say hi or try to get their attention on the streets. Because it was my private world I felt more relaxed and wanted to pick it up. With the background it was a very different experience. I don't see a background in the real world. I imagine that from playing videogames I had this pre-constructed reaction "that part of the map is unaccessible and, therefore, uninteresting to me".

Participant 6

There have been a few times in my life where I had an intensely emotional and spiritual moment which I won't forget. I often think about whether those moments could be considered as sublime and I think that if those aren't then I don't know what would be. Without going into too much detail both times I was by myself in nature and felt very very connected to the rawness, beauty, uniqueness and timelessness of the world. I wouldn't say the virtual reality experience matched those experiences in my life but it certainly gave me an emotional and spiritual tickle or nudge (for lack of a better word).

Participant 7

I have encountered this feeling when experiencing something new. The same way you would whilst one would be traveling.

Participant 8

The best relation I can imagine is being in a foreign country with a very different culture and language and somebody wanting something from you, but I'm not really getting what they want or them giving me something and me feeling like they expect something in return but I'm not sure what and how much of it. That kind of situation could evoke similar feelings to what I felt during the virtual experience at times.

Participant 9

It made me feel like a book I read when I was young, about a little boy that suddenly decreased in size and joined this wonder world of insects and stuff. So you could say I felt more 'childlike' again, like you know when you're still super intrigued by the whole natural world (something I think you kinda delearn when you grow older). At the same time, it also gave me very much of an 'imposter' feeling, which I can relate to any real-world experience when you enter a new space where you don't know anything/anyone.

7.
Now you have been able to reflect on the experience, what role or position would you give yourself in the story?

Participant 1

I think I was there to become aware and feel the magnitude of the problems that people cause and become compassionate towards other beings, not only other humans. I also think that I should contibute to making other people aware and compasionate.

Participant 2

I find this difficult. I would maybe give myself the role to open my eyes to my surroundings, to be aware of what is happening around me and to not have the feeling of being removed from other beings/life.

Participant 3

I think I was a visitor. It also felt like a game in the way that I was "the center of the universe" .The things were there for me to see them and explore.

Participant 4

I don't know. I guess I wouldn't give myself a role, other than being a participant and a person willing to exchange or communicate.

Participant 5

I assumed I was the main character, like when playing videogames. I am the one following a story, exploring the environment and trying to solve challenges.

Participant 6

I was a guest

Participant 7

the role of an explorer

Participant 8

I really don't know what my role or position is in the story. Obviously, the lizard was kind of guiding me through some things, but I have no idea what's the meaning behind it.

Participant 9

'The insignificant observer'.. I felt like there was a whole world there doing its thing, and I was definitely not the main character, I just happened to enter it and therefore it was a bit strange at first, because usually in 'game settings', you are the main character. Now, I felt like this world would've been the same without me being there. It was very humbling.

8.
Could you describe what you felt at the beginning of the experience and what you felt after the experience?

Participant 1

At the beginning felt curious and I wanted to explore that different reality. However, it felt a bit strange. At the end I felt very emotional about the fire and the distress of the creature. I was also quite moved that I was able to help and that the creature reached out to me and we somehow connected even though I was stranger and we actually didn't use words just gestures.

Participant 2

My emotions went all over the place. Like I described, at first I did not feel really at ease because of the surreal vast and open space which was so extremely unnatural. Then I was happy to see life but sad to feel like they did not want contact with me. Later I felt admiration when I entered the organic world, but very sad and panicked to see that this world seemed about to be distroyed. And then I felt happy that the fire was extinguished and even more happy that I was able to make new leaves together with the other being. Lastly, at the very end/after the experience I also felt unsure (about what I did was enough or not) and a bit dizzy of everything.

Participant 3

At the beginning I was excited because I had not tried VR before. I came in with the "tasks must be done, results given" mentality. I left surprised because this was quickly changed to a "you cannot give exact answers so there is no need to try to rationalize everything". Moreover, I felt a connection with someone/something else (Din) through virtual reality and this was not what I expected.

Participant 4

In the beginning I was a bit uncertain I would have the experience the adventure was set up to, because I was occupied remembering the instructions and what to do when. A big feeling ofbeing not familiair how to handle those controllers. After the experience I had the notion I wanted to stay a little longer in that world, I liked the game.

Participant 5

I was very curious at the beginning and wasn't sure what to expect. At the end I was asking myself if I had done everything that was really needed, how much assistant I had needed from the guide, if I had completed the objectives, what else was there to explore in the first environment, how could I have interacted with the cat... many questions!

Participant 6

At the beginning before the VR headset I felt very curious and open to trying new things. After the experience, as mentioned before, I felt a bit emotional and overwhelmed but not in a bad way, more so in a way that made me say "wow" to myself. I remember standing outside back

in reality and I almost shed a tear because what we have here in front of us is so preciously beautiful and delicate and the resolution or capacity that we have to experience it through our 5 senses (or more?) makes it truly magical and priceless.

Participant 7

in the beginning i felt skiddish and green, but at the and i felt more curious and bold. ready to explore.

Participant 8

In the beginning, I thought it was an open world for me to explore and I did not know I would interact with any entities that are being controlled by humans. Since I know open world video games, I was curious to explore that world and see what it offers and what I can interact with to try to see what this experience is about. I was then guided heavily to interact with the lizard person and stayed with them for the rest of the experience which changed my outlook on the whole thing obviously. After the experience I felt a mix of emotions ranging from being curious about what I just experienced, having found it to be interesting, but not being able to "categorize it". I also felt like I had missed some things and a vague feeling of not having done it properly without knowing what exactly was expected of me. I enjoyed playing with the leaves at the end so I was not happy to be stopped at that point.

Participant 9

As I already said, I felt pretty alienated at first, and also like an imposter. Afterwards, I felt 'light'? You know that feeling when you are completely absorbed by a movie, and then you walk outside of the cinema and you feel a bit disoriented, and everything feels surreal? But I also had this 'warm' feeling, that I think was still from the nice interaction with the fox. I also felt quite dizzy.

9.
The performance had as a goal to make you experience a multispecies encounter. One where you had to pay attention, give care, and interact with the world surrounding you. Would you say, with some reflection, this is goal was achieved? Would you say this makes you perceive the 'real' world surrounding you differently? If yes, please explain how and what exactly in this experience guided you to this reflection. If not, please explain why.

Participant 1

The goal was definately achieved in my case. I think that before the experiment, I had appreci-

ated my surroundings, but actually only rarely had involved with them emotionally. After the experiment, I assume that other beings also have feelings and right be feel happy and safe and I have no right violate that. I think I appreciate the effort other beings make in their lives.

Participant 2

So this goal was definitely achieved at the end of the VR experience, but I don't know if I extended my feelings to the 'real' world. When I took the VR glasses, I felt straight back into reality, not really comparing the two worlds. The experience was still in my head for a little while, but mostly as a very new, unreal experience. Maybe this also has to do with the fact that it was the first time for me with VR glasses. So a lot of attention went to just the technology side and the awe of this tool. That takes up quite some brain space. So maybe if it wasn't my first time with VR glasses, I would have had a different awareness afterwards. But I do have to say that the fact that I was really a participant (instead of let's say seeing a movie about burning trees/climate change) changes your feelings and mood at the end of such an experience! My thoughts stayed for a much longer time with what actually happened, because it was an active experience compared to a passive one.

Participant 3

The first aim was achieved because I had to pay attention in order to understand the new worlds and what was expected of me. The second and third goals are connected, I felt like a visitor and I did not know how to interact. Having Din made it possible to do both. With the tree exercise I understood some of the dynamics of the world and with the hand moving exercise I felt directly connected to another being.

Participant 4

The goal was achieved. I definitley had that experience. I wouldn't say that it makes my perception of the 'real' world different cause one can find it there as well. But being offered the opportunity to step into it while being guided to it opens lots of possibilities to set yourself in a mindset to bring the change of mind you need when you can't find it yourself. And we all get in that position.

Participant 5

I don't think it was successful multispecies encounter because I was paying a lot more attention to the things I was doing and trying to figure out my objectives and tasks. I interpreted the burning bushes, for example, as placeholders for the fire, that were linked to this quest I was on (videogame influence). However, I lights up a question on my head now that I'm reflecting about the experience: how self-centered am I being on my life? Am I missing the multispecies perspective and seeing myself as the main character in the world?

Participant 6

It's difficult for me to conclude whether or not that goal was achieved. I think in some ways yes because I was up close to other beings and tried to paint the leaves to renature the space. But also it had its limitations for obvious reasons because its virtual reality. But overall it reminded me of some of the things I love (interacting with other beings, cats, mushrooms, space, mystery, etc.) and I found it meaningful because it was another symbol to remind me of the precariousness and fleeting moments of life and our time here.

Participant 7

The first goal is achieved. But this was not becuase the other 'computer beings' in the game. This was achieved beacuase my partner was there to guide me in the VR which made me curious to follow. I do not percieve the 'real' world any different that before entering the VR, because the VR was just a very short experience.

Participant 8

My experience in the virtual world was too detached from the real world to have any lasting impacts for me, I think. In the question about relating it to a real-world encounter I described the situation in a foreign country with a different culture and language, but it is still very different. As humans we can still try to get meaning from facial expressions and more trial and error with free outcomes or abandon a conversation if it becomes obvious that communication is not really possible or the parties involed are not interested in keeping up the tremendous effort required to keep the conversation going. The virtual world was way more directed in a way but then still with these obstacles for me. I really tried to pay attention to the world around me in the virtual experience, but it had a lot of different elements that one could pay attention to and then it felt to me like one was supposed to pay attention to a very certain subset of this world. I am also not really sure why this was a multispecies encounter. My virtual avatar resembled a human, but the experience would have been just the same if I had resembled the lizard person. There was a communiation barrier, but you can easily have it between two humans, so it's not necessarily a thing between different species.

Participant 9

I think this goal was partly achieved within the game, but it did not really influence me outside of it. The biggest part of the game was just looking around and not really doing much, so this part where I really felt like "giving care, and interacting with the world" was just a minor part of the whole experience. I think, because it was this short, it had little influence on me. I think the fact that it was such a surreal, game-like setting, also contributed to this.

PART II

Multispecies Justice: your perspective

This set of questions consist out of 5 questions and concerns your general VR experience and your perception of the concept of Multispecies Justice.

1.
Do you have any experience with VR?
If yes, please describe.

> **Participant 1**
> Not really. I think I've been to some museums/exhibitions that offered some sort of VR experience, but it wasn't anything major that I would even remember very well. This experiment was I think my first proper encounter with VR.
>
> **Participant 2**
> Not before this experiment.
>
> **Participant 3**
> No, this was my first!
>
> **Participant 4**
> no
>
> **Participant 5**
> Yes. I watched a VR video once and played a game once as well.
>
> **Participant 6**
> Yes, I have played different games a few times in VR.
>
> **Participant 7**
> No

Participant 8

I have used VR two or three times prior to this experience. The first time was a simulation of me standing next to a fire in a forest at night with zombies coming at me slowly from all directions and I had to shoot them. Also, other little simulations like standing on a mountain and being able to move around with pointing a cursor and clicking to move instead of really moving around in a room.

Participant 9

Yes, we have a VR headset at home, and I used to play games with this sometimes. There were things like rapidly racing down a hill (of which you really feel the adrenaline), or exploring deep seas (which also felt pretty real! at some point, a shark attacks you, and this is really scary), ...

2.
In general, how connected do you feel to nature and other-then-human living beings?
Please describe how strongly/poorly connected and explain why.

Participant 1

I think I feel quite connected to nature and other beings. That's probably not politically correct, but I feel that they have more dignity than humans. I was raised in a environment that pays attention to non-human beings and I was taught that for instance having a spider in my room is a good sign. Also, I think I can only get a proper rest when I spend time in nature.

Participant 2

I feel very strongly connected to nature and other-then-human living beings. I grew up on the countryside where from very little I was surrounded with different animals and my own vegetable garden. I was raised my parents always tought me the importance of nature. I also made the decision to become vegetarian when I was 5 years old, because I had so many animals arround me, I did not want to prioritize the taste of meat over killing these creatures.

Participant 3

I feel connected to nature because I think we are all part of it, I do not think we are independent from it. Similarly I feel connected to non-human beings just because I think we have the same essence of life. Which is chaotic.

Participant 4

Very connected. I don't know why. As a young child I fought with neighbour boys bigger and stronger than me when I saw them hurting little animals. I didn't think. I just reacted that way. This stayed through my life. Althouhg nuances has joined my actions. I really love the connection I feel with nature and all creatures. They make me feel rich. Eventhough I do not understand why they exist. Like ticks or lice.

Participant 5

I feel weakly connected. I am not spontaneous to start talking to people in the streets, don't participate in communities or activist groups to protect the nature. I try to help people/nature on the spot, when I see someone/something in need (like helping with bags or bringing a bee to water/flower, picking up trash, these stuff) but I don't react sometimes.

Participant 6

It's hard to describe to what degree I feel connected, I'm not sure if its even possible to truly measure. I like to think I am more connected than some others but surely I'm less connected than others as well. All I can say is I would like to spend a great deal of my life in nature which is in essence a way of returning back to ourselves.

Participant 7

I feel connected to the world around me, I am against animal cruelty.

Participant 8

I feel more connected to nature when I am in spaces that are less dominated by human structures/modifications to nature. Around Utrecht, I feel the the presence of humans and their modifications of the landscape almost everywhere with very little spaces to actually feel like I'm really in the nature. In contrast to that when I am in the mountains or some bigger forests in other countries the traces of human interaction/modification are at least more subtle which makes it easier for me to feel embedded in nature rather than being separated from it. It makes it easier to stop for a moment and kneel down on the ground and look at little insects on the ground or just listen to the wind and the play of leaves or something like that without having a noisy highway in the background constantly reminding you of the tons of humans just around the corner.

Participant 9

I think I already feel fairly connected to nature. Maybe it's because I spend almost all my child holidays in nature, and I always had pets? I don't know, for me it's very easy to feel 'awe' for all little things I see in nature, or to feel empathy for other animals. This sense of

connectedness is also lost sometimes, as I think it's pretty easy to (for example) not wonder where my food comes from, where my water comes from, where my waste goes, or realize that i'm part of this bigger system, because humans have created this little bubble for themselves. I also acknowledge that 'nature' is a human construct, and when I talk about feeling connected, I'm talking about a rather 'romanticized'/ 'wilderness-like' version of nature, whereas we are nature ourselves and also human-made products are from 'natural elements', so where do you draw the line?

3.
Do you feel any responsibility to other-then-human living beings?
Explain in what way and how.

Participant 1

Again, I'm not sure if it's responsibility per se, but I definately have feeling for animals and pets and seeing them suffer gives me pain. I definately wouldn't kill any insect or other animal that is doing no harm to me. Regarding plants, I've recently learnt that the way forests look like right now has nothing to do with the way they looked when they were virgin. They are far too dense which makes them more vulnerable to diseases and fires. So it feels to me that practicessuch as afforestation are unethical.

Participant 2

I do feel responisibilty towards animals, because humans have become so powerful that they could kill most animals without a fair battle (like many hundreds of years ago). I find it aweful that many animals are still being born solely for the purpose of the meat-industry, and I feel I don't want to be part of that, and sometimes I feel responsibility to tell people this and/or responsibility to share my story and hope that others might change their behaviour.

Participant 3

For me, there are two sub topics to this question First is non-human beings being animal or virtual. I do not feel a responsibility for other than human beings that are the product of computers or technology (not talking about stem-cell or GMO but more compute produced like AI or robots). If anything I feel a little disgusted by them because there are so many resources we are pouring into creating this conscience while simultaneously destroying ourselves and other animals. For other than human living beings I feel both a responsibility and a conflict. I feel love for non-human animals, but I still support industries that make animals suffer. it pains me to understand that we eat animals and that we consider our lives more important than theirs. But I still do. This is a topic of conflict for me currently.

Participant 4

Yes I do and no I don't. I feel responsible in treating them or it with as much respect as I can think of. But in the end it also depends on their actions/reactions. I strongly feel there is no difference in other beings than in my own being, but I can turn my back when I do not resonate at all, and leave them be. And claim my own independance.

Participant 5

Yes. Even though I don't have the personal connections, I see a larger connection with everything. So I try to align my life-choices and work towards a brighter future for everyone. I reduce my personal negative impact on a daily basis and work to develop initiatives with a positive impact.

Participant 6

I certainly do and that's largely why I've chosen to do study certain things in life and not other and prioritize certain opportunities over others. For example I studied politics and philosophy with the hope of making our world a more just and equal place and after being basically disappointed and sad about that I turned towards sustainability because it gave me more chances to be closer to nature and try and protect it. If I had more time I would like to give a longer answer but right now I can't.

Participant 7

Yes, other organisms also have feelings. eventhought this might be different that with people.

Participant 8

I had different pets growing up and had to care for them, so that is probably the highest responsibility I felt for an other-then-human living being. Apart from that there are differences between the responsibility I feel about different types of living beings from plants and animals to bacteria, viruses and other organisms. As a rule of thumb I think that the closer an organism is to me (e.g. animal/mammal) and the more contact I had with it the more I am inclined to feel a certain responsibility/try not to hurt it etc.

Participant 9

Definitely. As humans, we have behaved super irresponsibly/hubris-like towards the rest of the earth (and towards each other). So I think if you have a slight sense of justice, you feel responsible for everything we have caused to other living beings. But also in broader terms, if you know that you are part of your surroundings and if you know you are connected to it and therefore dependent on it, you feel the responsibility for taking care of it.

4.
Do you feel any superiority/domination towards other-then-human living beings?
Please explain why.

Participant 1

No. I think we should be seen as equal, but because I feel that many people consider them-selves superior to other beings, I counteract it in my head by considering them sort of superior to humans.

Participant 2

No, I never do. The humans might have be further than other-then-human beings, bt for me this does not to any extend resonate to superiority/domination.evolution of

Participant 3

Yesterday I was watching a documentary where it came up that conservation efforts for a horse species that is almost extinct are working (there are about 100 in the wild now!). But it also was interesting to me how one of their lives is still technically worth less than ours (and we are billions). Definitely there is a superiority, if it is too much of a bother to take it out, I will kill a bug in my house. Similarly, I will try to make sure that there are no mice where I am living and if there are I have and I will use non-humane traps. This domination clearly stems from the idea that I am superior and my comfort is more important than their lives.

Participant 4

No. There really is no difference. However, I do not resonate with all other than human beings. I then could bring on some domination, not to their existence, but to overrule their presence in my environment.

Participant 5

Yes, towards plants. I see no issue in growing them to our consumption and see them as a key part of stabilising climate, therefore, there is this domination aspect: that we want to use them to our benefit. With animals it is different, because they feel the same emotions as us. But the status quo is designed to make us forget about this on our daily lives.With small random things like, when I get a chocolate with my coffee I'm participating a species domination scheme be-cause the milk in that chocolate originated from a cow. It is intrinsic still to our education and development, and you have to be alert to break from it. I try to be at the same level, but end up participating in the superiority/domination.

Participant 6

Sometimes I do and sometimes I don't. If I see flies or mosquitoes that really bother me I unfortunately destroy them which is a shame in the sense that it is only trying to live its little life and do its thing. At the same time, I do have to make choices and when using an extreme example, one could imagine why it would be absolutely necessary to start killing mosquitoes to stop the spread of malaria or dengue fever. I also unfortunately still eat meat and every time I use animal products or look at them in the store I feel guilty. It reminds me of the cruel and violent domination over other helpless beings and there is nothing I enjoy about that aspect. Most days I think its wrong to eat meat and other days I really don't know what God or this universe intended. But I've also realized that despite my guilt it hasn't reached deep enough yet to overcome my impulses, appetites and habits.

Participant 7

Yes, that is what our society is build on. So I feel it too.

Participant 8

The first thought that comes to my mind is a simpe "yes". The question I ask myself on the other hand is "what kind of superiority?". One can be superior in on or multiple areas but inferior in other areas. I certainly don't think me or any other human is superior in all aspects, but the fact that we have basically dominated all animals on this planet that are reachable and the way I grew up there is a sense of domination towards other-then-human living beings.

Participant 9

It's tempting to just say no, because I know I'm not superior to any being. However, I think it is also easy to look away when doing certain stuff, because (as I already said) we have made this human bubble in which we basically dominate all other life forms all the time. Directly, you can think of stupid things like breaking tree branches to play with as a kid, or killing mosquitos, eating meat,... But I think indirectly, most things we do in our daily lives affect other beings in a way that demonstrates a huge sense of superiority.

5.

Do you agree with the following statement: "we should give rights to nature and animals; with the same legal power we have for humans"?

Participant 1

Yes, I very much agree.

Participant 2

Absolutely. Without them, humans would not be anywhere. We need nature and animals more than most of us realize.

Participant 3

To an extent. We need to prioritize nature, understand that living with rather than dominating it, is the only way to a future. We will not survive by "using" nature the way that we are. So we need to prioritize nature and animals more but giving them legal rights will alienate and other them I think. Animals and nature need to have more value undoubtedly, I am not sure if giving them rights is the correct approach to this.

Participant 4

Oh yes!

Participant 5

I struggle with this one and have thought about before. The first time I thought about my answer was: Humans need to realize that we are part of nature. There is no way we could live without other species. We should incorporate those rights in the decisions we make for humans. Therefore, there shouldn't be any need for rights for humans, animals and nature, because they should all be one thing. But what I'm thinking now, is that my conclusion was still a way that we could hold humans as a priority in our decisions. On the other hand, how can we ensure rights to animals and nature at the same level as humans if we can't hold them accountable at the same level? I think there might be a ground in between where we can protect them the same way, but through a different legislation specifically drawn to that purpose.

Participant 6

Yes

Participant 7

I don't know what you mean and how that would work. we can not communicate with animals so how could we extend them legal power? and how could they enforce their legal power upon us when we cleary do not know if they would even want that powel in the first place?

Participant 8

I do not agree with the statement at all because at the end of the day we need some form of nutrients to survive. This is possible without animals, but I am not aware of the possibility of doing it without plants or even all the living organisms/nature. Additionally, even humans around the world do not have the same rights/legal power and one could argue that even humans from

the same country do not have the same legal power, which makes it hard to give nature and animals "the same legal power".

Participant 9

Yes, I agree. But the problem here is accountability and enforcement, because these beings can't speak for themselves, so it can also just become another stupid human construct.

B.   Transcripts of interviews

Danielle Celermajer
17.03.2022

Rosalie Le Grelle — Hello Dany, thank you so much for taking the time to discuss Multispecies Justice with me. I see that you have signed and sent me the form, thanks so much.

First off, I wanted to ask you if I can record this discussion, to be able to transcribe the interview.

[start recording with consent of Dany]

Secondly, I suggest I explain a bit more about myself but mostly about the why's and how's of my research and then if you don't have any questions, we can start.

I am Rosalie Le Grelle, I come from Belgium and I have started my academic career in Brussels where I did a bachelor in Political Science first and furthermore a bachelor in Philosophy. Then I moved to the Netherlands to study Sustainable Development as a master. My interests, that have been guiding my choice of research and readings, lie in philosophy of language, climate governance, queer ecofeminism, decoloniality and other critical theories regarding sustainable development.

My great interest in Multispecies Justice came from the fact that I believe the consequences of climate change have challenged the Western theorisation of a disentangled relationship between humans and nature, with interdependence all the more evident. What I find very remarkable is that this dichotomous imaginary makes the interrogation of our anthropocentric ontology almost unimaginable. Multispecies Justice (MSJ) however, gives, I believe, the possibility to think differently, and reconfigure biocentric individualism.

My research is focused on an in-depth analysis of MSJ's potential. The first part of the research, which I am doing at the moment, includes an explorative and philosophical research for a consolidation of MSJ; researching what defines MSJ theoretically as normatively. Secondly, by using the findings of this first analysis, I am going to address the concretisation and practicability of MSJ through conducting political scientific research that analyses the extent to which MSJ is reflected in sustainable governance practices.

The aim of these interviews is to better understand the scholars/experts' vision on the potential of MSJ, theoretically as normatively.

Maybe we can also start by you introducing yourself shortly and explaining your interests for the concept of MSJ?

Danielle Celermajer — So I am Dany Celermajer. Academically, I'm a professor in the Department of Sociology and Social Policy, I'm a political theorist, but I have a very interdisciplinary background. My first degree was in philosophy, my PhD was in political theory, but I use a lot of theology and I do a lot of empirical work, so I'm a very transdisciplinary scholar. In my life, I live on an intentional multispecies community in the Southeast of Australia. Living as part of a multispecies community is integral to my scholarship. I'm a materialist, so what I mean by that is that I don't believe that we make radical transformations in our epistemology, or our ethics unless we change our embodied material engagement. So, living with others that are working out what it means to live together in a way that can be responsive, relationally responsive to the interests and the desires of all sorts of beings, animal beings, soil beings, river beings, forests beings, grass beings. That practice of my life is really inseparable from my scholarship. I was a human rights activist and scholar. My commitment to human rights comes very much through out of my biography. My parents are both Polish Jews, who aren't alive anymore. So, I'm a child of Holocaust survivors. I grew up with a strong commitment to justice and a very lived understanding of the politics of structural injustice and structural violence. And I saw human rights for all its flaws, as having a type of commitment to contestation of different structures of explosion that offered both practical and potentially radical transformations in social and political organisation.

But at the same time, I have always had a very deep affinity for the more-then-human world and the inconsistency between my normative commitments in my scholarship, which are entered at the edge of humanity and my own personal ethical commitments, became increasingly intolerable to me. At the same time, of course, we've seen an intensification of violence against the more-than-human, our vice through ecological destruction, industrial farming, but also of course through anthropogenic climate change. So, when I talk about violence, I mean all sorts of violence, direct violence, structural violence, the destruction of the conditions of possibility for flourishing. So that combination of an intolerance for what felt like a theoretical inconsistency in my own work and a lived confrontation with intensifying violence led me to want to change my own work. I looked around and I saw that at my university, there were really great scholars working on intra human injustice, there were scholars working on environmental injustice and ecological justice. But also scholars working on animal injustice and animal violence, but we weren't really speaking to each other. There were some bilateral relationships, also with interesting critical race theory and critical gender. As you know, theory that looks at the relationships between violence

against the earth, or violence against animals and people of colour or women, or people of disability and so on. However, those relationships and engagements tend to be very sporadic rather than being schematised. An exception to that is ecofeminism. And of course, indigenous philosophies. A lot of mainstream philosophy and political theory and social science more generally, they still exist as parallel fields and yet, at the same time, some of the more critical work that is emerging in each of them is strongly resonant. So, you talked about the binary logics that have their hegemonic in Western philosophy that organise the human being. The logic that justifies violence against the earth and the environment and the logic steps to justify legitimate violence against non-human animals. They're very similar, you know, very similar critiques across the fields. Also, a kind of recognition of epistemic violence and epistemic injustice. There was a simultaneity of not speaking to each other, but actually speaking in some quite similar ways and so that was really what moved me, when I started the project. I called it animal environment and human justice coming together. My colleague David Schlossberg said why don't we call it Multispecies Justice and I said oh, that sounds good. It seemed a little bit simpler to get the hung around it a bit. Sometimes people say to me, oh, you know the language of species is problematic, that it is some form of classification. And I agree with that. I know that it's a problematic term, but it's a term that had a particular type of salience at the moment and I am very aware of the problems with the term. But for me it's just a way of declaring our attention to what I like to call all Earth beings and their relationships. So, if I didn't think it would make me sound like a terrible hippie and I would get, you know, laughed at even more than I already do in academics, I would call it justice for all Earth beings. That's really how I think about it.

RLG — To jump in on that and talk about the nature/origin of MSJ, I wondered: even though MSJ is a field of study that has been recently growing in the West, it is clear that thinking ontology in relation with more-then-humans, as well as practicing interdependent relations with more-then-humans, is not a original western invention. Do you believe MSJ does have some specific roots/origin that we could retrace?

D.C.— I mean both things are true, right? So indigenous people in different parts of the world have very long traditions of philosophies, politics, and protocols where the type of ontological divide, that is taken for granted in the hegemonic West between the human and the other-than-human, doesn't operate. So, in that regard, the type of ontological recasting and the political and legal recasting that I think Multispecies Justice calls is by no means new, right? And my colleague Christine Winter, who I write with is very insistent about that. I think that's a really important political statement to make. As she says, there's nothing new about Multispecies Justice, but that doesn't mean that within the Western Academy or within, the mainstream Academy I think we can still trace a particular type of intervention that emerged at a particular time. So, both things I think could be true, right? It doesn't mean that there we're the new kid on the block in lots of

ways, but within the fields or within the genealogies of philosophies, I think there was a particular type of turn.

The way that I would describe that turn, I mean we talked about this in the environmental politics article that we write, where we try to talk about different genealogies. You know one thing maybe that we didn't really talk about in that article is Multispecies has been growing quite significantly, over the last ten years or so. And you know some known academics use the term multispecies like Donna Haraway, but they didn't go really far with it right? So, I think what's different here is, what is the justice part of Multispecies Justice, and I think that's somewhat different to multispecies ethnography. Although you know, it is just a conversation that has not happened as much as it needs to happen, I think the commitment in multispecies ethnography is very much to contact specificity, to locality, to attach it to very particular encounters, and if there's an ethic that is really strong in multispecies ethnography it is an ethic of attentiveness and an ethic of care. But I think multispecies ethnographers have incorrectly, in my view, they've characterised justice as a type of universalising discourse. As if you have commitment to justice, then you've got a commitment to some abstract principles that get developed from an Archimedean point, and then imposed on context. Well, I don't think justice requires that at all. I think you can have a much more nuanced context specific conception of justice, what justice brings to it is really a concern for institutions and also a type of non-negotiability, right? I would say Multispecies Justice requires that the interests of all beings are taken into consideration, so I think there's an encounter between justice theory and people who are concerned with political and legal institutions, social and cultural institutions. So, I think in some ways that was the field that we've seen really strongly over the last 10 years. But I think the Multispecies Justice debate is a slightly different one and important one.

R.L.G. — Coming back to this 'universalising' that is usually attached to justice. I have read from some scholars a critic on using this concept of justice since it is not a neutral one and that has also been used to justify violence and discrimination to others. So, with what you said earlier, would you agree with that?

D.C. — Yes, I think that if your conception of justice is based on the model of the autonomous individual it's going to be really problematic, specifically liberal conceptions of justice. So, perceptions of justice that are based on an assumption that the subject of justice is an autonomous individual that has property in themselves. That type of lock in. It's not just us. I think if you take seriously relationships and relational ontology, which I think you have to take seriously, if you're going to be committed to Multispecies Justice, then that model of justice is going to be highly problematic. However, I think it's a mistake to say that conception of justice is equal to the concept of justice, right? The concept of justice is much broader than that particular conception

of justice. There are many theorists of justice, people such as Iris Marian Young who have much broader or relational conceptions, even Spinoza. Justice is not synonymous with luckiest justice. Let me put it that way.

Since MSJ is an emerging field, researched and influenced by many different disciplines, scholars stress different aspects of this concept. Hence, I would like to ask you how you would define MSJ, what your understanding is of the concept and more particularly what key characteristics/ set of beliefs you would say MSJ is embedded in.

It's an interesting question because. I want to try and put this clearly. I think the types of ethical commitments that I think are intrinsic to Multispecies Justice actually precludes giving a definition of Multispecies Justice because the justice that we would define now is a justice that is already excluding all of those who by definition need to be included in the business of working out what Multispecies Justice is. So, I think that's the really radical part of Multispecies Justice, and that that comes back to what I said earlier about my own methodology of living on a multispecies community. I think one of the distinct qualities of the principle of justice is that those who are a subject to justice aren't only accorded just treatment. They're also part of those who ought to be included in working out what arrangements look like and what concepts look like, and that sounds strange. Like having and animals and plants be involved in working out what concepts look like, but I think they can be. I think that's the more experimental work. So, I wouldn't want to say 'this is what Multispecies Justice looks like' when the only people in the room are a subset of human beings. That is already really problematic. It's a commitment, right? It's a commitment to a type of radical openness. It's a commitment to a set of methodologies that are going to enable a much more radically inclusive conversation about what justice might be like, what justice might look like. Does that give you a sense of what I mean?

R.L.G. — *Yes, very much. I have felt that in the writings of Multispecies Justice scholars. That is why I believe Multispecies Justice has a very disruptive potential and is way more subversive to our hegemonic anthropocentric worldview. Way more than other ethical animal theories in my opinion. The scope of knowledge in Multispecies Justice is therefore huge. It is not only about changing our institutions or justice system it goes beyond all that.*

D.C. — Yes, if it's going to have integrity, it has to be about everything, right? It has to be about how we experience ourselves, the world and material conditions. Yes, I think you're right. It is for that reason I really insist on this porosity between life and scholarship.

A few years ago, I was at a conference. It was an environmental justice conference and we were all sitting around in this room with no windows talking about environmental justice. And I just said to myself and the people around me *I just can't do this*. This is violent. We're doing so much violence to ourselves and to our topic. To think that we could sit here so abstracted from the world that we're supposedly talking about. It's just so inconsistent with the ethics. There has

to be an undoing of the modalities of scholarship as well. In the last couple of weeks, I've been thinking about that: what does it mean to do scholarship that's part of life, not *apart* from life? Because it is part of life, right?

R.L.G. — About this practicability of Multispecies Justice, because I think it's clear that the scope of knowledge is almost non definable and that it has much more a holistic philosophy. Putting together and overcoming the duality of theory and practice, I wanted to ask you if you do you believe MSJ practices can already be observed in governance practices? How would you envision MSJ in governance practices?

D.C. — I think there's the edge of them, I think some rights of nature, some legal transformations some of the personhood. The experimentation of legislation like in New Zealand. However, I think the prefigurations of Multispecies Justice are happening much more in informal spaces. Banning formal government institutions. But going back to what you said about indigenous peoples I think they have protocols and practices and politics of Multispecies Justice. That's where I would be looking at: their institutions. But I think in Western institutions, for the most part, we don't even have decent welfare laws or Environmental Protection laws. Let alone treating other beings as subjects of justice, we don't even treat them as subjects of anything less than sanctioned violence.

R.L.G. — Do you however believe Multispecies Justice should be institutionalised? Or would you say it hence only becomes a mere extension of justice and is thus not effective?

D.C. — Look, it's so tricky, right? Once the state comes in, does something radical get assimilated into the logic of the state. That's always the challenge, right? I was talking to some colleagues about this in a very different context. There's these really great sociologists, like John Braithwaite and Val Braithwaite. The way that they put it, is that you can't institutionalise virtue. As soon as you institutionalise virtue, it's not virtue anymore. So, I think there's always the danger of assimilation. But let's be real, formal institutions shape what happens in the world. So, I'm all in favour of transforming the institutions, politics and law. I think that we should be experimenting with different forms of representation in politics. For example: personhood for the more-then-human, you can say, it's problematic because it's taking an anthropomorphic form and imposing it on being too intrinsically relational, et cetera. However, I think those experiments are going to unfold in ways that may not be expected. So, if you take something like personhood of the river, well, the river can't really be contained within the model of the autonomous person, so maybe once you give personhood to river, maybe the river will do violence to our notion of personhood. So, I think it works both ways, potentially, at least.

R.L.G. — So those examples of personhood and rights to nature. Would you say that you would you envision Multispecies Justice and governance practices in those forms?

D.C. — I think they're early forms of what Multispecies Justice might become. I really think it's going to be about experimentation. Because we don't really know yet. Our institutions are so entrenched in problematic ontologies. So, we have to start with where we are, right? You know you always have to rebuild the ship at sea. So, I think there are ways of trying to rebuild the ship and I don't think that we can predict what will emerge.

R.L.G. — I have one last question. We talked a bit about the practicability, but what I've been working on a lot and what has also been guiding my study very differently than what I have the habit to do, is that I feel that concept of Multispecies Justice tries to relate differently to knowledge and relate differently to science. I was wondering how you would position Multispecies Justice in this kind of - going against conventional or traditional Western conception of science and knowledge - and how this impacts its research or its scope. You have talked about materialising this in your life instead of only seeing as research, would you say it relates differently to knowledge in that way?

D.C. — I think that's part of it. I mean this is not a new point, it's kind of feminist science studies, you know. I think Multispecies Justice requires that the knower always recognises themselves as being in relationship with the known. And any epistemology that would position the knower as operating from some Archimedean point with access to the truth, that's going to be enormously problematic because that type of epistemology of the subject is consistent with a particular type of casting of that puts the human subject within a hierarchy of human beings that then legitimates sorts of violence. So, any type of knowledge that positions the knower and the known in that way is going to be problematic. But I also think, and this comes very strongly through scholars, that the extractive nature of knowledge that is so endemic in the Academy. That also has to be really called into question. So, what does it mean to know responsibly? What is the responsibility that's involved in trying to understand others? I don't think that epistemology in a world that is in such radical process as ours is and where there's so much, just explicit and structural violence against the more-than-human. I think there's always a responsibility to do as well as to know, so you can't just know as if that's some neutral activity, and then you kind of, you know, close your floor core, stop giving a speech and then go home and that's it. The ethical implications are so overwhelming as soon as you know as a full being, with your heart, as soon as you know with your body, and you are attentive to the experience of the more-than-human. I don't mean the kind of raw experience, I mean the affective experience and instead symbiotic experience, that demands a response. I'm a Levinasian, so I think there's huge responsibility that goes with encountering the other. I should say that I'm speaking to me, and that I'm not speaking for the field. I'm not

saying that everybody is going to be like this or everybody should be like this. But I think that if you take seriously a multidimensional affective embodied ethical encounter with other beings in conditions of mass violence, then that demands a response. So, I think that's part of the epistemological transformation that needs to happen. And a lot of people are really going to hate that and really disagree with me. But that's my position.

Sophie Chao
14.02.2022

Rosalie Le Grelle — Hello Sophie, thank you so much for taking the time to discuss Multispecies Justice with me. I see that you have signed and sent me the form, thanks so much. First off, I wanted to ask you if I can record this discussion, to be able to transcribe the interview.

[start recording with consent of Sophie]

Secondly, I suggest I explain a bit more about myself but mostly about the why's and how's of my research and then if you don't have any questions, we can start. I have prepared some guiding questions, but I hope this can be an open discussion and that we hence can see where the discussion takes us.

I am Rosalie Le Grelle, I come from Belgium and I have started my academic career in Brussels where I did a bachelor in Political Science first and furthermore a bachelor in Philosophy. Then I moved to the Netherlands to study Sustainable Development as a master. My interests, that have been guiding my choice of research and readings, lie in philosophy of language, climate governance, queer ecofeminism, decoloniality and other critical theories regarding sustainable development.

My great interest in Multispecies Justice came from the fact that I believe the consequences of climate change have challenged the Western theorisation of a disentangled relationship between humans and nature, with interdependence all the more evident. What I find very remarkable is that this dichotomous imaginary makes the interrogation of our anthropocentric ontology almost unimaginable. Multispecies Justice (MSJ) however, gives, I believe, the possibility to think differently, and reconfigure biocentric individualism. I think that this disruptive potential is due to the fact that MSJ profoundly interrogates western anthropocentric knowledge creation, by having the ambition to practice relational ontologies.

My research is focused on an in-depth analysis of MSJ's potential. The first part of the research, which I am doing at the moment, includes an explorative and philosophical research for a consolidation of MSJ; researching what defines MSJ theoretically as normatively. Secondly, by using the findings of this first analysis, I am going to address the concretisation and practicability of MSJ through conducting political scientific research that analyses the extent to which MSJ is reflected in sustainable governance practices.

The aim of these interviews is to better understand the scholars/experts' vision on the potential of MSJ, theoretically as normatively. To have a holistic perspective of this scholarship and to go beyond conventional knowledge, it was important for me to approach people that practice MSJ in various ways. Being aware that the MSJ is not an original western invention, it was imperative for me to include indigenous knowledge coming from academia or activist practices. It is for this reason I reached out to you since, if I understand well, you have experience in coming up for indigenous rights and also focus your multispecies research together with the knowledge of indigenous communities. That is why I find your research on the plant-human relations in West-Papua more particularly interesting.

But maybe you can introduce yourself better than me and tell me a bit more about yourself and the passion for your research?

Sophie Chao — Well thank you so much for giving me that overview of where you're coming to this question or promise of Multispecies Justice. So I'm an anthropologist by training and also a multispecies ethnographer and in the course of the last decade I've been investigating and trying to understand the intersections of ecology and capitalism, indigeneity, health and justice with a primary ethnographic focus on the Pacific region and West Papua. I came to this research on human environment relations and multispecies entanglements from a prior background in the human rights sector, as you noted, and which was what first brought me to work with, learn from, think with, indigenous people in Indonesia where I was involved in investigative research and advocacy together with indigenous coalitions in support of their rights to land and in pursuit of redress and remedy for the violations of their rights to territory, to cultural environment too, and well-being and so many other dimensions of indigenous life worlds.

I suppose my passion for these questions surrounding multispecies relations, relationality, really stems from my field experiences in West Papua where I had the opportunity, the privilege to discover philosophies, practices and protocols of more than human coexistence, and that were radically different to these sort of dichotomous logic, that seems to dictate or govern many of the dominant Western ways of framing the relationship between humans and non humans, nature and culture alongside so many other Cartesian divides, body and mind, wild and domesticated, and the list sort of goes on. It was through everyday emerging and long term invasion in the everyday lives and activities of indigenous marind with each other and with the forest with plants with animals, with elements with ecosystems, that I understood that it was impossible to classify the world in these sorts of nature/culture, binaries, and that, on the contrary, the sort of ethos of relationality, reciprocity and cobecoming across species lines were the principal logics or operatives at play in these indigenous worlds where living and dying have always been multispecies affairs.

R.L.G. — Very nice that your passion for this topic really came out of out of practice. My guiding questions regard two aspects of MSJ. Firstly, more philosophical and ethical questions to be able to offer me a better understanding on how you normatively envision this concept and field of study. The other aspect is the practicability of MSJ, more particularly regarding questions on governance practices. Lastly, if we still have some time, I am curious to ask you questions regarding your research more specifically and how you envision knowledge creation and science on Multispecies Justice.
Since MSJ is an emerging field (at least in the West), researched and influenced by many different disciplines, scholars stress different aspects of this concept. Hence, I would like to ask you how you would define MSJ, what your understanding is of the concept and more particularly what key characteristics you would attribute to it.

S.C. — As you say, this sort of field or current of Multispecies Justice is very much emergent and, in many ways, embryonic at this particular point in time but it's also one that has seen a renewed convergence of interdisciplinary interest. In the last years, and really since the publication of Donna Haraway's *When species meet*, which really is, as far as I know, the first iteration of this concept of multispecies social justice, and this idea of having to rethink the scope and the subjects of justice beyond the individual, autonomous human subject to encompass the diverse array of other than human beings with whom we share, unevenly, this more than human and world.

So, I think that for me, the real central tenant and that's emerging in my ongoing thinking around Multispecies Justice, is that it's not come simply a question of expanding the scope of justice to encompass other beings. It's really having to rethink the ontology of justice itself and some of the epistemological premises that undergird what is just and most importantly, who gets to decide what is just. And what harms are proportional or disproportional, tolerable or intolerable, commensurable and incommensurable, right? For me Multispecies Justice is thoroughly bound up with questions of power, that also speak to, uneven distributions of voice and authority among humans themselves, you know - some are privileged and positioned in ways that their voices are heard and others less so - this question of who gets to speak for nature, who gets to speak on behalf of nature? And therefore, who gets to determine what counts as just or unjust is really a central problematic to the way in which we think about justice and its rightful participants, subjects and objects.

Another key dimension for me of Multispecies Justice is, I suppose, the issue of the very language of species itself, that's embedded in a word like multispecies. Species are good to think with as a particular kind of category and a particular mode of classification. But of course, knowing the world through species is in itself a product of Western secular, scientific, taxonomic frameworks in ways that don't necessarily, if a tool aligned with the ways in which indigenous

peoples amongst other might understand and the ontology of other than human beings, and that can also, in positive species, as entity or categories or things in some ways, obscure or elide the relationships that allow beings to come into being in the very first instance. So Multispecies Justice for me invites us to think beyond species as categories and instead start thinking about life and life forms as relationships. Now that's a difficult thing to do conceptually, practically, empirically, but I think it's much more aligned with the way that indigenous peoples talk about and relate to non-human beings, through forms of storytelling for instance, through forms of relationship building and through mode of kinship and other kinds of alliances, and that takes us well beyond and the classificatory rigidity of something like species categories.

R.L.G. — What I think is interesting here, is that you raised the root of MSJ as being one that is ontological right?

S.C. — Yes absolutely.

R.L.G. — And another point you raised that I find very interesting is the scope of justice in MSJ. As I read in one of Celermajer's article, is the fact that we have moved (in the West) from a universal – same rights for everyone kind of justice – to one that considers differentiation and that MSJ goes even further than this. However, as you said it would be wrong to describe MSJ as a mere extension of justice. So, how do you envision MSJ's scope and how do you see MSJ overcoming the difficult task of competing justice claims, conflicts, and exclusions?

S.C. — That's a huge question, and I'm glad you're reading Danny's work. I'm working on a special issue with her at the moment and I'm drawing a lot from that in answering your questions. So, I've always found Isabelle Stengers good to think with in relation to ontological conflicts and cosmopolitics and this idea that she puts forward of slowing down our thinking, to be aiming less for solutions to overcoming's conflicts of epistemic, ontological problems, and to start - through a practice of what she calls bettering conflict- and when Stengers talks about *bettering* conflict, she's inviting us to let go of the presumption of the possibility of a final peace or of a pure egalitarian commons. Instead, she's embracing the fact that difference always entails divergence and disputes and deliberation. A better place to start would be to understand the ontological premises that are giving rise to these conflicts. These kinds of ontological premises include, for instance, how do different actors in a conversation or a situation understand what nature is? How do they understand their own positionality in relation to what they consider as nature, right? How do they identify synchronies or potential similarities between the stakes or the things they care about in the world, and you know the things that other stakeholders and actors care about in the world? It's sort of slowing down to stay with the trouble of conflict, and in unearthing the sort of subconscious that is culturally shaped etymological routing of those conflicts.

I think when it comes to the question of Multispecies Justice, one generative ways of engaging in those difficult questions about politics and divergents therein, is to invite people to consider all the sort of theories and paradigms that are at play here, including dichotomies and economies and so forth, which do not always translate in the everyday practice of people, but do they actually play out in the everyday mundane life of people in western and non western societies? How do we move beyond these conceptual divides to look at the micro political ways in which people relate to and engage with the nonhuman world? This might also be very different to what theories and conceptual abstractions might suggest.

R.L.G. — So if I understand well, this would mean that we would start from that everyday practice instead of starting from those big abstract theories that 'would' be guiding or justice or political system.

S.C. — Yes exactly.

R.L.G. —This is more of a different question and more linked to philosophy of language that has been guiding my research and thinking a lot. As I read in your research and as you named your initiative, you usually use the notion more-than-humans to describe living beings that are not human. I was wondering why do you prefer using this notion in comparison to many other terms that are used in multi species literature? Such as other than humans, animate subjects you know living beings so.

S.C. — Actually, I don't know how consistent I am with my use of them more than human. My website is certainly embracing it entirely. I tend to use more than human over multispecies for some of the reasons that I've touched on earlier: that's the idiom of species in itself, sits within a Western, secular scientistic kind of epistemological framework, and one that doesn't really align. Certainly for the people I work with in West Papua, they don't have a word for 'species'. They don't have a word for nature or culture, you come to know entities through their stories and stories are always relational because you cannot talk about one life form without invoking another life form and everything is meshed. That's the reason why I prefer it over multispecies. The main term that I'm trying to push out is the framing of the *nonhuman* which has already been critiqued by scholars like Evan Kirksey amongst others for it to be compatible to calling a woman a non-man right? Or a black person, a non-white person. This re entrenches the dichotomy of the human and the non-human in ways that allied the complexity, the nuances and differences that exist in both of those spaces of the human, whatever that is, and the non-human, whatever that is. So that's the nonhuman argument. Other than human I do use often as well, I like it too. For the term *more-than-human*: this one comes with a more ambiguous side. I like more-than-human more then other-then-human because I like the idea of using 'more' to push against the kind of

human exceptionalism and assumptions of superiority, cognitive, or other that has so much been central to the kind of enlightenment construction of the White bourgeois male as the sort of prototypical human. So to reverse that in some ways, by speaking to everything else that is, that is so much more then human, I think this is a little bit of a dig at that sort of exceptionalist discourse. I suppose that also more -then-human for me is not just more than human in the sense of more then human life forms it's also in the sense of more-then-humans encompassing elements and forces and geological processes and landscapes and land and ecosystem that might not be considered, animate or sentient in a Western secular framework, but that certainly for many people, are, you know, equally, you know participants and participating in and consequential to, the making and unmaking of more-then-human worlds. That is why I think perhaps multispecies doesn't go far enough. Whereas more-then-humans can also include the afterlives of beings and forces and elements in their ruins and rubbles and past assemblages. This is the logic, but I am acutely aware and I'm not the only one by any means, some of the big risk of course, of calling for an expansion of the subjects of justice beyond the human, and when so many human populations and people continue to be treated as subhuman, non-human and killable before the law. So that sort of poetic and politics of the category the human is something that is absolutely fundamental to consider in any kind of conversation about taking justice beyond and whatever that construct of the human is.

R.L.G. — I feel this is a real struggle though, because even when thinking of what terminology to use we always use only one word to describe a huge amount of living beings which doesn't make us overcome this binary category. As you were saying, indigenous communities don't even have the word 'nature' but have many different words to describe all different living beings of this earth. Should we just completely transform our language then?

S.C. — I mean it is really important these politics of language and the problem is that the conversation usually stops and is stalled at the limits of language. The sort of the politics of language are to communicate exactly, let alone the possibility of comprehending or entering the perceptual lifeworld of all of these other diverse beings, right? It is however important to have those conversations and language has power.

R.L.G. — Concerning the more practical side of MSJ, as you mentioned before, your passion for this concept or promise of MSJ came out of practice and with a focus on everyday life activity. In my understanding, MSJ in practice tries to generate empathy, solidarity, and connection to more-then-humans. Several scholars practice this by activating imaginaries through story-telling, or art performances and many other different ways. How do you practice this yourself or how do you envision the practice of Multispecies Justice?

S.C. — I think I've had the privilege to learn about how Multispecies Justice can look like in practice among indigenous peoples in West Papua, even in the midst of radical and violent transformations and deforestation and all palm expansion and other. As you know, those capitalist driven projects that are radically undermining the possibility of just interspecies relations in the region. I think for me however, a lot of my work has been looking in particular at oil palm plantation expansion in West Papua and the way in which Marind experience these transformations. Particularly, and most interestingly, the way in which they relate to the plant of oil palm as a kind of introduced colonising destructive plant but also one that they pity and express compassion and empathy towards. Because, at the end of the day, it is also itself subjected to all kinds of human, institutional, technological, genetic, kinds of violence, and experimentation, and manipulation, and extraction and so forth. That was a really fascinating way to think about cash crops and commodities. That they're both drivers of destruction, and they're also themselves subjects to anthropogenic violence. This has really stayed with me in my everyday life. The need to shift away from taking for granted material conditions of our existence and to think through the commodities that surround us, and that make everyday life possible for us and to work through this method of thinking about what worlds are in these things, and what worlds do these things bring about. How is palm oil in the world and how is the world also in palm oil?

Doing that makes you start to think about things as connections, as relationships to other places, to other peoples, and to other species, to other forces. Everything suddenly starts to emerge as part of a tentacular network of capillaries that are endless and that are violent and that are often uneven and asymmetric. And I can make out of the way places and peoples that might seem remote and distance from our everyday life actually surface as profoundly and intrinsically embedded, embodied even in the stuff that makes our own everyday existence. This of course has implications for the kind of decisions and choices one makes as a consumer, right? Thinking through accountabilities to the places and peoples and beings who make those things possible, I think has been a really important practical way for me to start and reckoning with and becoming accountable.

R.L.G. — Talking about this consumerism and more generally the capitalist society we live in, in one article you wrote, you manage to describe a multispecies encounter in a hyper capitalist setting that is the palm oil plantations in West Papua. When reading this I was wondering if this encounter was only possible because of these indigenous communities, with their inheritance, story telling, perception of living beings, while if you would place a set of people with a western history, would a multispecies encounter even be apparent or observable?

S.C. — Yeah, it's a great question. Going off my experience when I first went to the field and certainly when I travelled through all palm plantations, all what was going through my mind was

corporations; World Bank, International Finance, like okay let's activate some UN mechanisms, as I've done previously. But that was really different to what my companions were reading in this landscape. Many Papuans that I worked with, talked about plantations as modern forests, which was also fascinating for me because there are trees, it's green, is it a forest? Are these the forests of the future? That was a question that many people would ask themselves. And if that's the forest of the future, what does it say for the lifeform that can thrive or that will not within these radically simplified homogeneous environments. But the fact that they still called it a forest, said something: that there was a possibility of emergency continuance that I certainly would never have read in these landscapes animated as they are by all plants but also by parasites and mutualists and all kinds of other emergent technologies as well. So I would say yes, I really do think that the culturally shaped ways in which Marind learn to be in the world is profoundly multi species from the outset. People are born as siblings or as kins of plants and animals, and with whom they share common descent from ancestral spirits and encounter with a plant, an animal is always an inter agentive encounter, it's not just intersubjective. Both parties do things and shape that encounter, and that was a really important distinction that they brought to mind for me. Come into inter agentive, not just subjects. I think that pre-existing ontological frameworks certainly shape the ways in which they read these landscapes in a way that someone like me, coming from my culture, wouldn't necessarily have done.

R.L.G. — Which brings us back to the beginning of our discussion where the essence of Multispecies Justice is an ontological struggle/question which flows back into our perception and practice.

S.C. — Yes, yes, but I think is pretty important to bear in mind that and I don't know if you've come across my article in the journal of ethnographic inquiry. This one looks at the some of the political challenges that come up with this kind of ontological stance: to approach an encounter in multispecies terms and what happens when indigenous people express their multispecies worldviews to predatory audiences like corporations and governments. Unfortunately, what often happens is that it backfires dramatically. Because in framing the world as a multispecies phenomenon, often indigenous people end up getting further relegated to the primitivist backwards slot by corporations and government who read in it a mystic, primitive way of understanding the world. So people are having to learn to be very careful and strategic in terms of how they represent what they know of multispecies worlds, depending on who they're speaking to and who their audiences is. Because not everyone is going to listen to, hear, or let alone heed the way in which they see the world and sometimes talking in multispecies terms can actually end up further undermining the very humanity of people who are already considered to be backward, primitive and deeply racialised and denigratory ways by the government and by corporations. So, it's an ontological question but also a political question, depending on who you're in conversation with.

***R.L.G. — As a last question I wanted to ask you, with your experience and with your back-
ground, how do you position yourself concerning science and knowledge creation more partic-
ularly in the field of Multispecies Justice? And what Western researchers in this field should be
careful of and attentive to when conducting research on this topic.***

S.C. — Again, that's a good question and I'm not entirely sure. I think it's good that I don't
have the answer because that makes me have to keep staying with the trouble of that question
because it's a political one and it's an ethical one as much as it's a method. Where do I stand on
science? First of all, I follow the lead of many of my indigenous colleagues who affirm that there
is more than one science and that indigenous ways of knowing the world are not just traditional
ecological knowledge (TEK), they are science. They are falsifiable, they are verifiable, and they
have been demonstrated. So, the distinction between TEK and science has been problematised
by many of my colleagues because it already assumes the kind of hierarchy of ways of knowing.
That's the first thing, when it comes to science. When it comes to Multispecies Justice, we need
cross disciplinary pollination. I don't think that is specific to the field of multi species justice,
but we need to foster conversations across disciplines and across fields and across global North
and South divides. We need to try and identify common ground. In what ways, for instance, can
secular dominant forms of science compliment or speak to indigenous forms of science? Often,
they are framed as radically opposite, and they are in many ways, in terms of their premises, but
there's also possibilities for the forging of common territory. Those are the sorts of places where
I see, the most generative work happening. In those spaces: epistemic nomadism, where we're
willing to think with other methodologies, and other praxeology's across different systems.

Moreover, I'm an ethnographer, so for me the starting point of any theorisation of justice is al-
ways the field and I really do believe that we need to start from specific situated sites, territories,
bodies, soils, cities, organisms and work our way up from that specificity to elaborate broader
conceptual and theoretical frameworks. I know that other scholars operate differently, and some-
times the other way round, but for me the field has always been where the most interesting theo-
risation happens. Because the people I work with, they're their own theorists, they have their own
critiques of the world. I like starting from there because it's often the most challenging place to
rethink one's own assumptions. Kind of bottom-up approach to theory I suppose.

For me another important part of the practice of doing research in this space is situating a lot of
the discourses of justice themselves within dominant Western kind of frameworks. There are a
couple of scholars who have written very critically about the concept of justice itself, which they
argue is a colonialist concept. A colonialist temporality that has often been used to justify the
dispossession and displacement of indigenous peoples. So it is very important in this field to not
take for granted that there are such things as ugly justices or freedoms. Freedoms or justices that

have framed our imaginaries but at the cost of lives and well-being of others who are not benefi-ciaries to these dreams. So being careful and not taking for granted that justice is not always just or neutral and by that same token, taking into account scholarship like Christine Winter who have argued that there are other idioms for talking about what the West understands as justice. Such as indigenous people talk about worldbuilding, talk about resurgence, talk about dignity and talk about care. Maybe these are idioms that we should also be thinking with. Not restricting our-selves to the kind of communal legacy that are so better to the idea and the language of justice. So again, inviting capacious grammars, that would be justice to this elusive thing that is justice.

The last thing I'd say on that, and this is again something that comes from my field work, is that I have found it really useful to have been challenged by my Papuan colleagues to move away from thinking about justice as a concept, as an abstraction and in their words, to think about not only what justice *means*, but also what justice as they put it: what does it smell like, taste like, feel like, sound like, touch like. So really, using your body, the phenomenology of the flesh and to start to think about justice in the immediacy of everyday life. And I love that idea. I love the idea of starting with the body and asking the question of justice over and over again with one body as it sits in relation to a whole range of diverse other-than-bodies who are more or less privileged or terrified within the global system, and within this broader age of pageantry.

Špela Petrič
18.03.2022

Rosalie Le Grelle — Hello Špela, thank you so much for taking the time to discuss Multispecies Justice with me. I see that you have signed and sent me the form, thanks so much. First off, I wanted to ask you if I can record this discussion, to be able to transcribe the interview.

[start recording with consent of Špela]

Secondly, I suggest I explain a bit more about myself but mostly about the why's and how's of my research and then if you don't have any questions, we can start. I have prepared some guiding questions, but I hope this can be an open discussion and that we hence can see where the discussion takes us.

I am Rosalie Le Grelle, I come from Belgium and I have started my academic career in Brussels where I did a bachelor in Political Science first and furthermore a bachelor in Philosophy. Then I moved to the Netherlands to study Sustainable Development as a master. My interests, that have been guiding my choice of research and readings, lie in philosophy of language, climate governance, queer ecofeminism, decoloniality and other critical theories regarding sustainable development.

My great interest in Multispecies Justice came from the fact that I believe the consequences of climate change have challenged the Western theorisation of a disentangled relationship between humans and nature, with interdependence all the more evident. What I find very remarkable is that this dichotomous imaginary makes the interrogation of our anthropocentric ontology almost unimaginable. Multispecies Justice (MSJ) however, gives, I believe, the possibility to think differently, and reconfigure biocentric individualism. I think that this disruptive potential is due to the fact that MSJ profoundly interrogates western anthropocentric knowledge creation, by having the ambition to practice relational ontologies.

My research is focused on an in-depth analysis of MSJ's potential. The first part of the research, which I am doing at the moment, includes an explorative and philosophical research for a; researching what defines MSJ theoretically as normatively. For this I am conducting a literature review, interviews and I set up an artistic research where I created, in collaboration with an theatre student, a VR (Virtual Reality) immersive and interactive experience in multispecies futures. I set up the artistic experience, first of all to overcome the dichotomy between

art and science and secondly to value sensorial experiences as legitimate sources of knowledge, that can also be usefull in science. Moreover, I truly believe in the disruptive and subversive force of the arts, and since I believe in the disruptive potential of Multispecies Justice, it didn't seem to make sense to conduct only conventional research.

Secondly, by using the findings of this first analysis, I am going to address the concretisation and practicability of MSJ through conducting political scientific research that analyses the extent to which MSJ is reflected in sustainable governance practices.
The aim of these interviews is to better understand the practice of artists bringing theory/ science together with art around the subject of sustainability and ecology and multispecies thematic.

Now that I have introduced myself and the research I am conducting we could start the discussion with you introducing yourself and your work?

Špela Petrič — So, I'm originally from Slovenia, and my background is in science. I studied biology and then did a PhD in biomedicine, so molecular biology and biochemistry. And it was actually during my PhD studies that I realised that this lab-based science was really not my thing. Not just because of the limitations and the hierarchy and the methodology and the lack of what was really promised, which would be like this creativity, right? But what I also felt was missing was a contextualisation of the work that is done in science, like how do you legitimise all this money and all this cognitive labour? All these people that are really trained for years and years to perform an increase of knowledge with no idea how it actually affects society. So, the downstream processes right? To be honest, it was a very isolating experience. A lot of scientists are ashamed of talking about their work. Me too. And say things like *oh but you know that is not really interesting*. This kind of shame that is associated with the fact that you're doing something perceived as irrelevant and totally obscure into some random detail that nobody cares about. But I think that this is actually a failure of science or the domains of science to contextualise the importance of this work.

So, I had a bit a period of soul searching really in my late 20s, and I realised that I couldn't really continue being a scientist. At the same time, there was this amazing opportunity: Slovenia, which is a really small place, everybody knows each other, there was a gallery that had been at that time interested in the field of bio arts. So a lot of artists were super interested in working with engaging with biotech. But of course, they clearly, had a lack of this scientific understanding. So, when I expressed the interest in making art without any artistic background (although there has always been an amateur engagement), this person said that it would be really amazing to see a scientist making art and see what comes out of that. This obviously approached then bioart. So, I had

the opportunity to make my first work. I felt really challenged because science is actually super repetitive and boring. I was like what am I going to do with this capacity that I have now and then all of a sudden in art? I felt like I couldn't and that I didn't understand anything.

I mean just the fact that in science you're able to learn a method and you know how to do science and in art you never really know because you have to invent the method. And this is always changing. It's hard to know exactly, especially when you start, when you're doing good art. But more than that, I was super interested in all these topics that art is able to address. Just precisely like the context of our relations with other-than-humans. But also to bodies, the living as material. All these things that are inherent to science with this kind of reflection and decision making is somehow outsourced. So, you don't actually have any ethical challenges. You just sign the sheet of paper that says you are aware of the fact that all good practices costs benefits. So, we kill animals in the name of science and knowledge. And in art, especially if you're working with living organisms, you really have to consider that in a different manner, it's very it's way more personal, right? So, the burden really falls on you. So, the utility isn't so clear anymore. But I think that this is also a super fruitful field and really important field, to undertake precisely because all these dilemmas become something that you as a person, but then hopefully also the larger audience, has an opportunity to deal with and rethink instead of just relying on these recipes of how it's done right so it's less about morality and more about a practice of ethics. But that is also really hard, right? Because you take this on and then you know there's doubt and there's shame eventually. You know when you look back and all of a sudden, you would rather have not decided to do something in this way at that time.

R.L.G. — *And you feel that as not the case as a scientist, because the form of paper was given to you, a legitimisation was given to you and now you have to legitimise it yourself?*

Š.P. — Yes. It's actually even more radical because during my bachelor thesis, I was working with primary neuronal cultures of rats and so for this you have to decapitate a newborn rat, with a razor blade. And that's how you start the culture, right? It was fairly early on, and you know at that point you have the razor blade and you have these little baby rats, right? And you just slice even though all these things are going through your mind like *I can't do this*. But then I just swallowed and I clenched my teeth and did it. Because that is what it takes to be a scientist. If you can't do this, it's just not meant for you. I'm super grateful for this experience. Because of how much impact it actually left. And so I would say that for much of my artistic practice of up until really recently, I've been reflecting on scientific epistemology, but also how scientific methodology creeps into ethics. Which I've of course been able to observe on myself as this case study. Because I had to of unlearn the common sense that science teaches you, which isn't very easy. And so one of the things that I've been really shocked about or surprised about learning is

anthropomorphism, and the act of ascribing agency (which is not necessarily scientifically deter-
minable) to other organisms. This is a big nono in science and so much so that it is considered an
unethical action, right? I've like I'm I'm following that it's a big no no in the sense that it because
it can be proved and because it's not. I mean the reason the roots of this bashing of anthropomor-
phism, I think, has to do with an insistence on objectivity, right? So what is measurable? And also
the separation of the observer and the observed. You can't subjectify the object

R.L.G. — In the sense that subjectifying the object would mean empathy, would mean solidar-
ity and would hence mean being biased and not being able to do your research objectively, as
western science requires?

Š.P. — Exactly. This isn't something that I was able to understand: that it is a matter of choice. I
now see it more as a tool, anthropomorphism can be a tool of connection and it can lead in a sim-
ilar manner like the respect of 'I don't know what it's like to be bat, how could I know, I'm not
going to assume that just because I can imagine what it's like to have a sonar that I know what
it's like to be a bat, right?' Then it allows you to come to the really interesting question of multi
species justice: how do you represent them then?

R.L.G. — Yes that's why I was wondering why you talked about anthropomorphism, because
in multi species justice's literature I would think it's kind of a no-go to use anthropomorphism
because you don't want to suppose or portray your human perspective on other living beings,
right? But at the other hand, I can understand that it can be a first good tool to a first kind of
connection.

Š.P. — Yes, so that took me really years to understand this. I went from an ethic where I thought
the most respectable thing, the most respectable way to approach a plant is through a material
practice of biosemiotics right. I am sure you looked at my work, and how I tried to base an ethic
on this exchange and I believed it was an ethical way of behaving because at that point I didn't
actually realise what kind of consequences that can also have, right, especially in terms of not
necessarily facilitating a relationship of care which is, not always, but sometimes can be based on
emotion. Creating this kinship, and whenever you create a care for something, it is at the expense
of something else. So, for example, I try to keep my tropical plants in a completely inappropriate
environment and I will gladly and continuously kill the trips which are killing them, right? So,
it's about choosing who deserves care and at the expense of whose life. I think that this also then
a way where anthropomorphism can play a role in terms of establishing the possibility for a rela-
tion where at the end, for whatever reason the consequences are that you sometimes put your own
life at stake on behalf of something else, even though that something else might not reciprocate
in human language. Plants are difficult precisely because of their lack of something that we can

easily understand as giving back like a cat. I have a cat as well and he comes and he purrs and I have a feeling that he appreciates me. The plants, they grow, if I am able to accommodate their needs, which is also really difficult because this space is unsuitable for them and that is also it's very selfish. Now when I leave for vacation, there's a 10-page charts for each one, on how to take care and when etc. It has come to a point where it's ridiculous. Therefore, it's never really clear for me whether care is smothering or misplaced, or if it's right. I do feel that it is messy, and by 'it' I mean these kinds of connections.

It is an interesting contribution your research because you feel it in these spaces as well, how do you overcome the nature/culture dichotomy and just get people to see things differently. At least, how I approach this with the work that I am developing, somehow nature/culture just doesn't work. It doesn't carry any meaning, it's an artifact of western continental philosophy. And I think that it's really interesting to consider it more from a Marxist analysis. So for this society nature is a resource that you can just take.

R.L.G. — Isn't a Marxist analysis, apart from the fact that it is demonstrating the dominance and exploitation of humans over nature, also staying in the dichotomous perspective and hence perpetuating it instead of going beyond it?

Š.P. — Yes, you're right. I'm not actually subscribing to this but it's just like an interesting adding counterpoint. Because if we start from this fact we can maybe think that looking at nature as to be 'preserved and conserved', as if it something far away from us, that might not be the way. Maybe we can see it in terms of relations, and that it starts from here, from my room, where I have my little experiment, where I try to connect with the plants that are here. It's a way to grow, a way to let the plants grow but also grow as a person. Because through these actions of 'care', all these conundrums arise which I think about and where I position myself as ethically engaged. Being engaged and experimenting and seeing actually how things change constantly in the proximity. So it's not something that is just out there, but I see, especially with the work I am doing now in the zoo (which is a performance of ethnographies that I'm in), these are interweaving systems, that are complex. Take the caretakers in the zoo, it seems almost like a silly relationship; like there is an excess of relation there in a context where animals are actually imprisoned. Or the same goes for the love of my plants in this room right? I think this is something that has been explored a lot in land art and ecoart this last century. I think it's just more interesting I think to not to take it from out there but into in here. For me nature starts *here*, in this enmeshment in the bacteria that are growing in my sink. It might be interesting to start with that and then gradually expand. I think it's easier and better then thinking Multispecies Justice as something that happens exotically in the Amazon with indigenous communities.

R.L.G. — *That is a very interesting point especially since I think we need to be careful as a western society to not romanticise indigenous knowledge.*

Š.P. — Exactly! And I think that would be a very big mistake.

R.L.G. — *Have you been inspired much by Donna Haraway's work? It seems like there is a strong resonance with a lot of what you're saying here.*

Š.P. — I will say something very controversial, which is that I refuse to read Haraway's work. Of course, I am sure that many things I say come from her legacy and other feminists, anthropologists and former scientists. I mean this is the sphere that I am working in so whether I read Haraway or not, I am obviously completely influenced by her (and Braidotti etc). But I feel that she has a really strong voice, and I would like to approach this in my own way. Because these realisations that I've had and explained to you, they're not something I've read, I've experienced them. I think that sort of has a different resonance than reading something. Because I have read a lot of works by Michael Martyr or Matthew Hall for example. But I feel that it is a theory I completely adhere to but that is often impossible to put into practice. You just don't know how to act upon that theory. Moreover, I don't think I can escape my particular lived experience. So, this means I'm Slovenian, but we also went through this socialist and secular (no gods) education where a sort of 'tradition' of magic was lost. So, my starting point, isn't actually in this revival of indigeneity. Not that it's not there, but I don't necessarily know, like my own.

R.L.G. — *With what you're saying now about 'experiencing' or starting your reflections out of a practice, and also linked to what you explained before about your artistic process (not knowing what exact methodology to follow), do you think we would miss a lot to do it the other way around; to start from theory?*

Š.P. — No, I wouldn't at all say that it's problematic. All I was saying is that it's hard and it's challenging. I think this point of departure can also change, from one artwork to the next. Both are super valid and can have amazing results. And sometimes I'm pretty sure that either approach can also give terrible results. They both have challenges. I think for me its just a personal preference where I try to supplement an intuition. Also, it's an easier way to enter some spaces that are interesting. When you say you will do 'performances', it's sometimes easier to enter in comparison to when you say you're a scientist and doing an investigation. So, I guess it also depends on which space you want to have access to and which language you should to be able to enter that space.

R.L.G. — *So, do you mean by all this that you found a practical and methodological answer through your artistic practice?*

Š.P. — Yes totally. But it's not the end goal, right? Because the end goal has much more to do with recomposing with these entanglements, that are found in these hidden spaces. For example, I'm particularly interested in agriculture because there are real issues. But practice is crucial. When I was working in the laboratories the reality of the practice and the narrative devices that we use are really entangled. Oftentimes the way that we talk about something, wouldn't pass the scientific scrutiny of what it is that we're actually doing. Anyhow, I have found that and believe that telling a story that is based on something real, on an experience, just resonates more somehow. That is why collaborations in the development of my work have been so important because they can show me what they have experienced and vice versa and also put aside some misconceptions I have of certain things/fields/disciplines. If that works, I feel there is a true quality of an interdisciplinary practice.

For the smart cultures grant I proposed to make an AI that thinks as if it's a plant. My motivation was to think about plant representation in the digital realm. This is absolutely problematic. It's a can of worms. The initial idea (I didn't pursue it in the end) was to build a really complex ecosystem where you would have some imagine like a greenhouse with plants, but the greenhouse is supplemented by all sorts of plant pleasure devices. So whatever plant pleasure is, those devices would be providing it. Those devices would be triggered by or in control of an AI that actually would measure all these sorts of things in plants. And usually in science this works, because we work with these devices of measurements, we interpret, we find patterns and we act upon that. But with plants obviously, this cannot be answered with science. With plants you take care of, you can have the feeling that a plant in your care is enjoying itself. The points that I'm trying to bring with these works of art that I made that deal with plant representation, such as the lip reader which is quite humoristic, and the humour in it tries to invite us to think that we're not in the capacity to give answers because to be honest there are none.

The work with the drill machine is also directly addressing plant representation in the sphere of the algorithmic. Because the algorithms are indifferent to the organisms that produces the data. And I tried to play subversively to this representation of humans in numbers and the fact that we can do the same with organisms and represent us all in the same way. There's an opportunity there I think to reconfigure the representation we have of ourselves but also of other living beings. I think this might be an interesting point of departure. So, my artistic approach in multispecies has been to say: what kind of strategies of conviviality can plants teach us? To have that as a mode of resistance and resilience. Not crying over the loss of some false ideals, because we know that even many humans were afforded the privilege of being a 'human'. Can this reconfiguration of representation be a productive and erotic way of engaging with plants? And by erotic I mean impassioned, can we find some positive drive and desire within the fact that we are treated like plants in relation to algorithms? For me that is very subversive.

The funny thing with making art is that you might have things figured out, you might articulate them and cultivate them as thoughts, and you might write texts that are published and that are of inspiration. But it's in fact the work that is going to communicate with people. Another artwork, the plant machine, was something I had articulated in my mind so strongly. I was going to show the world how plants sense and I stand there 20 hours in front of the plants to show people, to convince people of that. But then again, all these things that that we can and try to attach to plants in order to interpret their liveliness. It's in fact commodifying them. It's I think, related to what you mentioned about the indigenous communities and their relationship to nature. It's easy, we can admire it, can be totally fascinated with it, but there's always a trap of in the end abusing them and not helping our situation here at all. I've actually had experiences with his because I was doing a week of art investigation in Finland and were working with a Sami artist. And our task was to figure out how the indigenous people sense climate change. Which made us ask him stuff as: 'Have you noticed any changes?' And he was really brilliant with rejecting our western gaze. Because he is not The Sami, he's also just an artist and a person. This was a great experience of cultural alterity that made me requestion loads of things.

But coming back to the plant-machine and going through that opus, I had overcome my own prejudice. I became after this experience comfortable to work with plants because I had a respect for them. I started working with plants because of my utter ignorance of them. I couldn't care less. And I thought that was unacceptable, right? I'm a biologist, I for a fact know they're super fundamental, why do I find them so boring. Why can't I keep a plant at home? And being like okay let's look into this because I mean it's happening to me, but also most of everybody else, right? So, through these years and this opus, I started caring about them, I started understanding them in a different way. I had a different kind of connection to them. So, the instrumentalisation comes from a different plane of respect. And I think that shows somehow in the works, and you can't quite point your finger. Many people don't even see this issue of working with plants in general, although I've also had some running's with people saying I am abusing and using plants.

R.L.G. — How does that happen, when you have very engaged people criticising your work and question you work with plants?

Š.P. — Well, I engage with them, because I feel they are right in a way. But as I said, in the end it's not only about refusal. Sometimes by making something out of sites, it's also out of our minds. Why don't we try to engage with them instead? I am very pleased whenever somebody comes and says I disagree with you using plants and installation. I think that's a really nice sensibility.

R.L.G. — And do you think you would ever not do it anymore?

Š.P. — Yeah, I'm on the verge of not doing it anymore. I mean, it's sort of a process. For me my artistic practice, and that is maybe something I have kept from my science education, but my artworks are less about manifesting something, it's not solely on what I think needs to be out there. But they're really about asking questions. So, they are experiments by making an artwork, and in this goes a huge effort: money, people, plants, animals. And then once the work is there, it of course takes on this life of its own and it teaches us back. Artworks, especially if they contain living organisms but also when they're just machines, they are performative. There's always somebody in the back maintaining this. If gallery spaces are willing to show this kind of artwork, they're taking on this responsibility for the duration of the exhibition, you know. Gallery takers also participate to this performance, suddenly by showing bioart they need to take care of the plants. But therefore, plants have always been an exploration and an urgency for me.

R.L.G. —An urgency only for yourself or was it also linked with the urgency of climate change?

Š.P. — Obviously, I mean there's always been like 2 layers, right? Of course, I say I work and take my personal experiences, but I don't see it as a particular individual case. I'm a person with this kind of history and I'm thinking about these things, surely many others are as well right? So, this is testing ground, using my personal experience as a case study, for me that is also the ethic of why it matters: why does it matter that I don't care about plants? Probably because it's really part of a common a larger issue that has at its core something that prevents us or is predisposing us to relate to nature to a certain way, with particular consequences. What we do with various indigenous practices is that we fetishise the consequences of their worldview, but we are not prepared to change ours. That is why I try to work in the finality of our consumerist and neoliberal society, because I would like to find different proposals towards a different ethic. But I think that should come from something we already know, a nucleus of something else that has always been there but that when you look at it from this perspective, you think 'oh yes why not', so that actually fighting climate change isn't something that we need to apply ourselves towards, but that it comes easy, because people will want to do stuff that is easy, right? How do you make this easy? How do you make it something that is enjoyable and pleasurable, and aesthetic? And that is the challenge.

Ravi Agarwal
18.03.2022

Rosalie Le Grelle — Hello Ravi, thank you so much for taking the time to discuss Multispecies Justice with me. I see that you have signed and sent me the form, thanks so much.

First off, I wanted to ask you if I can record this discussion, to be able to transcribe the interview.

[start recording with consent of Ravi]

Secondly, I suggest I explain a bit more about myself but mostly about the why's and how's of my research and then if you don't have any questions, we can start. I have prepared some guiding questions, but I hope this can be an open discussion and that we hence can see where the discussion takes us.

I am Rosalie Le Grelle, I come from Belgium and I have started my academic career in Brussels where I did a bachelor in Political Science first and furthermore a bachelor in Philosophy. Then I moved to the Netherlands to study Sustainable Development as a master. My interests, that have been guiding my choice of research and readings, lie in philosophy of language, climate governance, queer ecofeminism, decoloniality and other critical theories regarding sustainable development.

My great interest in Multispecies Justice came from the fact that I believe the consequences of climate change have challenged the Western theorisation of a disentangled relationship between humans and nature, with interdependence all the more evident. What I find very remarkable is that this dichotomous imaginary makes the interrogation of our anthropocentric ontology almost unimaginable. Multispecies Justice (MSJ) however, gives, I believe, the possibility to think differently, and reconfigure biocentric individualism. I think that this disruptive potential is due to the fact that MSJ profoundly interrogates western anthropocentric knowledge creation, by having the ambition to practice relational ontologies.

My research is focused on an in-depth analysis of MSJ's potential. The first part of the research, which I am doing at the moment, includes an explorative and philosophical research for a; researching what defines MSJ theoretically as normatively. For this I am conducting a literature review, interviews and I set up an artistic research where I created, in collaboration with an theatre student, a VR (Virtual Reality) immersive and interactive experience in multi-

species futures. I set up the artistic experience, first of all to overcome the dichotomy between art and science and secondly to value sensorial experiences as legitimate sources of knowledge, that can also be usefull in science. Moreover, I truly believe in the disruptive and subversive force of the arts, and since I believe in the disruptive potential of Multispecies Justice, it didn't seem to make sense to conduct only conventional research.

Secondly, by using the findings of this first analysis, I am going to address the concretisation and practicability of MSJ through conducting political scientific research that analyses the extent to which MSJ is reflected in sustainable governance practices.
The aim of these interviews is to better understand the practice of artists bringing theory/ science together with art around the subject of sustainability and ecology and multispecies thematics.

Now that I have introduced myself and the research, I am conducting we could start the discussion with you introducing yourself and your work?

Ravi Agarwal —Thank you, Rosalie, for wanting to speak to me. I'm unlike you neither a philosopher or a political scientist. I'm a practitioner, as an artist and an activist, that's my impetus and where I get my particular drive and my agency from. I have been delving in these questions for some time now. I also started a not-for-profit organisation 30 years back looking at environmental toxicity. I trained as an engineer, I went to Business School, and I left my corporate career to become an activist and an artist. I met Sophie Chao in a conference I was invited to in Sydney on Multispecies Justice to present a paper, and subsequently I've been following her fascinating work. Also, I'm currently engaged in an online project interdisciplinary artistic project called *equal selves equal lands, equal terrains*, it was funded by the Prince Claus Foundation from the Netherlands. This project which is to be launched soon along with the publication is a series of interviews and online chats (such as this one) with people like Sophie and other people with philosophers, scientists, activists, poets, writers, to reflect on the idea of multispecies worlds. From my understanding this concept is still much lodged in the academia, in the terminology and the phraseology and the explorations is pretty academic because it talks of justice frameworks and agency and you know ontologies of being and all these things you know so I was interested in talking to them in free, flowing conversations, trying to make it more from an everyday perspective or what people think about it. What will a lawyer think about that for example? What would poets think about this? What would a lower cast (here in India) think about this? This comes from my long-standing interest in the idea of nature, in changing things on the ground as an activist, but also exploring the idea of nature in multiple dimensions, both from Western philosophy, but also from where I come from, which talk of different kinds of ontologies of selves. And the questions which I've faced and thought of for a long time is how the ontology of the self-chang-

es the reading of what nature is and how social hierarchies change what nature is. How nature is also partly a produced concept as much as it is an objective reality outside of us, which is and can be measured by science, but the way it appears to us is very much produced by our conditioning of our social selves and by ontological selves as well. And of late with the Anthropocene's frameworks becoming more and more prominent (they are even becoming outdated now) there's been so much talk about other knowledge systems and other ways of being. There's been so much literature on all this, so much that I can't even follow it. However, these are very important questions about heterogeneities, and also often a postcolonial perspective that tries to undo what was lost during colonisation: the extractions of many things but also of nature itself. For example, the extraction of plants from their localities in South America and being taken and reclassified into something else. So, there's a whole of colonisation colonial science you might call it. So, I'm interested in the heterogeneity of beings. And I'm interested as an artist, that was my last major project, was to work with fishers in South India for about four years and looking at both their cultural roots, but also their political realities of climate change and of local politics and of new developments.

So, a lot of things which I read in texts sort of echoes in terms of what is talked about, but there's always the question of agency which I keep coming back to as an activist. What do we do when we distribute agency? Do we become non-functional in that distribution of agency? So, I'm not a philosopher, but you are and you know that Latour talks a lot about translation and purification, about flattening of ontologies, flattening of agencies and object oriented philosophers, and all those things which preceded the Anthropocene concept, but seen seem to have a lot of agency in this concept right now. So, it's between navigating all this I read and navigating what I feel from my own practice and what I see and trying to calibrate the two all the time. Because while one is in a landscape such as fishers and one is being there as a person, you bring yourself there and you see, observe and you try and make sense of what's happening in the extent you can. You also have the background music off what you've read and what other people are saying about it, and then you try and make sense of what makes sense to you in a sense. It's a constant dichotomous relationship between your received knowledge and how you perceive it, and we both have difficulties in coming to it. So, there are many kinds of divides we're trying to deal with: the dichotomies are not only nature/culture, subject/object, but also between experience, which is immersive and immersive experiences are academically problematic as they say. What you read and what challenges your own immersion into it, you know. You challenge your own view of something because you are also conditioned by something. So, I'm a constant looking at references outside poetic and literary references. Outside to see what people might be feeling. I also trained as an engineer, I have a deep interest in science and somehow the question today is for me regards which question is important? Which is the *nature* question that is important to ask today and what are the tools and techniques we have to answer that question? How do we unpack that question?

It could be science, could be many, many things. So the interdisciplinarity or the extra discipli-
narity come from that perspective for me because I want to know more about the questions which
are important to me and there's no tool which is less important in that sphere, because I think we,
I, observe things in many complex ways. It's not a simple thing.

*R.L.G. —When you say that questions are important for you do you mean by that that what is im-
portant for you is searching for the root of the problem that is evidently related to climate change
and the ecological crisis?*

R.A. — That's how it started out actually. It started out in 2004. I was doing work on the river
on a body of work. And of course, when you look at a dirty river, the automatic thing is that it's
because of pollution. Of course, that is the material factor. But if you look at a river in India, it's
also a mythical body because people also see the river as a goddess and they also, despite it being
totally polluted see it as pure. So, the purity and pollution dichotomy already exist between the
material and the metaphysical in the classical Indian way of looking at nature in a sense. Much
of that has been lost in Europe, but at the same time the institutions of which look at the river
are science based European legacy institutions, so the pollution regulatory body which measures
pollution in the river comes from the European idea of normative science. The body which looks
at water flows and measures hydrological flows in the river, comes from the Rhine Commission
in Europe. It started in 18th mid 19th century. So, there is a legacy of the modernist institutions in
the nation state of India which have legacies to European science and European institutions which
got post colonisation converted to Indian national institutions and hold the same science-based
modernity for the future. At the same time, a Pilgrim which goes to the same river along with
the scientist who's measuring with the dipstick is now doing the last rites of his parents or his of
his dear or father or somebody and throwing the ashes in the rivers as the Hindu ride and Vedic
chants and thinking of the river as the as the mother goddess, these two things coexist. And they
have no ways of talking to each other, so the scientific body, and I've been on as an environmen-
talist nominating standards committees where you create norms of how much pollution, how
much oxygen, carbon, and so on, and all these norms define the purity of the river, has no place
for the conversation which the Pilgrim might bring onto the centre or group, so these are two
worlds we live in at the same time in India same time. And this sort of kind of defines the prob-
lem of these two ways of what is the river?

So, when I was doing this work, I had this background as an engineer, environmentalist and also
as a cultural artist and I saw both these things the same time. And of course, you try to see what
goes beyond this? So, you start looking at histories of institutions, histories of science. So, when
I was doing that, I started looking at early Marx and this very young Marx writes in the German
ideology about the alienation of the fish from water, because when the water gets polluted the

fish cannot live in the water, because the body of the fish is alien to the body of the water, so he brings this two bodies as separate by pollution and which were one. So later he developed this into labour theory of alienation and capital, but I was very struck by this. There is this book called Marxist Ecology written by a scholar called James Bellamy Foster, he teaches at NYU and he talks about the fact that the socialist communist world has been blamed rightly so for not taking environment as part of its remit. But he says that that might be a problem with the institutions and the state politics of communism, but that early Marx already thinks about this. He's already thinking about alienation of land from private ownership. And then I subsequently over the years went back and further back into cultural ideas of what forms a river. So, my query really starts on very empirical basis of observation as an artist and that trying to think of what is it? And the current question is what is nature? What is it? What is this river? Is it water? Is it pure? Is it pollution? What is pollution? Is pollution always to foreign body through the other bodies? Pollution is never polluting to itself. You know it's so these are all questions of boundaries. Even the question of dichotomy are questions of boundaries. So, where you draw the boundary, these questions appear and you're forced to do, such as Haraway does, to bring nature and culture together but you don't know how because it's really becomes so complicated. Starting from these enquiries, which became more and more complex in the fishers work because I started talking about the sea. I spent four years on the seashore, and I had made friends with the Fisher folk there and sometimes I felt that we were not talking about the same scene. Because you see, I was talking about was a sea of abstraction which was stormy, beautiful. They never called it stormy or beautiful or they never use the word beautiful. They always used, you know, it's today high we can't go out. There's always functionality to the relationship, to the need to. So, the nature they were talking about was very different than nature I was talking about, and I found myself talking about a very abstract nature. And their nature was very lived nature, was everyday nature, so it brought to the question is what is nature and is nature produced by the interaction of it? Is our entangle with nature produce the idea of nature? What I found interesting is that nature is never expressed as a thing it's always expressed as an everydayness of life. Which sort of led me to this exploration of some Tamil poetry (which is one of the oldest languages in the world) called Sangam poetry. Sangam literally means the coming together, the merging of something. It is dated between 300 BC and 480. It was discovered in the 19th century, early 20th century on palm leaves and then it was translated by scholars from their notation, they had a special notation into two or three books ow by two Indian scholars and one western scholar, David Hart, AK Ramanujan, who's a very well-known poet and Indian scholar living in the US. So the interesting thing about this poetry is that it addresses the nature/culture divide in 300 BC. And there are 222 sections of poetry in that called the Occam poetry, which means the poetry of the interior (love and emotions) and the Purem poetry, which means the exterior (dealing with material live). So, the interesting thing about the Occam poetry is that they are described through landscapes, they all are written in a backdrop of nature, which are relational to the human emotion. So, it'll say like "my lover comes

from the land where the one stands on one leg, waiting for the frog to move" something like that. But it doesn't say that something like "my lover looks like this beautiful flower" You see how it's so very different to the nature/cultural modern divide? It has a very equal agency, like the same level of meaning almost. That's what attracted me, and it led me to the question that this is already there in 300 BC. But it is important to note that the name came much later 'Sangam' meaning merging, because there was probably no separation. Moreover, there's no authorship, authorship was not important then. They suspect there's a group of poets who wrote it, but there's no definitive evidence. Only about 100 poems survived because they were sacrificed with the fire every year for newness, so some have just got lost. So, I'm just telling you where this inquiry leads me to, and where I come to today is having dealt with the processes of scientific process of environmental management in very great detail at a substantial level here, and both through international committees and through here in national committees. But also, having seen the limitations of it. The limitations of a scientific normative management of climate change. These normative ideas don't consider society. When you speak of air pollution norms, these are generic norms. You don't see that the poor have a bigger impact of air pollution because they're more exposure to it, because they have less shielding to it, and because individual nutritional values are lower, because they just weaker bodies and have don't have the same kind of vitamins and so on. So, when the air pollution debate in India, which as your probably know Delhi has had a huge air pollution problems, it's always put out in technology terms: this is the level of air pollution. It's never put out in equity terms. Who's getting more impacted? You know I have participated to a lot of UN conferences for a long time and UN technical meetings always bring in this idea of the poor and the dispossessed. They're part of the text when called a differential responsibility and development. But in fact, the way we create science is not inclusive of the people who are living on the landscape. So, the fishermen for example, they will tell you about the sea level rising, they tell you about the plastics they find on the beach. I did this project at the Havana Biennale in 2019 with the fishermen there and they said, "we don't understand the language of your fisherman, but we understand what they're saying because we have the same". So, the question for me is, why do we have to communicate climate change to them? Why are they not part of the *making* of the science? Because they're observers. The way science has become expert oriented is part of the difficulties of why this nature culture divide.

R.L.G. — *Coming back to the dichotomies you spoke about earlier, you mentioned Haraway's solution as if that would not be going far enough, as if overcoming the divide nature/culture would almost be too easy of an argument.*

R.A. — Haraway suggests very interesting terminology, because I think part of the problem is the terminology we live with and how we describe things with. I think everything starts with thinking about something differently. But there's also the other question of being something you know, so

of course a lot of written ontology of being so much is being written about it. It's a difficult thing for me to really understand in theoretical terms because I'm more interested in what does it mean to be something, and the question of ethics of understanding of being and acting. We are very much lodged in the beingness of the divide right now to cross that, is not an easy problem. Some philosophers have written about why does modernity have the liberty and equality as two goals?

Firstly, they say these are contesting goals because they lead to the tragedy of the Commons, because of privatisation of the Commons, but they also then suggest that you should look at non alienation and on the unalienated being as a goal and these should be subgoals in a sense. And these are very important terms, because as reflected in figures of Gandhi, Gandhi writes about "my life is my truth", basically saying "I am what I live". A main challenge is that personal ethical question of who we are and how we are. So, all these theoretical explanations are all very interesting, but I don't always have the capacity to understand them, so I also want to know How do I do this? What is my agency? How do I proceed with that? That's more my political question: how do we find an alternative that does not make me stop at adaptation instead of mitigation. And this brings me back to how do we think together?

R.L.G. — So that is the reason why you are doing interdisciplinary work, or you search for thinking together, is because you are seeing the limits of giving solely technical answers to societal problems.

R.A. — Yes exactly.

R.L.G. — Coming from being an engineer, to now being an artist and doing multiple other environmental activist work, how do you position yourself concerning science and knowledge creation and how does it impact your own research in practice? What would you say is useful and important in artistic research, what role should the arts have in science and the other way around? / What can the arts bring to science, that science would be lacking?

R.A. — I didn't choose to be an artist, so I was photographing when I was 12 years old, and my father showed it to me. I do art because it's compelling for me to do it. It brings a lot of internal communication outside which I'm not able to do otherwise. There are two terms in quantum mechanics, quantum physics: complexity and entanglements. They are used in quantum physics because we're trying to explain quantum physics from a classical physics perspective, and we find this complexity, entanglement and they become very mathematical. But these two terms are kind of nice terms to use in what art does: it's a language of expression. And a language of expression which goes beyond the dichotomies of the forensic evidentiary and the affective. Because I think some of these are false dichotomies of how we know something. I think we know something in

much more complex ways than just in the rational mind or the feeling we know them as an interplay. I do not, cannot separate them out. I don't have the capacity of the tools or the skills to do it. Maybe somebody has, but I think for me all important things in life are taken as a joint movement.

R.L.G. — Does this relate back to what you said about the UN conferences using only the language of science?

R.A. — Well yes and of course, the moment you talk of climate change, you cannot escape the work politics because all science is politics. But also, politics cannot be separated from culture. So those terms are not to be separated truly.

R.L.G. — However, I don't feel it's valued or legitimised in the mainstream discourse and that is why when you are speaking about the UN meetings and conferences it quite resonated with this in my opinion: even though it is a political discourse, it's portrayed as if it's only a scientific debate without any space for subjectivity or feeling or emotion, because that is not accepted. Whereas I disagree, especially if we're talking about the biggest crisis that affects everyone and everything and all the living beings around.

R.A. — Yes, and impossible to separate anything important going on without seeing its complexities. I think the mistake we make a for the sake of science, so separating and then understanding and hence synthesising. Science is actually very difficult when dealing with complex phenomena. Science separates things to be able to model them. So most science is taught like this, for example, the work I do in environmental work toxicity, we're always looking at one chemical at a time, but we never have one chemical at the time, we have multiple, a cocktail of chemicals and we never know what happens when you put them all together. You know the complexity of everything, the brew we are in, we are scared to acknowledge the complexity because we're not able to deal with it. Except through another sense of something which is where art comes in. We have another way of knowing things which have been very critical to science. Look at all big scientific discoveries: they have come out of a certain 'Eureka' moment, right? However, I think science is an extremely critical as a tool to know something. The important thing in science is the question you ask because science is a methodology. That's what it is. It is just a methodology, a method. But what do you apply the method to? What is the question you're asking? That is not science. It is cultural and political. Then the question of course also comes in on what question are you able to ask. But increasingly we see science is telling us new things which bring this idea of nature/culture together again for us. Look at new research on bio genetics. It's showing, for example, there's very interesting, that 30 percent of our bodies are made of microbes. It's written by a scholar that is an expert on the history of viruses. It talks about how viruses are co-formed

and cohabit with us through evolution. In the human placenta for example. Without the virus, the placenta would not work, so the evolution of the placenta has been through virus interaction. There's a complex coevolution or happening all over the place, so already we see that in scientific terms, also the that the webs we are involved in are much more complex than we believe them to be. If you know you have 30% of your whole system that is bacteria and other organisms and your body will not function without them, and they've always been there then, what then becomes this idea of the human as separate? It doesn't make sense anymore. So that is the same ontological questioning as in Multispecies Justice. Probably, science as its progressing, is leading the same idea of its limits, of these separations. The separations are becoming less and less true, and that through the scientific method. Hence, I don't separate ways of knowing, there are other ways of knowing, and if you want to believe the scientific pairs of knowing, I'm convinced they will lead to the same conclusions which indigenous people knew earlier from their ways of being. Through observation, why would they take part of the plant out for food and put the root back because they know next year, they have to come back to it? These are not just cultural or religious behaviours. These are behaviours based on observation.

R.L.G. — I do think there is a difference I mean, more spiritual connectedness to nature makes them have a very different relationship with nature and treat nature very differently than how the West has been doing with its very objective and distant attitude.

R.A. — Right, so in the current state, those are two different worlds. I'm just talking in the future world. The worlds can and will suggest we might at some point meet because the idea of the spiritual is the idea of a self. That something is bigger than you. That nature is bigger than you. It starts from that kind of boundary of knowing. I do think we know we know so little about the universe. Even about the physical world. I'm throwing a hypothetical question out which might play itself out if you survive that long in the future. I find the politics of science problematic of science, and its institutions problematic. But I see science as another tool and another method of knowing.

R.L.G. — So, when you said science is just a method of knowing, would you say art is as much a tool or a methodology of knowing?

R.A. — No art is not a methodology, art is like ethics. Its closer to me in a sense that it is a value, a quality.

R.L.G. — But would you say that, therefore, legitimising arts or more ethics and into science and the other way round would be a fruitful evolution?

R.A. — I believe so. I see a lot more scientific science and art collaborations now in the world

than I ever saw when I was a younger person. I see it many more now. I think both scientists and artists learn from those collaborations, because even scientists need to think about outside the box into new imaginaries. I think part of the scientific problem is that the scientists, both social and natural scientists speak too much to the Academy. Not to the questions which are facing us, and I think if you locate the questions of science to the questions of the world, like a political scientist does, for example, and the philosopher does, I think then you are using your learning to think about futures and conditions of the now. But a lot of scientists are trapped in just addressing itself to the Academy, into filling gaps.

C.   Convention on Biological Diversity

First draft of the Post-2020 Global Biodiversity Framework
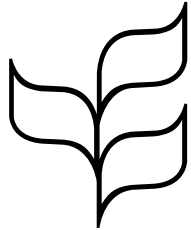
UN environment programme

Convention on Biological Diversity

OPEN ENDED WORKING GROUP
 ON THE POST-2020 GLOBAL
  BIODIVERSITY FRAMEWORK
Third meeting
Online, 23 August – 3 September 2021
Item 4 of the provisional agenda*

FIRST DRAFT OF THE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK

Note by the Co-Chairs

1.   In decision 14/34, the Conference of the Parties set out the process for developing a post-2020 global biodiversity framework, established the Open-ended Working Group on the Post-2020 Global Biodiversity Framework to support this process and designated its Co-Chairs. Subsequently, the Working Group at its first meeting requested the Co-Chairs and the Executive Secretary, with the oversight of the Bureau of the Conference of the Parties, to continue the preparatory process in accordance with decisions 14/34, CP-9/7 and NP-3/15, and to prepare documentation, including a zero draft text of the post-2020 global biodiversity framework[1] for consideration by the Working Group at its second meeting. Pursuant to these requests, a zero draft of the post-2020 global biodiversity framework was issued for consideration by the Working Group at its second meeting (CBD/WG2020/2/3).

2.   The Working Group at its second meeting considered the zero draft of the post-2020 global biodiversity framework and requested the Co-Chairs and the Executive Secretary, with the oversight of the Bureau, to prepare a document updating those elements of the draft framework that had been reviewed by the Working Group,[2] taking into account the annex to the outcomes of the meeting and the submissions received in response to notification 2019-108,[3] and to make it available at least six weeks before the twenty-fourth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice. Pursuant to these requests, an updated zero draft was issued (CBD/POST2020/PREP/2/1).

3.   The Working Group at its second meeting further requested the Co-Chairs and the Executive Secretary, under the oversight of the Bureau, to prepare a first draft of the global biodiversity framework, taking into account the conclusions adopted by the Working Group as contained in the report on its second meeting (CBD/WG2020/2/4), as well as ongoing consultation processes, the outcomes of the Ad Hoc Technical Expert Group on Digital Sequence Information, the outcome of the twenty-fourth meeting of the Subsidiary Body on Scientific Technical and Technological Advice and the outcome of the third meeting of the Subsidiary Body on Implementation, and to make it available six weeks before the third meeting of the Working Group.

4.   Pursuant to the above request, the annex to the present document contains the first draft of the post-2020 global biodiversity framework, which takes into account the outcomes of the virtual meetings of

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* CBD/WG2020/3/1.

[1] The term "post-2020 global biodiversity framework" is used in the present document as a placeholder, pending a decision on the final name of the framework at the fifteenth meeting of the Conference of the Parties. Similarly, the word "framework" is used throughout the text as a placeholder.

[2] See CBD/WG2020/REC/2/1.

[3] The submissions received are accessible from https://www.cbd.int/conferences/post2020/submissions/2019-108

the first part of the twenty-fourth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice and the third meeting of the Subsidiary Body in Implementation as well as the advice from thematic consultations. The framework will be supported by three additional documents: (a) a monitoring framework with headline indicators, (b) a glossary with a definition of terms used in the framework, and (c) supporting technical information on each draft goal and target.

5.   The zero draft of the post-2020 global biodiversity framework has been prepared with the following points in mind:

        (a)   Pursuant to the mandate from the Conference of the Parties at its fourteenth meeting,[4] the post-2020 global biodiversity framework is intended to be used not only under the Convention on Biological Diversity and its Protocols, but also under other biodiversity-related conventions, the Rio conventions, other multilateral environmental agreements, other international processes and instruments, and the broader international community;

        (b)   It is envisaged that the framework would be accompanied by a decision of the Conference of the Parties that would give effect to the implementation of the framework under the Convention. Such a decision could, for example, adopt the framework and include obligations with respect to reporting, review and means of implementation. For illustrative purposes, a preliminary draft of such a decision is provided in the annex to the present document. Complementary decisions of the Conference of the Parties might address related aspects, such as resource mobilization, capacity-building and the long-term strategic approach to mainstreaming, as well as related topics, such as digital sequence information;

        (c)   It is also envisaged that the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol on Biosafety and the Conference of the Parties serving as the meeting of the Parties to the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization could endorse the framework and make additional requests to their respective Parties. In addition, the Parties to the Cartagena Protocol might adopt the Implementation Plan for the Protocol. Furthermore, the governing bodies of the biodiversity-related conventions may, in due course, consider welcoming or endorsing the framework.

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[4] Decision 14/34, annex.

Annex

THE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK

A. Background

1.   Biodiversity, and the benefits it provides, is fundamental to human well-being and a healthy planet. Despite ongoing efforts, biodiversity is deteriorating worldwide and this decline is projected to continue or worsen under business-as-usual scenarios. The post-2020 global biodiversity framework[5] builds on the Strategic Plan for Biodiversity 2011-2020 and sets out an ambitious plan to implement broad-based action to bring about a transformation in society's relationship with biodiversity and to ensure that, by 2050, the shared vision of living in harmony with nature is fulfilled.

B. The purpose

2.   The framework aims to galvanize urgent and transformative action by Governments and all of society, including indigenous peoples and local communities, civil society, and businesses, to achieve the outcomes it sets out in its vision, mission, goals and targets, and thereby to contribute to the objectives of the Convention on Biological Diversity, its Protocols, and other biodiversity related multilateral agreements, processes and instruments.

3.   The framework aims to facilitate implementation, which will be primarily through activities at the national level, with supporting action at the subnational, regional and global levels. Specifically, it provides a global, outcome-oriented framework for the development of national, and as appropriate, regional, goals and targets and, as necessary, the updating of national biodiversity strategies and action plans to achieve these, and to facilitate regular monitoring and review of progress at the global level. It also aims to promote synergies and coordination between the Convention on Biological Diversity and its Protocols, and other relevant processes.

C. Relationship with 2030 Agenda for Sustainable Development

4.   The framework is a fundamental contribution to the implementation of the 2030 Agenda for Sustainable Development.[6] At the same time, progress towards the Sustainable Development Goals will help to create the conditions necessary to implement the framework.

D. Theory of change

5.   The framework is built around a theory of change (see figure 1) which recognizes that urgent policy action globally, regionally and nationally is required to transform economic, social and financial models so that the trends that have exacerbated biodiversity loss will stabilize in the next 10 years (by 2030) and allow for the recovery of natural ecosystems in the following 20 years, with net improvements by 2050 to achieve the Convention's vision of "living in harmony with nature by 2050". It also assumes that a whole-of-government and society approach is necessary to make the changes needed over the next 10 years as a stepping stone towards the achievement of the 2050 Vision. As such, Governments and societies need to determine priorities and allocate financial and other resources, internalize the value of nature and recognize the cost of inaction.

6.   The framework's theory of change assumes that transformative actions are taken to (a) put in place tools and solutions for implementation and mainstreaming, (b) reduce the threats to biodiversity and (c) ensure that biodiversity is used sustainably in order to meet people's needs and that these actions are supported by enabling conditions, and adequate means of implementation, including financial resources, capacity and technology. It also assumes that progress is monitored in a transparent and accountable manner

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[5] The term "post-2020 global biodiversity framework" is used as a placeholder, pending a decision on the final name of the framework by the Conference of the Parties at its fifteenth meeting. Similarly, the word "framework*"* is used throughout the text as a placeholder.

[6] General Assembly resolution 70/1.

with adequate stocktaking exercises to ensure that, by 2030, the world is on a path to reach the 2050 Vision for biodiversity.[7]

7.   The theory of change for the framework acknowledges the need for appropriate recognition of gender equality, women's empowerment, youth, gender-responsive approaches and the full and effective participation of indigenous peoples and local communities in the implementation of this framework. Further, it is built upon the recognition that its implementation will be done in partnership among organizations at the global, national and local levels to leverage ways to build a momentum for success. It will be implemented taking a rights-based approach and recognizing the principle of intergenerational equity.

8.   The framework is complementary to and supportive of the 2030 Agenda for Sustainable Development. It also takes into account the long-term strategies and targets of multilateral environment agreements, including biodiversity-related and Rio conventions, to ensure synergistic delivery of benefits from all the agreements for the planet and people.

Figure 1. Theory of change of the framework
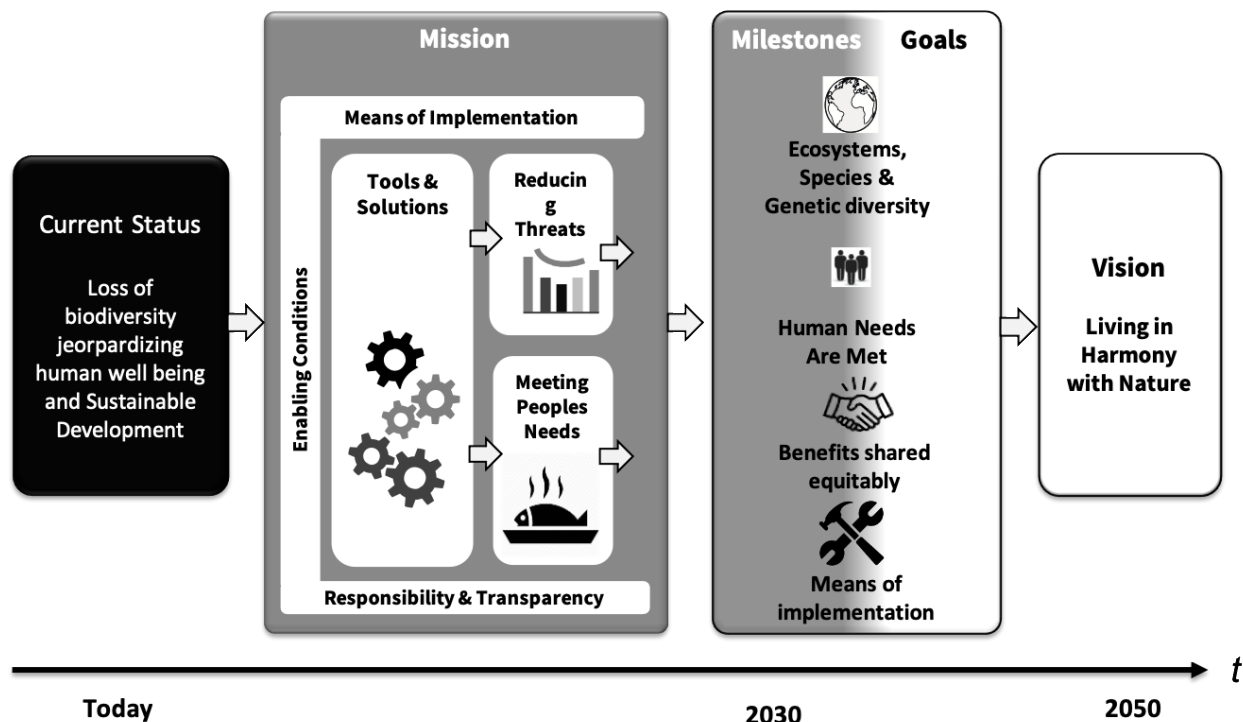
<h2 style="text-align:center">E.   2050 Vision and 2030 mission</h2>

9.   The vision of the framework is a world of living in harmony with nature where: "By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people."

10.   The mission of the framework for the period up to 2030, towards the 2050 vision is: "To take urgent action across society to conserve and sustainably use biodiversity and ensure the fair and equitabe sharing

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[7] The Working Group on the Post-2020 Global Biodiversity Framework may wish to consider reviewing the 2030 date in the light of the delay in the approval of the framework.

of benefits from the use of genetics resources, to put biodiversity on a path to recovery by 2030 for the benefit of planet and people".[8]

F. 2050 Goals and 2030 Milestones

11.   The framework has four long-term goals for 2050 related to the 2050 Vision for Biodiversity. Each 2050 goal has a number of corresponding milestones to assess, in 2030, progress towards the 2050 goals.

Goal A

The integrity of all ecosystems is enhanced, with an increase of at least 15 per cent in the area, connectivity and integrity of natural ecosystems, supporting healthy and resilient populations of all species, the rate of extinctions has been reduced at least tenfold, and the risk of species extinctions across all taxonomic and functional groups, is halved, and genetic diversity of wild and domesticated species is safeguarded, with at least 90 per cent of genetic diversity within all species maintained.

> Milestone A.1
> Net gain in the area, connectivity and integrity of natural systems of at least 5 per cent.

> Milestone A.2
> The increase in the extinction rate is halted or reversed, and the extinction risk is reduced by at least 10 per cent, with a decrease in the proportion of species that are threatened, and the abundance and distribution of populations of species is enhanced or at least maintained.

> Milestone A.3
> Genetic diversity of wild and domesticated species is safeguarded, with an increase in the proportion of species that have at least 90 per cent of their genetic diversity maintained.

Goal B

Nature's contributions to people are valued, maintained or enhanced through conservation and sustainable use supporting the global development agenda for the benefit of all;

> Milestone B.1
> Nature and its contributions to people are fully accounted and inform all relevant public and private decisions.

> Milestone B.2
> The long-term sustainability of all categories of nature's contributions to people is ensured, with those currently in decline restored, contributing to each of the relevant Sustainable Development Goals.

Goal C

The benefits from the utilization of genetic resources are shared fairly and equitably, with a substantial increase in both monetary and non-monetary benefits shared, including for the conservation and sustainable use of biodiversity.

> Milestone C.1
> The share of monetary benefits received by providers, including holders of traditional knowledge, has increased.

> Milestone C.2

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[8] In the 2030 Mission, "to take urgent action" reflects the need for action to be taken this decade to address the biodiversity crisis. "Across society" reflects the need for actions to be taken by all stakeholders, and for mainstreaming across sectors of society and the economy. "To put nature on a path to recovery" implies the need for positive action-oriented approach and the need for concerted and strategic action across a range of issues. It also implies the need for a stabilization in the rate of loss of biodiversity and enhanced protection and restoration. "For the benefit of people and planet" highlights elements of nature's contributions to people, makes a strong link to the delivery of the 2030 Agenda for Sustainable Development and its Sustainable Development Goals while also recognizing the intrinsic and existential importance of biodiversity. The 2030 deadline articulates that this mission is a milestone on the way to the 2050 Vision of "living in harmony with nature" and reinforces the need for urgent action this decade.

Non-monetary benefits, such as the participation of providers, including holders of traditional knowledge, in research and development, has increased.

Goal D
The gap between available financial and other means of implementation, and those necessary to achieve the 2050 Vision, is closed.

Milestone D.1
Adequate financial resources to implement the framework are available and deployed, progressively closing the financing gap up to at least US $700 billion per year by 2030.

Milestone D.2
Adequate other means, including capacity-building and development, technical and scientific cooperation and technology transfer to implement the framework to 2030 are available and deployed.

Milestone D.3
Adequate financial and other resources for the period 2030 to 2040 are planned or committed by 2030.

G. 2030 action targets

12.   The framework has 21 action-oriented targets for urgent action over the decade to 2030. The actions set out in each targeet need to be initiated immediately and completed by 2030. Together, the results will enable achievement of the 2030 milestones and of the outcome-oriented goals for 2050. Actions to reach these targets should be implemented consistently and in harmony with the Convention on Biological Diversity and its Protocols and other relevant international obligations, taking into account national socioeconomic conditions.[9]

1. *Reducing threats to biodiversity*

Target 1. Ensure that all land and sea areas globally are under integrated biodiversity-inclusive spatial planning addressing land- and sea-use change, retaining existing intact and wilderness areas.

Target 2. Ensure that at least 20 per cent of degraded freshwater, marine and terrestrial ecosystems are under restoration, ensuring connectivity among them and focusing on priority ecosystems.

Target 3. Ensure that at least 30 per cent globally of land areas and of sea areas, especially areas of particular importance for biodiversity and its contributions to people, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

Target 4. Ensure active management actions to enable the recovery and conservation of species and the genetic diversity of wild and domesticated species, including through ex situ conservation, and effectively manage human-wildlife interactions to avoid or reduce human-wildlife conflict.

Target 5. Ensure that the harvesting, trade and use of wild species is sustainable, legal, and safe for human health.

Target 6. Manage pathways for the introduction of invasive alien species, preventing, or reducing their rate of introduction and establishment by at least 50 per cent, and control or eradicate invasive alien species to eliminate or reduce their impacts, focusing on priority species and priority sites.

Target 7. Reduce pollution from all sources to levels that are not harmful to biodiversity and ecosystem functions and human health, including by reducing nutrients lost to the environment by at least half, and pesticides by at least two thirds and eliminating the discharge of plastic waste.

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[9] Countries will establish national targets/indicators aligned with this framework and progress towards the national and global targets will be periodically reviewed. A monitoring framework (see CBD/SBSTTA/24/3 and Add.1) provides further information on indicators of progress towards the targets.

Target 8. Minimize the impact of climate change on biodiversity, contribute to mitigation and adaptation through ecosystem-based approaches, contributing at least 10 GtCO₂e per year to global mitigation efforts, and ensure that all mitigation and adaptation efforts avoid negative impacts on biodiversity.

2. *Meeting people's needs through sustainable use and benefit-sharing*

Target 9. Ensure benefits, including nutrition, food security, medicines, and livelihoods for people especially for the most vulnerable through sustainable management of wild terrestrial, freshwater and marine species and protecting customary sustainable use by indigenous peoples and local communities.

Target 10. Ensure all areas under agriculture, aquaculture and forestry are managed sustainably, in particular through the conservation and sustainable use of biodiversity, increasing the productivity and resilience of these production systems.

Target 11. Maintain and enhance nature's contributions to regulation of air quality, quality and quantity of water, and protection from hazards and extreme events for all people.

Target 12. Increase the area of, access to, and benefits from green and blue spaces, for human health and well-being in urban areas and other densely populated areas.

Target 13. Implement measures at global level and in all countries to facilitate access to genetic resources and to ensure the fair and equitable sharing of benefits arising from the use of genetic resources, and as relevant, of associated traditional knowledge, including through mutually agreed terms and prior and informed consent.

3. *Tools and solutions for implementation and mainstreaming*

Target 14. Fully integrate biodiversity values into policies, regulations, planning, development processes, poverty reduction strategies, accounts, and assessments of environmental impacts at all levels of government and across all sectors of the economy, ensuring that all activities and financial flows are aligned with biodiversity values.

Target 15. All businesses (public and private, large, medium and small) assess and report on their dependencies and impacts on biodiversity, from local to global, and progressively reduce negative impacts, by at least half and increase positive impacts, reducing biodiversity-related risks to businesses and moving towards the full sustainability of extraction and production practices, sourcing and supply chains, and use and disposal.

Target 16. Ensure that people are encouraged and enabled to make responsible choices and have access to relevant information and alternatives, taking into account cultural preferences, to reduce by at least half the waste and, where relevant the overconsumption, of food and other materials.

Target 17. Establish, strengthen capacity for, and implement measures in all countries to prevent, manage or control potential adverse impacts of biotechnology on biodiversity and human health, reducing the risk of these impacts.

Target 18. Redirect, repurpose, reform or eliminate incentives harmful for biodiversity, in a just and equitable way, reducing them by at least US$ 500 billion per year, including all of the most harmful subsidies, and ensure that incentives, including public and private economic and regulatory incentives, are either positive or neutral for biodiversity.

Target 19. Increase financial resources from all sources to at least US$ 200 billion per year, including new, additional and effective financial resources, increasing by at least US$ 10 billion per year international financial flows to developing countries, leveraging private finance, and increasing domestic resource mobilization, taking into account national biodiversity finance planning, and strengthen capacity-building and technology transfer and scientific cooperation, to meet the needs for implementation, commensurate with the ambition of the goals and targets of the framework.

Target 20. Ensure that relevant knowledge, including the traditional knowledge, innovations and practices of indigenous peoples and local communities with their free, prior, and informed consent, guides

decision-making for the effective management of biodiversity, enabling monitoring, and by promoting awareness, education and research.

Target 21. Ensure equitable and effective participation in decision-making related to biodiversity by indigenous peoples and local communities, and respect their rights over lands, territories and resources, as well as by women and girls, and youth.

H. Implementation support mechanisms

13.   Implementation of the framework and achievement of its goals and targets will be supported through support mechanisms under the Convention on Biological Diversity, including the financial mechanism, and strategies for resource mobilization, capacity-building and development, technical and scientific cooperation and technology transfer, knowledge management as well as through relevant mecahnisms under other conventions and international processes.[10]

I. Enabling conditions

14.   The implementation of the global biodiversity framework requires integrative governance and whole-of-government approaches to ensure policy coherence and effectiveness, political will and recognition at the highest levels of government.

15.   It will require a participatory and inclusive whole-of-society approach that engages actors beyond national Governments, including subnational governments, cities and other local authorities (including through the Edinburgh Declaration),[11] intergovernmental organizations, non-governmental organizations, indigenous peoples and local communities, women's groups, youth groups, the business and finance community, the scientific community, academia, faith-based organizations, representatives of sectors related to or dependent on biodiversity, citizens at large, and other stakeholders.

16.   Efficiency and effectiveness will be enhanced for all by integration with relevant multilateral environmental agreements and other relevant international processes, at the global, regional and national levels, including through the strengthening or establishment of cooperation mechanisms.

17.   Further, success will depend on ensuring greater gender equality and empowerment of women and girls, reducing inequalities, greater access to education, employing rights-based approaches, and addressing the full range of indirect drivers of biodiversity loss, as identified by the *Global Assessment Report on Biodiversity and Ecosystem Services* issued by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services,[12] including those not directly addressed by the goals and targets of the Framework, such as demography, conflict and epidemics, including in the context of the 2030 Agenda for Sustainable Development.

J. Responsibility and transparency

18.   The successful implementation of the framework requires responsibility and transparency, which will be supported by effective mechanisms for planning, monitoring, reporting and review. Countries, Parties to the Convention, have a responsibility to implement mechanisms for planning, monitoring, reporting and review.[13] These mechanisms allow for transparent communication of progress to all, timely course correction and input in the preparation of the next global biodiversity framework, while minimizing the burden at the national and international levels, by:

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[10] This list will be updated when the elements are agreed.

[11] CBD/SBI/3/INF/25.

[12] IPBES (2019): *Global Assessment Report on Biodiversity and Ecosystem Services*. E. S. Brondizio, J. Settele, S. Díaz, and H. T. Ngo (editors). IPBES secretariat, Bonn. 1,148 pages. https://doi.org/10.5281/zenodo.3831673.

[13] Parties to the Convention would have a responsibility to implement mechanisms for planning, monitoring, reporting and review as set out in decision 15/--. This will be developed on the basis of discussions under the Subsidiary Body on Implementation as reflected in CBD/SBI/5/CRP.5, taking into account also any inputs from the Working Group on the Post-2020 Global Biodiversity Framework.

(a)   Establishing national targets as part of national strategies and action plans and as contributions towards the achievement of the global targets;

(b)   Reporting national targets to enable the collation of national targets in relation to the global action targets, as needed, and their adjustment to match the global action targets;

(c)   Enabling the evaluation of national and collective actions against targets.

19.   These mechanisms are aligned with and, where appropriate, complimented by national reporting under the Protocols and integrated with other processes and other relevant multilateral conventions including the 2030 Agenda for Sustainable Development and the Sustainable Development Goals.

20.   The development of additional and complimentary approaches is encouraged to allow other actors to contribute to the implementation of the framework and report on commitments and actions.

K.   Outreach, awareness and uptake

21.   Outreach, awareness and uptake of the post-2020 global biodiversity framework by all stakeholders is essential to effective implementation, including by:

(a)   Increasing understanding, awareness and appreciation of the values of biodiversity, including the associated knowledge, values and approaches used by indigenous peoples and local communities;

(b)   Raising awareness of all actors of the existence of the goals and targets of the post-2020 global biodiversity framework and progress made towards their achievement;

(c)   Promoting or developing platforms and partnerships, including with media and civil society, to share information on successes, lessons learned and experiences in acting for biodiversity.

Appendix

DRAFT ELEMENTS OF A POSSIBLE DECISION OPERATIONALIZING THE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK

The post-2020 global biodiversity framework will be contained in an annex to a decision of the Conference of the Parties. The present annex, which has been prepared by the Co-Chairs of the Open-ended Working Group on the Post-2020 Global Biodiversity Framework in cooperation with the Executive Secretary, contains possible elements of such a decision for the information of the Working Group at its third meeting. These elements will be revised in the light of the discussions during the third meeting of the Working Group, the resumed sessions of the twenty-fourth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice and the third meeting of the Subsidiary Body on Implementation and submitted to an appropriate body.

The post-2020 global biodiversity framework

The Conference of the Parties,

Recalling its decision 14/34, in which it adopted the preparatory process for the development of the post-2020 global biodiversity framework and decided to establish an open-ended intersessional working group to support its preparation,

Noting the outcomes of the first,[14] second[15] and third meetings of the Open-ended Working Group on the Post-2020 Global Biodiversity Framework,

Also noting the outcomes of the twenty-fourth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice and the third meeting of the Subsidiary Body in Implementation,

Expressing its gratitude to the Co-Chairs of the Open-ended Working Group on the Post-2020 Global Biodiversity Framework, Mr. Francis Ogwal (Uganda) and Mr. Basile van Havre (Canada), for supporting the development of the post-2020 global biodiversity framework,

Also expressing its gratitude to the Governments of (to be completed) for their financial and in kind support to the process for developing the post-2020 global biodiversity framework,

Welcoming the submissions by Parties and observers providing views on the development of the post-2020 global biodiversity framework,

Recognizing that the post-2020 global biodiversity represents a useful and flexible framework that is relevant to all biodiversity-related conventions, agreements and processes,

Recalling the conclusions of the fifth edition of the *Global Biodiversity Outlook*,[16] the second edition of the *Local Biodiversity Outlooks*[17] and the *Global Assessment Report on Biodiversity and Ecosystem Services* of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services[18] that, despite some progress, none of the Aichi Biodiversity Targets[19] has been fully achieved and

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[14] CBD/WG2020/1/5.

[15] CBD/WG2020/2/4.

[16] Secretariat of the Convention on Biological Diversity (2020). *Global Biodiversity Outlook 5*. Montreal, Canada.

[17] Forest Peoples Programme, International Indigenous Forum on Biodiversity, Indigenous Women's Biodiversity Network, Centres of Distinction on Indigenous and Local Knowledge and Secretariat of the Convention on Biological Diversity (2020). *Local Biodiversity Outlooks 2: The contributions of indigenous peoples and local communities to the implementation of the Strategic Plan for Biodiversity 2011–2020 and to renewing nature and cultures. A complement to the fifth edition of Global Biodiversity Outlook*. Moreton-in-Marsh, England: Forest Peoples Programme. Available at: www.localbiodiversityoutlooks.net.

[18] IPBES (2019): *Global Assessment Report on Biodiversity and Ecosystem Services*. E. S. Brondizio, J. Settele, S. Díaz, and H. T. Ngo (editors). IPBES secretariat, Bonn. 1,148 pages. https://doi.org/10.5281/zenodo.3831673.

[19] See decision X/2, annex.

that this undermines the attainment of the 2050 Vision for Biodiversity and other international goals and objectives,

Alarmed by the continued loss of biodiversity and the threat that this poses to human well-being and the prospects for reaching the three objectives of the Convention,

1.   *Adopts* the post-2020 global biodiversity framework, as contained in the annex to the present decision, as a global framework for action by all Parties and stakeholders to reach the 2050 Vision for Biodiversity and achieve the objectives of the Convention;

2.   *Notes* that the implementation of the post-2020 global biodiversity framework will be monitored through its monitoring framework;[20]

3.   *Also notes* that the implementation of the post-2020 global biodiversity will be supported through other relevant decisions adopted by the Conference of the Parties at its fifteenth meeting and, in particular, those addressing the following:

(a)   The enhanced multidimensional approach to planning, monitoring, reporting and review;[21]

(b)   The updated plan of action on subnational governments, cities and other local authorities for biodiversity;[22]

(c)   The strategy for resource mobilization;[23]

(d)   The long-term strategic framework for capacity-building and development to support nationally determined priorities for the implementation of the post-2020 global biodiversity framework;[24]

(e)   The gender plan of action for the post-2020 period;[25]

(f)   The communications strategy for the post-2020 global biodiversity framework,[26] which will support and contribute to the implementation of the post-2020 global biodiversity framework;

4.   *Reiterates* the fact that the role of the Conference of the Parties is to keep the implementation of the Convention under review, and *decides* that, at each of its future meetings, the Conference of the Parties will review progress in the implementation of the post-2020 global biodiversity framework, share experiences that are relevant for implementation and provide guidance on means to address any obstacles encountered;

5.   *Decides* to consider at its sixteenth meeting the need for and possible development of additional mechanisms or enhancements to existing mechanisms to enable Parties to meet their commitments under the Convention and the implementation of the post-2020 global biodiversity framework;

6.   *Urges* Parties, in particular developed country Parties, and *invites* other Governments and international financial institutions, regional development banks, and other multilateral financial institutions to provide adequate, predictable and timely financial support to developing country Parties, in particular the least developed countries, small island developing States, as well as countries with economies in transition, to enable the full implementation of the post-2020 global biodiversity framework, and *reiterates* the view that the extent to which developing country Parties will effectively implement their commitments

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[20] Decision 15/--

[21] Decision 15/--

[22] Decision 15/--

[23] Decision 15/--

[24] Decision 15/--

[25] Decision 15/--

[26] Decision 15/--

under this Convention will depend on the effective implementation by developed country Parties of their commitments under this Convention in connection with financial resources and transfer of technology;

7.   *Requests* the Global Environment Facility to provide adequate, timely and predictable financial support to eligible countries with a view to enabling the implementation of the post-2020 global biodiversity framework;

8.   *Emphasizes* the need for capacity-building activities and the effective sharing of knowledge, in order to support all countries, especially developing countries, in particular the least developed countries, small island developing States and countries with economies in transition, as well as indigenous peoples and local communities, in the implementation of post-2020 global biodiversity framework;

9.   *Urges* Parties and other Governments, with the support of intergovernmental and other organizations, as appropriate, to implement the post-2020 global biodiversity framework, consistent and in harmony with the Convention and other relevant international obligations, and, in particular, to enable participation at all levels, with a view to fostering the full and effective contributions of women, indigenous peoples and local communities, civil society organizations, the private sector and stakeholders from all other sectors, in the full implementation of the goals and targets of the post-2020 global biodiversity framework and the achievement of the objectives of the Convention;

10.   *Urges* relevant agreements, processes and organizations to consider the development or updating of relevant strategies and frameworks, as appropriate, as a means of complementing and supporting national actions and of contributing to the implementation of the post-2020 global biodiversity framework;

11.   *Invites* Parties and other Governments at the forthcoming meetings of the decision-making bodies of the other biodiversity-related conventions and other relevant agreements to consider appropriate contributions to the collaborative implementation of the post-2020 global biodiversity framework;

12.   *Invites* the United Nations Environment Programme, in particular its regional offices, as well as the United Nations Development Programme and the Food and Agriculture Organization of the United Nations, working at the country level, to facilitate activities designed to support the implementation of the Convention and the post-2020 global biodiversity framework, in cooperation with other relevant implementation agencies;

13.   *Invites* the Environment Management Group and the Biodiversity Liaison Group to identify measures for effective and efficient implementation of the post-2020 global biodiversity framework across the United Nations system and to submit a report on their work to the Conference of the Parties at its sixteenth meeting;

14.   *Requests* the Executive Secretary:

(a)   To promote and facilitate, in partnership with relevant international organizations, including indigenous peoples' and local community organizations, activities to strengthen capacity for the implementation of the post-2020 global biodiversity framework;

(b)   To develop, for consideration by the Subsidiary Body on Implementation at a meeting held prior to the sixteenth meeting of the Conference of the Parties, options for the further enhancement of implementation of the Convention, including through the further development of capacity-building programmes, partnerships and the strengthening of synergies among conventions and other international processes;

(c)   To develop guidance materials, including the identification of possible actions, for the goals, targets and other elements of the post-2020 global biodiversity framework.

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