Interdisciplinary Approaches on Ecological Justice
MARIE SKLODOWSKA – CURIE ACTIONS STAFF EXCHANGES (MSCA-SE)
MSCA-SE-2021 No. 101086202

WP3 – The Empirical Level of Ecological Justice

D3.4 The Cultural Roots of Ecological Justice

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Status	Released
Version	5
Dissemination	**PU** Public

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ACKNOWLEDGMENT

This project has received funding from the European Union's **Horizon Europe – Research and innovation programme MSCA Staff Exchanges, grant agreement No. 101086202.**

Version	Date	Authors	Description
V.0.1	02/04/2026	Jonatan Pamblad	First draft completed
V.0.2	24/04/2026	Pilar Peralta Ardila	Additions and expansion
V.0.3	27/04/2026	Jonatan Palmblad	Revised and edited version
V.0.4	30/04/2026	All	Version for internal review
V.0.5	30/04/2026	Jonatan Palmblad	Final deliverable

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Project	
Project Acronym	SPEAK4NATURE
Project Title	**“Speak for Nature: Interdisciplinary approaches on ecological justice”**
Grant Agreement number	**101086202**
Call identifier	**HORIZON-MSCA-SE-2021**
Topic identifier	Innovative, systemic zero-pollution solutions to protect health, environment and natural resources from persistent and mobile chemicals
Funding Scheme	Research and Innovation Action
Project duration	48 months (From March 2023 to February 2027)
Coordinator	Rodrigo Míguez Núñez (UPO)
Website	https://www.speak4nature.eu/
Deliverable	
Deliverable No.	D3.4
Deliverable title	The Cultural Roots of Ecological Justice
Description	The deliverable will consist of a document identifying the different types of historical or cultural backgrounds involved in the manifestation of EJ instances.
WP No.	WP3
Related task	T3.5
Lead Beneficiary	Ludwig Maximilian University Munich (LMU)

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Contributor(s)			
Dissemination	**PU** Public		
Language	English		
Due	M38	**Submission date**	30/04/2026

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Table of Contents

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1 Executive Summary

This deliverable is a part of Work Package 3 (WP3), "The Empirical Level of Ecological Justice," and it serves to investigate and contextualize manifestations of ecological justice in history. It builds on research conducted within WP3 and synthesizes insights from different events and contributions.

The document below first assesses the history of justice and ecology separately, followed by a consideration of how the fusing of the two is not necessarily good for humanity, but quite problematic if not balanced by social justice. It thereafter delves into the question of *culture* and investigates different stances in history and geography that can be said to be ecologically just, to show that the ecological cultures of modernity in some cases have given rise to a tension between social and ecological justice. Next, the report investigates the history of the ecological justice concept to show how these tensions have been present since it was coined in an anglophone context—but also reconciled with social justice by following initiatives. The term "ecological history" has a forgotten history that is outlined below, and which can inform today's uses of this notion. Lastly, we propose a framework for resolving the tension between the social and the ecological in environmental ethics, and for establishing a foundation for socio-ecological justice.

The report is preceded by a general introduction and ends with a conclusion that summarizes the findings and looks ahead at the implications for future Speak4Nature tasks.

On behalf of the authors,

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2 Introduction

2.1 Purpose and Target Group

The purpose of this report is to contextualize the idea of ecological justice by identifying the different types of historical or cultural backgrounds of its manifestations today. The report is not an exhaustive account of the cultural influences on this discourse, which would demand a book-length study, but rather aims at covering a broad spectrum of factors that bear relevance to how we talk and think about ecological justice today. The report concludes Work Package 3, "The Empirical Level of Ecological Justice," and is meant to serve as an auxiliary document for the tasks and deliverables of Work Package 4, "The Strategic Level of Ecological Justice." To this end, the report also contains recommendations on what conclusions to draw from the investigation of the cultural roots of ecological justice.

This document is a scholarly output of nature written firstly as a contribution to Speak4Nature, for which reason internal references to other deliverables occur throughout, but it is also written to be accessible to a wider audience. Readers who are only interested in the topic of ecological justice and its cultural roots can read chapter 3 to 6. Members of the Speak4Nature consortium will also find chapter 7 relevant.

Lastly, this report aims chiefly to investigate justice in the terms of ethics and less in terms of law, since the authors hold that the conventional nature of law, even when natural law is embraced, must be grounded on an ethical conception of what is just and right. Thus it concerns itself with the theory of justice, as in D2.1, not with the theory of law, as in D2.2, but it does so chiefly in the context of ethics.

The conclusions and arguments are not necessarily shared with all members of the Speak4Nature consortium, but where disagreement may occur, we believe that this will result in discussions productive both for the members and the consortium as a whole. That being said, the historical picture drawn in this report will be relevant also to those who do not agree with the conclusions.

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2.2 Brief Description of the Report's Structure and Content

This document consists of five parts, ranging from chapter 3 to 7. In chapter 3, "Orientation: The Origin of Justice and Ecology," we establish a general understanding of what ecological justice may refer to, first by outlining parts of the respective histories of justice and ecology and then by considering some issues that may arise when these are fused. We here argue that ecological justice must be balanced with social justice, and that ecological justice on its own be best understood as justice *in* rather than *for* nature. Chapter 4, "Cultures of Ecological Justice and Injustice," investigates the cultural roots of the kind of ecological justice we have outlined, looking at how it has manifested at different times and places. We here establish an understanding of culture as a many-sided configuration of human groups and societies, which can be alienated from or integrated with the biosphere. Ecologically just cultures exist around the world since the beginning of humanity, we suggest, while arguing that the cultural paradigm of modernity has made possible increasingly unsustainable cultures. The ecological justice movements within this paradigm, we argue at the end of this chapter, have sometimes come to refute social justice in favor of ecological integrity, which warrants careful reflection on how we understand the ecological crisis, its causes, and its solution. Chapter 5 is titled "The Birth of the Ecological Justice Concept" and follows the emergence of the explicit notion of "ecological justice," showing how this, too, has been used in ways that challenge the claim for social justice. Counter examples exist, however, and they all show how the anglophone concept of ecological justice needs ecological justice as a complement. In chapter 6, "Implications for Contemporary Ecological Justice," we consider how to learn from the cultural roots we have studied as well as how to make ecological justice theory more practical. We first reflect upon the role of environmental ethics in the time of industrial consumer societies, and then make the case for an ecologization of anthropocentrism as a means to resolving tensions between social and ecological justice. This, we suggest, protects humans while also constituting a rationale for preserving the current state of the biosphere. Finally, chapter 7 concludes the report with a summary of the achievements and a look ahead toward future tasks of the Speak4Nature project.

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2.3 Contributions of Partners

The deliverable was first outlined by Jonatan Palmblad (LMU) who is also responsible for the final version. Andreas Jünger (LMU) participated in the planning phase and contributed to the revisions. Pilar Peralta Ardila (LMU) wrote subchapter 4.3.3 and the first draft of chapter 4.3, and she contributed with feedback and revisions to the deliverable as a whole. For the sake of coherency, Jonatan Palmblad made the final round of revisions.

The three contributors do not necessarily agree on all points and arguments in this report and compromises among them—as well as with diverging opinions in the Speak4Nature project—have guided many of the contentions. As lead author and final editor, Jonatan Palmblad is nevertheless ultimately responsible for the final deliverable.

2.4 Relations to Other Activities

This report is the result of secondments, seminars, and conferences within the Speak4Nature project. Two official Speak4Nature publications by Jonatan Palmblad, "Instrumentalidad y personalidad ecológica: ¿Con qué finalidad?" in *Papeles de Relaciones Ecosociales y Cambio Global* (November 2025) and "The Inhuman Condition: Rethinking Anthropocentrism" in *Springs: The Rachel Carson Center Review* (February 2026) built on research that also is foundational for this deliverable, as they consider the history and philosophy of human–environment interaction with a specific focus on the tensions between environmentalism and humanitarianism. To this end, the articles have in turn informed parts of this deliverable.

The First Network School of Speak4Nature in Florianópolis, Brazil, took place on 9–15 April 2024, and constituted an important backdrop for this deliverable. Titled "Introduction to Ecological Justice," the event brought together project partners from different countries and covered a range of topics that reappear in the following pages. Jonatan Palmblad's presentation on 10 April, titled "Nature, Technology, and Mind: A Philosophical and Historical Approach to Human-Environment Relations," constituted a first outline of the philosophical framework behind this deliverable. The network school was an introduction to ecological justice and also contained many other presentations that informed

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this deliverable, such as Marta Solari's (UPO) "Human Rights and Rights of Nature, Two Sides of the Same Coin: Biocultural Rights," by Marta Solari (UPO), "Naming the Ecological Crisis: Ontology and Epistemology of Global Change" by Luis Lloredo Alix (UAM), "Territoriality, Indigenous Demands, and Ecological Justice" by Adriana Biller Aparicio (UFSC), and "We Are the Nature Defending Itself" by Adrián Almazán (UC3M).

On 8–10 October 2024, LMU Munich organized the official Speak4Nature workshop "The Political Implementation of Nature's Inherent Value" in Munich Germany, organized by Jonatan Palmblad. The workshop, which included a keynote by renowned environmental justice scholar Joan Martinez Alier on "The Making of World Movements for Environmental Justice," provided an important exposé of what justice in relation to the ecological world can mean across disciplines, institutions, countries, and cultures. Moreover, the question of how to implement concepts of ecological justice and the problematization of "inherent value" discussed during this workshop inspired chapter 6.

The groundwork for this deliverable was done during and after secondments of Pilar Peralta Ardila and Jonatan Palmblad to UNL in Santa Fe, Argentina, and of Andreas Jünger (LMU) to EcoCastulum in Linares, Spain in 2025 and 2026. Jonatan Palmblad delivered two lectures during the secondment with direct bearing upon the content of the report: "Sostenidos en lo insostenible: La ciudad como problema y oportunidad" on 5 November 2025 and "Humanismo ecológico: cómo reconciliar la personalidad humana con la ecología" on 2 December 2025. The latter was a part of the Speak4Nature seminar "¿Qué es el Humanismo Ecológico? Diálogos entre Filosofía, Biología y Derecho" at the UNL together with two of its scholars, Carolina Attallah and Gonzalo Bailo. The seminar covered philosophy, biology, and law and circled around the topic of the place of humanity and humanism in the ecological crisis.

Lastly, in March 2026, Jonatan Palmblad was a short-term fellow at the Dipartimento per lo sviluppo sostenibile e la transizione ecologica (DISSTE) of the University of Eastern Piedmont (UPO), at which he delivered two lectures within the scope of Speak4Nature: "Technology and Ecology: Using Environmental History to Address Modern Ecological Challenges" and "Thinking Regionally: Building an Ecological Identity and Protecting Biodiversity." The preparation of these lectures and the

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discussions with Rodrigo Míguez, Rossana Pennazio, and Enrico Ferrero during the fellowship served as important contributions to this report.

We are immensely grateful to colleagues at all member institutions of the Speak4Nature consortium, whose critical and different viewpoints have helped us develop the present deliverable. Without these discussions, the following pages could not have been written.

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3 Orientation: The Origins of Justice and Ecology

3.1 The Concept of Justice

At first glance, "justice" might seem like a straight-forward concept: it could simply be the principle of fairness or the demand that good deeds be rewarded and evil deeds punished. However, this raises the question of what *fair*, *good*, and *evil* is—and of who the arbiter of that question should be. Justice could moreover be guided by the notion of equality or that of equity, and that which is *just* might be decided based on ideas of natural rights, caste systems and other hierarchies or privileges, individual effort, individual need, the Mandate of Heaven, or the Grace of God. The concept is also complicated by the many meanings and uses of the word itself: it can be used as a notion of ethics or a notion of law, which are not necessarily one and the same, and it can be a virtue or a principle, which also do not necessarily coincide. Justice moreover comes in many different kinds, from the conventional *distributive*, *corrective*, and *retributive* to historically more recent notions like *social*, *environmental*, and *ecological* justice. Many other kinds of justice exist, which is why we will begin with an inquiry into the roots of the concept and some of its developments.

A truly comparative study would have to consider justice across languages, cultures, and times, and we will here conduct a limited investigation of the history of the idea of justice that chiefly informs the notions used in the Speak4Nature project: *justice*, *justicía*, *justiça*, and *giustizia*. A better grasp of the cultural roots of this justice concept will, we suggest, give a better idea of what it might mean to preface it with "ecological."

Etymologically, the English term justice—like its counterparts in Spanish, Portuguese, and Italian—comes from Latin *justitia*. While our modern concepts are all obvious derivatives of this Latin notion, this also carries a range of different meanings like "equity," "righteousness," "uprightness," "the whole of the laws," "the goddess of justice," "holiness," "conduct in accordance with the divine law," "clemency," and "compassion" (Lewis and Short, 1879). To make it more complicated, *justitia* comes from *iustus*, which carries meanings like "just," "upright," "righteous," "lawful," "true," "proper," "perfect," "reasonable," "sufficient," and "right" (Ibid.). The polysemy of the Latin root

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words indicate why justice today can still be interpreted in many ways, but its many meanings generally refer to something *normative*, good, and desirable.

Today's notions of justice also carry many meanings, as we initially saw, but according to justice scholar David Johnston (2011), many theorists tend to consider the concept through a somewhat limited scope. He thus argues that the contemporary conception of justice tends to be hinged upon a distinction between two particular views: the idea that it is either utilitarian or deontological. In the utilitarian case, justice is understood as that which conforms to an ethical goal, such as the greatest happiness for the greatest number (e.g., of people or of sentient beings), while the deontological is characterized by the idea that justice is done when duties of what is *right* are fulfilled. But justice can also be rooted in the reciprocal relations between persons, Johnston argues, and shows how this relational aspect is both much older and more universal. This idea of reciprocity and relationality we will return to later.

If we go beyond the Latin root word, the reciprocal view can be traced much further, but this also shows how it can itself, paradoxically, accept injustice. A concept of justice is found already in the Mesopotamian Code of Hammurabi (c. 1753 BCE), where it is fairly representative of ancient uses prior to Greek philosophy, focused as it is on vengeance and very alien from today's notions of social equity (Johnston, 2011). Thus the ancient notion of justice is capable of protecting the poor against exploitation by the rich while simultaneously accepting other inequities in the social hierarchy—as in the cases of gender, class, and slavery. With Aristotle in the fourth century BCE, however, significant change came: while he, too, accepted slavery and wrote only of justice among free men, his reciprocal view of justice made it a virtue while emphasizing the need for distributive justice among equals (Aristotle, 1961; Johnston, 2011: 63–88).

The philosophy of justice has seen many turns since Aristotle, including the bifurcation into utilitarian and deontological notions that largely ignore the more ancient reciprocal understanding, but a significant development began in the wake of the French Revolution: the idea of *social* justice. What makes it significant is that the call for social justice is a call for a restructuring of society and its institutions in a way that makes justice possible among all people according to the same measure. This measure could be *desert* (that which we deserve), but social justice would increasingly come to

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be measured by *need*, and later by *fairness* (Johnston, 2011). The most globally accepted standard for social justice today, however, is that of the Universal Declaration of Human Rights, according to which "[a]ll human beings are born free and equal in dignity and rights" (article 1). While nonbinding and far from fulfilled, the declaration nevertheless provides an operational foundation for social justice around the world.

The concept of justice as we have discussed it so far is undoubtedly *anthropocentric* in the sense that it focuses on human relations alone. We will in this deliverable suggest that anthropocentrism should be ecologized rather than rejected, but a *narrowly* anthropocentric outlook will inevitably defeat itself. Such an outlook is abstract in the sense that humans are abstracted from the world, as if we existed in a void or on a separate plane of existence; the alternative, which we will return to later, is a concrete anthropocentrism in which humans are understood ecologically, in the flesh, as embodied and environed. This is why notions like environmental justice, climate justice, and energy justice serve as broadening notions that make sure that justice theories account also for how environmental destruction and mismanagement are unfairly distributed among humans, disproportionally impacting people in poor and marginalized communities and countries (cf. Nixon, 2011).

At the same time, as noted in D2.1 (§6.2), environmental, climate, and energy justice are nevertheless too human-centered for a fully ecological theory of justice, since they provide no real incentives for protecting nonhuman relations and the ecosystems these constitute together with us. The same problem is noted in D2.3 in relation to the environmentalization of human rights, which is an important tool with practical consequences, but which so far remains insufficient when it comes to protecting environments without human victims. However, acting justly in relation to the nonhuman world can be argued for anthropocentrically too, since the pursuit of justice without consideration for ecological limits and dynamics risks undoing the very "circumstances of justice" conceived by David Hume and John Rawls, "in which we neither enjoy unlimited abundance nor suffer extreme deprivation" (Johnston, 2011: 207).[1] For social justice to be possible, a functional

[1] Johnston himself does not consider this point. He makes the important point that social justice is not global enough, and that parochial understandings might entail injustice done to people elsewhere, but he does not account for the environmental and ecological dimensions of this problem. E.g., "The idea of social justice should be re-invented as part of a larger conception of justice, at the center of which lies the concept of social relations of mutual respect and reciprocity among citizens" (2011: 228). This re-invention, we argue, must go

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environment and ecology that can sustain it is a *condition*. Hence the "circumstances of justice" among humans imply a need for ecological prudence.

Ecological justice, then, can generally be said to refer to a normative good according to an ecological measure. It could be conceived of as utilitarian (as in aiming for maximizing the common good of all beings and ecosystems), deontological (as in demanding that the rights of nature never be violated), or reciprocal (as in when humans and the other parts of the biosphere interact in a measured way). The reciprocal understanding, which seeks to counteract imbalanced reciprocity, could here be interpreted as the normativity of ecological balance, an idea we will return to later.

Applying the theories of Speak4Nature will in light of the history of the justice concept constitute an important intervention. As Johnston argues, the history of justice can be largely understood through the changing conceptions of the *terrain* of justice: the generally accepted idea of equity according to which imbalanced reciprocity and other issues of injustice are defined. This is why historical notions of justice may appear unjust to us, and why our contemporary notion will likely be considered partly unjust by future generations. The mission of Speak4Nature, then, can be understood as nothing less than changing the very terrain of justice today. In line with previous deliverables, we will argue that this new terrain implies a cultural change, and that it must be the groundwork for a *socio*-ecological justice.

3.2 Ecology

Having considered justice on its own, we will now consider the cultural roots of that which is referred to as "ecological." Probing the historical depths of ecological thought will help us avoid the former pitfalls of the scientific discipline as well as outline the general nature of the ecological world in which we seek justice. As noted in D3.1 (§4.1–4.2), nature can be represented in many ways, but we will here focus on how its dynamics have been understood through ecological science.

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further by understanding human beings as ecologically embedded and ultimately relying on the integrity of the biosphere and its local ecosystems.

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The science of ecology was founded in 1866 when the German polymath Ernst Haeckel (1834–1919) coined the term *Oekologie*, defining it as "the whole science of the relations of the organism to the surrounding world" (1866: 286, our translation). Although ecology today has evolved into many different fields, such as *population*, *behavioral*, and *human* ecology, Haeckel's general definition still serves to pinpoint its overall object of study: organism–environment interaction. This may take many different forms, and ecologists can—for example—be specialists on different species, types, biomes, and levels of organization, but the overall focus remains the interaction of organisms with their environments (which, importantly, include other organisms). Biodiversity is therefore a foundation for ecosystems, and ecologists study the dynamic, shifting, and heterogenous patterns of these systems in different places, at different times, and at different levels (Schmitz, 2007: 7).

While ecology can be traced back to the nineteenth century, the general understanding of complex organism–environment interaction existed *avant la lettre*, as environmental historian Donald Worster (1998) has shown. Prior to Haeckel, naturalists like Carl Linnaeus (1707–1778) and Alexander von Humboldt (1769–1859) conducted studies that in retrospect could be called ecological, but Worster gives examples all the way back to antiquity of rudimentary but highly functional understandings of ecological complexity and interaction. After all, knowledge that can be termed ecological in hindsight can be found in any culture that has known how to live sustainably in relation to its surroundings. As Worster also notes, the history of ecology proper has been very eventful and full of inner tensions, but whether reductionist or holistic (cf. Leopold, 1989: 221–3), contemporary ecologists generally see as their object of study the interrelated activities between organisms and their environments.

Ecology has evolved immensely since its early days, but specialization and division of labor has also come at a price. Today, there is namely a general tendency among the natural sciences—ecology and biology included—to study places without humans or human impacts, or to look at humanity only as an external and disturbing factor, which in effect means to study ecology as if humans were not a part of it (Salomon and McKechnie, 2025).[2] This differs from the early ecology of the nineteenth century as well as from the branch of *human* ecology that was formed in the early twentieth century. Human ecologists study not only the interactions between human individuals and their

[2] On the need for an integrative perspective of humanity and ecology, see Böhning-Gaese, Kersten, and Trischler, 2025.

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environments, but also the interaction between social systems (households, cities, regions, etc.) and the ecosystems that contain them (Marten, 2008: 1–6; cf. Manemann, 2014). Importantly, the social domain lies not outside of the ecological one, but is part and parcel of it: it is the many ways in which we human organisms structure and constitute our societies and environments, from the local to the global.

The general knowledge of ecology is fundamental if we are to be able to judge what constitutes just ecological behavior, but we believe that Speak4Nature will benefit from also considering the insights of human ecology. This is because, firstly, it emphasizes the relation between the social domains and human systems, on the one hand, and the ecological domains and systems of all life, on the other. Human ecology thus makes it possible to consider humans as ecological agents while also distinguishing between individual action and action that is collective, institutional, or systemic. Secondly, it emphasizes that human beings are integral members of ecosystems whether they know it or not, rather than external actors or factors. Thirdly, human ecology stresses the intersection between humans and their environments, and it is the dysfunctionality of much of this interaction that we seek to correct and ecologize in Speak4Nature. By virtue of its potential and all-too-often actual destructivity, which we argue is effectively due to technological mediation fueled by a growth-centered economy, human action must be privileged in discussions on ecological justice.

Understanding of ecology proper and human ecology is essential for discussions on justice in an ecological sense, especially since we otherwise risk establishing frameworks and imaginaries that do not align with the ecological world we argue must be protected from destructive human activities. We would here like to mention a particular misconception that for long was prominent among ecologists themselves, and which still is popular among laypeople: the assumption that nature is something harmonious and stable, if untouched by human beings. Historically, ecologists have often assumed this to be the case, but in reality ecosystems are much more dynamic, changeable, and sometimes chaotic than they seem at first sight (Botkin, 1990; cf. Leopold, 1987; 214–15). While conservation of wilderness areas is essential for preserving biodiversity (cf. Washington et al., 2024), the belief in ecological harmony might lead to the belief that they will easily sustain themselves, that wildfires and bark-beetle infestations are not part of the ecological cycles of some biomes, that a changing ecosystem is necessarily a sick one, or that humans and their habitats are not a part of

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ecological nature (despite humans being organisms and many species having made cities their natural niche). The notion of Gaia also risks subscribing to this assumption, for even if the biosphere is self-regulating for the sake of life, the mass extinctions of the past shows that change is integral to it: the survival and proliferation of life does not imply the survival or well-being of neither species nor individuals. Ecological reality is rather one in which some ecosystems are changeable and others resilient, and one in which the relative global balance of the last twelve millennia is an extremely short part of earth's 4.5 billion years—a period that will not last forever.

Nature on earth is not harmonious, then, and it should not be romanticized as something normatively good for organisms and species. Death, sickness, decay, and even exploitation are not the enemies of life, but its prerequisite: the demise of one organism provides the energy for others, as well as the opportunity for evolution, and parasites and predators are just as ecological as are herbivores. Even extreme suffering pertains to ecology: for example, holoparasites like the New World screwworm (*Cochliomyia hominivorax*) can only exist by exploiting a host organism, which in the screwworm's case consists of a warm-blooded animal (human or otherwise) that is bound to suffer immensely and not seldom die if not treated (Rodríguez-Hidalgo et al., 2019). Brutal exploitation can thus not be considered an exclusively human phenomenon, nor one that is anti-ecological, for holoparasites can only survive by inducing pain, suffering, and death. While the screwworm is an extreme example, we suggest that the biosphere as a whole must be understood as a dynamic process in which individuals not only flourish but also naturally suffer. Beautiful examples of altruism and collaboration exist across ecosystems, but violence, rape, infanticide, and killing are also part of the ecological behaviors of nonhuman animals. Ecology is a necessary aspect of a proper ethics, we will argue, but it does not suffice as standard for human moral conduct as a whole.

3.4 The Fusion of Justice and Ecology

We have suggested that social justice cannot exist without some notion of ecological justice, since ecological integrity is a precondition for both the social domain of humanity and the very idea of justice. This begs the question of the relation between these two types of justice. While a synthesis could simply devise a theory of justice that simultaneously accounts for all life, we believe that social and ecological justice must be understood as distinct but mutually interdependent. We therefore

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second our colleagues in D2.1 who argue that justice must be understood as socio-ecological (§6.3, cf. Washington et al., 2024), and we would here like to make the case that, while social justice is conditioned by ecological justice, ecological justice is insufficient unless complemented by social justice. In light of an ecology that considers the complexities of the biosphere, justice must be socio-ecological not only because social justice is important too, but because a truly ecological justice is not concerned with humans at all and can motivate cruelties and atrocities for the sake of ecological integrity.

Although we make no claim on an ultimate definition of ecological justice, we will in the following outline what we consider a wholly ecocentric understanding of justice. This means that it is not a concept for regulating human action in relation to nature, since this is anthropocentric in the sense that humans are assigned moral agency and responsibility while other species are not. Rather, a truly ecocentric conception would look at how justice might manifest itself in the biosphere and its ecosystems. In short, ecological justice could be understood as justice *in* nature rather than justice *for* nature. We can and should think of justice also *for* environments and nonhuman organisms, but this, we suggest, is a human-centered question, since it concerns an asymmetric relation between us humans and the world surrounding us. This issue we will return to in chapter 6, after having substantiated the problems of ecological justice without social justice through historical empiricism.

By studying ecology, then, we might learn something about fairness in an ecological sense without romanticizing nature as a sort of ecological Paradise if left on its own. Although there is no harmonic balance in nature and asymmetries are common, ecosystems work through reciprocity and exchange rather than by utilitarian or deontological principles of what is right. We have thus seen that there is a tendency toward relative balance and dynamic equilibria, and taking too much or taking without giving something in return will often result in unwanted and unanticipated consequences, as George Perkins Marsh noted in 1864 (Marsh, 2003). We have seen how the idea of what is fair, good, and evil has differed among cultures in time and space, and we here suggest a “terrain of justice” (see §3.1) in which the arbiter is life as a whole: the dynamics of nature enforce justice whether we like it or not, making sure that all actions have an ecological reaction.

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While this aligns with many normative claims within environmentalist discourse, especially those that consider Nature a benign force, we would like to emphasize again that ecology has no special consideration for humans or other organisms whatsoever: what is good for biodiversity and life on earth is not necessarily good for us or the people we care about, and it provides no guidelines for protecting human dignity and wellbeing. For this, social justice is still needed, since atrocities committed by humans against other humans may very well be ecologically beneficial. An ecological benchmark applied to humanity provides the condition for social justice, we have argued, but it is a necessary and not a sufficient condition. Conversely, if we apply our human standards of justice to nature, we would have to condemn the natural behavior of the screwworm in the last section as well as that of many other members of our biotic community—such as the cat playing with its prey. Ecolocially speaking, however, they are simply playing their part in the web of life.

However, a minimal but fundamental ethic that distinguishes between *good* and *bad* actually seems to be omnipresent among organisms in the sense that they all need to be able to discern between what favors and threatens survival: an organism that cannot make such distinctions in relation to factors like food and predators will disappear along with its genotype by natural selection (Jennings, 1934; Palmblad, 2025). If we again consider the screwworm, its obligate parasitism can only be considered an *immoral* activity if interpreted from an anthropomorphic or anthropocentric perspective. From its own, worm-centric perspective, however, it is able to distinguish what is good from what is bad: and screwing itself into the flesh of a warm-blooded animal is decidedly a positive act from the perspective of the worm: it enables it to live and contributes not only to individual survival and wellbeing, but also to life as a whole. In this it does not differ from the cow eating grass, although the cow—from its cow-centric perspective—might be its unfortunate host.

Self-interest and instrumentalization of others, then, are decidedly part of ecological conduct, and to the extent that it favors the continuation of life as a whole, these are goods and not evils from an entirely ecocentric viewpoint. However, so are mutualism, altruism, and symbiosis—all of which are found in different species and serve their own ecological functions. The Darwinian-Spencerian discourse on the "survival of the fittest" has historically been used to legitimize competition and exploitation by the appeal to nature, but, as Peter Kropotkin showed at the turn of the twentieth century, the principle of mutual aid is equally if not more representative of an evolutionary factor

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applicable to both human and nonhuman organisms (2021 [1902]). In fact, collaborative and altruistic behavior can be found in all social organisms, and game theory exemplifies how individuals within an ecological community can either take the role of "doves" or "hawks": the "doves" are reciprocal and avoid risk, while the "hawks" are competitive, risk-taking, and opportunistic (cf. Rodrigues, Braga, and Wardil, 2025). Rather than being different species, these are examples of behavioral strategies that can be found within one and the same species.

What this means is that we cannot look for ultimate moral standards in ecology as a whole, since we would have to cherry pick the cases that align with our human and culturally contingent conceptions of justice, but it likewise implies that our concepts of justice have ecological and natural—not only cultural—roots. Thinkers like Aristotle and Hobbes assumed that language was a prerequisite for justice and that it could therefore only be enacted by human beings capable of speech (Johnston, 2011: 13–14), which would conform to a common understanding of "culture," but human infants and some other species clearly display an aversion to inequity. Sarah Brosnan and Frans de Waal have shown how inequity aversion of the first order, in which an animal reacts to being unfairly treated, is displayed not only by humans but also some apes, monkeys, dogs, and birds, while only apes and humans seem to display second-order inequity aversion: a negative reaction to others being unfairly treated, even when the individual being is benefitting from it (Brosnan and de Waal, 2003, 2014).

A sense of justice can thus be found in some species and some individuals, and human conceptions of justice can be understood as elaborations of this sense. The very idea of an ethic means to establish a rule of conduct that promotes desirable and thwarts undesirable behavior, and we humans have developed different ethical systems—indeed, different cultures—around the world. If we look at ecology as a whole, however, and ignore human-specific elaborations of just behavior, we find that individuals experience and induce both justice and injustice, being both reciprocal and opportunistic at the expense of others—generally depending on what is strategic for survival in the particular environment they are in. Taking risks by taking too much, acting like a "hawk" rather than a "dove," may very well be rewarded, especially for organisms in resource-scarce environments.

Thus, a possible and clearly ecocentric use of the concept of ecological justice, which also happens to coincide with the first meaning of the concept in the 1960s (see §5.1), is the idea that nature itself is

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an arbiter or enforcer of justice. While easily conflated with the idea that nature is harmonious, this idea is equally applicable upon the notion of dynamic and mutable equilibria. Cybernetically speaking, justice is here served by means of feedback loops that strive to maintain *homeostasis*, a relatively steady state of organisms, ecosystems, and other systems. Injustice would be to take too much of something or to never reciprocate (i.e., to abuse rather than use one's environment, cf. Palmblad, 2025), and ecological justice would become manifest by unpredictable side effects that help the ecosystem maintain its (relative) equilibrium—or by the turnover from one type of ecosystem to another (cf. Marten, 2008: 14–25, 83–7).

This is clearly an understanding of ecological justice that differs radically from most theories of justice and ethics; but it highlights how ecologically appropriate behavior—the conduct of most organisms—can be understood as that which contributes to the necessary negative feedback loops that uphold the homeostasis of the earth's ecosystems. At the same time, from a purely ecological perspective not rooted in human time spans and life spans, disrupting an ecosystem is only ecologically unjust if it puts life on earth at risk. This is so because, just like the death of an individual organism is an ecological good in that it supplies nutrition for other organisms, the death of one ecosystem can give rise to another and thus be part of an ecological succession (Marten, 2008: 83–87).

However, one could also argue that even the current extinction event, which is the sixth of its kind and different only to the extent that we regard the human component unnatural, is merely another ecological cycle in which a radically new condition for life will emerge from the ashes—as was the case with the Great Oxidation Event some 2.4 billion years ago.[3] It is not ecologically justifiable to prioritize the current geological epoch of the Holocene (or the Cenozoic era of which it is a part) over what might come next, since dramatic shifts and even mass extinctions are integral to the natural process—something that becomes apparent only when we think through geological and nonhuman time spans. Purely biocentric and ecocentric perspectives that disregard the viewpoint and values of humans cannot but accept the larger cycles of ecology, which prompts us to ask why an anthropogenic mass extinction would be any different from those that came before. Paradoxically, it

[3] On the difficulty of reconciling the human and geological time spans in relation to extinctions, see Chakrabarty, 2018.

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might seem, an anthropocentric component (if ecologically informed) thus becomes the rationale for caring for the species that coexist with us and on whose proliferation we depend, since these species and their individuals are important and valuable *to us*, but are just—like humans—ephemeral stepping stones in the process of evolution by which life adapts to the changing conditions of earth.

Ecology, then, has everything to say about justice in terms of ecological balance, and how relative equilibria are imperative for life, but little to say about justice for human persons and communities. This does not mean that a purely ecological understanding of justice is not important, quite the opposite, but it shows the need for justice to be conceived also in socio-ecological and human-ecological terms. Firstly, because there are no ecological reasons to protect humans and human rights: social injustice may, as we will see later, be considered sacrificeable for the common good of the global biological community, and disastrous events (e.g., pandemics, starvation, and earthquakes) and morally atrocious acts against other humans (e.g., induced starvation, social control, genocide) can very well be considered *ecologically* just. The mass dying of humans, as we will see later, can without moral guardrails thus be rendered a necessary evil and an ecological good. Human beings, moreover, have specific needs that cannot readily be applied to other species due to the kind of societies most of us live in: education, housing, and other aspects outlined in the Universal Declaration of Human Rights.

Secondly, a socio-ecological and human-ecological standpoint provides a necessary anchor for valuing nature (cf. D2.1, §4.3) and escaping ecological relativism. While agency should be recognized also beyond humanity (D3.1, §4.1.3.1), highlighting how human beings and institutions have moral agency in the sense that we can blame and praise each other for our conduct (Balslev Willert and Knudsen, 2025) is what gives us humans accountability and other species not, but the human perspective also provides a justification to care for the species existing at this point in natural history. By us humans valuing the species and spaces around us—whether this be because we consider them sacred, aesthetically pleasing, or necessary for human life and flourishing—we provide an anchor and a measure by which we can avoid the relativism of ecology. In short, we thereby have a reason for preserving earth's current ecosystems and letting the biosphere flourish rather than accelerating its current trajectory toward another extinction cycle (see §6.4 below).

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Ecological justice in its general and strictly ecocentric sense, we suggest, is akin to *ecologically sound behavior*. In this sense, it is not an abstract principle, but a relationship of reciprocity between organisms and their environments: a behavior regulated not by a justice system, but by an ecosystem. By the same token, however, ecological *injustice* is ecologically *unsound* behavior, and when human behavior takes this form, ecological justice becomes the subject of our ethical frameworks and justice systems—as demonstrated in ecological law and the rights of nature. From a human-ecological perspective, then, ecological justice can be something as simple as dealing with the environment within the ecological bounds of the region we reside in: taking not more than we need, provided that our needs do not exceed the carrying capacity of the environment we are in. This is increasingly difficult in a globalized and technologized world, as we will see, and it calls for attention to the question of *how* to make justice socio-ecological.

In what follows, we will investigate the role of culture in relation to ecological justice (chapter 4), the tensions exhibited in the conception of the notion of ecological justice (chapter 5), and finally reflect upon the implications for the contemporary discussion on justice in and for ecology (chapter 6).

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4 Cultures of Ecological Justice and Injustice

4.1 Ecologically Integrated and Alienated Cultures

The word culture is as protean as the word nature: a part of everybody's vocabulary, they nevertheless contain a multitude of different meanings (Williams, 1985). Like our colleagues in D3.1, we hold that the concepts should not be understood as discrete and fully distinct from one another. We nevertheless believe that the two concepts, their many meanings notwithstanding, denote different aspects of existence, which is why we will talk of them separately—without implying a complete separation. In the following, we will therefore approach culture *ecologically*. Like elsewhere in ecology, culture in our understanding does therefore refer to something that is interconnected, interrelated, and overlapping with other cultures and ecological phenomena. Importantly, such cultures can exist at different levels of organization, from small groups to entire nation states or continents.

An ecological approach to culture makes it a concept for describing the changeable mediation between social organisms and their environments. As such, culture includes human–human interaction (social) as well as the interaction between social systems and ecosystems (cf. Marten, 2008), which makes it a *socio-ecological* and *bio-cultural* concept. This kind of framing aligns with the notion of "cultural sustainability," which some use to refer to the ecological sustainability of a culture as a whole, and to whether it impedes or promotes such sustainability (Meireis and Rippl, 2019).

We will therefore suggest that any given culture can be more or less compatible with the ecology that contains it: it may be ecologically *integrated* or *alienated*. Alternatively, we can think of cultures on a spectrum in terms of how sustainable they are. A society that persists over time without undermining the ecological integrity of the surrounding world can in light of chapter 3 be understood as exhibiting an *ecologically just* culture. The notion of culture can therefore be used to describe how it is possible that some human societies radically depart from the ecological checks and balances that have regulated humanity for most of its existence. As such, culture is not a departure from nature

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but a crossroads at which we can either become more integrated with or more alienated from its ecological dynamics.

One of the many meanings of nature refers to what is innate, instinctive, or inherited—that which is *in our nature* and which we do not need to learn—and many meanings of culture denote the contrary: what is acquired, learned, and accumulated during the lifetime of an organism through *nurture*. Our ecological understanding of culture, then, refers to contingent characteristics that differ across space and time within the same kind of organism. While such characteristics can be individual, we follow the general meaning of culture as a pattern unfolding at a collective level. A culture in this sense is only a generalization and a pattern, and its very existence means that it can be rejected in part or as a whole by individuals socialized within it. The ecological understanding of culture as a pattern, moreover, shows how and why cultures generally survive the existence of individuals: a culture, like an ecosystem, is more than the sum of its parts.

A culture, in this sense, takes the form of an emergent whole—like an organism, an ecosystem, or the biosphere. This ecological understanding of culture also means that we can avoid misanthropic assumptions about human nature, instead understanding unsustainability and ecologically disastrous behavior as something contingent, changeable, and indeed cultural.

Let us consider three overlapping aspects of what culture can mean from an ecological point of view, which could all be understood as forms of niche construction by which organisms adapt to or modify their environment for the sake of life:

1. **Culture as behavior**. The word culture can refer to habits and customs that, on a collective level, regulate the behavior of individual organisms. Any social animal whose group displays a general behavior that may change across space and time can be said to have culture in this sense of the word. Among humans, collective habits, traditions, and rituals amount to distinct behavioral cultures, which may include anything from mass consumerism and stock trading to hiking, gardening, and community building. Such behaviors rely on different knowledges, infrastructures, and material processes, and can all be judged by ecological standards.

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2. **Culture as artifacts**. The notion of "material culture" points instead toward artifacts created by social groups of organisms. Hence this aspect of culture is found in many other species too, and it could be said to exist whenever the construction of shelter, ornament, or tools take place. With us humans, however, material culture is very diverse and extensive, since it not only includes powerful tools, machines, and infrastructures but also includes the many products of these technological artifacts. Human material culture, when mediated by technical equipment, therefore radically alters our functional relationship to our environment. Culture as material artefacts, whether artistic or technological, is an expression of human–environment interaction, and the efficacy and design of tools and machines itself becomes a factor regulating this interaction: tools may not determine what we do, but well what we *can* do. Without technological artifacts, the ecological crisis would not be possible.
3. **Culture as worldmaking**. Culture can also refer to worldviews, *Weltanschauungen*, imaginaries, narratives, ideologies, epistemologies, and ontologies, which all can be understood as symbolic or semiotic understandings of our environment in the past, present, and future. Biosemiotics shows how nonhuman animals can also be understood to interpret their respective worlds semiotically, but we will focus on the only such world we can know: that which is human and which relies on high levels of abstraction—a level that enables both scientific and religious conceptions of the world (cf. Mumford, 1922, and Hornborg, 2017). Anthropology has shown how these worldviews can differ fundamentally across cultures, which explains why some cultures understand nature in very different ways from how people tend to do it in the modern cultures of the Global North. Culture in this semiotic sense includes human languages and it informs the other two aspects mentioned: behaviors can be codified as laws or traditions and knowledge can be developed into science, technology, and planning. Thus this kind of culture is essential for how we conceive the world and its purpose, and our imaginaries can structure our very practices (cf. D3.1, §4.1.2). If the technological artefacts regulate what we can do, our worldmaking regulates what we may want to do.

This is in no way an exhaustive account of what culture can mean, but these three points serve to make sense of the different cultural aspects of ecological (in)justice. While culture in the semiotic sense (convictions, beliefs, assumptions, worldviews etc.) is the focus of this deliverable, we find it

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crucial to understand this term as something more (behaviors and artifacts). This ideological understanding of culture is limited to the human realm of abstraction (the images, imaginaries, and ideas that vary among people across space and time), and it is central for understanding the *ideas* of ecological justice. Culture as worldmaking decides whether we understand ourselves as part of nature or as external actors, and people can thus be integrated with or alienated from the insights of ecology and traditional knowledge. But integration and alienation occur also within the other two aspects, since we may behave in ecologically sound or unsound ways and can create artefacts that either bring us closer to the ecological processes on which we depend, or that bring us far away from them as when our primary food source becomes the restaurant, the supermarket, or the delivery.

Ecological justice, then, can be understood in practice as the integration of human communities with their ecological surroundings, which means that their behaviors and traditions, artworks and technologies, and overall imaginaries are functionally interrelated with the ecosystems around them. Conversely, ecological injustice is concretely found in human communities that develop in ways that ignore the ecodependency (cf. D2.1, §3.5) and undermine ecological integrity. Finally, cultural sustainability characterizes ecologically integrated cultures, whereas cultural unsustainability is characterized by a growing ecological alienation in all aspects of culture. When culture in the three aspects becomes detached from nature in the ecological sense, we thus see how people act, create, and interpret the world in ways that are not compatible with the ecological conditions we need to survive. The answer to the ecological crisis in these terms is a genuine understanding and realization of the European–Chinese notion of “ecological civilization” (Worster, 2022).

4.2 The Socio-Ecological Rift in History

When did the ecological crisis begin? As is outlined in D2.1 (§3.1), a decisive turning point in the history of human–environment relations occurred in the mid-twentieth century, when the so-called Great Acceleration began: at this time, human activities of earth-transforming magnitude came to increase and intensify exponentially, which is visible both in terms of growth in economy and destruction in ecology (McNeill and Engelke, 2015; Steffen et al., 2015). The Great Acceleration is a quantifiable, socio-ecological phenomenon that proves a strong correlation between human activities and the escalating environmental problems we face, and it also precedes the modern

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environmentalist movement of the 1960s. If the mid-twentieth century were the origin of the crisis, then the cultural and qualitative underpinning could be understood as the culture of consumerism and mass consumption (especially in light of the Capitalocene framing by our colleagues in D2.1, §3.1).

However, even in quantitative terms, the crisis has been suggested to start much earlier, and the Anthropocene—the now formally rejected but still used notion of humanity as a new biogeochemical force of nature—was originally said to have started with the Industrial Revolution, but has been scientifically dated to events ranging from 8,000 years ago (Ruddiman, 2003) to the Great Acceleration (e.g., Zalasiewicz et al., 2014). The official Anthropocene Working Group settled for the latter, but prior suggestions constitute important milestones on the path leading up to the shape the crisis has taken today. What, then, is the role of culture in this build-up of environmental problems? We will outline some important steps.

Ecologically unjust cultures must always have existed, only that the justice *in* ecology made it so that they did not survive to tell the tale. Today, the issues of ecodependence can be temporarily circumvented by the technological aspect of culture, by which humans can find ways to depend less on their surroundings only to accumulate an ecological debt passed on to future generations or people in remote parts of the world. This very problem provides us with a good reason for thinking of the crisis in socio-ecological terms.

When did human beings find a way to postpone the consequences of ecological destruction? A seminal work in the role of culture in the ecological crisis is historian Lynn White, Jr.'s article on "The Historical Roots of Our Ecologic Crisis" from 1967. White argued that with new technological artifacts (more efficient plows) in the seventh century, west-European "[m]an's relation to the soil was profoundly changed. Formerly man had been part of nature; now he was the exploiter of nature" (White, 1967: 1205). This explanation shows how culture as *behavior* and as *artifacts* can depart from ecological reality, but his most famous contention was that of *worldmaking*: "Human ecology is deeply conditioned by beliefs about our nature and destiny—that is, by religion," and the ideological driver behind the crisis was west-European Christianity (ibid.). White's argument has been debated ever since it was published in 1967, and just like he admitted in his article, Christianity can also

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furnish us with ideas promoting ecological integration. However, we suggest that White's focus on human power over nature misses an important point made by his Stanford colleague Lewis Mumford: namely, that human technology exerts power also over humanity (1934, 1970). While Christianity and older inventions have played a role in the rupture between some cultures and their surrounding ecosystems, the rift that causes both social and ecological injustice is rather that which coincides with the waning of the middle ages: early modernity and the European "discovery" of the New World, which in turn coincides with globalization, the Columbian exchange, western colonialism, and the Scientific Revolution. If White had coupled the crisis with western religion, later scholars like Carolyn Merchant (1990) instead coupled it with western science.

Throughout the roughly five centuries of western modernity, skill, technique, and technology have become less a tool for shielding ourselves against the dangers of nature and more one by which we are able to modify the natural world. This period signifies a shift in perception from an organic and essentially living nature to one that is mechanistic and dead, a clockwork that can be manipulated entirely if only we figure out how its mechanism works (Merchant, 1990; Whitehead, 1929; Mumford, 1944, 1970; Botkin, 1990; cf. D3.1, §4.1.1). At the same time, western modernity contains reactions to the mechanistic view (see §4.4 below), which instead consider nature as a dynamic and interconnected whole that can destroy us or, possibly, be destroyed by us. While many today might consider nature a passive backdrop for humans, it can escape nobody upon reflection that the biosphere is dynamic in terms of phenomena like weather, seasons, pathogens, and disastrous events like volcanic eruptions, tsunamis, and floods. Among those who recognize that these dynamics in some cases react to human activities, the views of nature can nevertheless vary, as when it is considered as fragile, durable, or capricious—tendencies that belong to particular ecosystems rather than to nature or the biosphere as a whole (Marten, 2008: 121–35).

As Mumford argues in *The Pentagon of Power* (1970), early modernity signals an important change in the way and scale that humans interact with the environment—but this will not only culminate in ecological destruction but also dehumanization and exploitation of vulnerable humans. The patterns of behavior, technological artifacts, and imaginaries of early-modern Europe have since developed and spread across the globe, and—if we are to believe Mumford—we are now all part of a "planetary megamachine," or what Peter Haff (2014, 2023) has called the "technosphere." These theories,

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which suggest that we live within socio-technological systems that we are not ourselves in control of, overlap with the theory embraced by our colleagues in D2.1: the "Capitalocene." This concept has been understood in different ways, but in essence it is nothing as simple as a mere blaming of capitalists or the *idea* of capitalism, for it rather refers to the specific socio-ecological configurations enacted by the capitalist economy (Hornborg and Malm, 2015; Moore, 2016). Capitalism as a system encompasses culture in the three senses outlined above—behavioral, material, ideological—and it is substantiated by the correlation of economic growth and environmental harm. As such, it serves as a suitable cultural explanation, if widely understood, of the ecological crisis, which simultaneously shows why justice must be understood in socio-ecological terms. As our colleagues have put it: "it is not the 'anthropos,' but a specific economic and *cultural* form that is responsible for the ecological crisis: capitalism" (D2.1, §3.1), and they argue that "[t]he current global ecosocial crisis is the result of a very specific social configuration: industrial capitalism" (D2.1, §3.5). This framing can be complicated by considering how the Soviet Union and other non-capitalist societies have also been extremely disastrous in both social and ecological terms, which is why we will focus on the common denominator: growth and expansion. When these guide the behavior, production, and thinking of a culture, it is bound to become unsustainable and ecologically unjust no matter what the underlying ideology or kind of economy may be.

4.3 Ecologically Just Ideas and Cultures

4.3.1 Premodern Cultures

Studies in the history of ideas generally seek to trace the genealogy of conceptions back to their point of origin. Since our fundamental understanding of ecological justice is relational, however, we suggest that ecological justice has been enacted by any culture that has not undermined the environment on which it depends. The general idea that the surrounding world can be treated justly or unjustly must have emerged at some point, probably when ecological problems were first understood, but following the written record it goes at least as far back as antiquity.

The ancient Greeks, who considered nature not as a part of reality but rather as the process of reality itself, could think of it as spontaneous in the sense that it provided both good and bad effects on

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humanity, and that skill (*techne*) was the way by which they could protect themselves against the dangers (e.g., Aristotle, 1955: 330–31, 1961: 334–5). This dynamic understanding of nature is decidedly proto-ecological, and earlier thinkers like Herodotus, Thucydides, and Xenophon warned against the hubris of abusing the environment (Hughes, 2006: 18–26). "In Antiquity," White moreover tells us, "every tree, every spring, every stream, every hill had its own *genius loci*, its guardian spirits . . . Before one cut a tree, mined a mountain, or dammed a brook, it was important to placate the spirit in charge of that particular situation, and to keep it placated" (1967: 1205). The idea that nature might reward or punish us depending on what we do was therefore clearly present in the ancient Greek mind.

Both the Greek and Roman philosophers moreover thought of law as either human-made or ordained by nature, perceivable in the Greek distinction between *nomos* (custom) and *physis* (nature), and Roderick Nash writes how the Romans distinguished between *jus commune* and *jus naturae*. While the idea of natural rights have often been applied to humans alone, Nash points out that the Romans also conceived a *jus animale*, which "implied that animals possessed what later philosophers would call inherent or natural rights independent of human civilization and government" (Nash, 1989: 16–17).

Consider also the Roman emperor Marcus Aurelius (121–190 CE), who in his *Meditations* wrote:

> Injustice [*adikos*] is impiety. For in that the Nature of the Universe has fashioned rational creatures for the sake of one another with a view to mutual benefit based upon worth, but by no means for harm, the transgressor of her will acts with obvious impiety against the most venerable of Deities. (Aurelius, 1941: 230–31)

Justice was according to Aurelius a question of following the will of nature, which—like among the Greeks—was not a place but a holistic process of which we humans also were a part. His musings are today most remembered for their emphasis on self-discipline, but in them one also finds a worldview that is difficult not to call ecological; "Consider each little plant, each tiny bird, the ant, the spider, the bee, how they go about their own work and do each this part for the building up of an orderly Universe," he wrote, arguing that humanity and its work is a part of this universe (ibid., 98–9). The

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world of Aurelius was one of wholes and parts, of life and death, in which nature sets limits that we cannot but accept.

Chinese antiquity also presents examples of ecologically just behavior in the broad sense. Mayfair Yang writes about how, in an important myth harking back to a Chinese culture from 2200 BCE, Yu the Great (大禹) saves his people from floods by redirecting a river. What from today's viewpoint might be considered a human intervention in nature was in Ancient China rather an example of working *with* nature. The moral of the story, Yang writes, is "that a benign natural environment conducive to human flourishing depends on the personal virtue of human heroes, good relations between human and other species, the ritual performance and incarnation of environmental ethics, and a reverence for the higher powers of natural/divine forces" (Yang, 2021: 12–13).

Moreover, during the Zou dynasty, the philosopher Mengzi (孟子, c. 371 – c. 289 BCE), Latinized as Mencius, taught that human prosperity may only be achieved *within* what we now call ecological limits, and that human conduct and techniques must therefore be regulated within these bounds:

> If the seasons of husbandry be not interfered with, the grain will be more than can be eaten. If close nets are not allowed to enter the pools and ponds, the fishes and turtles will be more than can be consumed. If the axes and bills enter the hills and forests *only* at the proper time, the wood will be more than can be used. When the grain and fish and turtles are more than can be eaten, and there is more wood than can be used, this enables the people to nourish their living and mourn their dead . . . (Mencius, 1895: 130–31).

Although not framed as *justice*, the argument here was that a fair treatment of the environment will lead to good consequences and avoid negative ones. Ancient wisdom was, however, often a reaction to ancient folly, and no ancient culture can be said to have been free of ecological challenges and misuse of land. Indeed, according to George Perkins Marsh, the fall of the Western Roman Empire was largely due to abuse of its environment (Marsh, 1864: 5–8). Ecologically just and unjust cultures and ideas can be found across the world in premodern times, and even Lynn White (1967) finds an exception in Francis of Assisi (c. 1181 – 3 October 1226 CE). Culture, in the three ecological aspects

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we are considering in this deliverable, thus remains a regulating factor through which societies can integrate with or alienate themselves from conditions of the biosphere.

The ideological component, however, is where the legacy of premodern ideas continues to exist and impact people around the world, which is chiefly visible in the lasting influence of world religions. While the Abrahamic religions provide rationales for exploiting the nonhuman world, as White argued, they also contain rationales for the opposite just like the other world religions do (Marten, 2008: 125–33). An example of the import of world religions is found in India, where the notion of *dharma*—which is found in Buddhism, Hinduism, and Jainism—characterizes the conduct of both human and nonhuman nature, which makes for a worldview in which the ecological world is more than a passive backdrop. In the legal systems, this is reflected by both religious and secular motivations for protecting different aspects of the environment (Brara, 2017). Just like an ecosystem, modernity is not a discrete and homogeneous entity, then, but a cultural paradigm that overlaps with sometimes contradictory ideas and beliefs. The world religions thus provide an important root of ecological justice—one that is still very much alive.

4.3.2 Non-Modern Cultures

Given that the cultural paradigm of western modernity provides justifications for acts of socio-ecological injustice, the wide diversity of cultures that precede or exist alongside it constitute alternatives to be considered. However, modernity as a paradigm is not uniform but contains a variety of ideas, including internal critiques of its mainstream assumptions regarding progress, enlightenment, and development. Conversely, the body of cultures that are not included in modernity—that is, all other cultures—is extremely heterogenous and cannot be reduced to a singular alternative, whether this be considered positively or negatively. Western modernity, moreover, is not the only modernity (cf. Ghosh, 2016), but we would here like to focus on *non-modern* cultures: those who have not been a part of a developmental paradigm.

This notion of the non-modern includes that varied set of cultures, ideas, and knowledges termed *Indigenous*: just like ideas of progress have leaned on the idea of the *ignoble savage*, a barbarian

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who is lagging behind in the “march of progress,” many critiques still lean on the Romantic stereotype of the *noble savage* whose wisdom will guide us. For example, as Shepard Krech III argues in *The Ecological Indian* (2000), the peoples indigenous to North America have been framed positively or negatively in relation to ecology, and both obscure the variety of ways that these peoples have lived in history. The same pattern can be observed in South America, where the stereotype of the "ecological native" (Ulloa, 2004) assumes, from a colonial perspective, that certain populations are responsible for protecting ideal or pristine ecological ecosystems. These populations are reduced to exotic, needy, minor, feminized, or uncivilized beings, who at the same time are handed over the burden of righting the wrongs done by colonial powers.

The often well-meaning but nevertheless exotifying and generalizing portrayal of Indigenous thinking, knowledge, and wisdom as a panacea does injustice both to the integrity and humanity of these diverse peoples—and it says something about a simplified understanding of culture. If culture is understood solely on the basis of worldview, ideology, or ontology, it might seem plausible that the paradigm of western modernity—which now far exceeds the “west”—can be dissolved or corrected by simply changing people’s cultural outlook and perspective. In reality, however, Indigenous cultures are not only diverse but also co-evolved with their local environments (Marten, 2008; Gudynas, 2011; Tănăsescu, 2022; D3.1, §4.1.3.1). Moreover, history shows that Indigenous cultures can also be fallible: when human populations reach greater numbers and develop technologies with high environmental impact, they tend to become unsustainable regardless of what culture they belong to (Krech III, 2000). Hence “culture” must also be understood in terms of behavior, organization, and technology that develop in tandem with “nature”—and never reduced to that aspect we refer to us as worldmaking.

From such a holistic outlook, the paradigm of western modernity constitutes the most unsustainable and global culture in history, not only due to ideology and attitude but also due to the science and technology that makes this possible. And yet, cultural ideas and concepts may act as codes of conduct and regulate human action and agency, whether this be to legitimize an imperial attitude to the human and nonhuman environment or to curb one. With these caveats in mind, by which we can avoid using “Indigenous” as an essentialized category, it is both possible and important to learn from non-modern cultures when addressing the ecological crisis. We can then see how, among the diverse

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peoples and cultures referred to as Indigenous, some develop their own concepts of ecological justice, exercising their cultural autonomy and their right to shape their own way of life (Escobar, 1995). According to Arturo Escobar (2010), these alternatives have emerged from hybrid spaces where the modern, the premodern, and the antimodern coexist simultaneously. It is within these spaces—e.g., rural communities, impoverished populations, African-descendent or black communities, and urban working-class sectors—that subjects and their own alternatives, their own understandings of ecological justice, have been forged.

Indigenous and other non-modern cultures may have their own ideas of what is ecologically just and unjust, then, and to really learn from them it is important to listen to people within these cultures; especially in regard to the local problems and possibilities they may experience and find important. While it is tempting to focus on Indigenous ideas like Mother Earth, it is important that we do not project a global and totalizing vision upon Indigenous peoples who in reality are better characterized with their deep understanding of earth as the local territory of which they are themselves a part (Lévi-Strauss, 2021: 1–40; Tănăsescu, 2022).

It is important to note that ecological justice, when understood broadly as an ethical attitude to one's environment and not only to people, is exhibited in Indigenous cultures around the world—and this is discernible in the ecological integration of their respective and different worldviews. E.g., an animistic worldview, according to which spirits reside in or around rivers, mountains, and other features of our surroundings, imply that the world is dynamic and that our actions toward these features can be considered within an ethical framework. These worldviews should not be generalized into one, nor their implications, but it should be noted that the world tends to be understood as active. Rather than understanding the world as fragile and in need of our active stewardship, then, this many times means that the world is itself active and can punish us when we offend it—much like was the case among the ancient Greeks. While recognizing the diversity of all Indigenous cultures, a sense of justice can be found in any such culture that ordains that taking too much is wrong—whether this be motivated by an ethical conviction or the question of not undermining the integrity of the environment on which these people depend.

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While Indigenous ideas cannot be subsumed under the notion of ecological justice, then, there are however some ideas that truly have influenced the contemporary debate on ecological justice. In what follows, we will cover only some of these ideas, focusing on notions that are prevalent in the contemporary discourse on ecological justice and the rights of nature.

4.3.3 *Buen vivir* or *sumak kawsay*

Crystallizing as a concept in South America in the 1990s, the idea of *buen vivir* ("good living") or *vivir bien* ("living well") has become an important concept for recognizing value in nonhuman nature and harmonizing this with human well-being, and it has been included in the respective constitutions of Ecuador and Bolivia. Eduardo Gudynas (2011) describes how, in Bolivia, the concept serves as a goal for society, while in Ecuador it is used to denote a set of rights along with others, such as the rights of nature. Though its exact meaning varies, *buen vivir* builds on Indigenous ideas and constitutes an alternative to the western notion of development, both questioning its adequacy and constituting an alternative to it. Buen vivir is the translation of *sumak kawsay* in the Kichwa language, while in Bolivia it has been translated as *vivir bien* and instead stems from the concept *suma qamaña* in the Aymara language as well as the Guaraní notions of "harmonious living (*ñandereko*), good life (*teko kavi*), the land without evil (*ivi maraei*) and the path to the noble life (*qhapaj ñan*)" (ibid., 442–3). Similar ideas are also found in *shiir waras* of the Shuar people and *küme mongen* of the Mapuches. These Indigenous concepts cannot be conflated to one and the same meaning: some are strictly bound to the region in which they are used, some are old concepts, and some are neologisms. Gudynas argues that *buen vivir* acts as an umbrella term for this plurality of concepts and ideas. In common, however, they have that they are all alternatives to western modernity and its *development* concept, either explicitly or by virtue of being different visions of what a good and prosperous life can mean.

The western discourse on development—which is integral to the notion of sustainable development—hails from the historical idea of progress and enlightenment as desirable or even inevitable, and it often conflates progress in life quality with economic growth and technological innovation. While such factors can and do improve the quality of human lives, the conflation obscures how it also can and does worsen the quality of life for many—environmental destruction being one of the key reasons. In this context, the non-modern challenge of *buen vivir* concepts to the

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doctrine of development provides an important corrective that promotes ecological justice. According to *sumak kawsay*, for example, there is no linear process to follow, nor a final, superior stage to achieve. On the contrary, there is a holistic perspective in which all human endeavors should create material and spiritual conditions to build and sustain the harmonic life or *sumak kawsay:* an ever-changing process in which humans are analogous to other life forms on earth—those with whom one should live in permanent dialogue (Viteri Gualinga, 2003).

While many of the Indigenous notions exist independently, the two main concepts behind *buen vivir* are both neologisms that have been formed in reaction to modernity. *Suma qamaña* seems to have been coined and developed by Aymara sociologist Simón Yampara (Gudynas, 2011: 444), while the Kichwa notion of *sumak kawsay* has a somewhat more complex history. In his genealogy of the concept, José Benjamín Inuca Lechón (2017) describes how *sumak kawsay* developed from the sibling concept of *alli kawsay*, and that both of them were examples of *yachay tinkuy*—a notion referring to the confrontation of knowledge, ideas, and feelings. As such, they both confront ideas and sentiments imposed by western modernity. Strictly speaking, neither of the two Kichwa concepts mean *buen vivir*, but rather *vida buena* (*alli kawsay*, "good life") and *vida hermosa* (*sumak kawsay*, "beautiful life"). *Alli kawsay* seems to have been introduced in 1939 and 1940 in the official journal of the Federación Ecuatoriana de Indios, first in relation to gaining a good life through education, then as a concept for unifying workers for the sake of a good life without exploitation. A few decades later, in the 1980s, several developments occurred. In 1984, Indigenous leaders and Catholic missionaries developed *alli kawsay* in workshops as a concept for a good life in the past, prior to colonization and forced integration, which served as a model for a future in which different cultures could co-exist on equal terms. It was two years prior, in 1982, that *sumak kawsay* emerged in the Ecuadorian Amazon through the Centro de Investigaciones de la Educación Indígena, then referring to a beautiful life in the jungle undergirded by Kichwa knowledge. In 1986, *sumak kawsay* was embraced in the Ecuadorian highlands by state actors, who used it to denote a beautiful life based on local diets and culture, contrasted with imported food, illness, and bad attitudes. Different organizations and actors, from missionaries and the Communist party to the Ecuadorian State, interacted with Kichwa people to develop the concepts, and *sumak kawsay* was finally embraced by the Consejo Nacional de Coordinación de las Nacionalidades Indígenas del Ecuador, founded in 1986. In this iteration, *sumak kawsay* became a concept against oppression, discrimination, and

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exploitation, and for Indigenous rights and an intercultural society that cares both for local and global problems (Inuca Lechón, 2017).

If *buen vivir* promotes a notion of life and quality of life different from that of western modernity, it also provides a vastly different notion of nature—one that differs both from the idea of nature as mechanistic and conquerable and that of nature as a pristine realm separate from humanity. In the *sumak kawsay* understanding of nature as *pachamama*, all beings are instead considered in relational terms, akin but not reducible to the insights of ecology.. This includes the idea of belongingness to a vital and cosmic whole, which is different from historically Western traditions (Báez, Michelle, and Cortez, 2012).

The paradigm of *buen vivir* thus lays the foundations for alternative ways of understanding the world. It emphasizes its relational and spiritual dimension in order to solve problems and needs through solidarity and reciprocity. Such a worldview strengthens interdependence while maintaining autonomy. However, the *buen vivir* paradigm is under threat. There are projects to co-opt Indigenous worldviews to integrate them into the market and thereby obscure and undo their fundamental opposition to the cultural paradigm of development. Hence some communities give up their own local forms of subsistence to turn into a labor force and converge on extractivist activities at the detriment of biodiversity (Viteri Gualinga, 2003).

To sum up, *buen vivir* has gained a life (or several lives) of its own, developed in different directions and understood according to different traditions, but it remains an umbrella term for the various views of a good and beautiful life as conceived by South America's Indigenous peoples. Importantly, its key concepts have been developed in reaction to the imposed and socioecologically unsustainable development of modernity, and to the extent that modern development is understood as ecologically unjust, *buen vivir* can be understood as a concept of ecological justice.

4.3.4 Body-Territory

Ecofeminism is also an important source of socio-ecologically just ideas, and many important contributors come from Europe, the United States, and Australia, we will here look at another Latin American strand of thinking. There, an ecofeminist approach to socio-ecological justice that draws

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from Indigenous conceptions as well as those of other marginalized communities is manifest in the emergence of notions like *cuerpo-territorio* (body-territory) and *territorio-cuerpo-tierra* (territory-body-earth). These and similar concepts serve to challenge the hard separation of organisms and their environments, supplanting abstract space with concrete and particular configurations of socio-ecological places. *Sumak kawsay*, we have seen, proposes living in harmony, generating the common good, and promoting mutual support. However, the study of feminist political ecologies rooted in *Abya Yala*—the Guna name for the Americas, used by some of the continent's Indigenous peoples—has deepened and expanded the idea of *buen vivir* with these new and critical concepts. The feminist political ecology of Latin America here goes beyond institutional frameworks to engage with everyday practices and the private sphere, the body, and emotions related to the environment (Ulloa, 2017; 2020). In the following, we will consider some of these contributions and the productive tensions they have resulted in.

In Latin America and the Caribbean, scholars and social movements have developed critiques of colonial notions of conservation, "paradise," and exotic portrayals of nature as a feminine entity that needs to be protected and controlled (Ojeda, 2023). From this analytical standpoint, the "body-territory" notion developed by Indigenous communitarian feminist women offers a transformative response to hegemonic notions of nature; notions that antedate the colonial period itself.

According to Lorena Cabnal, a Maya-Xinka communitarian feminist from Guatemala, bodies and the places they inhabit are inseparable. "Body-territory" emerged from the political practice of community feminists and made a foray into academic circles. Caring for territory-body-land entails recovering the expropriated body, or, in Cabnal's words, "to generate life, joy, vitality, pleasures and the construction of liberating knowledge for decision-making" (Cabnal, 2010: 23).

However, subsequent critiques have argued that gender oppression existed in pre-colonial cultures and societies too (Cabnal, 2010), and it was rather the case that the violence and subordination inherent in earlier patriarchal systems were intensified and recodified through and after the colonial process (Paredes, 2010). This reframing suggests that by shifting the understanding of what is at risk—from the land itself to human existence—we are called to embrace these territories and recognize that life itself is at stake.

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To understand the enunciation "body-territory," it must also be understood as drawing on perspectives from the Afro-descendant diaspora. These perspectives build on a broader tradition of Black feminist thought in Latin America (e.g., Carneiro, 2017; Curiel, 2007; González, 2018; Viveros, 2016) that has challenged the view of Blackness as a reduction of the human condition and hegemonic Western epistemologies.

In particular, *body-territories* are understood from this perspective as fluid and permeable—sites of re-existence, memory, and creation. Kattya Hernández Basante (2019) deepens this understanding through the notion of *body-memories*—places of memory that gather ancestral knowledge. Crucially, she expands the notion of body-territory to include what she calls *cosmocommunity*: "the coexistence of many bodies—not only human, but also water, animals, land, and spirits" (Hernández-Basante, 2019: 33). Betty Ruth Lozano extends the concept of "place" toward creating resistance and alterity. For Lozano, place becomes "a geography and a corporeality from which knowledge is produced" (Lozano, 2016: 24). This is where "everyday uprisings" take place—practices that extend beyond the sphere of the home and the domestic to build community: "midwifery, traditional medicine, their own forms of organization, collective forms of work, kinship ties that go beyond blood relations, among many others" (Lozano, 2016: 27).

This ancestral and embodied knowledge, rooted in everyday practice, memory, and community, finds analytical grounding in Tania Cruz-Hernández's analytical inputs. From a decolonial, feminist, and Latin American-Caribbean perspective, she foregrounds the body-territory framework as a way of understanding "bodies as living, historical territories" (Cruz-Hernández, 2016: 44)—acknowledging shared responsibility and co-constitutive interconnection between bodies and territories. This perspective "provides a fundamental space for political discourse that allows us to rethink the territories that are under threat today" (Cruz-Hernández, 2016: 42).

While territorial feminism has centered the defense of land and community as a space of resistance in an extractivist context (Ulloa, 2020), Sofía Zaragocín argues that this framing leaves unaddressed the spatial dimension of racialized deaths—those manifest in territories, bodies, water, and intimate geographies. Her main contribution, however, lies in her reframing of spatiality beyond territory. From a hemispheric feminist decolonial perspective, she connects the body-territory framework with other elements, such as aquatic spaces (e.g., *agua-cuerpo-territorio* or "water-body-territory"). In

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contexts of violence and death, the uterus is conceived as a geopolitical entity strategically used to resist or reclaim a particular struggle. With the notion “geopolitics of the womb,” she thus proposes that “there are parts of the body that can resist differently than other parts of the body: using certain parts of the body strategically to create one’s own territoriality” (Zaragocín, 2020: 91; cf. Zaragocin, 2024).

These perspectives challenge the traditional conception of justice, which often focuses on the distribution of resources. Instead, they highlight other dimensions for understanding and recognizing racialized and colonized bodies as the primary territory in dispute—with the relational and independent dimensions of life.

This reorientation acknowledges the harm certain actors can cause, but it also demands accountability toward all living beings. This interdependence shows that humans are not exceptional, but rather part of a network of interconnected existences. As such, these perspectives are important contributions to a socio-ecological understanding of justice. It reveals the necessity of caring about the fragility of the web of life—and it does so by thinking of the human as intrinsically tied to its environment or territory.

4.4 The Rise of Western Environmental Ethics

Ecologically just ideas and cultures are found around the world across time and space, which today can be seen in all extant communities and societies that have not been assimilated by the overarching culture of occidental modernity. While occidental modernity itself is ecologically unsustainable and unjust, however, it is replete with counter-modern ideas and imaginaries that demand sustainability and ecological integration. We will here canvas only some of the many late-modern roots of ecological justice, some of which are covered in D2.1 (§4.1), and we will do so to highlight some of the tensions that reside within it. An important example is given by historian William Cronon (1996), who shows that the protection of wilderness areas has often been the driving force of social injustice, since people Indigenous to the land have been evicted from it on the grounds that humans cannot be a part of wilderness.

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While environmentalism seems to necessitate an ecological crisis to respond to, it is still possible to trace it further than its official beginnings in the United States of the 1960s. Environmental historian Ramachandra Guha has made the case that environmentalism should include all thinkers around the world who reacted against the negative ecological impacts of the Industrial Revolution (Guha, 2000). Guha highlights naturalists like Henry David Thoreau (1817–1862), whose experiment at Walden Pond in Massachusetts, USA, can indeed be understood as an attempt at living justly in relation to his surroundings (Thoreau, 2016 [1854]) cf. Balthrop-Lewis, 2021). Most western environmentalists lived *within* unsustainable cultures, however, and their value lies chiefly in how they conceived the world.

We will focus mostly on North American examples, since it is in the USA that the main tensions between social and ecological justice eventually arise, but it is worth noting that European thinkers also preceded the official beginning of environmentalism in the 1960s. Some of these resided in the United States, however, such as Max Horkheimer (1895–1973) of the Frankfurt School. He could in 1947 write:

> Once it was the endeavor of art, literature, and philosophy to express the meaning of things and of life, to be the voice of all that is dumb [i.e., mute], to endow nature with an organ for making known her sufferings, or, we might say, to call reality by its rightful name. Today nature's tongue is taken away. (Horkheimer, 2004: 69)

Horkheimer's main concern was how reason had become something mechanistic and arbitrary, exploiting the world as a resource instead of being a part of it, but he recognized the need to speak for nature and animals (see ibid., 71) and that nature thus treated is bound to take revenge. His philosophy therefore gives another example of the idea that ecology can itself enforce justice by means of unanticipated consequences. At the same time, this was not another "man and nature" dichotomy, since he held that the "[d]omination of nature involves domination of man." Thus Horkheimer belongs to those who anticipated the discourse on socio-ecological justice.

In 1949, two years after Horkheimer, Aldo Leopold's (1887–1948) famous *A Sand County Almanac* was published. This was quite a different book, however, and Leopold considered not the relationship between humanity and the world at large as much as that between Americans and

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wilderness areas. The book remains important, however, because Leopold realized that human cultures could be aligned with or depart from the ecological dynamics of their surroundings. His "land ethics," moreover, was not an attempt to protect nature *from* humans, but to realign humans with their surroundings.

> For the first time in the history of the human species, two changes are now impending. One is the exhaustion of wilderness in the more habitable portions of the globe. The other is the world-wide hybridization of cultures through modern transport and industrialization. Neither can be prevented, and perhaps should not be, but the question arises whether, by some slight amelioration of the impending changes, certain values can be preserved that would otherwise be lost. (Leopold, 1989: 188)

The main problem to Leopold was not humans infringing upon "virgin" lands, then, but people becoming out of touch with the ecological world from which they came. The chief evil was the alienation that followed from technological mediation of the human–environment relation, and his hope was to establish an ethic that would reconnect industrialized cultures with their ecosystems rather than shielding the latter from the former. Protecting ecosystems was therefore not a duty incumbent upon a humanity who could do without it, but rather a natural and indeed cultural type of behavior that would benefit us all. To this end, Leopold argued, we need an ethic that recognizes the land as an ecological entity or even organism, which thereby imposes "a limitation of freedom of action in the struggle for existence"—a limitation, however, that would give much in return (Leopold, 1989: 165–226, quote from p. 202).

While similar ideas can be found throughout late modernity, we would like to stress that the rise of environmental ethics in western cultures was not a simple awakening, but rather a new discourse with internal conflicts that last to this day. Some of these concern whether capitalism can be made sustainable or not, others whether vegetarianism or veganism are prerequisites for environmentalism, while the key issue we would like to stress relates to the relation between concerns for humans and concerns for (the rest of) nature. This issue has often been understood as giving to nature what is already given to humans, as in the original introductions of rights of nature

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North and South America in the 1970s (Stone, 1972; Stutzin, 1979), but this decade would also see the emergence of a distinctly socio-ecological discourse (see chapter 5).

As detailed in D2.1 (§4.1), the birth of deep ecology in the early 1970s was in itself a critique of mainstream environmentalism, which Arne Naess termed "shallow ecology" (1973). While this important step in the rise of environmentalism is often framed as a critique of anthropocentric environmentalism, it is worth noting that Naess in his article argued that shallow ecology's "restriction to humans is an anthropocentrism with detrimental effects upon the life quality of humans themselves," and that where it focused on "the health and affluence of people in the developed countries," deep ecology was conscious of class and concerned itself with all humans (ibid.). Hence, in its onset, deep ecology was an attempt at reconciling social justice with ecological justice, even though none of the two concepts were used.

Naess was a Norwegian philosopher, but his philosophy caught on in the United States where it was picked up by the Earth First! movement of radical environmentalists. Earth First! was not an organization with one single ideology, however, but as is obvious from reading the movement's journal, it collected heterogenous views that converged around a care for ecology and activism. Nevertheless, a certain tension between social and ecological justice existed already from the movement's onset, when co-founder Dave Foreman in the statement of principles wrote: "Earth first, humanity second" (Foreman, 1980). This reflected older ideas like the fear of the "population bomb," a recurrent theme in the journal, and in light of chapter 3 it can be understood as a claim that ecological justice precedes social justice. By the late 1980s, the tensions between a biocentric care for nature and an allegedly anthropocentric care for humans had taken on a new dimension, and criticism ended up in Foreman leaving Earth First! (Taylor, 2018). The *Earth First!* journal had by then published pieces that argued that, "if the AIDS epidemic didn't exist, radical environmentalists would have to invent one" (Miss Ann Thropy, 1987) and that this epidemic might be an "answer to an environmentalist's prayer" (Conner, 1987). Foreman himself told his colleague Bill Devall in an interview:

> When I tell people how the worst thing we could do in Ethiopia is to give aid—the best thing would be to just *let nature seek its own balance*, to let the people there just starve—they think

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> this is monstrous. . . . Likewise, letting the USA be an overflow valve for problems in Latin America is not solving a thing. It's just putting more pressure on the resources we have in the USA. (Quoted in Bookchin, 1987c, emphasis added)

Here, ecological justice would meant letting poor countries succumb to the laws of nature. In a similar argument, Edward Abbey (1927–1989)—who had inspired the Earth First! movement—wrote that "it might be wise for us as American citizens to consider calling a halt to the mass influx of ever more millions of hungry, ignorant, unskilled, and culturally-morally-genetically impoverished people" (Abbey, 1988). By the late 1980s, then, important parts of the American deep ecology movement eschewed social and socio-ecological justice, pitting humans against nature not only as "Earth first" but in some instances also as "America first." This differs greatly from Naess's initial definition of deep ecology.

There is, however, another form of environmentalism that has existed in parallel with both mainstream and radical movements, but which is older: the movement of social ecology.[4] This is the first movement to explicitly argue for a *socio-ecological* perspective, which makes it highly relevant for Speak4Nature. The first iteration of social ecology emerged in England in 1953, when the German architect and city planner Erwin A. Gutkind (1886–1968) coined the term in his essay *Community and Environment*. His essay was a contribution to what he termed "socio-ecological studies," and in it he argued that "[m]an and environment are one, and the understanding of this oneness cannot be gained by unrelated studies of individual problems" (Gutkind, 1953: xi, 79). Building on the perspectives of the organicism of Alfred North Whitehead (1861–1947) and the science of human ecology, Gutkind thus emphasized the importance of not separating humans and nature almost a decade before the birth of modern environmentalism in the United States. At the same time, he asserted that the human perspective must not be relativized, since it is key for understanding the interaction between human beings and their environment.

While social ecology remains less known than deep ecology, its most famous iteration stems from the works of the American philosopher Murray Bookchin (1921–2006), who was very much a part of

[4] For a historically incomplete overview of social ecology, which nevertheless highlights some of the tensions with other strands of ecological thought, see Theilmann, 2024.

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the first wave of environmentalism in the 1960s. Already in 1952, under the pseudonym Lewis Herber, Bookchin had written about "The Problem of Chemicals in Food" (Herber, 1952), and a few months before Rachel Carson published *Silent Spring* in 1962, he published *Our Synthetic Environment*, in which he made a similar point to Carson's: the spread of DDT, Strontium 90, and other pollutants also pollute our human bodies (Herber, 1962). Initially, Bookchin used the older notion of *human* ecology, but it was with the concept of social ecology that he would devise his philosophy in later works. Though conceived after Gutkind coined the term, Bookchin's social ecology was inspired by early American regionalists and social critics like Lewis Mumford, who already in the 1920s had realized that problems of social organization, the design of urban environments, and economy had increasingly devastating effects on ecology—which, in turn, had detrimental effects on human lives (cf. Guha, 1991). For Bookchin, it was therefore inconceivable to frame the ecological crisis as a conflict between humanity and nature, and he instead argued that a society geared toward economic growth was bound to exploit all living beings—humans included.

Social ecology is an important aspect of the history of environmentalism, not only because it emphasized the need for a socio-ecological perspective already before the rise of environmentalism proper, but also because it ended up clashing with the better remembered deep ecology. Like deep ecology, social ecology also critiques mainstream environmentalism for not paying attention to (or ignoring) social injustice, but it also critiques deep ecology for not comprehending what social ecology contends is the origin of the ecological crisis: social and economic injustice. Ecological destruction follows from hierarchical and oppressive cultures and societies, Bookchin argued, and it cannot be reduced to an attitude of "man" against nature.

At the same time, the social ecology of Bookchin must be approached carefully. This is true not only due to the large number of publications in which it was expressed. Firstly, social ecology is a radical philosophy that in Bookchin's philosophy was anarchist, although it has also taken socialist forms among other thinkers. This means that those who do not subscribe to the political conviction cannot adopt the philosophy as a whole. Secondly, Bookchin was extremely and unnecessarily pugnacious, and although he played a key role in expelling the misanthropic and racist tendencies from the Earth First! movement, he also alienated many moderates by his combative and confrontational attitude. Thirdly, Bookchin was at odds with the very notion of justice. Due to his anarchist convictions, he

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criticized justice as an “inequality of equals,” according to which people are equal in theory but not in fact, and instead argued for a conception of freedom that implied the “equality of unequals”: the recognition that we are unequal in fact, but from which he argued for compensation and complementarity.

Although Bookchin’s philosophy causes conceptual challenges for Speak4Nature, it constitutes an important historical contribution to the discourse on justice and ecology that ought to be considered. Its most pregnant contribution, perhaps, is how it addresses the tension between the ecological and the social by suggesting that social and economic organization is the factor that determines our relationship to the ecological world of which we are a part. Bookchin’s claim can also be understood as being that systemic change is needed so that human societies can thrive within ecological bounds; “‘Civilization’ as we know it today is more mute than the nature for which it professes to speak and more blind than the elemental forces it professes to control” (Bookchin, 1991: 366). If we are to speak for nature in terms of social ecology, then, we might have to take the notion of an ecological civilization seriously (cf. Worster, 2022).

This concludes chapter 4, which in sum contends that an ecological understanding of “culture” that highlights its aspects of behavior, artifacts, and worldmaking makes it possible to think of cultures at different places, times, and levels of organization as more or less aligned with ecological reality. Humans are animals and organisms, as human ecology teaches, and around the world cultures have exhibited ecological integration, without which they cannot survive. With the rise of modernity, however, some cultures have developed the technological and cultural means to survive while alienating its human members from ecosystems on which they depend. In the “western” cultures, this has prompted well needed reactions asking for reintegration and de-alienation, but also a rupture within ecological culture itself: a rupture in which social justice is sometimes rejected or trivialized as an anthropocentric argument.

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5 The Birth of the Ecological Justice Concept

5.1 “Ecological Justice” Takes Form

The idea that behavior in relation to the ecosystems and species around us can be just or unjust does not necessitate a corresponding concept, as we have seen, but at one point in history the specific concept of “ecological justice” was coined. This history seems to be largely unknown among current scholars who use the concept, who—in the few instances they consider its provenance—often refer to the 1998 definition of Nicholas Low and Brendan Gleeson. In their conception, ecological justice was meant as a complement not to social but to environmental justice, both of which they understood as distributive: “*Environmental justice* is about the fair distribution of good and bad environments to humans. *Ecological justice* is about fair distribution of [good and bad] environments among all the inhabitants of the planet.” (Low and Gleeson, 1998: i). Building on Low and Gleeson’s notion, Anna Wienhues (2021) argues that the current extinction event is anthropogenic and conceptually different from the five preceding extinctions, and that this is the cause of ecological injustice. She writes that “the human takeover of the Earth’s ecological space—its resources, ecosystem benefits and actual spaces—that ultimately leads to species extinctions constitutes a genuine and non-metaphorical *injustice*.” (ibid., 2) Wienhaus seeks to establish ecological justice as a notion alongside social justice for humans, but considers ecological justice fundamentally non-anthropocentric. We agree with this latter contention, but hold that the current extinction event can only be different from the vantage point of humanity itself. As outlined in chapter 3, a truly ecocentric understanding of ecological justice must recognize that cycles of mass death are a part of life on earth. Rightly conceived, as we also argued in chapter 3 and will develop in chapter 6, social justice can serve as the very rationale for caring for the types of biomes, ecosystem, climate, and species that characterize Holocene and the Cenozoic. Otherwise we have no reason to prioritize species whose existence is coeval with our own over those novel forms of life that some day will take our place.

“Ecological justice” seems to be an English concept from the start, but its real history goes back to the 1960s. As far as we can discern, the notion was first mentioned in print on 19 February 1966,

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when the American essayist E. B. White (1899–1985) used it in his portrait of the ornithologist Edward Howe Forbush. Its use, however, was an ecological variety of *poetic justice*, in the sense that the attempt at modifying our environment to our own advantage can result in effects adverse to our own ends. The ecological justice thus consisted of the case of "a sheepman who annihilated the crows in his region because they killed newborn lambs, only to discover that the grass in his pastures was dying from white grubs, which had increased rapidly following the destruction of the crows" (White, 1977 [1966]). Almost a decade earlier, ecologist Paul Shepard had similarly talked about the irony of talking of "the place of nature in man's world," an "irony [that] stems from the deep conviction that we do not change natural laws nor conquer nature; we only impose ourselves on it and, in the end, suffer for whatever damage we do" (Shepard, 1958).[5] Shepard quoted an earlier essay by White (1957), and both found it incredulous to assume that nature is a resource that can be controlled without consequence, an idea that echoed what George Perkins Marsh (2003) had argued a century earlier. In its original use, then, ecological justice was what was the consequences of when someone broke the laws of ecology. In other words, the judge of what is ecologically just was understood as nature itself. As such, it is unequivocally ecocentric and non-anthropocentric, characterized by indifference to humans.

The 1960s was the decade that environmentalism became a movement with a name, and the concept might have been coined in discussions in the wake of Carson's *Silent Spring*. White only used it in passing, and it was next printed in 1969 by the biologist Garrett Hardin (1915–2003). Hardin, today mostly remembered for his infamous "tragedy of the commons," provided the following definition: "Ecological justice dictates that he who produces a cost should be responsible for paying it." He argued that the quantifying logic of economists excused negative outcomes as unfortunate "externalities," while the more qualitative logic of ecologists, who understands how the world is complex and interrelated, accepts no such fiction. As costs of damage incurred to workers had once been internalized to business enterprises, a new "ecological ethic" now demanded that damage to the rest of the environment be internalized too. Hardin was a reader of E. B. White, and perhaps he had taken the concept of "ecological justice" from him, but his concept was slightly different: rather than being the justice arbited by nature itself, ecological justice was conceived as a human ethic by

[5] Interestingly, Shepard quotes White on p. 402.

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which polluters and destroyers of ecosystems must be held accountable (Hardin, 1971a [1969]: 179–81).

Hardin's notion of ecological justice is useful and applicable, but it cannot be understood in full without a consideration of "The Tragedy of the Commons," which he had published one year prior, nor without his even more provocative article "Lifeboat Ethics: The Case Against Helping the Poor," published in 1974. The former article is not chiefly a critique of the commons, but uses their supposed long-term impossibility as a metaphor for explaining why population numbers must be controlled. If people share the responsibility of commonly owned lands, he argued, this will always lead to overgrazing since every herdsman is a "rational being" who "seeks to maximize his gain." By the same token, he argues that human nature will inevitably pollute the environment and exceed its carrying capacity unless we agree on limiting our numbers and introducing "coercive laws or taxing devices that make it cheaper for the polluter to treat his pollutants than to discharge them untreated." Hardin's solution was "to augment statutory law with administrative law," a move that he conceded might endanger the rule of law but which is justified by the environmental circumstances. Due to ecological necessity, human justice must be curtailed, he argued, stating that "Injustice is preferable to total ruin" (Hardin, 1971b). In short, ecological justice in Hardin's conception had to be achieved by human—or rather, social—injustice.

When Hardin expanded his views as "lifeboat ethics" in 1974, it became clear that ecological justice was incompatible with social justice. The naive belief of a "pure justice" that considered each person as the holder of the same rights was in his view not compatible with ecological reality. In a new metaphor, which was an extension of the one of the commons, Hardin compared each rich country to a lifeboat that sadly cannot help the people in the water, who represented those in poor countries. The idea was that, just like the lifeboat will sink if it helps people in need, rich countries simply cannot help the others without endangering themselves and their future generations (Hardin, 1985). Both humanitarianism and immigration were rejected, not merely as inefficient but also as dangerous.

E. B. White expressed no similar views in his original conception and had rather argued that humans were one with the environment (cf. White, 1957), but Hardin's adaptation leaned heavily on the fear

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of overpopulation in the wake of Paul and Anne Erlich's *The Population Bomb* published in 1968. The Erlichs were nevertheless more worried of the social consequences of their argument (cf. Chisholm, 1972: 141, 147–8), and it is Hardin's understanding of ecological justice that foreshadows the "America first" attitude of some of the Earth First! members in the late 1980s.

The origin of the notion of ecological justice is thus haunted by a cynical belief in humanity as fated to sacrifice social justice in the face of ecological problems due to Hardin's overall outlook on human nature. In isolation, however, his understanding provides an applicable use of the concept to argue that, from an ecological viewpoint, externalities do not exist and polluters can thus only avoid accountability by an economic outlook that does not account for the pollution as a part of production. The marine engineer Herman E. Sheets reproduced this use of the term in 1970 when he wrote that "[e]cological justice dictates that the initiator of pollution should also take the necessary steps to eliminate it" (Sheets, 1970), but the concept would otherwise be understood rather differently until it fell out of general use in the 1980s.

5.2 The Second Coming of Ecological Justice

"All thinking worthy of the name now must be ecological," Mumford famously argued in 1970, and the decade that then commenced would be a good one for the concept of ecology. It is not strange therefore that "ecological justice" would occur in different contexts with different meanings, often in passing. It is within the ecumenical community in the United States, however, that the concept finds its second coming.

Some ecological interests existed in the Christian community in the United States of the 1960s, if not earlier, but in terms of justice the concern was chiefly social. Progressive churches championed the rights of farmers and workers in the early 1970s, and it was during this decade that social justice was ecologized. While environmentalist discourse surely influenced theologians and ministers, the initial interest in these topics seems to have come out of the interest in food systems and agriculture, since the hunger problem could not be separated from the ecology of food production. It was the oil crises of this decade, however, that prompted the real change (Hessel, 2005). The first elaborate exposition of ecological justice in English we thus find in a report made for the National Council of the Churches

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of Christ (NCCC) in 1976, which suggested a policy statement accepted on 11 May 1979. The report was titled "The Ethical Implications of Energy Production and Use," and it is worth noting that it was commissioned during the oil crises of the 1970s: commissioned during the one in 1973 and published and accepted after the one in 1979.

Ecological justice in the report was defined as follows:

> Ecological justice . . . is an ethic for all members of the community of life, inspired by Christian hope for the fulfillment of God's promises assured us in the resurrection. It provides guidelines for human choice and action. An ecologically just society will be guided by the values of sustainability, fairness and participation. (NCCC, 1980: 242)

The religious framing might seem exclusionary, but it is worth considering how ecologically integrating it was. The NCCC broke with the interpretation of Genesis as a promise of domination, arguing that it should be understood as first saying that "[h]uman beings are made by God as *persons-in-nature*, co-creatures in reciprocal relationships with everything else that God has made" (ibid., 241). "The definition of *neighbor*," the document moreover argued, "is now being radically expanded to encompass all humans in past, present, and future generations, as well as the rest of creation," (ibid., 242), and it argued for an expansion of ethical concern while rejecting the hard separation of humanity and nature that has characterized many Abrahamic ideas.

The values of "sustainability, fairness and participation" mentioned in the above block quote were regulatory terms for the notion of ecological justice: sustainability, here used a decade before the Brundtland report, referred to the recognition of earth's ecological finitude; fairness referred to the just distribution of ecological benefits and costs; and participation meant that individuals both had the duty and the right to participate in public policy decisions. In a finite world, then, Christians were asked to reintegrate themselves with its ecological realities. The NCCC's policy document moreover covered all three aspects of cultures that we outlined in §4.1, since it called for a new behavior and a new outlook, but also for a new technology: "An ecologically just society cannot be achieved by using a technology which violates the values of fairness, sustainability and participation," they argued, while outlining a list of criteria for its use, like "safe," "pluralistic," and "appropriate" (ibid., 244–5).

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In effect, the NCCC's understanding of ecological justice is much in line with the way we in §3.4 argued that socio-ecological justice must be a harmonization of the social and ecological aspects of human existence: ecological limits sets the boundaries for social justice and constitute its condition, while social justice ensures that vulnerable people and communities are not sacrificed as in Hardin's "lifeboat ethics." Despite the Christian rationale and target group, the NCCC's ecological justice can therefore be understood as an important historical contribution to the kind of socio-ecological justice we in Speak4Nature seek to establish in the 2020s.

A non-American influence on the debate worth mentioning was the German Reformed theologian Jürgen Moltmann (1926–2024), who in 1976 argued that God's promise in Genesis, that earth is given to humanity to rule, applies only insofar as our conduct does not contradict the will of God and his love for his creation. "The right of human beings to rule over the nonhuman creation," he wrote, "must therefore be balanced by their respecting the 'rights' of the nonhuman creation." This was a precondition for human economic rights *to* nature, Moltmann contended, since without "ecological duties" we will upend the environment on which we depend. Human rights must be sought within the limits to growth, not by continued growth, and thus "economic and ecological justice mutually condition each other and thus can only be realized together" (Moltmann, 1977: 135–7).[6] The NCCC report did not as emphatically argue against growth, although an influence of *The Limits to Growth* can be found between the lines.

In the end, the NCCC's notion of ecological justice was meant to guide the American and perhaps global ecumenical community, but it should be understood as part of the wave of popular ecology in the 1970s that—unlike those who feared the "population bomb"—sought to harmonize the tension between social and ecological justice. While the Christian context neither can nor should be ignored, as it imposes both opportunities and limitations to the argument, the ecumenical and global scope of the project should also be noted. It was in the wake of the Stockholm Conference on Environment and Development in 1972 that the global ecumenical movement began focusing on environmental

[6] The 1977 publication in English was a translation of a 1977 essay. The original reads: "Ökonomische und ökologische Gerechtigkeit bedingen sich heute gegenseitig und können daher nur gemeinsam verwirklicht werden." Moltmann, 1984: 173.

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issues, and in 1975 the Nairobi Assembly of the World Council of Churches argued for a "just, sustainable, and participatory society"—the three keywords that would later become a part of the NCCC's concept of justice (see Hessel, 2005).

Socioecological justice and ecological integration became an important aspect of the American public debate in the 1970s, with thinkers like Mumford setting the tone and Barry Commoner (1917–2012) attacking the population-bomb argument with notions of how it was constructed on faulty and colonial principles (Chisholm, 1972: 136–9). Moreover, the outcome of the Stockholm conference, the "Declaration of the United Nations Conference on the Human Environment," was an important milestone that paved the way for subsequent discussions on socio-ecological justice: declaring that humanity had a joint responsibility, it also acknowledged the need to think inter- and intragenerationally as well as the responsibility of "developed" nations to aid the "developing" ones (United Nations, 1972).

Ecological justice was in some cases also mentioned in non-Christian contexts. In 1974, for example, Lima Ohsawa (1898–1999), wife of Georges Ohsawa (1893–1966), popularizer of the "macrobiotic diet," used the concept in the American cookbook *The Art of Just Cooking: A Culinary Guide to Living in Harmony with Nature*, written with the help of Nahum Stiskin. As the title suggests, justice was understood as interrelated with food according to the Ohsawas, and in this context Lima wrote: "In our cooking and combining we delicately alter nature to suit our needs and maximize our freedom while remaining within the bounds of biological and ecological justice" (Ohsawa and Stiskin, 1974: 26). Like her late husband Georges, Lima embraced a holistic worldview in which balance was understood as a part of both life and of nature. Ohsawa's use was a brief contribution of Taoist philosophy in the American discourse on ecological justice, and much like Taoism in general it emphasized the continuity with and normativity of nature. It did not oppose nor embrace social justice, but it is worth noting that it emphasized ecological integration.

Other uses tended to be in an environmentalist setting, such as when environmental scientist Tim O'Riordan in 1976 wrote that "to devise a peaceful and orderly pathway toward worldwide social and ecological justice is the real predicament of man." He never defined the two types of justice, but his appeal was to reconcile the two, thereby contradicting the earlier claims of Hardin. One year

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later, the Canadian literary critic John Moss used the concept too, also without defining it, but in a context that is nevertheless worth considering. Critiquing the settler-colonial perspective of nature as something *other* than human, he wrote that "[e]ven when we demand ecological justice, we do not appreciate that the rights we demand are our own" (Moss, 1977: 306). The implications here was that aboriginal Canadians, whom he argued considered themselves a part of their environment, would rather see ecological justice as something that they can demand as humans who are one with the land.[7] Again, the focus was ecological integration and of recognizing that non-modern ways can reconcile the social and the ecological.

While the discussion thus was not confined to the ecumenical community, the working group behind the NCCC report was an important contributor to the debate. They and the NCCC in general constituted a force for social justice that learned from environmentalists about the need for ecological justice, and in return they promoted among environmentalists the notion ecological justice must be combined with a justice that is social (Hessel, 2005). Overall, then, the 1970s was the decade in which socio-ecological justice took form in the American and western debate.

5.3 The Legacy of the Ecological Conception of Justice

In the 1980s, the notion of "ecological justice" was supplanted with "eco-justice" by the NCCC, and the council's work on this topic continued with the forming of the "NCC Eco-Justice Working Group."[8] In 2004, they defined "eco-justice" as "the integration of social justice and ecological integrity," arguing that justice should mean "creating right relationships, both social and ecological, to ensure for all members of the Earth community the conditions required for their flourishing." Human beings were understood within the ecological frame, and due to their need for "ecological integrity," the working group argued, environmental rights for human beings was necessary. Importantly, the members also emphasized that "economic production and consumption" must be restrained "for the sake of eco-justice," and that, "[o]n a finite planet, frugality is an expression of love and an instrument for justice and sustainability" (NCC, 2004). As of 2013, the Eco-Justice Working Group has

[7] Among other interesting uses in the 1970s, see Madden, 1976 for a short mention and Radford Ruether, 1978 for a more interesting discussion.
[8] The NCC (National Council of Churches) and the NCCC (National Council of the Churches of Christ) are the same.

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continued its work as an organization in its own right, under the name the Creation Justice Ministries.

Outside the ecumenical context, the explicit discourse on ecological justice seems to have waned in the 1980s, but the idea of justice and ecology as interrelated terms did not. However, tensions reappeared. When Earth First! was formed in 1980, the sentiment of ecological justice was therefore very much present—even though the concept was not. In 1983, however, the idea of justice for the nonhuman world started occurring in passing in the pages of the *Earth First!* journal. The pseudonym Doc Raccoon implied the existence of more-than-human justice when writing about Mahatma Gandhi that, although an ally, "he struggled for human justice merely" (Doc Raccoon, 1983: 14). Shortly thereafter, Ric Bailey, the Oregon Wilderness Coordinator for Earth First!, argued for a literal translation of "Liberty and Justice for *all*" when testifying before a Senate subcommittee on public lands. If liberty and justice does not encompass all creatures, and "if there is no place where nature maintains a stronghold from the constraints and demands of man," freedom is not possible, Bailey contended (1983: 5, 20–21).

What is noteworthy here is that the discourse again seems to pit humans *against* nature, rather than seeking integration and a balance between the social and the ecological. "Ecological justice" as a concept remained absent among the American deep ecologists, but people like the ecologist George Wuerthner mused on what was just and unjust in relation to the ecological world. To him, a radical view that defied established laws by embracing "the extension of 'rights' to objects not usually thought to have rights" was an example of a truly just and morally mature approach (Wuerthner, 1985: 20). While the idea of extending the scope of moral concern to a wider nature was a contribution to justice in the ecological sense, it is worth noting that the concern for nature was something extra and beyond—an additional area of morality that we must also recognize, rather than something that lies in our common interest—and that social justice was not a balancing factor. This can be compared to the article by Arne Naess on the following page in the same issue, in which he argued that a deep-ecological lifestyle includes "[a]ppreciation of ethnic and cultural differences among people," a "[c]oncern about the situation of the third and fourth world," and "feeling one's own community as part of ecosystems." There was not one lifestyle but many, Naess argued, but a

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deep-ecological one should not lead to “injustice toward fellow humans or other species” (Naess, 1985).

The main anglophone forum for deep ecology, then, ignored the notion of *ecological* justice but nevertheless considered justice ecologically. With the important exception of Naess, however, they generally failed to reconcile the social and ecological aspects of justice, culminating in the outright misanthropic and racist remarks in the late 1980s (see §4.4). Today, however, the hatchet has been buried. After Foreman and other founding members left in the late 1980s, the movement took a new turn that once more cared for social justice. When Murray Bookchin, the social ecologist who had attacked the organization in the late 1980s, passed away in 2006, Earth First!’s Brian Tokar and Chaia Heller thus wrote that his “critique of the misanthropic cult of the lone ‘eco-warrior’ within Earth First! helped create space for the emergence of a new consciousness rooted in feminism, respect for working people and urban issues, and active solidarity with the ecological struggles of nonindustrial peoples and citydwellers alike” (Tokar and Heller, 2006). *Earth First!*, too, had become a forum for ecological integration.

Today, social ecology is eclipsed by deep ecology and remains a lesser known approach to ecological ethics. Moreover, the ecumenical contributions to the concept of ecological justice are largely forgotten among environmental scholars outside the field of religious studies, and so is the tension between the social and the ecological notions of justice. The two are often understood as complementary, but it is important to remember that they can be fundamentally at odds with one another if not carefully elaborated together. Hardin’s contributions remain even more unknown, and although it can serve as a tool for seeing through the economistic and neoliberal externalization of pollution, it primarily serves as a reminder that ecological justice can be demanded at the expense of the most vulnerable of our societies and the world.

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6 Implications for Contemporary Ecological Justice

6.1 Technology and Ethics

Environmental ethics are important both for human conduct and as a precedent for environmental law, but, if we consider the practical developments since Aldo Leopold's land ethic in the 1940s, there is still a vast gap between theory and practice—between abstract frameworks and concrete effects (cf. D2.1, §4.4). We will in this last chapter propose an outlook that aims to turn theory into practice by being grounded in socio-ecological reality rather than in abstract thought and ideal conceptions of environmental ethics. First, we will consider the ecological challenge as we stand before it today, and thereafter develop a form of human-centered approach designed to resolve the tension between social and ecological justice. This will not be a provocation, but an attempt to undo the historical friction between the two notions of justice in the western debate.

In §4.2 above we argued that the rupture that has caused the cultures of modernity to become ecologically alienated in terms of behavior, artifacts, and worldview was caused by their inclusion in a socio-technical system that has been framed as "the megamachine," "the technosphere," and "the Capitalocene" by different scholars and scientists. Although these notions differ in their details, they all describe an important fact for human ecology: human action today takes place in an economic system that expands at the expense of the integrity of the ecological system that contains us all. We hold this to be an important fact because it emphasizes how complex human–environment interaction has become today; it shows how theories of justice based on face-to-face interaction, though imperative for everyday interaction, have become insufficient due to the intricacies of technological mediation.

The implication for ethics is demonstrated in the 1979 book *The Imperative of Responsibility* by the German philosopher Hans Jonas (1903–1993), in which he argues that the technologically enhanced power of human technology calls for a change of the very foundations of ethics (Jonas, 1985). In human history, the consequences of our actions have almost always been immediate in time and space, making ethics a question of what we do unto others in our vicinity. This has changed, Jonas

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argues, pointing to how the age of modern technology has effects in remote lands and distant futures, at scales that are hard to fathom. This point had been made in 1972 by the authors of *Limits to Growth*, who had developed a computer model to compensate for the limits of the human perspective (Meadows et al., 1972: 17–20)—limits that have made it hard to perceive the "slow violence" that inconspicuously assaults both people and ecosystems over timespans and geographies (Nixon, 2011). While mostly concerned with human nature, Jonas recognizes "that an object of an entirely new order—no less than the whole biosphere of the planet—has been added to what we must be responsible for because of our power over it" (1985: 7). The vulnerability of nature, he argues, has given rise to an imperative to strive for knowledge commensurate with the effects of our technological power; otherwise we will lack the knowledge needed for ethical decision-making.[9]

If the technosphere, the megamachine, and the Capitalocene seem like very abstract concepts, consider instead how most of us now live in cities. The ecological alienation that we have referred to (§3.1), which Hannah Arendt (2018) called "world alienation," is expressed in how city-dwellers are estranged from the rest of the world. Light pollution dims the stars that have shone upon us for hundreds of thousands of years, the electric light frees us from the cycle of night and day, and artificial heating and air conditioning reduces the impact of the weather and season. We have thus become less dependent upon the dynamic cycles of the biosphere, but this easily gives the illusion that we are no longer dependent on ecology. Quite the opposite is true: as Bruno Latour (2015) has argued, we are in reality becoming more and not less entangled with the dynamics of nature, and the city's increasing freedom from natural cycles comes at an increasing ecological cost (Rees and Wackernagel, 1996). We are, as it were, *unsustainably sustained*. Ecologically, life in the city becomes a choice between more or less unsustainable options, since the urban environment itself is unsustainable. To function, at least in its current growth-based form, the city demands a constant and growing influx of energy and materials, and it forces a steady stream of waste and pollution back upon the surrounding world (ibid.)—a process that Marxian scholars term "the metabolic rift" (e.g., Foster, 1999). In short, life in an unsustainable city is always also unsustainable: whether it is the life

[9] Jonas even contemplated the need for rights of nature, arguing that "[i]t is at least not senseless anymore to ask whether the condition of extrahuman nature, the biosphere as a whole and in its parts, now subject to our power, has become a human trust and has something of a moral claim on us not only for our ulterior sake but for its own and in its own right" (1985: 8).

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of humans, cats, dogs, pigeons, or rats, city life in the modern city is sustained by increasingly destructive processes.

The example of the city shows, at a macro level, the ecology of the everyday is contained within larger wholes, but human ecology is even more complex than this. Consider how each city is a part of a global infrastructural network of roads, pipelines, cables, and transport routes by sea without which they would not function, and how the paradigm of economic growth is paralleled by urban growth. Cities merge into one another in what Patrick Geddes (1915) called "conurbation," while feedlots and monocrop fields sustaining the cities engulf more of what has not yet been urbanized, thereby diminishing the space left for wildlife. The earth is becoming increasingly technologized in the sense that it is instrumentalized for a certain purpose: Gross Domestic Product—economic growth. Misanthropes might say that humanity is making earth into its machine, but this misses an important point: humans, too, are instrumentalized for this purpose. It is thus a misconception to think of the Anthropocene as anthropocentric in its effects. Save for the shrinking minority of people living off grid, all of us are a part of a technosphere that expands at the cost of the biosphere (Haff, 2014, 2023)—an expansion that sooner or later, if it keeps going, must collapse the conditions of life for most organisms in the Holocene. Any solution that does not contribute to harmonizing the technosphere with biosphere through ecological integration is merely making an unsustainable process a little less unsustainable. True sustainability demands systemic change.

An ecologically informed view of the human condition in late modernity raises an important but uncomfortable question: to what avail is environmental ethics in such a world? It might seem like a lost game, since individual initiatives are merely palliative unless they contribute to systemic change. Environmental ethics can even be an impediment to such change if too abstract and too focused on individual conduct—or if it solves the problem in theory only. However, with a proper understanding of how modern cultures are alienated from the ecological processes on which they depend, and of what it actually means to be human today, new demands can be made. Ecological integrity and ecological limits can be recognized as a condition for humanity's economic and technological activities, rather than as a special interest for those who care for the natural world—and social justice can regulate the way we re-integrate our unsustainable cultures with ecological reality. This is not a utopian imaginary; it is the only alternative to letting ecological justice be served by human

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societies collapsing, and social injustice and "lifeboat ethics" then ruling who is to be sacrificed first. And although it might be true that it is easier to imagine the end of the world than the end of capitalism, alternatives do exist: *sumak kawsay* (§4.3.3), degrowth and post-growth (D2.1, §6.3.2), a biotechnical economy achieved through a collective withdrawal from growth-based activities (Mumford, 1970), or a similar non-participation augmented by general strikes and disengagement from the attention economy (Odell, 2020). More alternatives do exist, none of which guarantee success, but all of which will become more realistic and viable if guided by an ethic and law based on socio-ecological justice.

The answer to the human-ecological predicament, then, lies in understanding ourselves ecologically and institutionalizing this understanding together with the demand for ecological integration and de-alienation. While human-centered ethics poses an obstacle when too narrow, as shown by Hans Jonas and *Limits to Growth* in the 1970s, we will argue that a refutation of anthropocentrism removes the very foundation for socio-ecological justice. The alternative we suggest in light of the previous chapters is an ecologization of anthropocentrism and social justice, by which the limits imposed by the biosphere are taken into account. This way, ecological and social justice come to regulate one another: one by rooting human interests in ecological reality, the other by safe-guarding that ecological limitations are not used to justify dehumanization, "lifeboat ethics," and social inequity. Ecological justice *is* a condition for social justice, while social justice—from a universally human point of view—*ought to be* a condition on how we adapt the wayward global economy of modern societies to the reality of ecological justice. The position at the center of this framework we will call *ecological anthropocentrism*.

6.2 Toward an Ecological Anthropocentrism

What does it mean to take seriously the notion, implied by the terms *human ecology* and *ecological integration*, that we human beings are a part of nature? To accept that we are not just biological but also ecological beings? To recognize that we are not just humans, but also animals and organisms? It means to see, touch, smell, hear, feel, and think the world anew: to look with new eyes upon our collective behaviors, artifacts, and imaginaries beyond the imaginaries of modernity. It means to accept the counter-intuitive fact that we are not *on* the earth, for we *are* the earth—just like all other

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terrestrial organisms are. Even the most gargantuan city then becomes not an inversion of nature, but a habitat and niche for humans and other organisms (cf. Jørgensen, 2018). Such a view does not imply a blind eye toward the ecological harm of industrial civilization, for its environmental contradictions show how alienated most humans have become from the ecological conditions of life.

Taking the notion of human ecology seriously can also amount to nihilism, however, since we humans and our values might seem very arbitrary and even false. If humans are just as natural as amoebas, gnats, and tapeworms, what does it matter if we live or die? And if we cherish the earth, then we could very well accept the view of the misanthropic environmentalists of the late 1980s and consider epidemics, pandemics, and starvation as necessary evils and ecological goods in the economy of nature. After all, we humans are no keystone species. To avoid such ecological nihilism and to ensure that human wellbeing can be protected within ecological bounds, we propose a consideration of the notion of "ecological anthropocentrism," developed within the Speak4Nature (Palmblad, 2026). This notion is not synonymous to "human supremacism," and it refers to a position that embraces the ecological nature of humanity without giving up the rationale for caring for ourselves and each other. It is not a new position, but a concept that covers any culture or idea of ecological integration (§3.1) that simultaneously ensures human dignity and wellbeing.

In this chapter, we will in light of the preceding ones suggest that bio- and ecocentric philosophies have provided an essential framework for ecological justice, but that they need and often have an anthropocentric component that we would like to conceptualize further. The polarity between bio- or ecocentrism and anthropocentrism enforces an unhelpful dichotomy—not unlike the absolute separation of nature from culture. This is a part of Ramachandra Guha's "third-world critique" of the American deep ecologists, as he saw their binary opposition between anthropocentrism and biocentrism as an obstacle to recognizing the social injustice of industrial society (Guha, 1989). Unsurprisingly, then, *anthropocentric*, *biocentric*, and *zoocentric* are all western concepts from the second half of the nineteenth century, and it is not until the twentieth century that "ecocentric" is coined and "anthropocentrism" gains a distinctly anti-ecological meaning as its opposite. While immensely popular as an academic concept, anthropocentrism is today an extremely vague term with many meanings, often used to explain the ecological crisis without being defined—or by being defined in different ways (Droz, 2022). The inefficacy of environmental ethics to instigate practical

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change, we suggest, is to a large extent explained by its polarity to human-centered perspectives and interests. This is why we argue for a rethinking of the critique and rejection of anthropocentrism *in lieu* of simply calling for social and ecological justice to be considered together—ecological anthropocentrism is a rationale for establishing a functional relationship between them.

We define anthropocentrism as a conceptual point of departure located in human experience, and ecological anthropocentrism as such a point of departure that is also ecologically informed. On its own, an anthropocentric outlook will yield distinctly human understandings of the world, descriptively or normatively, just as we have argued that a truly ecocentric outlook yields an ecological understanding in which human perspectives and interest have no privilege whatsoever (§2.3, §2.4). The limitations of the anthropocentric outlook are *natural*, we suggest, since we cannot see the world from a god's-eye view and nor from that of a cat or a bat, and all other sentient organisms exhibit their own kinds of centrisms (cf. Palmblad, 2026: 5). Our colleagues have framed this as "epistemic" or "weak" anthropocentrism (D2.1, §4.2).[10]

However, the inescapable human outlook can and does lead to misconceptions and biases: firstly, since our understanding of the global and universal necessarily is an extrapolation from our limited experience or our models of reality, which Hans Jonas and *Limits to Growth* addressed in the 1970s; secondly, because our understanding of nonhuman mentalities necessarily are human interpretations and (to a larger or lesser extent) projections, as Thomas Nagel argued in 1974. When confronted with this problem, however, we can use our human brain's faculty of abstraction to think *as if* we were not human, which can help us avoid biases—but it also might give rise to new ones, as when we reason from unreflected assumptions or unknowingly project our human experience upon the world. By science or imagination, we can nevertheless *conceive* the world in ways in which we cannot *perceive* it. Even so, at the end of the day, we must return to our human point of departure, which we only ever left in thought. Thus we cannot escape anthropocentrism in this sense, not even

[10] We agree with the logic behind these notions, but suggest that a "weak anthropocentrism," if understood normatively rather than descriptively and epistemologically, can also be understood as one that is not sufficiently grounded in a genuine care for humanity. Hence, in this sense, a "strong anthropocentrism" would describe the normative side of ecological anthropocentrism, "a stance that centers on our species morally and that embraces what it *truly* means to be human, which means to care also for the nonhuman world without which we would not exist" (Palmblad, 2026: 3).

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when we embrace values we deem nonhuman; but we can inform ourselves ecologically so that we do not imagine humanity to be something *out of this world*.

Ecological anthropocentrism is not an alternative to biocentrism and ecocentrism but a compensatory complement. Bio- and ecocentrism can be conceived in many ways, but any feature of such centrisms that privileges a human outlook or value constitutes an anthropocentric component, even when human superiority is rejected and non-human values embraced. It is this component that we call ecological anthropocentrism. This can easily be visualized: rather than different spheres, imagine a *concentric* model of inner and outer circles. At its center is anthropocentrism, since all humans by definition have a human point of departure, and around it are the wider circles of existence of which we are all a part: the biocentric, ecocentric, cosmocentric, etc. At the center is always the human self, not as a metaphysical or hierarchical claim, but as a shared point of view among people. This has two relevant analogies. First, we are by necessity at the center of our own environment, which is that which surrounds us as individual organisms. An environment is the correlate of an organism (e.g., Bateson, 2000: 503, and Gibson, 2015: 4) rather than a place,[11] and the environment of an organism is the rest of the world in relation to it. The second is the geocentric model of the solar system: it is objectively and factually incorrect, but subjectively and actually correct. We, like all other terrestrial organisms, are earth-centric and see the sun go up and down, rather than the earth spiraling around one of the septillion stars that move around a universe with no absolute center. The subjective perspective of human beings, then, is a perspective of life in general and of human life in particular, which is not just a limitation but rather the necessary viewpoint for all practicalities and actualities. This can be done without assuming an imperial attitude toward our environment. Anthropocentrism that ignores the outer circles and that abstracts humanity from the world must be rejected, as it is at odds with concrete reality itself, while anthropocentrism that confirms its relation to and dependency of the outer circles is that we call ecological.

[11] "Environment" has been used in many ways and we are here referring to the ecological notion rather than the for environmentalism and environmental policy important concept of *the* environment that emerged in the mid-twentieth century. On the emergence of this concept, see Warde, Robin, and Sörlin, 2018.

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The concentric model moreover coincides with the idea of expanding the circle of moral concern to the world around us, which has been important within the scholarship on the rights of nature (Stone, 1973: 453–6; Nash, 1989: 6–7; Jonas, 1985: 7). Such is also the logic of Leopold's land ethic, and he argues that extending ethics to cover also the dynamic land is "an evolutionary possibility and an ecological necessity" (1989: 203). However, the logic of ecological anthropocentrism is not to recognize an *intrinsic* value to the outer circles, a popular notion in environmental ethics problematized by our colleagues in D2.1 (§4.3), but rather a *relational* understanding of (eco)dependence. We are at the center of our own lives, but to maintain and sustain those lives, we have to *valuate* the world surrounding us ecologically and then complement it with an adequate human superstructure (cf. Palmblad, 2025: 116–22).

6.3 Using and Abusing Nature

One problem of intrinsic value and the flattening of values sometimes argued for in environmental ethics concerns its practicality. If the intrinsic value of all organisms is undifferentiated, we must either accept that humans can be killed and eaten too (as in cannibalism), or that we must refrain not only from eating animals, but also from eating plants and mushrooms. In short, we then lack a criterion for conduct both in terms of ecological and social justice, and what in theory is an ethical approach will in practice result in unsolvable ethical dilemmas. If it is *intrinsically* wrong to eat animals but not plants, moreover, we end up in a position from which we must condemn Indigenous lifestyles, which we have seen tend to be ecologically just and integrated. Animal justice and animal rights can be a part of an ecological integration, but they can also be at odds with it, since they can be achieved in ecologically alienated ways.

Let us be clear: vegetarianism and veganism, when not sustained by ultraprocessed meat substitutes, are important contributions to sustainability and ecological justice, and refraining from eating meat or animal products for religious or ethical reasons is a moral position that is highly compatible with ecological anthropocentrism. To ask that everyone unconditionally submit to such diets, however, is not. Rather, from an ecologically anthropocentric outlook, our diets should depend chiefly upon what food production can be sustained by the regions in which we reside. Inhabitants of industrialized societies have less reasons for eating meat than those who live in self-sustaining communities, and

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the former have good reasons for at least reducing the consumption of meat and dairy. Ecological anthropocentrism allows each human and each community to choose their own diet, but—since it is a relational, environmental, and concrete position—it urges us to do so based on the ecological integrity of our actual surroundings.

Again, ecological anthropocentrism is not an alternative to biocentrism and ecocentrism, but a compensatory complement that sometimes is already a component of the two. While dethroning humanity and a call for rejecting any differentiation in the valuation of different organisms and species (as in the critique of *speciesism*), the recognition that differentiation is needed in practice has long been recognized within the discourse on environmental ethics. As Naess puts it: "The deep ecology movement accepts biospherical egalitarianism—*in principle*. The 'in principle' clause is inserted because any realistic praxis necessitates some killing, exploitation, and suppression." (Naess, 1973: 95–6). Similarly, Christopher Stone wrote that

> to say that the natural environment should have rights is not to say anything as silly as that no one should be allowed to cut down a tree. . . . [T]o say that the environment should have rights is not to say that it should have every right we can imagine, or even the same body of rights as human beings have. Nor is it to say that everything in the environment should have the same rights as every other thing in the environment. (Stone, 1972: 457–8)

Environmental ethics has often failed, we suggest, because of an ideal focus on biospherical egalitarianism *in principle*, which makes it unrealistic and incompatible both with the realities of ecology and the realities of living human beings. We who are ecologically alienated must rather, as Aldo Leopold (1989) suggested, find again our place in the ecosystem. We are not an essential part of the biosphere and can easily be dispensed with by the justice *in* ecology, so we better make ourselves ecologically useful. To do so, however, we must be realistic and informed by how ecology actually works—not by ideal principles of how we wish it worked.

Positions of ecological anthropocentrism provide a functional framework for how to think about instrumentalization. As noted in D2.1 (§4.3), it is common that instrumental values are unproductively conflated with economistic values and self-interest, and we argue that this conflation

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must be undone. In fact, from the viewpoint of ecology, instrumental values seem to be the primary value for all organisms, who instrumentalize their environments for the purpose of survival and well-being. A relational and ecological view of valuation can be conceived as follows: when an organism does something for itself or something else, it recognizes an intrinsic value in it; when it uses itself or something else for this purpose, it recognizes an extrinsic/instrumental value. With the separation of instrumental value from economistic values, which really are just instrumentalization for the sake of growth and accumulation, we can conceive of instrumentalization within ecological bounds. This distinction can be understood as between *use value* and *abuse value* (Palmblad, 2025), and it has direct bearing on ecological anthropocentrism: organisms without highly efficacious technological means can abuse their environments without this being a problem, since their impact is limited and since justice *in* ecology will cause an appropriate reaction for the sake of homeostasis; but, by the same token, human societies cannot abuse their ecological surroundings without contributing to an impending socio-ecological collapse (ibid.). As our colleagues put it:

> As in the Kantian categorical imperative, the key would be not to use nature merely as a means, but also, at the same time, as an end in itself. This means that, even if the instrumental valuation of certain natural goods (for aesthetic reasons, public health, etc.) is unavoidable, we must repudiate the commodification of nature at all costs. (D2.1, §7.1, cf. Palmblad, 2025: 121)

In the vein of such an *ecological imperative*, ecological anthropocentrism grounds itself in the concrete relations between humans and their environments in the twenty-first century, recognizing that these can and must be used—but also that they cannot and must not be abused. Rather than just being a plea to humans around the world to think more ecologically—a theoretical solution that is practically unrealistic—this is also a call for institutionalizing these ethics so that human societies and industries abide by this ecological imperative. As we have argued above (§6.1), human agency in modern societies is technologically augmented and mediated by entities at higher levels of organization, such as corporations, institutions, cities, and economies, and the rule of using but not abusing the ecological world must thus come to regulate these larger bodies of which we are all a part. Ecological law here has an essential role to play, since it is only by law that we can regulate growth-based cities, Promethean technologies (Palmblad, 2023), and profit-seeking corporations. To

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achieve a truly ecological civilization (Worster, 2022) in which humanity can prosper without growth (Jackson, 2017), we need our societies to function within ecological bounds.

6.4 Ecological Anthropocentrism as an Anchor

In the long term, social justice can only be achieved within ecological limits, since beyond these the conditions for human life and human justice are undermined, but the human perspective also serves to protect all the nonhuman species and processes on which our lives and societies depend. We thus contended in chapter 3 that anthropocentrism, if ecologically conceived, constitutes a needed anchor for avoiding ecological relativism. The idea was that ecological justice on its own, if understood not as a human framework but as an ecological phenomenon, constitutes a dynamic and cyclic process of checks and balances, in which life as a whole persists without consideration for the welfare of individual organisms or species. Organisms contribute to biodiversity both by thriving and by suffering, by eating and by being eaten, by collaborating and by competing—and species likewise contribute both by persisting and by perishing. Shifting environmental conditions in the past and now may undo the conditions for most organisms, but large-scale extinctions are part of a process by which life adapts to new circumstances. Technologically mediated human activities might bring an end to the Holocene or even the Cenozoic conditions of life, but from an *ecologically informed* ecocentric viewpoint, we and our activities are but a part of earth's life process renewing itself.

It is true that it is *conceivable* that our ecologically alienated civilization will upend the whole biosphere, but empirical data show how life works by adaptation to radically different and challenging ecological and climatic changes, and we thus deem it more conceivable that life will persist in novel and unexpected forms. After all, is the contention that an anthropogenic extinction event is radically different from nonhuman extinction events not also an anthropocentric supposition? However, if the increasingly unsustainable trajectory of human civilization truly is toward the end of all life on earth, which is nonetheless not an impossibility, ecologically informed social justice becomes a means for changing the trajectory and thereby also to protect and save the biosphere of which we all are a part.

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An ecological anthropocentrism that accepts biospherical limits, extends ethics to the surrounding spheres of our environment without resorting to an unrealistic abolition of ecological differentiation, and acts toward the ecological integration of modernity's cultures thus serves as an anchor and rationale for preserving the biospherical state we humans call the Holocene—and possibly the biosphere itself. This is true also when no human victims can be discerned, since human survival and well-being in the end depend on the integrity of the biosphere as a whole. This is very different from the disproportionate care for charismatic megafauna and other landscapes that humans find aesthetically pleasing, since ecological anthropocentrism is ecologically informed and thereby considers the value of the environment in terms of what is ecologically important for life as we know it right now. Hence *uncharismatic microfauna* like insects and less popular biomes like swamps gain a value once we accept the insights of ecological science. In short, when we are informed by how ecological processes work, ecological integrity turns from a nonhuman to a human interest.

The anchor of which we speak has two functions: it serves to protect the conditions of human life and it gives us a rationale for caring for *this* climate, *this* environment, and *these* species. Only an abstract understanding of humanity, by which we are severed from our ecological dependencies, can contribute to the belief that an imperial behavior toward the nonhuman world is good for humanity. To care for humanity and not for other lifeforms is thus a contradiction from an ecological perspective, since this assumes that humanity can live without biodiversity and ecosystems. Such imaginaries pertain to the realm of science fiction. Ecological anthropocentrism acknowledges our ecodependence and recognizes that to care for ourselves only is a contradiction in terms. As Arne Naess put it: "[the restriction of] the equal right to live and blossom . . . to human beings is an anthropocentrism with detrimental effects upon the life quality of men and women themselves" (Naess, 1973: 96). The same idea was defended in 1972 by Rene Dubos (1901–1982), who explicitly referred to it as anthropocentric:

> If properly conceived, . . . anthropocentrism is an attitude very different from the crude belief that man is the only value to be considered in managing the world and that the rest of nature can be thoughtlessly sacrificed to his welfare and whims. An enlightened anthropocentrism acknowledges that, in the long run, the world's good always coincides with man's own most

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> meaningful good. Man can manipulate nature to his best interests only if he first loves her for her own sake. (Dubos, 1972: 45)

As we noted above, instrumentalizing and even manipulating the world around us is only an ecological evil when it is abusive; in other cases, from an ecological standpoint, it is simply human niche construction. For this to be successful, we must re-learn not only how to care for the world around us, but how to protect those ecological systems that sustain us more than any economic system will ever do. The features of such ecological systems are often called "ecosystem services," but rather than providing us a service, which implies a mercantile and external relation, these species, places, and ecosystems provide humans with the conditions of life. The earth, as Hannah Arendt (2018 [1958]) noted, is a part of the human condition.

To fight for ourselves and each other as a species within an ecological framework, then, is to also fight for the biosphere and life on earth—and especially for the life forms we cherish and/or depend on. Importantly, this is not merely a safe-guard for the biosphere or the Holocene, but also for humanity and the concretely existing human beings this general concept refers to. Ecological anthropocentrism is thus a stance from which humans and the biosphere are protected together. Human worth and dignity here conforms to the Human Rights, and it is in the interest of all of humanity that we also must protect our current climate and life as a whole. Differently put: We are part of Team Humanity, which is a part of Team Holocene, which is a part of Team Earth. Defending the earth, then, means defending ourselves. This means that we cannot only speak *for* nature, but must also learn how to speak *as* nature.

6.5 Anthropocentrism as Strategy

The final argument for ecological anthropocentrism is strategic. Instead of asking people to care for a nature *out there* because it has a value they have yet to recognize, we suggest emphasizing the continuity between people and ecology, between culture and nature—not through theory alone but by communicating this truism in a language that is literally *down to earth*. Rachel Carson here serves as an important role model, since she managed to communicate what other scientists could not. Scientific language and even some theoretical jargon serve a purpose, but many witty neologisms

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and academic buzzwords rather serve to alienate people from the important messages that researchers try to communicate. This includes topical words within environmentalism itself, which people across political and ethnic divides have come to reject as elitist even when it concerns their own well-being (Price, 2021). Not all people care about "the environment," but as Carson made clear in the wake of *Silent Spring*, few will willingly eat and inhale pesticides if they are aware of what it actually does to our health and environment.

There is thus a strategic element to ecological anthropocentrism, but this does not mean that it is an ecocentrism veiled as anthropocentric for the sake of being more palatable to the general public and policy makers; rather, it is a reconciliation of an anthropocentric social justice and an ecocentric ecological justice. No approach should count on being frictionless and without contradictions, but ecological anthropocentrism serves to undo unnecessary obstacles to the transition into a socio-ecologically just civilization. Too often, sustainability is framed as achievable only by sacrificing our quality of life. This is not wholly unwarranted, since ecological limits impose a limit to what is possible, but it takes for granted what "quality of life" might mean. To be sure, many of the real goods of life that past generations lacked demand energy and matter to be consumed, but industrial consumer society has also given rise to ills that were unknown to people of the past, like "diseases of affluence," sickness through pollution, and anxieties induced by the current dynamics of modern society. Activities that benefit both mental and bodily health, like socializing, community-building, practicing sports, Leopoldian outdoor recreation, and community or home gardening need not cost much or anything at all. Activities that count as "doing nothing" according to the monetary and quantifying metrics of GDP both contribute to human well-being and a shift toward a humane economy and ecology (Odell, 2020). Through ecological anthropocentrism, we thus argue that human societies should be guided toward the goal of a good life for all, a possibility of *sumak kawsay* or *buen vivir*, not toward an economic growth that rewards only a part of humanity while exploiting both humans and the rest of the planet.

If ecological anthropocentrism is more convincing for people in general, we believe that it is also more practical for all of us who truly care for ecology. It draws attention to how socially unjust societies and imaginaries are driving the ecological crisis, not just a modern or human attitude toward nature, and it therefore helps us to focus on the socio-ecological issues built into our

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institutions and societies. While narrow anthropocentrism is problematic, the wholesale rejection of human-centered perspectives has proven itself unable to convince people in general as well as policy-makers to instigate a shift toward ecological integration. As Matthias Petel puts it:

> Condemning anthropocentrism offers no clear political compass for an ecological movement. What is needed instead is a critical focus on the unequal power relations within human societies that shape environmental outcomes. For rights of nature advocates, this means moving beyond abstract ethical commitments and toward a *political* approach—one that centers questions of institutional design, representation, and authority in contested territories. (Petel, 2025)[12]

Ecological anthropocentrism is such a political compass, and although it is at odds with capitalist politics and any other growth-based approach to the ecological crisis (including ecomodernism), it offers a starting point that is built upon a broad ecological humanism rather than any specific political ideology. A common ground for humanity enables us to recognize ecological finitude and an alternative to the current system no matter where we stand politically—as long as we agree on a basic ecological humanism and humanitarianism. Some political movements, like growth-critical green parties and Eco-Marxists, will find this easier to swallow than others, but even the utilitarian and economically liberal John Stuart Mill (1806–1873) argued for a "stationary state" as an answer to the question: "Towards what ultimate point is society tending by its industrial progress?" (Mill, 1923 [1848]: 746–51). In these pages, one of the foremost champions of liberalism argued against infinite growth, for social justice, and for preserving the natural world—and that such a stationary state without economic growth could still be the basis for personal growth. His forgotten words should serve as a historical warning to anyone subscribing to the idea of "green growth" today: "I sincerely hope, for the sake of posterity, that they will be content to be stationary, long before necessity compels them to it" (ibid., 750–51). Ecological anthropocentrism challenges the whole political spectrum to address this problem.

[12] This article is also available in Spanish. https://www.openglobalrights.org/beyond-the-critique-of-anthropocentrism-rethinking-the-rights-of-nature/?lang=Spanish

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Today, any champion of humanity must reconcile with the limits to growth and the role of social justice for adapting our increasingly global culture to the ecological processes on which we all depend. On a personal level, we can achieve ecological integration by striving toward and promoting among others an ecological awareness as an extension of our individual humanity. Personal development that is ecologically integrative and de-alienating amounts to what could be called an *ecological personality*—an idea that is more in line with *buen vivir* than with western notions of development and progress. This is not a personality type, but rather any form of personal development that is informed by ecology and the fact that we are ecologically dependent (Palmblad, 2025). To anyone who recognizes themselves as a part of nature rather than as people *on* a planet, defending the earth becomes an act of self defense. Of course, only in an ecological utopia will all people learn about their ecological dependencies, but it is not unrealistic to believe that more of us "moderns" can be ecologically informed even when we pursue different interests. Ecology can thus be made a part of the curriculum at all levels of education, not as a subject on an alien nature but as one on the human condition.

In the end, however, the major change needed to achieve a sustainable and socio-ecologically human ecology world is systemic and not personal, and the most realistic conception of an ecological society, culture, economy, and civilization is one that is structured in a way so that people can live their everyday lives sustainably even when they have no knowledge of ecology. Rather than being unsustainably sustained (§6.1), we would all be sustained by infrastructures and supply chains that do not exploit people and ecosystems in other places and times. Sustainability thus becomes not an extra demand upon humans who try to make sense of their lives, but the default condition of their human environment. This is akin to what some have termed *just sustainability*, a notion of sustainability that pays attention to social needs and welfare, includes the notions of quality of life and the good life, and is open to other means than economic growth for achieving it (Agyeman, 2016). The key role of ecological law, then, is to regulate the technologies, corporations, and institutions that make socio-ecologically unsustainable societies possible, so that carrying capacity is not exceeded by wanton exploitation, cornucopian imprudence, and ecological ignorance.

In the end, ecological anthropocentrism is no panacea, but it is an attempt at reconciling the historical tension between ecological and social justice. By appealing to how ecology is a part of the

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human condition rather than a nonhuman world that we could possibly do without, we prepare a fertile soil in which wild and cultivated plants can grow together. The planetary boundaries of the biosphere confine what kind of society we can cultivate, and human cultures around the world have shown that only a more socially just culture can be perennial without depleting its soils. It is only by cultivating ourselves and our institutions ecologically, by reconciling the laws of ecology with the struggle for a just society, that we can nurture the cultural roots of ecological justice.

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7 Conclusions

7.1 Summary of Achievements

This deliverable has investigated the cultural and historical roots of ecological justice, and it has highlighted how these origins present both inspiration and possible contradictions and tensions. Moreover, it has suggested a path forward for reconciling these tensions.

We have shown that, in its *manifestations*, ecological justice is not a phenomenon that emerged in history, but is rather the default ecological conduct that humans and nonhumans have adhered to since time immemorial. Its cultural roots are preceded by natural roots. At the individual level, organisms that adapt to their environment in a way that is sustainable over time can be said to demonstrate ecologically just behavior, while, at the ecosystem level, ecological justice is the self-regulation that favors a dynamic equilibrium. Even though conscious intentionality is missing, an ecosystem can thus be considered a form of justice system. Ecological injustice, by this line of reasoning, is an unsustainable or imprudent behavior, which is corrected by the dynamics of the ecosystem in which it takes place. The ecological crisis, then, can be seen as the result of human cultures that through technology have found ways of persisting despite increasingly unsustainable behavior, thereby escaping and circumventing ecological justice. This understanding of ecological justice is a form of justice *in* rather than *for* nature, which builds upon an ecological and ecocentric conception of how the checks and balances of the biosphere work. As such, it is justice that has no consideration for human notions of social justice, but it works as a condition for it: without a functional ecosystem, the very circumstances of human justice are lost.

As a *human idea*, however, ecological justice has emerged around the world in relation to perceived environmental problems, from antiquity to non- and counter-modern people of today. We highlighted how Indigenous peoples and their ideas neither can nor should be conflated into a homogenous category, but that they are all part of ecologically time-tested cultures and communities. Modernity, we argued in line with much other research, is a fundamentally unsustainable cultural and economic paradigm that exploits both humans and nonhumans. The

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Kichwa concept of *yachay tinkuy*, which refers to the confrontation of knowledge, ideas, and feelings, show how Indigenous and other populations exploited by the modern development paradigm have come up with ideas and practices that are not just ecologically but socio-ecologically just. This is also the case for ecofeminists, who in Latin America have developed notions like *cuerpo-territorio* (body-territory) to challenge the hard separation made in modernity. Concepts like *sumak kaway* or *buen vivir* are also examples of what we called *ecologically integrating culture*, but which also consider human well-being as important. Socio-ecological justice, then, is not a western invention, but sometimes an answer to the injustices induced by modernity.

If the idea of ecological justice takes many forms around the world and generally seeks to harmonize human demands for a good life with ecological integrity, we saw that the ideas of western environmentalism contain a tension between these two poles. The concept of ecological justice was since its conception in the 1960s perceived as justice without consideration for human dignity and welfare, which although helpful made it possible to pit it *against* social justice. This was the philosophy of Garrett Hardin, but socially informed environmentalists and ecologically informed ecumenical theologians in the United States of the 1970s instead emphasized how we must harmonize the two. Although the concept was largely forgotten until the late 1990s, the tensions persisted in the American deep ecology movement until the late 1980s, when radical environmentalists in some cases resorted to a misanthropic and racist rejection of social justice for the sake of ecological integrity. This was exposed by the social ecologist Murray Bookchin, today largely forgotten in environmentalist circles, and although radical his socio-ecological philosophy constitutes an important contribution to the notion of a socio-ecologically just culture and civilization.

We have aligned with our colleagues in arguing that justice must be socio-ecological, but we have substantiated this further by problematizing what ecological justice amounts to when social justice is absent. This we did by considering ecological justice not as a normative idea created by humans, but rather as a descriptive recognition of the balancing acts of the biosphere—what we termed a truly ecocentric view of ecological justice. However, the best way to harmonize social and ecological justice, we have argued, is to supplant the common critique of anthropocentrism with an appeal to ecological anthropocentrism. This was not to resort to human supremacism or to have a limited

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instrumental view of nature, but rather to understand how ecological integrity is *instrumental* to human life—without it, we cannot exist. This idea aimed to bring social and ecological justice into a functional relationship: the inhumane consequences of a true ecological justice are thus curbed and regulated, while unrealistic visions of human justice are brought down to earth.

Even though we introduced ecological anthropocentrism as a reconciliatory notion, it may be misunderstood. The answer to the problems regarding anthropocentrism is not, we suggest, to abandon the valuation of life and ecology found in biocentrism and ecocentrism, nor to reject these positions as a whole. Rather, the solution lies in undoing and rethinking the critique of anthropocentrism. Our proposal was therefore to embrace a *concentric* model: what if anthropocentrism were not an alternative, but rather a part of biocentrism, which in turn is a part of ecocentrism? This would no doubt disturb the circles of many theorists, but it would reflect the foundation of the human environment: we are humans (*anthropoi*), environed by life (*bios*), and part of an ecosystem (*oikos*). Human reasons to care for ecology are not always enough, but they can be enough if we understand how ecology works and how we are all a part of it—even when alienated from its processes. Embracing how we are all ecological would enable a serious socioecological critique of abusive instrumentalization, as well as of interests that align with none of the circles of life, like war and exploitation.

Finally, this report includes a claim made in §4.1 that is later used throughout: an ecological understanding of cultures makes for an understanding by which human collectives are entities at higher levels of organization that can be *ecologically alienated* or *ecologically integrated*. We concluded that ecological law has an important role to play in regulating these "cultures"—like corporations, cities, and countries—when they have unproportionally strong agency in relation to the rest of the biosphere. This would to ecologically integrate ecologically alienated cultures. Ecological anthropocentrism can serve as an anchor here, not only to safeguard humanity when ecological justice is accommodated, but also to safeguard the climate, biomes, and species of the Holocene period.

The cultural roots of ecological justice can in general terms be understood as the simultaneous traditions, tools, and worldviews that have aligned people with their local ecosystems since

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prehistory. All around the world, people have known how to act fairly in relation to their surroundings, which is why Indigenous peoples and cultures, despite being unique and different, are good examples of ways to live ecologically just lives. The cultural roots of ecological *injustice* is, by the same token, traditions, tools, and imaginaries that alienate people from the ecological reality. This report has focused on culture in the sense of ideas, worldviews, values, and imaginaries, but it emphasizes that these do not determine human conduct alone. Hence it is not enough to *think* the world differently, and it is quite possible to do so while in practice living unsustainably. What is really needed, we suggest, is to rethink culture as a whole. To this end, we hope that this report will contribute to the shift toward a socio-ecologically just civilization.

7.2 Relation to the Following Project Tasks

This deliverable concludes the official outputs of Work Packet 3 (WP3), "The Empirical Level of Ecological Justice," and thus joins the prior deliverables as a foundation for the last Work Packet on the strategic level. By investigating the historical and cultural background, we have provided a larger context of ecological justice that can inform all project partners as well as the tasks and deliverables of the next Work Packet. Work Packet 4 (WP4), "The Strategic Level of Ecological Justice," aims at establishing a plan to achieve long-term practices on ecological justice to further contribute to the development of an "ecological citizenship." This, we believe, will be facilitated by considering the historical context we have outlined as well as our reflection on how to achieve a socio-ecologically just culture through ecological integration and ecological anthropocentrism.

We recognize that not everyone in the Speak4Nature project might be willing to accept the idea of the "ecological anthropocentrism" proposed in chapter 6, since the very concept of "anthropocentrism" has been rendered anathema in most of environmental ethics. Although we stand by the idea of ecologizing rather than rejecting anthropocentrism, and since we have sought to be constructive rather than to cause a debate in lieu of action, we believe that the meaning we wish to convey with ecological anthropocentrism can be captured by other concepts too. In other cases, we believe that our proposed strategy will serve as a productive provocation by which alternative frameworks for reconciling social and ecological justice can be conceived. The history of the tension

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between these forms of justice, moreover, serves as a reminder not to take their compatibility for granted.

The first task of WP4, T4.1, which includes deliverable D4.1, will map civil society initiatives that currently implement the conceptual premises of ecological justice, discerning among other things whether they conform to common patterns. To this end, our analysis will provide an extra lens for perceiving possible conflicts between social and ecological justice in these initiatives. T4.1 also includes a secondary task of fostering contacts between citizen initiatives engaged in eco-activism so as to create conditions for future cooperation, and we believe that our framework of ecological integration can constitute a common framework for facilitating such fostering. The related T4.2 will map and assess the participation in ecological justice instances by private and public legal entities in both the profit and non-profit sector, and will investigate the compliance of for-profit initiatives to current directives. Depending on how much these directives constitute the measure, this report can serve as lens for understanding ecological and socio-ecological justice in a larger context.

T4.3 and D4.2, the "Speak4Nature White Book on Ecological Justice," will establish "recommendations and guidelines intended for both civil society and all the other institutions potentially interested in EJ, in order to provide them with an operational toolkit to assist any interested party in promoting and channelling instances of EJ in local, national and international contexts," including activities aiming "to improve access to justice in ecological matters." This is where we believe that our report will serve the Speak4Nature consortium the most, since we have not only assessed the cultural roots but also given suggestions for a framework through which to promote and realize ecological justice. T4.4 will establish the Observatory on Ecological Justice (OEJ). To this end our report will likely be less relevant, since its related D4.3 chiefly concerns a business plan for the OEJ, but we hope it can serve as a help in the framing of the project.

Finally, D5.1, which will outline the project strategy for communication and dissemination, can draw from our our reflection to establish a viable strategy for ecological justice in the twenty-first century.

This concludes D3.4, "The Cultural Roots of Ecological Justice."

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