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Developing normative criteria for meaningful citizen participation and deliberation in environmental policy

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The European Green Deal (EGD) represents the most ambitious environmental policy framework in European history, aimed at improving the health and well-being of citizens and future generations through climate action and becoming the first climate-neutral region in the world by 2050. The EC has initiated the European Democracy Action Plan and the European Climate Pact to include the participation of citizens in a meaningful way to help achieve these goals (i.e. not simply a tokenistic gesture or box-ticking exercise). While these efforts to ensure greater citizen participation and deliberation in environmental policy are good first steps, there is still a lack of clarity about what meaningful citizen engagement should look like. This paper will propose that for such efforts to be successful, we need to assess different perspectives in the debate and provide recommendations based on this. This paper provides a systematic review of various approaches within the academic literature on citizen participation and deliberation in environmental policy (ecocentrism, biocentrism, ecomodernism, ecofeminism, environmental pragmatism, environmental citizenship, environmental rights, and environmental justice). Following this, we provide a list of 16 criteria (in five thematic sections) for policymakers, civil society organisations (CSOs), and society, to ensure meaningful citizen participation and deliberation.

Keywords: environmental policy; European Green Deal; participation; deliberation; inclusion; citizens

1. Introduction

With the increased frequency and intensity of climate change-related impacts, huge biodiversity losses, and increased risk of environmental disasters, there is an urgent need to implement effective environmental policy worldwide. One of the milestones in European environmental and sustainability policy in this regard is the European Green Deal (EGD). This was first presented in December 2019 and represents the most ambitious

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environmental policy framework in European history. The EGD proposes a strong emphasis on improving the health and well-being of citizens[1] and future generations through appropriate climate action and becoming the first climate-neutral region in the world by 2050. It is a fundamental part of the European Commission's (EC) strategy to implement the seventeen sustainable development goals (SDGs) and ensure a sustainable future for the planet.

Although the EGD signifies a huge step forward in uniting Europe around the common goal of addressing our environmental challenges, trust and confidence in European governments and institutions are low. There is a perceived distance between European citizens and policymakers, a rise in Euroscepticism, an increase in support for populist and nationalist politicians, and disillusionment towards European diplomats. In response to this, the EC has initiated the European Democracy Action Plan, which aims to bring about greater levels of citizen participatory and deliberative democracy, particularly in the context of environmental policy. Other initiatives, such as the European Climate Pact, aim to directly include the participation of citizens in a meaningful way (i.e. not simply a tokenistic gesture or box-ticking exercise).[2]

While all these efforts to ensure greater citizen participation and deliberation in environmental policy are good first steps, there is still a lack of clarity about what meaningful citizen engagement should look like. The EGD aims to bring about environmental change while including citizens in the decision-making process, but it is unclear what kind of criteria make up meaningful inclusion within environmental policy. This is not helped by the fact that much of the scientific research done on this topic is siloed within different disciplines; and often only focuses on challenges and issues, rather than providing recommendations and solutions.

Therefore, an important first step towards achieving meaningful citizen participation and deliberation in environmental policy is to assess the different approaches and perspectives in the debate and to provide recommendations based on this. In this paper, we understand participation as the act of taking part in something; it is the process of involving, engaging, and information sharing with the public and citizens' involvement in the decision-making process (Baum 2001). Deliberation is understood as the act of reflexive discussing, speaking about, and exchanging thoughts through dialogue, discussion, or debate (Dryzek and Pickering 2017). Deliberation can be defined as a

> mutual communication that involves weighing and reflecting on preferences, values, and interests regarding matters of common concern. Defining it this way minimizes the positive valence that is associated with the word 'deliberation' itself, so that we can then speak of 'good' and 'bad' deliberation without 'bad deliberation' inherently being a contradiction. We define deliberative democracy as any practice of democracy that gives deliberation a central place. (Bächtiger et al. 2018, 2)

This paper aims to identify varying viewpoints from academic literature on citizen participation and deliberation in environmental policy (taking the EGD as an example of where these criteria could be implemented) and, based on these findings, provide a list of criteria for policymakers.[3] This paper provides a unique contribution to the scientific literature because little research has been conducted on bringing such a wide diversity of approaches together, mapping what they say about citizen participation and deliberation, and even less on the unification of approaches within a normative list of criteria of what should be implemented to achieve meaningful citizen participation and deliberation in environmental policy (such as the EGD).

This paper will begin by providing a clear methodology of the systematic review that we conducted (section 2). Section 3 focuses on the results of this review of eight environmental approaches: ecocentrism, biocentrism, ecomodernism, ecofeminism, environmental pragmatism, environmental citizenship, environmental rights, and environmental justice. Finally, we will provide a list of 16 criteria (in five thematic sections) for meaningful citizen participation and deliberation (section 4) and Section 5 will discuss how the criteria should be interpreted and possible tensions between the different approaches to these criteria.

2. Methodology

The first step involved in our research was identifying how we should cover a wide diversity of fields of research on the topic of citizen participation and deliberation in environmental policy. It was important to include research relevant to the debate, so we identified several key fields of research that would offer insights into the topic of citizen participation and deliberation. Between the co-authors, we had a diversity of experiences with multiple fields of research related to justice, democracy and transformation towards sustainability that could offer interesting insights on this topic. We settled on focusing on four specific fields of research that offered a diverse range of perspectives on the topic of citizen participation and deliberation: law, ethics, political science, and feminism. These perspectives provide different normative contributions to the topic of citizen engagement in the context of environmental policy and societal change. We felt that these four fields of research would provide a diverse range of normative assumptions and positions on environmental citizen participation and deliberation. While we accept that one could focus on more fields of research (e.g. sociology, geography, economics, etc.), our reason for choosing these four is that they were relevant to the focus of our paper (citizen participation and deliberation) and were diverse enough to incorporate a range of perspectives on the topic. Nevertheless, since our literature review involved numerous articles on sustainability which is an inter-, multi- and transdisciplinary concept, it did refer to and touch upon further fields of research.

In addition, many of the eight approaches that we analyse (within these four fields of research) could fit into many other fields of research (e.g. ecofeminism is often discussed in philosophy, sociology, and geography, as well), so our approach, in practice, covered many more than just these four fields of research. We also did not use these four fields of research as strict cut-off points, but more as parameters to ensure that the approaches we focused on would cover the deliberative and participatory requirements and expectations of the Green Deal. It was important for our project to focus on fields of research that were typically normative in nature and focused on environmental topics related to the Green Deal. For example, addressing the field of law, for instance, enabled us to research the varieties of national frameworks influencing deliberation and participation in environmental policies; politics was essential to assess the development and impact of participatory and deliberative processes; Feminism has gained more and more centrality over the last decades both in the field of deliberative democracy and sustainable transition; and ethics (by definition) is the most normative approach to provide guidance on reasons why we should or should not implement deliberation and participation in the context of environmental practice and policy.

Within the context of the four fields of research, we did not have the capacity to analyse *all* disciplines that may be relevant to this topic, nor would it be possible within the word count confinements of an academic paper, so we had to make a pragmatic

choice on what disciplines to focus on. The authors also felt that it was important to identify specific *environmental* positions within the four fields of research analysed, so this also narrowed down our focus to those approaches that had specific environmental content.

Our research was focused on citizen deliberation and participation in the context of *environmental* policy, rather than the wide abundance of literature on general citizen deliberation and participation. In addition, while there has also been a great deal published in other areas on this topic, we specifically aimed to focus on how different environmental approaches framed the debate. This was to gather an eclectic and disparate set of viewpoints on the topic of citizen participation and deliberation on *environmental* issues. Essentially, we looked at environmental-related literature and how they take citizen participation and deliberation into account and not the other way around, meaning, looking at deliberative and participatory democracy literature and how they take the environmental aspect into account. In other words: the starting point was EDG and environment, not citizen participation and deliberation.

Based on the skills and background of the team (10 members), we divided the eight approaches that we examined among the researchers with relevant backgrounds and skills in the approaches analysed (see Table 1).

We agreed on having a single approach for the systematic review[4] to ensure consistency, using the same databases (Scopus and Web of Science), literature exclusion methods (PRISMA flow chart), and data analysis software (ATLAS.ti). The systematic reviews were confined to English-language books, book chapters, papers, and conference proceedings, that would lend insights into how these eight approaches discuss citizen participation and deliberation.

The co-authors began with the same Boolean search queries, outlined by the task leader (see Table 2, using ecocentrism as an example).

For some of the approaches, the searches brought back over 1,000 articles. However, much of that literature was not relevant to the task at hand. Because of the quite broad search terms, there was much overlap with other topics, areas, and applications of the approaches searched for. To refine these lists, the co-authors implemented the PRISMA systematic review flowchart (see Figure 1).

The PRISMA flowchart is useful because it allowed everyone to follow the same procedure and steps for refining their article searches. Three exclusion criteria formulated by

Table 1. Division of labour among researchers.

Approach	Researcher(s) Profile
1. Ecocentrism	Environmental Ethicist
2. Biocentrism	Environmental Ethicist
3. Ecomodernism	Political Scientist Sociologist
4. Ecofeminism	Anthropologist Political Scientist
5. Environmental Pragmatism	Environmental Ethicist
6. Environmental Citizenship	Political Scientist Sociologist
7. Environmental Justice	Environmental law and policy professor Law Professor/Philosopher
8. Environmental Rights	Human Rights Lawyer/Researcher Human Rights Lawyer/Researcher

Table 2. Search queries for SCOPUS and Web of Science with ecocentrism as an example.

Source	Search Query
SCOPUS	(TITLE-ABS-KEY ((‘ecocentrism’) OR (‘ecocentric’)) AND ALL (participation) OR ALL (citizen) OR ALL (involvement) OR ALL (deliberation) OR ALL (deliberative) OR ALL (dialogue) OR ALL (public) OR ALL (collaborate) OR ALL (collaboration) OR ALL (involvement) OR ALL (democracy) OR ALL (democratic) OR ALL (governance) OR ALL (citizenship)) AND (LIMIT-TO (PUBSTAGE, ‘final’)) AND (LIMIT-TO (LANGUAGE, ‘English’))
Web of Science	((((((TI = (ecocentrism)) OR AB = (ecocentrism)) OR AK = (ecocentrism)) OR TI = (ecocentric)) OR AB = (ecocentric)) OR AK = (ecocentric)) AND ((ALL = (participation) OR ALL = (citizen) OR ALL = (involvement) OR ALL = (deliberation) OR ALL = (deliberative) OR ALL = (dialogue) OR ALL = (public) OR ALL = (collaborate) OR ALL = (collaboration) OR ALL = (involvement) OR ALL = (democracy) OR ALL = (democratic) OR ALL = (governance) OR ALL = (citizenship)) OR ALL = (deliberative))

the task leader were applied to each of the eight literature searches (one for each of the eight approaches analysed). Articles were excluded if they were not:

(1) Relevant to the approach that the co-author was examining (for example, if the paper was not focused on ecofeminism in the ecofeminism literature review).
(2) Focused on the topics of citizen participation and deliberation.
(3) Focused on topics related to the environment.

The result of this systematic collection and article refinement process left us with many analysable texts within each of the eight approaches (see Table 3).[5]

When this process was finished, each of the co-authors uploaded their collection of articles to ATLAS.ti.[6] The first author created a codebook[7] in ATLAS.ti that the co-authors could apply in their thematic analysis (i.e. deductive coding). Co-authors also created codes throughout their analysis because different approaches raise different issues (i.e. inductive coding). This resulted in a mixed-methods approach (deductive and inductive). The co-authors analysed the texts for specific words and phrases that would identify themes around citizen participation and deliberation.

The co-authors produced eight individual systematic reviews based on the approaches analysed. Following this, they collectively analysed the literature to find specific criteria for what should constitute meaningful citizen participation and deliberation on

Table 3. Articles for analysis.

Approach	Retrieved	Excluded	Articles analysed
1. Ecocentrism	643	604	39
2. Biocentrism	343	336	7
3. Ecomodernism	71	54	17
4. Ecofeminism	852	812	40
5. Environmental Pragmatism	57	48	9
6. Environmental Citizenship	643	614	29
7. Environmental Justice	1063	1024	39
8. Environmental Rights	562	523	39
Total	**4234**	**4015**	**219**

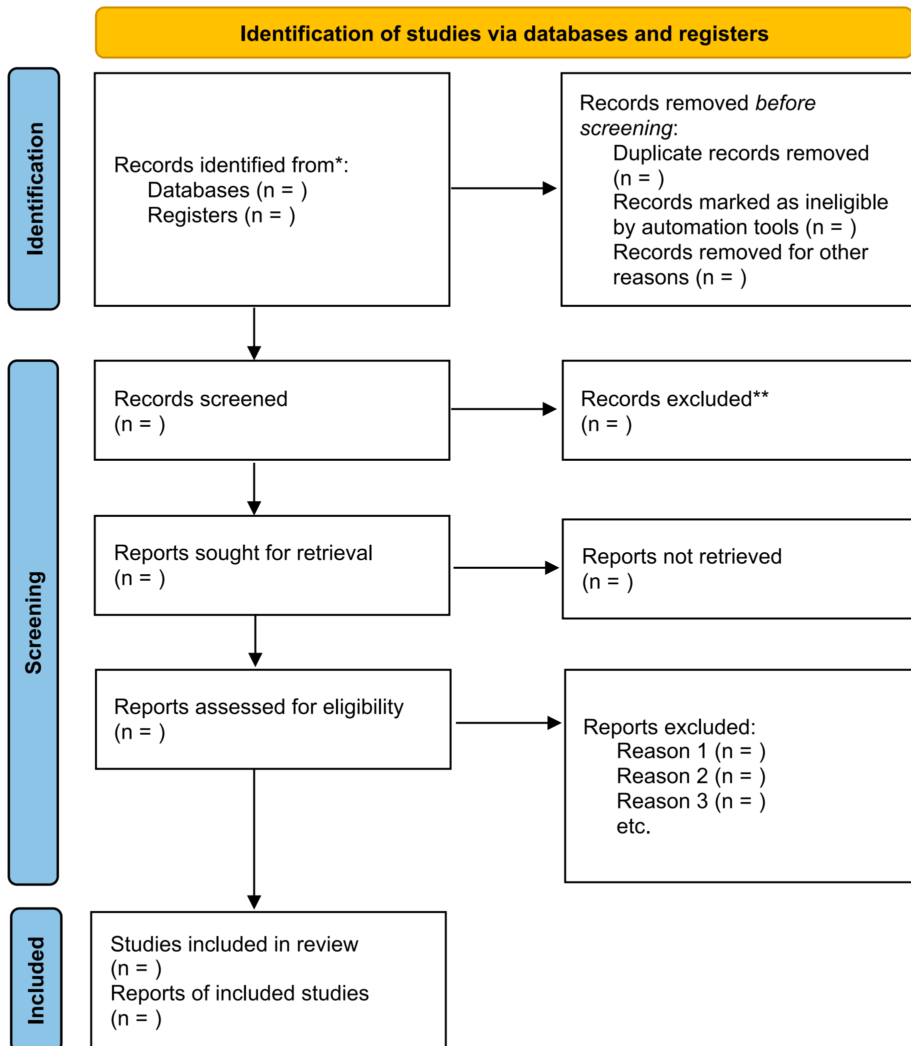

Figure 1. PRISMA flowchart, taken from Page et al. (2021).

environmental policy. During a 2-hour workshop, each co-author provided 2–6 key recommendations from their approach to achieve meaningful citizen participation and deliberation.[8]

There was a strong degree of overlap and repetition, many of the criteria were merged and refined down to a total of 16 criteria in five thematic categories. These criteria were presented and discussed to a wider body of stakeholders (including civil society organisations, policymakers, and other scientific researchers) online on three separate occasions to receive feedback and input for changes to the criteria (two in July and one in September 2022). During several rounds of refinement and changes, this paper presents the final version resulting from these discussions.

The 16 criteria will be explained in Section 4 after we discuss the eight systematic reviews that these criteria stemmed from in the following section. The initial eight systematic reviews were much longer for the purpose of our project and are condensed

down for the purpose of this paper. However, they represent the main findings of our research and the data that was most relevant for our criteria development.

3. Findings: eight systematic reviews

It must be made clear at this point that the eight approaches we evaluate are not the only ones that discuss citizen participation and deliberation, as there are many perspectives and a wide body of literature focusing on this topic for many decades now. For example, Renn and Schweizer (2009) outline six classical perspectives on participation and deliberation: functionalist, neo-liberal, deliberative, anthropological, emancipatory, and post-modern perspectives (see Table 4).

These six classical perspectives show that there is not one commonly accepted definition of participation and important related concepts (Rowe and Frewer 2004). Whether or not acts of citizen participation and deliberation are regarded meaningful, strongly depends on which understanding one puts central in their evaluation of the participatory practice. For supporters of the emancipatory perspective, the degree to which underprivileged groups have gained more access to power determines the quality of the process, while for functionalists, this might be judged by the quality of the outputs (Renn and Schweizer 2009).

Because of the divergent timelines in the emergence of both the classical perspectives to citizen participation and deliberation and the eight approaches that we focus on in this paper, there is no clearcut and self-evident way to categorise what positions came first or influenced who, and often, they do not often refer to one another. However, there is a strong degree of similarity and overlap, demonstrating that the eight approaches that

Table 4. Six classical approaches to deliberation and participation, based on Renn and Schweizer 2009.

Six Classical Perspectives on Deliberation and Participation
In a **functionalist** perspective, every form of social action is assumed to relate to the survival of society. The main objectives of participatory action following this perspective are to gather all relevant information and perspectives of people involved, avoid political paralysis by an open process, and ensure that the implementation of the decision-making goes smoothly.
In a **neo-liberal** perspective, individuals and their strive for their individual preferences and interests with the available resources are central. Participation is seen as a way of achieving informed consent. Representation 'of values and preferences' should be according 'to their share in the affected population' (Renn and Schweizer 2009, 180).
For the **deliberative** perspective, instead of striving for a win-win situation with a proportional representation, reaching consensus through rational argumentation is key. Influenced by Habermas, deliberation is seen as a crucial matter of representation because the plurality of values and views within our modern societies cannot be adequately dealt with by conventional politics.
The **anthropological** perspective does not focus on representativeness but instead draws on the idea that using common sense is the best way to judge. By using your mind and own experience, every citizen can make moral judgements.
The central point of an **emancipatory** perspective is that less privileged groups could make their voice heard. Participation is the way to reveal power structures and to enable structural change of disenfranchised groups, who themselves want to change and fight their oppressed situation.
The **post-modern** approach, influenced by Foucault's discourse analysis, connects to this in their aim to reveal the power and knowledge structures that are present but not always visible in society. By demonstrating plurality of knowledge, deliberation can decrease the pressure of conflict.

we analyse were not created in a citizen participation and deliberation vacuum, nor do we make this assumption. Furthermore, while there is a lot of very valuable research focusing on citizen participation and deliberation in the literature, we specifically wanted to focus on several specific *environmental* positions within the debate to identify how they view and frame participation and deliberation for topics related to the EGD. This adds a new dimension to the classical literature on this topic and adds to the novelty of our research.

Each of the following subsections will provide an overview of the eight approaches analysed and their descriptions of citizen deliberation and participation. The length and depth of analysis for each of the eight approaches vary because of the number of articles that were analysed (see Table 3 earlier) and the coverage of deliberation and participation within each approach. In addition, each section differs in its focus, based on the literature examined. For example, the literature on ecocentrism focuses on different strands of ecocentrism and their relationship to political structures and activism. Whereas, other sections, such as ecomodernism and environmental pragmatism mostly consist of criticisms of, and arguments against, these approaches and their stance on citizen participation and deliberation (as that was the focus of the literature). We will focus specifically on how each approach speaks about citizen participation and deliberation to get a robust and cohesive perspective on this topic within the debate. Each section will begin with a general overview of the position and will then explore the divergent values and viewpoints found within that approach related to citizen participation and deliberation.

3.1. *Ecocentrism*

3.1.1. *Introduction and values of the approach*

Ecocentrism is a position within environmental ethics that emphasises the fact that human beings have a dramatic effect on the environment and its ecological stability and regulation (Aguilar-Luzón et al. 2020). Advocates of this approach claim that we need to change our human chauvinism (a sense of superiority over other species) (Eckersley 1992; Pesch 2022; Prati et al. 2016). Instead, we should realise 'the interconnectedness of nature, humankind's inability to control nature, and working with nature rather than using technological fixes to control and modify nature for our purposes' (Beckwith, Hadlock, and Suffron 2003, 135). We need to widen our moral circle and stop the exploitation of natural habitats, ecosystems, and other species (Batavia et al. 2020; Matzek and Wilson 2021; Rülke et al. 2020; Skollerhorn 1998). According to ecocentrists, nature has intrinsic value (Taylor, Wright, and LeVasseur 2020) and we need to value nature for its own sake, regardless of how we can benefit from it (Casey and Scott 2006; Grendstad and Wollebaek 1998; Kaida and Kaida 2016; Kloek et al. 2018; Papadakis 2000). This is typically in contrast with anthropocentrism, which concentrates on the physical, aesthetic, and economic benefits that we can get from the natural world (Aguilar-Luzón et al. 2020). For ecocentrists, there is a strong need to better account for the values of nature within political decision-making (Skollerhorn 1998). We need to acknowledge our impact on nature and make better decisions to minimise harm to it (Payne 2010). Our species must become more responsible for other species, ecosystems, and nature, and this needs to be reflected within the public consciousness and materialise through our participation and deliberation about the environment (Eckersley 1995, 179). There are two strands of ecocentrism being applied in a political context, which have different views on what citizen participation and deliberation should look like: liberal and global ecocentrism.

3.1.2. *Citizen participation and deliberation in ecocentrism*

Liberal ecocentrism claims that corporations have too much power, nature is compromised for profit, and we need to increase ecocentric representation within politics to change this, using liberal democracy (Salazar 2009) We need to vote for parties who represent greater environmental care and place it high on their agendas (Aguilar-Luzón et al. 2020; Papadakis 2000). However, liberal ecocentrism must still answer the underpinning justification in liberal democracy that only human beings have political status because of our ability to reason, communicate, and our very status as a species (Mathews 1995).

Liberal ecocentrists claim that although liberal democracy does not necessarily initiate an ecocentric perspective, it can still be used to bring citizens together to better incorporate these viewpoints into political action (Mathews 1995). This change needs to come from the bottom-up and we need movements to bring about change (Eckersley 2002). We need liberal ecocentrists to drive us out of complacency and into better environmental practices and discussions (Mathews 1995). Liberal ecocentrists must encourage, promote, and develop this ecological consciousness in others so that they become better ecological citizens (also see the environmental citizenship section later in this paper) (Pavalache-Ilie and Unianu 2012).

Global ecocentrism promotes a communal understanding of our relationship with nature, veers away from individualism, and emphasises the need to include other species and ecosystems within our moral outlook (diZerega 1996; Mathews 1995). However, in contrast to liberal ecocentrists, they are sceptical of local politics, claiming that the environment and ecological systems are not bound to a country's boundaries. Often, local and national power is far less than the corporate interests of multinational organisations (Mathews 1995, 18). Instead, we need to create 'transnational networks or communities of resistance' (Mathews 1995, 30).

Global ecocentrism claims that our political system is often insufficient for bringing about real environmental change because of the vested interests of politicians and large corporations. Therefore, we need to initiate other forms of political action to initiate real change and for our voices to be heard. Global ecocentrists often promote civil disobedience, protests, and activism, to ensure that they are heard (Eckersley 1995, 170). They contrast fight for the rights of nature with other forms of social protest and liberation of other groups in the past, such as the abolition of slavery, women's rights, and people from the LGBTQIA + community (Kopnina 2012).

However, global ecocentrists sometimes become frustrated with the slowness of political action and discussions about the environment (Biagi and Ferro 2011, 6; Salazar and Alper 2002, 545). This frustration boils over into a disassociation from politicians, parties, and the political system. They sometimes view the political apparatus as being corrupt, self-interested, and overlooking the dramatic impacts we are having on the environment (Salazar and Alper 2002, 545). Global ecocentrists state that if strong steps are not implemented to initiate change, then we will continue a business-as-usual path to self-destruction and the annihilation of the environment.

3.2. *Biocentrism*

3.2.1. *Introduction and values of the approach*

Biocentrism states that nature is not there simply to provide us with resources to overexploit and destroy because it provides the life source for all other living entities on the

planet (Barranquero Carretero and Sáez Baeza 2022; Laastad 2020). Biocentrism fundamentally views human beings as a part of nature, not apart or distinct from it (Ingalsbee 1996). Human beings should be respectful of the intrinsic value of other organisms and parts of nature, and we should strive to live in harmony with these other species, rather than being in opposition to it (van Norren 2020). The ability of other organisms to live and flourish is at the heart of biocentrism (Wienhues 2017). The main difference between biocentrism and ecocentrism is that the former emphasises the moral importance of individual organisms, and collections of these organisms, while ecocentrism is more concerned with the health and wellbeing of ecosystems (Ryan 2016). Their difference is sometimes evident when there is a tension between their values. For example, if there is a species of deer that was overgrazing a habitat, ecocentrists would cull it to provide a continuing resource for future populations of deer, and other species, and so that the ecosystem as a whole is still able to recover; while biocentrists may disagree, claiming that this domination over nature and killing of other organisms is impermissible. Instead, for biocentrists, we should create rights to protect animals from such interference and allow nature to take its course.

However, when one tries to implement rights for non-human organisms or consider the intrinsic value of nature, one is often left with the challenge of how to do this in practice. This is because

> the biocentric "marketplace of interests" poses new problems for the balancing of conflicting rights. A virus that is deadly for humans, for example, has nevertheless an intrinsic value as a part of nature; its extinction is not "natural" but has to be justified. (Emmenegger and Tschentscher 1993, 583)

3.2.2. *Citizen participation and deliberation in biocentrism*

Biocentrists claim that while there is not a consensus for environmental protection for the intrinsic value of other organisms, this does not necessarily mean that it is something that is not important or that should not be implemented in policy and law. Biocentrists would argue that humankind has had a history of unfair and inhumane practices, which were only absolved through law and restrictions on individual practices. Biocentrists aim to provide the representation of those who cannot represent themselves (namely, non-human organisms), giving a voice to the voiceless in global environmental participation and deliberation (Emmenegger and Tschentscher 1993).

Some claim that biocentrists should become more proactive and should try to initiate change based on their deeply held values and beliefs (Anker and Witoszek 1998). They should attempt to do this through nonviolent means and attempt to build a new society formed on the values of biocentrism (Anker and Witoszek 1998). Biocentric reformists claim that they should work within the system and encourage and develop biocentric values through grassroots movements and by educating citizens, and public debate. Their main aim is to engage others, create better democratic participation and deliberation, and reform societal values towards more biocentric ones. This position is not against the current system but attempts to reform and change it in a more biocentric direction (Anker and Witoszek 1998, 242). However, most liberal democratic countries are too focused on economic growth and the only reason that they change their behaviours is when environmental pressures threaten economic growth (Boxley 2019). This is a common criticism which has also been levelled against positions such as ecomodernism.

3.3. *Ecomodernism*

3.3.1. *Introduction and values of the approach*

Ecomodernists promote agricultural intensification, synthetic and/or genetically modified foods, fish from aquaculture farms, desalination and waste recycling, urbanisation, and the replacement of less 'dense' energy fuels with more dense ones (e.g. nuclear power plants and advanced renewables), as well as fossil fuel power plants equipped with carbon capture and storage systems available for everybody (Kallis and Bliss 2019). Ecomodernism aims at making environmental protection appealing to the public and especially working-class people while promoting growth (Kallis and Bliss 2019).

Ecomodernism promotes the idea of a circular economy and green growth (Wiedmann et al. 2020), where infinite growth and consumption is not only possible, but desirable (McDonough and Braungart 2002). It also states that it is unfair for people in the Global South to be forced to limit their development and economic progress when the Global North has profited from long periods of growth (often at the expense of the Global South). It opposes degrowth theories which it describes as 'ecological austerity' or 'neo-primitivists' (Karlsson 2016).

3.3.2. *Citizen participation and deliberation in ecomodernism*

Ecomodernism promotes a consumer-led, monetised future. It believes that citizen participation and deliberation will largely appear through their market preferences and activities. Citizen action and citizens' voices can be seen in their purchasing and market movements. Most of the literature discussion ecomodernism and its approach to citizen participation and deliberation was negative and critical of it. Therefore, we wish to represent the critical reflections against ecomodernism in this section, and they will also be reflected in our criteria.The first criticism against ecomodernism's approach to citizen participation and deliberation is in relation to its promotion of market-based solutions to solve environmental issues: it transforms the state from a regulatory body to a cultivator of technological innovations (Anshelm and Hultman 2015). Ecomodernism celebrates market approaches and higher-priced 'green' products (Schlosberg and Rinfret 2008), while treating the class, gender, and racial inequalities embedded in capitalism as solvable through liberal democracy and local control (Foster 2021). The use of Green Tech may provide concerned consumers an easy way to feel like they are making a difference and a sense of participation and deliberation but is not sufficient for radical, necessary changes, particularly for marginalised groups (Sharzer 2012 in Dockstader and Bell 2020).

Secondly, ecomodernism tries to make what is very probably unsustainable simply *appear* sustainable, and it turns environmental policy making into a theatre for securing public acceptance of policies that support the established order (Blühdorn and Deflorian 2019, in Berglund and Julier 2020). The politics of ecomodernism is reactionary and elitist, since it only profits the powerful (politicians and investors) and does not effectively include people in the green transition processes or allow for public debate and deliberation (Swyngedouw 2013 in Berglund and Julier 2020).

Collard, Dempsey, and Sundberg (2016) also criticise ecomodernism for its amnesia regarding the violence of the modernisation processes and the social struggles that have been fundamental to all progress toward equality and liberation for the group's modernisation has oppressed. In this sense, ecomodernist policies ignore oppression and exclusion issues in modernisation processes. Ecomodernism's emphasis on technological advancement undermines inclusive, justice-oriented proposals for climate mitigation

and human progress (Kallis and Bliss 2019). Thirdly, Foster (2021) underlines the hegemonic and exclusive dimensions of ecomodernism in which elite businessmen undertake the task of solving environmental problems. This approach places faith in business while ignoring economic, environmental, and social inequalities faced by working-class people, particularly women and people of colour, and dismisses their long tradition of radical activism for environmental justice (Dalby 2016; Elliott 2013; MacGregor 2010). Ecomodernism acknowledges climate change as an existential threat but ignores the disproportionate impact of it on systemically excluded groups (Foster 2021; in Dockstader and Bell 2020).

White underlines that ecomodernism has failed to develop a complex politics of labour and work that could provide the basis for building broader audiences and alliances towards sustainability and open the floor to greater debate and public deliberation. The potential creative role that employees could play in redirecting practices, developing new institutional forms or new lay-expert modes of engagement to build entirely new design ecologies and green public goods, is not addressed by ecomodernism (White 2019).

3.4. *Ecofeminism*

3.4.1. *Introduction and values of the approach*

Ecofeminism was coined during the second feminist wave by d'Eaubonne in 1974 (Baker 2004; Fakier 2018; Mies and Shiva 1993). According to ecofeminists, current conceptualisations of modernisation and 'progress' are based off colonial and patriarchal systems and are responsible for the degradation of nature and the oppression of women (Mies and Shiva 1993). This places it in contrast with the green growth advocated by ecomodernism, as ecofeminism aims to achieve de-growth and a feminist wellbeing economy that centres care for people and the planet. Besides the feminist focus on the effect of social and ecological approaches on people, ecofeminism also focuses on the effects these approaches have on nature (Pilgrim and Davis 2015). For a further explanation of different versions of ecofeminism, see Appendix 1. Ecofeminism takes the position that the oppression of women is inherently entwined with the destruction and exploitation of nature by people (e.g. Ajibade and Boateng 2021; Anahita 2009; Baker 2004). The same structural sources are seen for both forms of oppression, namely western science which is based upon rationality, objectivity and control (Bäckstrand 2004) and (neo)colonial patriarchal domination (Anahita 2009; Buckingham 2015; Nugent and Shandra 2009). Ecofeminism differs from feminism in that it considers the liberation of women as being intertwined with efforts to end environmental degradation (Lee 2018; Pilgrim and Davis 2015). While the specific activities differ for different places on earth, in general women are the ones who are responsible for caring tasks, the provision of food, and fetching of water (Nugent and Shandra 2009) and therefore, immediately notice when water levels are changing or when the quality of the soil worsens. Because of this, effects of climate or environmental change such as drought or heavy rainfall will often be noticed by women – especially structurally disadvantaged women who experience poverty – first and will affect these women most (Hunt 2014; Kesting 2011; Lee 2018). This knowledge and these experiences are often undervalued due to systemic oppression. Therefore, gender equality and the end of the climate/environmental crisis can only be achieved in conjunction (Nugent and Shandra 2009, 210).

Both capitalism and patriarchy are highlighted as structures that flourish due to the oppression of women and nature and sustain their oppression (Foster 2021; Stevens, Tait, and Varney 2017). Ecofeminism takes an intersectional approach in claiming that

women are oppressed for more reasons than only their gender. Aspects like racialisation, sexuality, class, location, religion, dis/ability, physical appearance, and nationality also shape people's individual identity (Lee 2018). When an intersectional approach is taken, individuals are not only defined by their gender but also by other societal aspects and characteristics.

3.4.2. *Citizen participation and deliberation in ecofeminism*

Effective participation and deliberation should include the knowledge of local people, but as Rocheleau (1991) asserts, often indigenous ecological science is obscured by the invisibility of women, who are custodians of such knowledge. Wilkinson (2016) asserts that women and other traditionally excluded groups are often incorporated into institutions that maintain dominant ideologies and devalue their contributions. Meaningful participation and deliberation are limited and creating spaces for women's 'empowerment' without critically addressing local power structures will hinder an equal participation and deliberation .[9]

Bäckstrand (2004) argues that scientific knowledge, just like every type of knowledge, is formed in a certain social and cultural context. Scientific knowledge is typically framed as being objective and rational; characteristics that are often historically linked – particularly in Western societies – to masculinity. These characteristics are ascribed a higher value in science – as well as in societies in general – compared to values that are seen as feminine. For example, Daggett (2018) argues that new authoritarian movements in Western democracy link masculinity with the use of fossil fuels to bolster their own legitimacy.

Ecofeminists claims that we need to include local experiences and knowledge in science (Morrow 2017). Shiva states that marginalised people often have access to traditional or indigenous knowledge about food, the environment and medicinal plants, knowledge learned outside official education; and women are mostly the custodians of this kind of knowledge (Agarwal 1998; Morrow 2017; Rocheleau 1991; Stevens, Tait, and Varney 2017). Only by acknowledging and including women, can this wisdom be taken into account.[10]

Needs and interests of women from the Global South are often not reflected in capitalist systems in which economic growth is seen as the main indicator of development (Wilkinson 2016; Giacomini 2016). Besides that, lives of systemically excluded groups are most affected by environmental degradation and climate change, underlining the moral argument for their participation and deliberation (Anahita 2009; Morrow 2017). However, ecofeminism should 'not "borrow from another group" when attempting to identify tools or resources to aid them in their struggles, but rather learn to "locate sources of empowerment in one's own heritage and context"' (Daly in Kao 2010, 628). Inappropriate use of grassroots beliefs and traditions must be avoided by listening to local and indigenous people's experiences and utilising their knowledge (Wilson 2005).

This can be done, for example, by keeping local people in the lead, like in the Indigenous Organization of the Ecuadorian Amazon, local people have a key strategic role in determining how the movement collaborates with other indigenous women to work on local environmental problems (Li 2007). Local women who started environmental movements at the grassroots level play an important role in the continuation and successes of these movements and therefore in the realisation of environmental conservation. The Green Belt Movement active in Kenya claims that it is necessary to have committed local people working on sustainability processes for them to succeed (Hunt 2014; Stevens, Tait, and Varney 2017).

Maleta (2018) argues that women in the Global North should network with those in the South and conduct joint ecofeminist actions. The collaborative transnational nature of ecofeminism allows for a shift away from Western dominated knowledge construction and exploitative research. An example of this is the joint activism between women in the Global North who experienced persecution in the aftermath of Hurricane Katrina and those in the Global South who have been harmed by exploitative mining practices (Salman and Iqbal 2007).

One possibility for increasing participation and deliberation in environmental policy is attributing care for the environment to personal values (Ajibade and Boateng 2021). This was linked to participation and deliberation in pro-sustainable behaviours in the U.S., defined 'as enduring and repetitive actions taken with the intention to change, benefit, or minimize human impact on the environment' (Ajibade and Boateng 2021, 1). Fostering certain values within people has the potential to transform their lives and how they relate to the environment, leading to more sustainable outcomes (Pilgrim and Davis 2015).

Maleta (2018) emphasises women's grassroots leadership and points out how those leading environmental justice movements tend to be women from working class, indigenous or culturally/linguistically diverse backgrounds. Diverse participation is vital for sustainable development, and this must come from the bottom-up, rather than a tokenistic exercise implemented from above. However, it is not enough to say that diversity in participation and deliberation can lead to just and sustainable outcomes. Agarwal (1998) points out that the decentralisation of power and community control can also strengthen localised pockets of power, including patriarchal. Diverse participation and deliberation should be matched with an understanding of local contexts and challenging existing power relations to ensure sustainable communities and human development.

Ecofeminism brings together different movements to foster a 'radical revisioning of the world' (Sandilands 1997, 135), because without it, increased participation and deliberation will not change the current structures that perpetuate inequality (Maleta 2018). Women's ability to contribute to active environmental citizenship should encompass a resistance of formal structures and existing norms (Agarwal 1998; Wilkinson 2016; Giacomini 2016; Hunt 2014). Activism has the potential to change these structures e.g. protests in 2016 by indigenous women in the U.S. and Ecuador against oil concessions (Giacomini 2016) and Australia's 'Climate Guardians' protests (Stevens, Tait, and Varney 2017).

Baker (2004) states that non-violence and non-hierarchical organisational structure are two key pillars of ecofeminist activism, and that they have the potential to expand the environmental movement. Ecofeminist activism typically consists of bringing together social and environmental movements to bring the experiences of systematically excluded groups into environmental discourse. Ecofeminist activism has had success in putting greater emphasis on the value of women's non-productive work and ensuring women's full and equal participation and deliberation (for example, in the UN Conference on Sustainable Development (UNCSD)) (Wilkinson 2016).

Reproductive health and universal access to healthcare is of key importance to participation and deliberation and sustainable development (Wilkinson 2016). This is because there is often a need to balance participation in environmental sustainability with the 'responsibility for sustaining life' (Ilishko 2008; Pilgrim and Davis 2015, 128). Women are often marginalised from meaningful civic engagement because of the inability to manage their unpaid care burden (Pilgrim and Davis 2015). Women with more resources have a greater opportunity to participate and deliberate in environmental discussions, but this is typically predicated on the ability to pay other women to do their care work

(Buckingham 2015). Therefore, power asymmetries to participation and deliberation should be tackled for fairer inclusion, a point which is also emphasised in the approach environmental pragmatism.

3.5. *Environmental pragmatism*

3.5.1. *Introduction and values of the approach*

Environmental pragmatism originated out of a desire to cut out the unnecessary dialogue within environmental ethics and policy. Environmental pragmatism claims that debates about intrinsic vs. instrumental value, non-anthropocentric dialogue about nature's inherent worth[11], are a hindrance to the environmental cause. They view the inability of environmental ethics to hold sway over environmental policy in the past as a demonstration of its ineffectiveness (Brush 2020).

Environmental pragmatists emphasise practical concerns over theoretical ones, achieved through local action and community initiative (Booth 2012). There is a need to focus on practical, real, societal issues, rather than philosophical ideas and theories that are only relevant to academics (Loman 2020). Dialogue can overcome disputes among groups and the goal is find consensus on environmental issues (Loman 2020). Environmental pragmatism does this by conducting open-ended inquiries into issues and incorporating 'all relevant stakeholders in a rational discourse' (Loman 2020, 286).

However, an assumption of environmental pragmatism is that citizens will be able to put aside their values and beliefs to a large degree for a more 'rational' and structured discussion about environmental protection. This may be at fundamental odds with individuals' moral and political worlds and is not an easy thing to achieve (Maboloc 2016, 110). This repression of values and beliefs represents intolerance, subjugation, and ignorance towards other citizens' deep-rooted moral convictions and values. In favouring expediency, environmental pragmatism creates a forced homogeneity between citizens (Maboloc 2016, 110).

3.5.2. *Citizen and participation in environmental pragmatism*

One of the main objectives of environmental pragmatism is to spur public debate and dialogue about environmental issues and to reclaim the importance of nature protection from the hands of academics. It aims for consensus and tolerance, achieved through dialogue and discussions to uncover what the public considers the most important environmental issues to address (Brush 2020). The aim is to redirect policy towards what citizens want and value (Irwin 2007), and it has a 'clear preference for democratic consensus-building and social justice' (Mintz 2004).

Environmental pragmatists consider a wide plurality of values and open debate (Loman 2020, 288). When there are conflicts and challenges between different viewpoints and values, we still need to come to a decision that takes everyone's views into account. The goal of environmental pragmatism is to facilitate a situation where people can discuss, debate, and find common ground about environmental issues to achieve a 'workable policy' (Maboloc 2016). Environmental pragmatism advocates for citizen participation and deliberation that forwards an ideal of collective thought and collective decision-making. Through participation and deliberation, citizens can become more informed, while also informing others, and find a balance or consensus (Brush 2020). While this process is not perfect, it is the most democratically-sound approach to take (Brush 2020).

> [P]ragmatism treats difference as a resource for learning and growth by foregrounding the limitations of any one discursive or political position—if all knowledge is situated, no one's standpoint holds enough information to solve collective problems. Instead, continual cross-group negotiation and experimentation are required to assess and advance various proposals for social and environmental amelioration. Ideas from various ideological corners emerge as tools, and distinct worldviews become useful, rather than obstructive, in offering partial proposals for confronting complex challenges, with which no one single moral or political approach can be capable of addressing on its own. (Brush 2020, 162)

However, simply allowing someone a place at the negotiating table does not mean that their voices will be heard (Booth 2012). It may even work as a form of co-optation, subsuming the voices of marginalised groups and silencing discord and opposition (Booth 2012). Environmental pragmatism also emphasises the power of reason, dialogue, and debate to reach a consensus. This favours those who can dominate the debate and make their voice seem the most rational. It places lesser-educated and less eloquent citizens at a disadvantage.

Environmental pragmatism claims that dissent and discord represent a threat to instability, misdirection, and misguidance from coming to more effective and practical actions, and 'distracts' from implementing effective environmental policy (Brush 2020). While environmental pragmatists believe that disagreement is a fundamental component of democracy, it can be resolved through dialogue and communication, rather than divergence or dissent (Brush 2020). However, if environmental pragmatism is always the compromiser, it never takes actions that may be required but are not necessarily desirable for all citizens (Brush 2020). Environmental pragmatism focuses too much on the results of situations and fails to acknowledge how the system has allowed environmental destruction in the first place. It often fails to examine who policies are beneficial for, who has benefitted from environmental destruction historically, and the relevance of power asymmetries within these relationships (Booth 2012). Environmental pragmatism has the potential to overlook institutional failures because it is so driven toward policy within the current system (Maboloc 2016). In countries where systemic oppression is overt, environmental pragmatism may condone these systems and argue against reform as it would be too inconvenient or misdirected away from 'pragmatic' environmental concerns (Maboloc 2016). Therefore, a clear emphasis in environmental pragmatism is towards more democratic institutions to ensure citizens can participate and deliberate in environmental discussions (also, clearly reflected in the position environmental citizenships, which will be the focus of the next section).

3.6. *Environmental citizenship*

3.6.1. *Introduction and values of the approach*

Environmental citizenship entails the right to participate and deliberate in environmental policy making, choose sustainable actions, obey just environmental law, and promote sustainable and just arrangements (Bell 2005). This concept is also about attitude, behavioural change, and engagement towards sustainability. Environmental citizenship and the politics of sustainability raise questions around different models of citizenship ranging from compliance through democratic deliberation, to active dissent (Levinson et al. 2020). Usually, environmental citizenship advocates both bottom-up and top-down methods of citizen participation (Amand and Cuesta 2021). Various models of environmental citizenships have been developed over time, each of them focusing differently

on the duties and responsibilities of citizens toward the planet, the involvement of citizens in collective action and the role of the state toward greener societies (Fischer 2018; Latta 2007). Fostering a 'common environmental citizenship' contributes to accelerating and facilitating the transition to a low-carbon, sustainable social mdel, while ensuring that all voices are heard and no one is left behind (Amand and Cuesta 2021). Citizens can play a crucial role in establishing a 'socio-environmental pact', by helping to reconsider the role that humans have on the planet and what will be left for future generations (Amand and Cuesta 2021). Environmental citizenship states that it is essential to support public engagement and deliberation and acknowledge the complementarity between individual and collective actions.

Environmental citizens debate, act, and protest in public, while they also know that their private actions have public implications. From an environmental point-of-view, all actions are public actions – even those that originate in the home (e.g. we heat our homes, we cool our homes, we buy food to consume in our homes) have implications for the environment. Each of these apparently 'private' decisions has public environmental implications, so environmental citizenship is a citizenship of the private sphere as well as the public sphere (Dobson 2007).

3.6.2. *Citizen participation and deliberation in environmental citizenship*

An environmental citizen should have the skills, values, and attitudes necessary to be able to act and participate and deliberate in society. They are expected to solve contemporary environmental problems, prevent the creation of new environmental problems, achieve sustainability, and develop a healthy relationship with nature (Monte and Reis 2021). An environmental citizen is an individual who: practices their environmental rights and duties; can identify the structural causes underlying environmental degradation and environmental problems; has the skills for critical and active involvement and civic participation to address these structural causes; and has the ability to act individually and collectively within democratic circles, taking inter and intra-generational justice into account (Monte and Reis 2021).

Demonstrations and protests function as forms of bottom-up climate activism and these initiatives contribute to better engagement in political dialogue and knowledge transfer based on scientific evidence (Kyroglou 2021). They can be seen as 'triggers of change' for transformations towards sustainable futures. Civic engagement and mobilisation depend on confidence in the effectiveness of participation, and beliefs about one's own capacity to become actively involved.

Many movements, such as The Fridays for Future movement, have led to a reflection on a better integration of climate activism and environmental citizenship into education for sustainable development (Kowasch et al. 2021). Environmental citizenship should be supported by providing space for participation and deliberation of citizens (students) in political dialogue; incorporating critical reflections on climate activism into school curricula, including the discussion of different perspectives; teacher-training about climate change and environmental justice (Kowasch et al. 2021).

Citizen deliberations are a powerful instrument to promote environmental citizenship and deliberation formats allow crucial transformation of individual preferences in the pursuit of the common good (Batterbury 2003, 15; Bohn 2019; Bull, Petts, and Evans 2008; Latta 2007; Luque 2005, 9). Deliberation is seen as a 'public form of pedagogy' (Bohn 2019, 8), as it promotes learning, the emergence of new ideas, the confrontation of various points of views. These benefits emerge through the opportunity for discussion, debate and questioning of issues with a broad range of people (Bull, Petts, and Evans

2008, 11). However, the conditions under which deliberation leads to preference transformation and how these formats should be designed depending on the deliberative context are still unclear (Bohn 2019, 3).

Hobson claims that while citizens want and can make small changes in their everyday life; such changes are not always easy to implement. Hobson (2013, 16) also warns against the unintended long-term consequences of deliberative processes on citizens, especially when they are disillusioned about the process. Environmental citizenship states that we should ensure the priorities of the various groups are considered (Bull, Petts, and Evans 2008, 12–13). This should be achieved by engaging ‘the most marginalized groups and foster a sense of collective ownership of community action on sustainability’ (Merritt and Stubbs 2012, 3). This is to ensure a more just and equitable form of citizen participation and deliberation, a principle which also underpins environmental justice.

3.7. *Environmental justice*

3.7.1. *Introduction and values of the approach*

Environmental justice developed in the US, where it focused on the unfair burdens placed on minority groups living in areas of poor environmental quality. Environmental justice is defined as ‘fair treatment and meaningful involvement of all people regardless of race, colour, national origin, or income concerning the development, implementation, and enforcement of environmental laws regulations and policies’ (Krämer 2020, 1).

Environmental Justice aims to ensure that all people have equal access to a healthy, safe, and sustainable environment, and protection from environmental harm, connecting environmental issues with social justice, and commonly is a response to environmental racism (Figueroa and Mills 2001; Hughes 2012).[12] While the US approach to environmental justice traditionally recognises the universality of natural rights granted to individuals and aims at curbing discrimination faced by them in exercising those rights, the European approach to environmental justice usually focuses on correcting the social processes that produce inequalities (Laurent 2011). European environmental justice emphasises the fact that there should be an equitable distribution of access to regulations, equal application of rules, equal protection of the law and an unbiased representation of all groups and classes that may be impacted by specific environmental or human health risks (Emmel et al. 2007; Orchard-Webb et al. 2016, 315; Ross et al. 2021, 1524).

3.7.2. *Citizen participation and deliberation in environmental justice*

Environmental justice is the fair distribution of charges and benefits derived from using natural resources, to provide minimal welfare standards to all human beings, including future generations (Pigrau et al. 2016, 380). This is achieved through the judicial enforcement of procedural environmental rights (PER). PERs are constitutional and legislative provisions relating to (1) access to information, (2) access to justice, and (3) participation in environmental matters (May and Daly 2014, 44). PERs offer a means of empowering individuals and groups that have been historically disadvantaged in environmental governance (Boyle 2012). PERs can be seen in the Aarhus Convention, which legally implements many of the principles of environmental justice.[13]

The first of the PER elaborated by the Aarhus Convention is the right of access to information. Each party assumes the obligation to ensure that public authorities make environmental information available to the public as soon as possible, within the framework of national legislation. This right to access information is essential because it is a

prerequisite for any potential public participation and deliberation, and decision-making in environmental matters.

The second PER elaborated by the Aarhus Convention places participation and deliberation at the core of environmental justice and law. Meaningful participation, in terms of the quality of the participation and deliberation, and whether it is timely, among other considerations, is fundamental to exercising a participatory and deliberative democracy at all levels of government (Bastidas 2004, 6).

The Convention emphasises the need to: implement participation and deliberation programmes to achieve 'early' participation and deliberation; provide the public with access to all documentation relevant to the decision-making process; enter discussions with the public concerned; allow the public to submit their opinions at public inquiries; consider the outcome of public participation and deliberation in decision-making and achieve 'effective' participation and deliberation. Each of these key principles can act as evaluation criteria for the implementation of environmental law (Hartley and Wood 2005, 319).

Article 6 provides details on timing, provision of information, considering comments, and an obligation to give reasons for a decision, and suggest that the Convention envisages participation and deliberation with the potential to exert a genuine influence on decisions (Lee and Abbot 2003, 67). In this sense, the national implementation reports submitted to the Convention explain their domestic legal accommodations and practical implementation of treaty obligations. These include opening the consulting process to the public authorities involved where citizens may participate and deliberate, sending proposals and comments, questionnaires, meetings, and surveys.

The third PER elaborated by the Aarhus Convention (the right of access to justice) provides access to justice for members of the public and certain NGOs. The right to access not only gives the possibility of filing appeals against the violation of information or participatory and deliberative rights, but also the possibility of filing claims and appeals for breaches of environmental obligations. The Convention, however, refers to the internal law of each State, although it requires governments to guarantee access to administrative and judicial procedures to challenge acts or omissions contrary to the law by both persons, private entities, and public administration (Ruiz de Apodaca 2018, 5).

The Aarhus Convention obliges Parties to promote public participation and deliberation in international processes as well. In practice, this often enables members of CSOs to influence government positions on relevant issues, to be members of international delegations, and to provide inputs into national reports. For example, participation and deliberation in the UN Framework Convention on Climate Change may strengthen efforts to limit greenhouse gas emissions. Participation and deliberation of a wide range of stakeholders during international climate change negotiations may incorporate the perspectives of those most vulnerable to the harmful effects of climate change, while also ensuring the protection of their environmental rights (Kravchenko 2010, 648).

3.8. *Environmental rights*

3.8.1. *Introduction and values of the approach*

Environmental rights refer to any proclamation of a right to environmental conditions of a specified quality (right to a clean or healthy environment) (UNEP n.d). The concept of 'environmental rights' derives from two fields: the environmental and legal where society's normative expectations about the environment are transformed into legal statements (Christel and Gutiérrez 2017; Wu 2017), specifically in the form of rights (see Appendix 2 for a distinction between three environmental rights approaches).

Citizens experiencing poverty and/or minorities are the major victims of unequal environmental burdens, and in most cases, they have fewer economic opportunities and less influence in the decision-making process (Ahmed 2013, 2014). This unequal access to power and distribution of resources causes unequal political representation (Ahmed 2013). There needs to be new forms of civic innovations, where people organise themselves, opt for common goals, demand their rights, and oppose environmental injustice collectively (Ahmed 2013, 2014; Denedo, Thomson, and Yonekura 2019; Hemming et al. 2019; Luthfa 2017; Soveroski 2008). However, civic innovation and community building sometimes overlook existing inequalities by not openly addressing gender, age, class and power differences (Park 2021). A predominant position in the environmental rights discourse is that rights are a prerequisite for justice and balancing power relations, not only between Government and citizens but also those related to imbalances in terms of enjoyment of environmental rights between industrialised and lower-income countries (Ahmed 2013), local and global imbalances (Dias et al. 2021), or inter – and intragenerational imbalances and rights of future generations (Christel and Gutiérrez 2017; Gellers and Jeffords 2018; Haydon and Kuang 2013; Valladares and Boelens 2019).

3.8.2. *Citizen participation and deliberation in environmental rights*

Deliberation and participation in environmental rights are rooted in the development of international frameworks, such as The Stockholm Declaration (1972), the Rio Declaration (1992) and the Arhus Convention (1998) (Dias et al. 2021; Giupponi 2019; Gönenç 2020; Peters 2018; Rodenhoff 2002; Soveroski 2008; Suman 2021). Deliberation and participation can be seen in the division between (1) substantive rights and (2) procedural rights (Ako 2011).

Substantive rights are those in which ‘the environment has a direct effect on the existence or the enjoyment of the right itself’ (UNEP 2018), including first and second generations of human rights as well as *collective rights* affected by environmental degradation, such as the rights of indigenous peoples (UNEP 2018). While PER, which were discussed earlier in this paper, prescribe formal steps to be taken in enforcing legal rights. They enable access to substantive rights (Dodsworth 2021). Both forms of rights work as means to allow participation in environmental governance.

Public participation and deliberation in the context of environmental rights is about linking citizens to environmental governance and provides the means through which environmental governance is exercised (King and Reddell 2015). Environmental governance ensures environmental rights and equitable distribution among all members of society and compliance of environmental legislation (Yang 2017). The right to participate in environmental policy has been described by UNEP as ‘citizen’s environmental rights’ (Morrow 2015). The new paradigm for decision-making extends to the implementation of new and improved environmental governance and management processes based on a partnership between Government, business and citizens (Haydon and Kuang 2013) and a balance between their powers.

Environmental rights are also often used by indigenous peoples and local communities to resist the ecological impacts caused by powerful corporations (Humphreys 2009). The power of corporations, who are often more powerful than states, may undermine the realisation of environmental rights, specifically the right to participation. They may do this by neglecting the wishes of their host communities and create marginalisation in employment and contracting (Ikelegbe 2001; Su 2021). This situation has led to

intensified bottom-up activism for more participative democracy, grounded on an environmental rights-based approach (Ikelegbe 2001; Lalander and Lembke 2018).

The rights to participation and deliberation entail a meaningful participatory and deliberative process that should have an inclusive character (Barral 2018). The privileged should not dominate participatory and deliberative processes and States must reach out to systemically excluded groups to encourage their involvement (Barral 2018). Access to decision-making procedures through the right to participation and deliberation asks whether the process is designed in a way that leads to fair outcomes (Gellers and Jeffords 2018).

4. Criteria for meaningful participation and deliberation

To come to criteria for meaningful citizen participation and deliberation, all co-authors formulated criteria that derived from the analysis and evaluations of the approach they worked on. The criteria were based on a close reading of the literature and identifying what were the most significant themes identified within each approach. Based on this analysis, and by asking the question: 'What would according to approach X be criteria that need to be in place for citizen participation and deliberation to be meaningful?' normative recommendations were developed. All co-authors ensured that their criteria were coherent and understandable, as well as being specific enough to be implementable and usable for policymakers.

Because of the diversity of approaches analysed, the list is meant as a form of 'boundary conditions' to take into consideration when ensuring meaningful citizen participation and deliberation, rather than dogmatic prescriptions. In total, after several rounds of discussion and revisions, including a workshop with the co-authors, a list of 16 criteria (in five categories) emerged from our analysis. The citations from which the criteria emerged from are included as footnotes for clarity and readability (i.e. without overpopulating the text with citations). As will be shown in the criteria, there are some themes that emerged more strongly than others, such as the theme of inclusion, which points towards a degree of overlap and alignment between the positions on citizen participation and deliberation.

4.1. *Be aware of power imbalances*

When forming collaborations and creating spaces for participation or deliberation, it is crucial to be aware of the inherent power imbalances and the history of these imbalances. For example, actors from the Global North need to give special attention to unequal power relations between them and the Global East and South. Unequal societal structures also need to change in order to reach ecological transformation and a sustainable future. Policy and participatory tools should contribute to this by fostering equal participation and challenging power imbalances.

(1) Policymakers should examine who benefits from certain environmental policy, identify historical power asymmetries, and foster change. Environmental policies must include the working class, which can bring about new lay-expert knowledge and build new design ecologies and green public goods.[14]

(2) Policymakers need to consider inequalities (such as racialised group, gender, and class) in the design of legal frameworks and the implementation of deliberative and participatory tools. The regulatory and institutional frameworks in

environmental policy need to address the deep uncertainties and the vested interests at stake in decision-making. The values and culture of those who will be impacted must be fairly considered and represented.[15]

(3) Global North actors should be aware of how they work with those in the Global South and should strive to transform power dynamics in participation and deliberation. CSOs in the Global North must reflect on their relationship with CSOs in the Global South and build movements based on solidarity. This activism should strive to challenge existing structures of oppression and environmental degradation. Capacity building and knowledge sharing should be based on principles of empowerment and understood in local contexts.[16]

(4) Spaces for participation (e.g. local committees, decision making bodies, councils) are not neutral and contain inherent power imbalances. Alternative spaces that address such power imbalances should be created to foster equal participation from structurally excluded groups.[17]

4.2. *Promoting and ensuring inclusiveness*

Participation and deliberation should be inclusive so a wide variety of values, beliefs, and knowledge can be considered. The perspective of those who are often excluded from current policies have to be included, like systemically excluded groups, women in all their diversity, the Global South, the working class, and non-humans. Because some people are systematically excluded from participatory practices by societal structures, different forms of participation and deliberation need to be offered instead. Inclusion should avoid tokenism, instead incorporating an intersectional approach where intersecting forms of discrimination and exclusion are considered.

(1) Public participation and dialogue are important for environmental policy, and a wide plurality of viewpoints should be considered through open debate, discussion, and deliberation. Policymakers need to ensure a compromise about what most citizens deem acceptable, but must also be aware that sometimes finding a middle-ground is not always easy and may even be contradictory to.[18]

(2) It is important to ensure that citizens are not excluded because they are unable to reason and debate as strongly as others. While group deliberation and discussions are an effective form of communication to voice opinions, they should not be the *only* form of participation, as it may be advantageous to some, while disadvantageous to others.[19]

(3) While being pragmatic and future-oriented about participation and deliberation on environmental policy is often effective, it is important that the values of citizens are not lost along the way. Therefore, ensuring better inclusion of a wide diversity of values and beliefs, and taking an intersectional approach in environmental deliberative procedures, rather than leaving certain groups alienated and voiceless, is fundamental. Policymakers should support inclusive participation and deliberation processes, ensuring the inclusion of structurally disadvantaged groups, and non-humans.[20]

(4) The participation of local and indigenous groups – in particular women – should be promoted. Often these groups have valuable knowledge related to the environment, climate, and sustainability, yet their participation is hindered by structural barriers. Similarly, intersectional perspectives should be promoted in environmental policies, with the aim of understanding multiple and intersecting forms

of discrimination. Policymakers should remove structural barriers to participation and deliberation in environmental decision making.[21]

4.3. *Work with and protect nature*

While it is people who are engaged in participation and deliberation practices, we should reflect the needs and importance of other species and the environment. People need to ensure that the interests of non-human species are not always overruled. Nature's intrinsic value must be regarded, and nature should be seen as an active element.

(1) We should not view ourselves as being the only thing of moral considerability. The needs and importance of other species and the environment should be recognised within our dialogue on environmental policy. Human beings are interconnected with nature, and we should work with nature, rather than against it.[22]
(2) Non-human organisms, species, and the environment, cannot voice their concerns politically, so human citizens need to include these voices within deliberation, and ensure that corporate, political, and economic interests do not override the intrinsic value of nature.[23]

4.4. *Collaborating with bottom-up activism and cultivating environmental citizenship*

There are several ways citizens can show and express their respect for nature (elections, citizen deliberations, bottom-up organised demonstrations, or grassroots actions). When no attention is given to the voice of local and grassroots groups, both environmental movements as well as gender equality will suffer from it.

(1) Demonstrations and bottom-up climate activism contributes to political dialogue and can be seen as a trigger of change for transformative learning. These demonstrations are indications that some citizens are unhappy with policy, and protest is the only option available to them. Policymakers need to respond to these criticisms and identify how they can do more.[24]
(2) International institutions such as the United Nations and the European Union should consult with grassroots groups and promote participation in decisions that affect their environment. Grassroots actions can be taken by citizens that want to initiate change and do not want to wait on the slow wheels of politics to initiate real change.[25]
(3) Citizen participation and deliberation transforms individual preferences in the pursuit of the common good. Decision-makers need to create the conditions to foster environmental citizenship and to improve environmental awareness of citizens. Citizens can demonstrate their views by electing parties that attest to ecocentric values, adopting green principles, and working within current democratic systems.[26]

4.5. *Transitioning the economic model to a green economy*

There are different visions on the desirability of a green economy. Some approaches argue that we should not only focus on economic growth but also on societal change. While

others strive to completely move away from (green) economic growth, and instead focus on wellbeing and care for people and the planet. A focus should be given to the participation of women, since the unpaid care burden often provides an extra hurdle for them to participate.

(1) Transitions are not only driven by politics and governance, markets, and technology; but also, civic and cultural mobilisation. Societal groups should create new institutional forms of, or new lay-expert modes of, engagement to build new design ecologies.[27]
(2) The role of the individual citizen needs to be extended beyond that of a consumer of the environment, and involve active participation based on collective action. Decision makers should not simply encourage purchasing green products as a form of public participation, but also engage people in meaningful political action and be open to radical changes. For example, policymakers should ensure that procedural environmental and human rights are meaningful and executed (e.g. at the national level), because without meaningful procedural rights, there are no substantive environmental and human rights.[28]
(3) Governments should recognise and value the current unpaid care burden that is often borne by women, which hinders their participation in many aspects of decision making, as well as devalues their contribution to sustainable development. A conceptualisation of wellbeing that moves away from the current economic focus on growth and instead centres care for people and the planet should be promoted.[29]

5. Discussion and conclusion

The eight approaches we focus on, and the list of criteria derived from those approaches have a great deal of overlap with the six classical perspectives of citizen participation or deliberation that are discussed at the start of this paper. For example, ecofeminists emphasise the importance of increasing the inclusion of underprivileged and underrepresented groups and challenging existing power structures and connected barriers to participation; which is demonstrative in the emancipatory perspective (Renn and Schweizer 2009). Ecomodernism would probably situation itself within the neoliberal perspective (Renn and Schweizer 2009) because of its strong emphasis on economic growth and technological advancements to avoid environmental catastrophe. While approaches such as environmental pragmatism would have strong leanings toward the deliberative perspective (Renn and Schweizer 2009) because of its emphasis on discussion, dialogue, and finding a common middle-ground on topics of environmental concern. This also underlines that the eight approaches we looked at have different visions of meaningful citizen participation and deliberation to one another, in a similar way to the six classical perspectives outlined in Renn and Schweizer (2009).

This is also why it is not possible to formulate a uniting coherent set of criteria that all the disparate positions would fundamentally agree upon without contestation. As we mentioned at the start of this paper, our objective was not to provide a non-disputable list of criteria based on the eight approaches; rather, it was to identify what were the most significant or important issues, challenges, and recommendations within each of the eight positions and to identify a broad list of criteria based on these findings. As was discussed in the methodology section, some of the approaches had much more content on the topic of citizen participation and deliberation than others and had more criteria developed when we conducted the workshop with the authors of all eight approaches.

While there was much overlap on certain topics within the literature, such as the need to ensure justice and fairness in the deliberation and participation, as well as the prevailing concern about inclusion, there was also some tensions or disagreements that may be felt within our criteria between the eight different positions. Most of these tensions are not explicitly discussed within the approaches but are often criticisms against the overall approach's framing and outlook. For example, ecofeminism criticises ecomodernism for its largely masculine approach towards the environmental crisis, stating that its outlook of further technological development and economic growth are part of the problem and have gotten us into many of the environmental problems we currently face.

Despite this criticism of ecomodernism by ecofeminism, it does not necessarily contradict the list of criteria that we derived from the ecofeminist and ecomodernism literature. This is because ecomodernism does not necessarily dispute, for example, the importance of ensuring better gender balance in inclusionary processes or better recognising unpaid cure burden on female participation and deliberation. Within the list of criteria established for each of the eight approaches, there was little clear-cut disagreement between them or criteria that the other approaches outright rejected in the literature that we examined in the context of citizen participation and deliberation. Thus, while we did not attempt to have universal symmetry between all eight approaches within our criteria, there are very few criteria that any of the approaches have fundamentally contradicted within the literature that we examined.

On one occasion, the criteria between the eight approaches did strongly conflict with one another; for example, on the topic of the Green Economy and the role of citizens therein. While ecomodernism views consumers' preferences for green products as a (limited) form of citizen participation, environmental citizenship and ecofeminism are critical of this position, stating that individuals' views should not come from their market preferences as consumers. In these situations, we provided a middle-ground between the two types of criteria in the 'transitioning to the green economy' section of our paper. In this, we state that the 'role of the individual citizen needs to be extended beyond that of a consumer of the environment, and involve active participation based on collective action'. While we accept that some value may be derived from market preferences, this cannot be the sole or leading marker of citizen involvement in environmental decision-making.

5.1. *Limitations and further research*

The criterion listed here are in no way exhaustive, but they provide an important insight into the variety of ways in which environmental policy, such as the EGD, could better approach citizen participation and deliberation. For example, further research needs to be conducted into how the high-level criteria outlined in this paper can be operationalised in practice. The success of environmental policies and the future of the planet is dependent on how citizens are engaged in such processes. Our analysis and subsequent criteria have given an overview of how this may be done in practice, using the EGD as an example.

An additional area of further research that would be interesting is to conduct a contrast or comparison of the criteria created in this document with the criteria established in traditional (non-environmental) discourse on citizen participation and deliberation to see if it matches or where it diverges. While we discussed these approaches briefly in this paper, it was beyond the scope of this paper to go into detail with this comparison, unfortunately.

In addition, this paper mainly focused on citizen participation in the environmental research. Further research could contribute to discuss and validate (or not) these results

by comparing similar processes dealing with other issues than ecological crises. It could be analysed to see if this list of criteria can also be broadly applicable to other non-environmental processes of citizen participation and deliberation. As we focused on eight environmental approaches, many of the classic studies of participation and the environment are not included in the literature review (e.g. Latour 2004, 2012). Many of the classical approaches can be understood in the terms of the approaches that we focused on, of which we gave a few examples, so further research could be conducted on aligning the environmental approaches on citizen deliberation and participation with those found in classical literature on the topic.

Notes

1. We use the commonly understood definition of a citizen to refer to 'a native or naturalized person who owes allegiance to a government and is entitled to protection from it' (Merriam-Webster Dictionary, 2022). While there is a whole body of literature on defining and critiquing the meaning of citizen and citizenship, for the purpose of this paper, we will only integrate these criticisms when relevant to the topic of deliberation and participation.
2. By meaningful we refer to citizen participation and deliberation that involves citizens in decision-making, provides them a voice and outlet to voice their concerns, and acts on the feedback and input of citizens. It can be compared to its opposite, meaningless participation and deliberation, which either ignores citizens the voice of citizens, does not provide them an outlet to express their views and positions. We do not think that all of the criteria we outline are *necessary* for meaningful citizen participation and deliberation. But rather, these are the criteria outlined in the literature as being important to achieve (what they believe to be) meaningful citizen participation and deliberation.
3. This paper is based on research conducted in a large Horizon project, funded by the European Commission. The [] project is funded under agreement number [], and this paper is based on research conducted in a report []. '[]' is used for anonymity.
4. A systematic review is a form of review that applies analytical methods, that can be repeated, to collect and analyse data. This data is organised, structured, and carried out in a systematic way to ensure a robust and repeatable method of data analysis is implemented. Systematic reviews are designed to provide a detailed analysis of data on a specific topic or review question.
5. The PRISMA flowcharts for each of the eight approaches are available upon request.
6. ATLAS.ti is a qualitative analysis software tool that gives users the possibility to analyse large bodies of text in one place by 'coding', grouping, and writing memos and notes on the text. It provides users with the capacity to code their texts and sort by theme and topics the content of their documents. Coding involves creating groups or themes on the topics analysed in the documents. Codes represent when a specific word is used or when a topic is discussed, to highlight a sentence(s) and to contextually classify it. It is particularly useful for conducting thematic reviews, as it allows researchers to examine individual themes separately.
7. This codebook is available upon request.
8. These lists of criteria for each approach are also available upon request.
9. There are many examples from the literature that exemplify the impact of this: Rocheleau's (1991) case study shows how Kenyan women's exclusion from agroforestry practices led to a reduction of quality in fuel wood. Women had to ask a wealthy head of household to secure site access and negotiate time and space for tree nurseries, whereas men's access to land was assumed and inherent. In another case study in Nigiris (India), women only successfully benefited from forest management schemes when they were granted access to masculine spaces (Suresh 2021). This was also shown in Agarwal's (1998) study where all-male groups of forest management did not listen to women, resulting in them requiring critical mass action before they could contribute.
10. For example, the Sindh Rural Women's Uplift Group in Pakistan have helped women to work in organic farming, where they use their knowledge on herbs, medicine and sustainability for, inter alia, sustainable soil management (Salman and Iqbal 2007).

11. Environmental pragmatism attempts to move away from anthropocentrism vs. non-anthropocentrism, providing a 'third way', namely, through deliberative, inclusive, pragmatic decision-making (Michael 2020). It attempts to minimise the distinction between these two approaches because their goals often converge in practice (Minteer and Manning 2000; Norton 1994).
12. Environmental racism refers to any policy, practice, or directive that differentially affects or disadvantages individuals, groups, or communities based on race or colour (Nelson and Grubesic 2018; Szulecki 2018, 26). It is the relationship between marginalised groups and environmental issues, including mainstream environmentalism (Jordan and Snow 1992) the biased nature of environmental policy (Pulido 1993), the limited participation of marginalised groups in environmental affairs, and the disproportionate exposure of marginalised groups to pollution (Pulido 1996, 2000). These disparities contribute to the unfair allocations of environmental hazards, which are often based on class and race (Nelson and Grubesic 2018, 8; Menton et al. 2020, 1623; see also Ryder and Devine-Wright 2021, 3; Bullard 1999).
13. The Aarhus Convention imposes (on the Parties and Member States) a binding obligation to ensure effective judicial protection of the rights conferred by law, in particular the relevant provisions of environmental law. All EU Member States and the European Union itself are Parties to the Convention. The Convention also has additional Parties from non-EU countries, for example, North Macedonia, Serbia, and Ukraine. The Aarhus Convention tries to accommodate and balance manifold interests, including democratisation, openness, transparency, and the model of economic development with the protection of private and commercial interests (Petrić 2019, 24).
14. This criterion was reflected in the following literature: White 2019 (**ecomodernism**); Morrow 2017; Bäckstrand 2004; Ahmed 2013 (**environmental rights**); Krämer 2020; Jordan and Snow 1992; Pulido 1993; Nelson and Grubesic 2018; Menton et al. 2020; Ryder and Devine-Wright 2021; Bullard 1999 (**environmental justice**).
15. Giacomini 2016; Ajibade and Boateng 2021 (**ecofeminism**); Ahmed 2013, 2014; Hemming et al. 2019; Denedo, Thomson, and Yonekura 2019; Hemming et al. 2019; Soveroski 2007 (**environmental rights**); Krämer 2020; Banzhaf 2012; Nelson and Grubesic 2018; Szulecki 2018; Figueroa and Mills 2001; Hughes 2012; Jordan and Snow 1992; Pulido 1993; Reed, 2008; Menton et al. 2020; Ryder and Devine-Wright 2021; Bullard 1999; and Laurent 2011 (**environmental justice**).
16. This criterion was reflected in the following literature: diZerega 1996; Eckersley 1995; Payne 2010 (**ecocentrism**); Maleta 2018; Salman and Iqbal 2007 (**ecofeminism**); Ahmed 2013; Dias et al. 2021 (**environmental rights**).
17. This criterion was reflected in the following literature: Agarwal 1998; Wilkinson 2016; Giacomini 2016; Hunt 2014 (**ecofeminism**); diZerega 1996; Eckersley 1995; Payne 2010 (**ecocentrism**); Park, 2021 (**environmental rights**); Krämer 2020; Figueroa and Mills 2001; Hughes 2012; Pulido 1993; Bullard 1999 (**environmental justice**).
18. This criterion was reflected in the following literature: Booth 2012; Brush 2020; Eckersley 2002; Loman 2020; Maboloc 2016 (**environmental pragmatism**); Latta 2007; Bohn 2019; Fischer 2018 (**environmental citizenship**); Waks 1996 (**environmental rights**).
19. This criterion was reflected in the following literature: Booth 2012; Brush 2020; Eckersley 2002; Loman 2020; Maboloc 2016 (**environmental pragmatism**); Krämer 2020; Figueroa and Mills 2001; Hughes 2012; Boyle 2012; Pulido 1993; Lee and Abbot 2003; Ruiz de Apodaca 2018; and Kravchenko 2010 (**environmental justice**).
20. This criterion was reflected in the following literature: Booth 2012 (**environmental pragmatism**); Latta 2007; Bohn 2019; Fischer 2018 (**environmental citizenship**); Stevens et al. 2017; Latta, 2007; Agarwal 1998; Wilkinson 2016; Giacomini 2016; Hunt 2014 (**ecofeminism**); Ahmed 2013, 2014 (**environmental rights**); Krämer 2020; Jordan and Snow 1992; Pulido 1993; Nelson and Grubesic 2018; Menton et al. 2020; Ryder and Devine-Wright 2021; Bullard 1999; Pigrau et al. 2016; Hartley and Wood 2005 (**environmental justice**).
21. This criterion was reflected in the following literature: diZerega 1996; Eckersley 1992, 1995; Kopnina 2012; Pesch 2022; Skollerhorn 1998 (**ecocentrism**); Anker and Witoszek 1998; Emmenegger and Tschentscher 1993 (**biocentrism**); Agarwal 1998; Morrow 2017; Rocheleau 1991; Stevens, Tait, and Varney 2017; Ilishko 2008; Wilkinson 2016; Giacomini 2016; Hunt 2014 (**ecofeminism**); Hemming et al. 2019; Denedo, Thomson, and Yonekura 2019; Hemming et al. 2019; Barral 2018; Humphreys 2009; Soveroski 2007 (**environmental rights**).

22. This criterion was reflected in the following literature: Beckwith, Hadlock, and Suffron 2003; Eckersley 1992, 1995; Kopnina 2012; Pavalache-Ilie and Unianu 2012; Pesch 2022; Skollerhorn 1998 (**ecocentrism**); Anker and Witoszek 1998; Barranquero Carretero and Sáez Baeza 2022; Emmenegger and Tschentscher 1993; Ingalsbee 1996; Laastad 2020; Wienhues 2017; van Norren 2020 (**biocentrism**); Stevens, Tait, and Varney 2017; Devika, 2010 (**ecofeminism**); Valladares and Boelens 2019; Peters 2018; Jelin 2000 (**environmental rights**)
23. This criterion was reflected in the following literature: diZerega 1996; Eckersley 1992, 1995; Kopnina 2012; Pesch 2022; Skollerhorn 1998 (**ecocentrism**); Anker and Witoszek 1998; Emmenegger and Tschentscher 1993 (**biocentrism**); Giacomini 2016; Baker 2004; Li 2007; Pandey 2010 (**ecofeminism**); Petrić 2019 (**environmental justice**).
24. This criterion was reflected in the following literature: Barry 1994; Eckersley 1992, 1995, 2002; Kopnina 2012; Salazar and Alper 2002 (**ecocentrism**); Kyroglou (2021) and Kowasch et al. (2021) (**environmental citizenship**); Luthfa 2017; Ahmed 2013, 2014 (**environmental rights**).
25. This criterion was reflected in the following literature: Agarwal 1998; Wilkinson 2016; Giacomini 2016; Hunt 2014; Stevens, Tait, and Varney 2017 (**ecofeminism**); Dias et al. 2021 (**environmental rights**).
26. This criterion was reflected in the following literature: Aguilar-Luzón et al. 2020; Barry 1994; Mathews 1995; Papadakis 2000 (**ecocentrism**); Amand and Jareño Cuesta (Eds.). 2021; Batterbury 2003; Luque 2005; Bull, Petts, and Evans 2008; Bohn 2019 (**environmental citizenship**); Lalander and Lembke 2018; Ikelegbe 2001 (**environmental rights**); Bastidas 2004 (**environmental justice**).
27. This criterion was reflected in the following literature: Midttun and Witoszek 2016; White 2019; Leonard 2007 (**ecomodernism**), Sandilands 1997; Agarwal 1998; Wilkinson 2016; Giacomini 2016; Hunt 2014 (**ecofeminism**); Luthfa 2017; Ahmed 2013, 2014 (**environmental rights**).
28. This criterion was reflected in the following literature: Dockstader and Bell 2020 (**ecomodernism**); Dobson 2007 (**environmental citizenship**); Yang 2017; King and Reddell 2015; Morrow 2015; Humphreys 2009 (**environmental rights**).
29. This criterion was reflected in the following literature: Ilishko 2008; Pilgrim and Davis 2015; Devika 2010; Kesting 2011; MacGregor 2014 (**ecofeminism**); Petrić 2019 (**environmental justice**).
30. The division of human rights into three generations was initially proposed by Karel Vasak. First generation rights include civil and political rights defined as a sphere of activity which government may not enter. First generation rights include, among other, the right to life, equality before the law, freedom of speech, freedom of religion, property rights, the right to a fair trial, and voting rights. Second generation rights include economic and social rights requiring direct governmental action. Some examples of second generation rights include rights to food, housing, health care, and social security. Environmental rights are considered as belonging to a 'third generation' of rights, including such rights as right to self-determination, right to development, right to natural resources and right to satisfactory environment. Note: Vasak's theories have primarily taken root in European law.

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Appendices

Appendix 1

Ecofeminism can be split into two strands that perceive the gender-nature link differently: cultural and social ecofeminists. Cultural ecofeminism arose from radical feminism and argued that women's reproductive power causes their closer connection with nature, which also has life-giving powers (Baker 2004; Wehrmeyer and McNeil 2000). This movement shares ideas with spiritual ecofeminists who see women as agents for ecological change because of the close connection to live-giving Earth as a result of women's live-giving, caring, and nurturing characteristics (Foster 2021). In recent years, this vision has been rejected by social ecofeminists who argue that focusing on reproductive powers is reductionist and reinforces a harmful binary concept of gender (Baker 2004; Stevens, Tait, and Varney 2017). Social ecofeminists, also referred to as materialist ecofeminists, strongly reject the essentialist claim that women have an innate connection with nature. Social ecofeminists instead argue that the oppression of nature should be linked to exploitation and socially constructed ideas of gender in society. For them, economic and social arrangements in our society are the root cause of oppression.

Appendix 2

In the literature, environmental rights have been discussed within three distinct frameworks: (1) a human rights approach; (2) rights-to-environment approach; and (3) rights-of-environment approach (Waks 1996).

A **human rights approach** subsumes environmental claims under existing human rights, specifically first generation of human rights (civil and political rights) and second generation of human rights (economic, social and cultural rights)[30] (Baber and Bartlett 2020; Bacher 2017; Christel and Gutiérrez 2017; Giupponi 2019; Soveroski 2008; Wisner 1995). Environmental rights may be seen as prerequisites to established rights, and hence covered by existing legal protections in constitutions and other human rights instruments (Soveroski 2008; Waks 1996). Environmental protection is essential for the enjoyment of basic human rights (e.g. right to life and health) because these rights cannot be realised in a very degraded environment (Christel and Gutiérrez 2017).

A **rights-to-environment approach** states that environmental rights are independent of, but parallel to, first- and second-generation human rights, thus calling for independent recognition (Peters 2018; Rodenhoff 2002; De Santo 2011). As argued by Waks (1996), this approach encompasses both rights subsumed under existing rights (e.g. rights to clean water and air), and those that cannot be (e.g. access to wilderness and to a balanced ecology). This approach focuses on protection of environmental rights through existing political rights; for example, the political rights of public access to information and broader participation in decision-making processes (Barral 2018).

The rights-of-environment approach argues that the rights of animals, plant species, and wilderness areas, should exist and flourish, independently of human benefit (Jelin 2000; Peters 2018; Valladares and Boelens 2019) (this approach correlates with the biocentric approach described earlier).