



Strengthening Democratic Governance
for Climate Transitions

D2.1 – ANALYTICAL FRAMEWORK

WP2 – Analytical and empirical underpinnings

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EC Summary Requirements

1. Changes with respect to the DoA

No changes with respect to the work described in the DoA.

2. Dissemination and uptake

This deliverable is for use within the project consortium and available to the general public.

3. Short summary of results (<250 words)

This deliverable captures the work undertaken in T2.1 and T2.2. It sets out RETOOL’s analytical framework on climate change and democracy.

Task 2.1: **The climate challenge and its contestation in democracies** (M1-M6) is an overarching analysis of the challenges to democratic governance arising from climate transitions as well as the challenges that democratic governance poses for fair, inclusive and effective climate transitions, thereby providing a basis for answering the project’s two overarching research questions. It draws upon a review, analysis and integration of relevant literatures.

Task 2.2: **Conceptualizing types of democracy and democratic institutions in a multilevel context** (M6-M9) builds on the work of the previous task. Task 2.2 examines the challenges arising from the climate transition in relation to different types of democracy as well as the challenges arising from these different types to effective climate policy. It involves: (i) reviewing academic debates about different types of democracy; (ii) analysing the strengths and limitations of each type with respect to each of the elements of the project’s analytical framework; and (iii) in a multilevel governance context comparing climate democracy across governance levels.

4. Evidence of accomplishment

This report.

Preface

The overall goal of the RETOOL project is to advance our understanding of how to address the twin challenges of responding to the climate imperative while strengthening and reinvigorating democratic governance. The project has four overarching objectives: (i) To deepen our understanding of the relationship between democratic governance and the climate imperative by developing a novel analytical framework and creating new empirical underpinnings, including important new open-access datasets; (ii) To understand how a variety of democratic institutions across Europe are responding to the climate challenge, including learning lessons from history and studying new and innovative democratic practices; (iii) To contribute to reinvigorating democratic governance in Europe by developing and synthesising new knowledge and insights on climate democracy, and presenting them in a range of high-impact formats; and (iv) To serve as a bridge between academic research on climate democracy innovations and policymakers and practitioners, as well as civil society and the wider public. RETOOL brings together an international and interdisciplinary consortium, with partners from Western Europe (Ireland, UK, Belgium, Austria), Northern Europe (Finland), Eastern Europe (Estonia), and Southern Europe (Italy, Greece), combining expertise in political science, political sociology, deliberative democracy, environmental law, European studies, and public administration. The consortium includes a democracy practitioner foundation (DDF), and all partners are closely associated with practitioner and civil society networks and involved in hands-on activities. RETOOL will be undertaken by a mature, settled consortium that has significant experience of working together, with six of our nine partners core members of the EU-funded Jean Monnet Network GreenDeal-NET.

Consortium Partner	Acronym	Country	Logo
Dublin City University	DCU	IR	
Vrije Universiteit Brussel	VUB	BE	
Università degli studi di Trento	UNITN	IT	
Universiteit Gent	UGent	BE	
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University of Eastern Finland	UEF	FI	
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Foundation for Science and Liberal Arts Domus Dorpatensis	DDF	EE	
London School of Economics and Political Science	LSE	UK	

Executive Summary

Deliverable 2.1, the Finalised Analytical Framework, captures the work undertaken in T2.1 and T2.2. It sets out RETOOL’s analytical framework on climate change and democracy.

This report serves as the **analytical framework** for RETOOL. It sets out the analytical and conceptual thinking on the climate challenge and its relationship with democratic governance. Section 2 sets out key elements of the crisis of democracy, putting it in historical perspective and highlighting the rise of populism. Section 3 highlights distinctive features of the climate challenge and their implications for democratic governance, including its *urgent* and *long-term nature*, the *cross-sectoral* and *multi-level* characteristics of the challenge, the themes of *contestation and politicisation*, and the cross-cutting importance of *spatial, temporal and intersectional injustice*. Section 4 sets out seven core characteristics of democracy that we consider to be of central importance to the RETOOL project’s research agenda, namely *participation, representation, knowledge and expertise, accountability, deliberativeness, effectiveness, and justice*. Finally, section 5 concludes by setting out how the empirical work packages of the RETOOL project intends to engage with the analytical concepts developed in this project report.

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1 Introduction

Responding rapidly and equitably to climate change poses significant challenges for decision-makers around the world. Established systems of decision-making and governance have failed to deliver appropriate policy responses at sufficient scale and speed. They have also struggled to adequately include citizens in decision-making, contributing to mistrust in the policy process and its outcomes. At the same time, democratic institutions, processes, and norms are increasingly under pressure, contributing to a retreat of democracy and its norms in many places. Rising political polarisation and increased distrust in expertise pose risks to the effective governance of climate change. In parallel, a populist backlash has been increasingly evident in a range of Western democracies, with action on climate change drawing particularly strong critique for being an elitist project.

In this context, the overall goal of the RETOOL project is to advance our understanding of how to address the twin challenges of responding to climate change while strengthening and reinvigorating democratic governance. The project is premised on the idea that effective, fair and inclusive climate transitions on the scale envisaged by the European Green Deal and the Paris Agreement cannot be successful without strong, robust democratic governance and active citizen involvement in shaping the transition.¹

The RETOOL project therefore addresses two overarching research questions:

1. What systems of democratic governance enable and underpin fair, inclusive, and effective climate transitions?
2. How can responses to the climate crisis be used to strengthen and reinvigorate democratic governance?

In this report, we present the RETOOL project's analytical framework, which we will use to study the intersection between climate transitions and democratic governance. The framework brings together multiple strands of literature, including democratic theory, comparative politics, climate change and democracy, multilevel climate governance, and challenges to democracy in Europe. It is designed to assess the democratic qualities of climate governance, and the enablers of and barriers to effective climate change governance.

Our research rests on two broad normative assumptions. The first assumption is that democracy is preferable to non-democracy, both in general and in the context of addressing the climate emergency. We do this knowing that there is an ongoing debate in the academic literature about the relative strengths and weaknesses of democracies when addressing climate change, with some contributions arguing that authoritarian governments are sometimes more effective at taking climate action (e.g., Beeson, 2010), and with some calls for eco-authoritarianism or technocracy (see, for example, Shearman and Smith 2007). Other scholars critique liberal democracy from the other direction arguing for structural transformation towards an ecological or environmental democracy that is radically more participatory and takes into account ecological boundaries and non-human natural systems (White 2019; Pickering et al. 2020; 2022; Pickering and Person 2020). We do not directly address these debates here; instead, we align with scholarship that argues that democracies are normatively preferable for promoting social justice and climate action (Stirling 2015; Fiorino 2018; Smith 2021; Lindvall and Karlsson 2024).

Our second assumption is that rapid, transformational climate action is necessary to reach the goals of the Paris Agreement and for a sustainable and equitable future. A strong scientific consensus, supported by research, shows that climate change is driven by human actions and the larger the change in climate, the more harmful it will be for both human and non-human inhabitants of the earth, especially the most vulnerable and marginalised (Fisher 2015; Lamb et al 2020; IPCC 2022). While some people still deny the existence of the climate emergency or argue for delay of climate action (Brown et al 2019; White 2019; Lamb et al 2020),

¹ In this report we use citizen in a broad sense - to denote members of the polity - regardless of whether they hold nationality in their jurisdiction.



and others criticise the human-centredness and hubris of defining planetary boundaries and engineering solutions (even political ones) to climate change (Stirling 2015; Pickering and Persson 2020), for most scholars the remaining disagreements concern what level of change is acceptable, what actions should be taken, and what trade-offs might need to be made. We also do not engage directly with these conversations, taking the normative stance that rapid transformation is necessary for a sustainable and equitable future. Therefore, in this report we focus on how to improve both climate action and democracy, what elements of each are most essential to consider, as well as how they interact and can be made to more successfully support each other.

The project report is structured as follows. Section 2 discusses the current crisis of democracy, setting it in historical context. Section 3 considers the challenges of climate change as a policy problem and analyses its implications for democratic governance. Section 4 sets out seven core characteristics of democracy that we consider to be of central importance to the RETOOL project's research agenda, namely *participation, representation, knowledge and expertise, accountability, deliberativeness, effectiveness, and justice*. Each of these concepts is introduced and discussed in the context of the climate crisis. Finally, section 5 concludes by setting out how the empirical work packages of the RETOOL project intend to engage with the analytical concepts developed in this project report.



2 The crisis of democracy

There have been discussions of the ‘crisis of democracy’ for decades. The discussion preceding the Second World War focused on the threat to representation and liberal democracy from fascism and totalitarian Communism, and during the 1970s it centred on a legitimacy crisis for political authority and procedural threats to voting and the institutions of democracy (Merkel 2014; Ercan and Gagnon 2014). Most recently, talk of a crisis of democracy was revived again beginning in the mid-2010s. A strand of literature focuses on increasing autocratisation and the retreat of democracy after widespread democratisation in the 1990s (Nord et al. 2024; Eckersley 2020; Oleart and Theuns 2023). Another strand focuses on globalisation and deregulation leading to public mistrust of the ability of democracy to work for the public interest (Merkel 2014). Recently, increasing attention has been placed on the role of populism and nationalism in creating a crisis of democracy (Galston 2018).

Populism is defined by a core message that there is an elite that is taking power away from the people (Vachudova 2021). Because populists assert that representative government is not working anymore, they believe that the ‘pure’ people need to take more direct control, and that politics should reflect the ‘general will’ of those people (Zaslave et al. 2021, 732). There are both left and right-wing versions of populism, with the left dividing people along economic lines, and the right dividing people along ethnic and nationalist lines (Galston 2018; Vachudova 2021). Importantly, these divisions are antagonistic in a populist narrative: there are good people and evil people, making political polarisation an essential part of the populist cause (Lockwood 2018; Vachudova 2021; Zaslave et al. 2021). Populists often value democratic ideals and see themselves as saving democracy from the corrupt elite and evil outsiders who have taken over the government (Lockwood 2018; Kriesi 2020). In Europe, the nationalistic element of right-wing populism has been reinforced by, and increases, Euroscepticism (Lockwood 2018; Kriesi 2020). The degree and importance of the rise of populism, nationalism, and post-truth politics in Europe is a matter of scholarly debate, with some scholars arguing that populism may be a ‘democratic corrective’ that brings new conversations into the political agenda, and that democracy is adaptable enough to survive the current crisis (Blühdorn 2020, Kriesi 2020).

While the preceding paragraph applied to populism in general (both on the left and right), right-wing populism has received the most attention among climate change researchers because right-wing populists have generally opposed climate action (Forchtner and Kølvråa 2015; Lockwood 2018; Fiorino 2018). Forchtner and Kølvråa (2015) point out that nationalist, right-wing political movements are not necessarily inherently against climate action. However, populist right-wing parties, as currently oriented in most countries, support climate denial and inaction due at least partially to their nationalistic anti-global orientation conflicting with the global nature of climate change. In addition, right-wing populists have low trust in academic expertise and support a ‘post-truth’ politics narrative which calls into question the idea of objective truth, feeding cynicism in democratic institutions and antipathy toward climate action (Bächtiger et al. 2018; Lockwood 2018). For example, distrust in elite scientists has been found to be an important link between right-wing populism and climate scepticism (Huber et al. 2022).

In Europe, questions of democracy and legitimacy have another, multilevel dimension. Policy from the European Union has become increasingly important for its member states in the last three decades (Dupont et al. 2024a). However, EU climate policy confronts existing critiques of the Union on the grounds of democratic legitimacy (Schmidt, 2013; Jensen 2009). A number of critiques have been brought forward, including the lack of a full European ‘demos’ (public) when voting in European Parliament elections (Follesdal and Hix 2006); and the high level of authority given to the unelected European Commission, which is both highly influential in climate policy (Skjaerseth and Wettestad, 2010) and subject to an internal process of centralisation (Kassim et al. 2017).

3 Climate change and its implications for democratic governance

There is a long-running strand in the climate governance literature discussing the climate change issue and the challenges it poses for political systems (e.g., Levin et al. 2012; Lazarus 2008) and specifically for democracies (e.g., Jordan et al. 2022; Willis et al. 2022). Climate change has frequently been identified as a 'wicked' or 'super wicked' problem, one that is "complex, unpredictable, open ended, or intractable" (Head and Alford 2015, p. 712; Lazarus 2008, Levin et al. 2012). In addition, it becomes harder to solve the longer action is delayed (Lazarus 2008).

3.1 Challenges of climate change for democracies

The challenges below interact with each other, reinforcing or mitigating each other and in some cases leading to complex multi-dimensional and 'wicked' issues (e.g., the tension inherent in dealing with a problem that is both urgent and long-term). Some of them could also be viewed as opportunities if they force democracy to evolve, thereby potentially making democracy stronger.

Urgent: the societal transformations that are needed to limit temperature rise to 1.5°C or 2°C must be implemented at a rapid pace, especially in developed economies (IPCC, 2022; Moore et al. 2021). Urgency creates a number of cross-pressures on democratic processes. It requires speed, which feeds into calls for less consultation, and in some cases a more authoritarian or expert-led policy process (Willis et al. 2022, pp. 3–4). Urgency can also reduce opportunities for experimentation by reducing the time available to try multiple options. As a result, choices about policy, infrastructure and other topics can create path dependency that is difficult to address after the fact (Seto et al., 2016).

Long-term: Climate change is a problem that requires a combination of short-, medium-, and long-term governance that in many cases has an endpoint beyond 2050 (Hovi et al. 2009). Democratic systems can struggle with the mismatch between short political time horizons and the long-term nature of the climate change issue (Jordan et al. 2022; Willis et al. 2022, Smith, 2021; Gheuens and Oberthür 2021). Political short-termism is underpinned by several factors, including politicians' prioritisation of short-term electoral time scales and voters' focus on short-term issues (Jacobs 2016). In addition, uncertainty about the amount of global warming, climate impacts, and technological innovation increases over longer time horizons (Hovi et al. 2009; Jacobs 2016).

Cross-sectoral: Climate change mitigation and adaptation face the challenge of needing simultaneous changes across a broad range of sectors including energy, industry, agriculture, transport, and waste (Kulovesi et al. 2024; Dupont and Oberthür 2012; Adelle and Russel 2013). This raises a number of issues, including how to effectively coordinate and share burdens between sectors across time and space, how to run parallel policy processes in political institutions with limited capacity, and how to integrate climate-related objectives into adjacent sectors.

Multi-level: Addressing climate change requires action at multiple governance levels, including international negotiations under the United Nations, transnational networks, national governments, regional and local institutions, and, in Europe, at the European Union level. This topic has been discussed in the literature on multilevel climate governance (Janicke 2017) and that on polycentric climate governance, which emphasises the multiple centres of authority involved in climate governance at all levels (Jordan et al. 2015, 2018). The multi-level nature of the climate challenge can create serious political challenges related to effective coordination between levels and jurisdictions, diffused authority, and disagreements on where responsibility for climate action lies (Abbott 2018). That diversity alone makes coordinated action difficult, but there is the additional challenge for climate action: the need for coordination across governmental levels (Pickering et al. 2020). It can also have benefits, e.g., through multilevel reinforcement of climate governance (Scheurs and Tiberghien 2007).

Contestation and politicisation: Climate policy has always been a contested issue and this contestation has increased as difficult-to-abate sectors with higher mitigation costs are put under pressure by climate policy (Dupont et al. 2024a, 2024b; Paterson et al. 2022). Contestation can lead to policy delays and ‘negative salience’ that raises the salience of the issue in a way that is detrimental to climate action. There are strong incumbent interests invested in existing infrastructure, energy systems, and political patterns (Brulle 2021; Downie 2017). Democracies face specific challenges in this area because climate policy is a change to the status quo, and polities with more veto points and institutions may give greater influence to incumbent interests who are not pro-climate-policy. On the other hand, there are important normative and practical reasons for contestation to be seriously addressed. Contestation is to be expected given the deep, rapid, and broad changes needed to address climate change (Paterson et al. 2022; see also Marquardt and Lederer, 2022; Pepermans and Maesele 2016). Politicisation happens when an issue moves from the technical realm into the political one. Politicisation can lead to polarisation and delay, but it may also lead to increased attention and resources (Dupont et al. 2024a; Caldwell et al. 2024). Stirling argues that depoliticisation favours the powerful, preventing change or favouring regressive change (Stirling 2015). This has led to a tension in related academic literature about the role of politicisation and depoliticisation in climate politics (see Paterson et al. 2022).

Spatial, temporal and intersectional injustice: The most severely climate-impacted populations are socially and politically marginalised in many democracies. This has a spatial dimension, as those most directly experiencing climate impacts are not the same as those primarily responsible for greenhouse gas emissions (Fisher 2015; Fiorino 2018). The climate justice movement has emphasised the mismatch between who is a citizen, and therefore eligible to participate in democratic processes in the countries that need to reduce fossil fuel use, versus those who are most impacted who often live outside that particular jurisdiction (Fisher 2015; Zimm et al 2024). Marginalised communities within Europe and the United States are also disproportionately burdened and at risk of being further harmed by climate mitigation itself (Schlosberg and Collins 2014; Sultana 2022). This is because there is a mismatch within countries, where those with economic and political power have higher-emissions lifestyles than those frontline communities that disproportionately feel the impacts of climate change (Chancel et al 2023). In addition, there is a temporal, or intergenerational, dimension. Future generations as well as the current generation of children cannot vote in elections, or directly participate in many of the other sites of democratic governance, but they will be most severely impacted by decisions made today (Lidskog and Elander 2007; Fiorino 2018; Koirala et al. 2021; Smith 2021).

3.2 Procedural climate governance and democracy

Climate governance can be conceptualised as being composed of substantive and procedural governance. Substantive climate governance aims to directly reduce greenhouse gas emissions (Kulovesi et al. 2024; Moore et al. 2023). Procedural climate governance “sets the overarching goals for substantive climate policy and puts in place the instruments, institutions and processes for planning, implementing, enforcing and adjusting substantive climate policies” (Kulovesi et al. 2024, p. 3). The instruments, institutions, and processes of procedural governance form the “how” of democratic policy-making, including the identification of policy problems, the formulation and adoption of climate policies, and their implementation, monitoring, and reform. It therefore serves as one of the key routes by which policymakers and others can think about how to improve climate governance as well as key areas that are closely tied to a more effective democratic governance of the issue.

While procedural governance is not limited to democracies, it is one avenue to better adapt democratic governance to the challenges of climate change. Table 1 presents ten dimensions of procedural governance modified from the existing literature (Kulovesi et al. 2024; Moore et al. 2023; Bali et al. 2021).

Table 1: Dimensions of procedural climate governance

Procedural governance dimension	Description	Relationship to democratic governance
Access to justice	Provide judicial access for stakeholders.	Strong access to justice allows the public and non-state actors to intervene in climate governance via the courts.
Decision making	Set guidelines for how decisions are made, including in the policy process.	Shapes how democratic institutions make decisions.
Deliberation	Provide fora for citizens and others to deliberate on climate governance.	Deliberative governance mechanisms allow for in-depth discussion of policy issues, and can address challenges related to climate’s long-term nature, contentiousness, as well as climate injustice.
Expert advice	Provide expert advice on climate science, public policy options, and other topics.	Informs democratic decisions and policymakers, contributes to making predictions and setting out policy options.
Implementation and enforcement	Set guidelines for policy implementation and architecture for enforcement.	Contributes to the process whereby the decisions of representative institutions are implemented, playing an important role in representation.
Monitoring and evaluation	Monitor the implementation of policies and evaluate policy impacts and effectiveness.	A key component of policy accountability, may strengthen output and outcome legitimacy.
Participation	Incorporate viewpoints and knowledge from stakeholders.	Can lead to more effective policies and to greater public legitimacy and buy-in.
Planning	Provide short-, medium-, and long-term planning for climate policy.	Can improve the long-term orientation of policymaking and provide transparency into government thinking, allowing for inputs from stakeholders.
Policy integration	Incorporate objectives of climate policy into other issue areas.	Seeks to align multiple sectors with climate objectives and reduce policy inconsistencies.
Target setting	Set overall policy objectives.	Creates transparency about overall policy goals and provides a framework for individual measures.

4 Defining democracy and its core characteristics

In order to answer the core research questions of the RETOOL project, we need a shared understanding of democracy. There are many approaches to evaluating democracy and determining the merits of one system over another. After defining democracy, we identify seven cross-cutting characteristics that will be used by RETOOL researchers in their work for the project.

4.1 Defining democracy

The minimalist version of democracy is simple: democracies are political systems where politicians are chosen in free and fair elections (Held 2006; Cini and Felicetti 2018). However, most definitions go beyond this minimum standard to include additional normative elements, including participation, deliberation, and representation (Lidskog and Elander 2007; Lafont 2015; Jacquet et al. 2023). In addition, many definitions include civil liberties such as a free press, freedom of association, a strong, independent judiciary, and accountability of decision-makers to those impacted by their decisions (Pickering et al 2022; Lindvall and Karlsson 2024).

The electoral element of democracy underpins each of the others; as noted above, something cannot be considered democratic in the areas of liberty, participation, or deliberation if it is not within an electoral system. Elections are necessary but not sufficient for democracy. There are two major ways of choosing representatives in these electoral systems: winner-take-all and proportional representation (as well as mixed systems that combine aspects of both approaches). In winner-take-all systems, the candidate(s) with the most votes win, often in individual districts. In contrast, proportional representation systems are “deliberately designed to produce a close correspondence between the proportion of the total votes cast for a party in elections and the proportion of seats the party gains in the legislature” (Dahl and Shapiro 2020 p. 131).

Another important concept underpinning the others is liberal democracy. Liberal democracy is based on the idea that minorities should be protected from the ‘tyranny’ of the majority. This is implemented through checks and balances and guarantees for individual rights (Locke 1963; Holmes and Novick 1995; Lindberg et al 2014). A non-liberal example system is one where power is concentrated within one branch of government, the executive. Distributed systems, where power is distributed among different branches of government or institutions of governance, are seen as more liberal (Held 2006). Liberal democratic systems are designed to reduce the potential of intolerance, injustice, and instability being imposed on citizens, but can come at the expense of leadership and efficiency (Held 2006). The development of liberal democracy and expansion of rights to additional groups has always been contentious, with social movements and others pushing for change and greater inclusion through collective action (Tilly 2017; Castañeda 2023).

4.2 Core characteristics of democracy

We identify seven cross-cutting characteristics of democracy: participation, representation, knowledge and expertise, accountability, deliberativeness, effectiveness, and justice. The categories were drawn from the existing literature about democracy across different fields of study, and therefore reflect different perspectives on evaluating democracy. Some of the categories (for example participation) are largely procedural, some (such as effectiveness) are more related to outcomes, while others (for example, justice) include both. In addition, some characteristics have multiple elements (for example, accountability includes elements of responsiveness, achieving intended outcomes, and transparency). Importantly, several of the concepts below have conceptual overlap, with some scholars making distinctions where others do not. We have tried to indicate where there are significant differences of opinion in the literature.

Participation is the ability of citizens to engage in governance processes, both within and beyond elections (Graham et al 2003; Lidskog & Elander 2007). It has been defined as the “direct rule and active participation by citizens in all political processes” (Lindberg et al. 2014 p. 160), and can be direct, such as referenda, or indirect, through voting for representatives (O’Flynn 2019; Koirala et al. 2021). In modern liberal democracies, participation mostly takes the form of voting in elections, and Hardin (2009) argues that participation is structurally discouraged outside of elections. He states (ibid, p. 232), “for the vast majority of citizens in a



populous representative democracy to do much more than vote in regular elections might well have negative consequences for the stability and coherence of government.” There are normative, instrumental and substantive rationales for including stakeholders and the public in policy making (Stirling, 2006). According to Stirling (2006), from a normative perspective, participation is valuable in its own right; from an instrumental perspective, providing opportunities for participation is likely to lead to greater buy-in for policy decisions; and from a substantive perspective, public participation is likely to lead to stronger policies than would otherwise be the case.

In the climate change arena, participation is seen by some as a hindrance to action, and by others as essential for action to occur. Armeni and Lee (2021) argue that, during a crisis, public participation can be seen by some as an unnecessary luxury that will slow down action, and that some view the public as too ignorant and selfish to adequately participate in climate change decisions, despite evidence that participation improves decision making. However, participation is included as a key element in the Aarhus Convention because of its importance in decision making and because of its essential role in promoting justice (Pickering et al. 2020; Robinson and Shine 2018). Some are looking to innovations in democratic participation since many impacted groups do not participate in most democratic processes, such as future generations, people who live outside the jurisdiction but are impacted by policies, and non-humans.

Representation looks at how much influence individual citizens have over outcomes, and is therefore a measure of political influence, not just raw participation (Lidskog and Elander 2007). The concept of representation is used in several different ways. In the most common usage, it refers to one entity being authorised to speak for others, such as through elections (Brown 2006; Hayat 2022). Representation is also sometimes equated with responsiveness in the sense of looking at how institutions and governance systems try to serve all stakeholders (Graham et al. 2003). Another meaning relates to a person’s embodiment of a specific social identity, such as race or gender (Brown 2006; Hayat 2022). These last two meanings are sometimes, but not always, included in definitions of participation, as the two concepts are closely related (Brown 2006).

Representative democracies have been criticised for having inherent disincentives to taking climate action due to periodic election cycles prioritising short-term wins over long-term problems (Lidskog and Elander 2007). In addition, as pointed out by Goodman and Morton (2023), representative democracy, as practised today, is widely seen as being highly influenced by the fossil fuel sector, which serves to prevent actions in the long-term interest of society. Similar to the discussion of participation and climate change, representing the interests of all who are (or will be) impacted by climate policies is a challenge to democratic systems. There is some experimentation with establishing ‘representatives’ for future people and non-humans because of this challenge (see for example Davies 2016).

There is also a robust dialogue in the literature about the representativeness of democratic experiments around climate change, such as mini-publics and other deliberative democratic innovations. Critics argue that mini-publics cannot represent the public because they are not authorised by those they seek to represent, and because once they have participated in the deliberation they no longer represent a cross-section of the public, but rather the views of what the public would think if they had been similarly educated (Lafont 2015). Others have argued that mini-publics are representative of the public in other ways. First, by reducing the voice and power of special interests, such as fossil fuel interests, the voice of the public can be better represented (Torney 2021). Second, more affected groups can be heard in a mini-public more than in an election where minority voices are more easily lost (Bäckstrand 2006). Third, because they make recommendations to both the public and elected officials, representativeness is not required for mini-publics (Fishkin 2002).

Knowledge and expertise, and their use in informing policy, are important elements of democratic practice. Ensuring that decision-making processes and outcomes are informed by diverse sources of knowledge, including but not limited to state-of-the-art science, is particularly important to climate governance and is increasingly under threat (Lidskog and Elander 2007; Fiorino 2018). As Lane (2016) notes, democratic theorists have devoted relatively little attention to the question of how expertise should be incorporated into democratic processes, but it is an ongoing conversation in science and technology studies and public policy (for example, Jasanoff 2013).





This conversation is especially important for climate change, as climate change is one of the types of modern risks that Beck (1992) outlines as being visible mostly through scientific study, rather than everyday experience. Scientific knowledge on climate change is intertwined with politics and values (Hulme 2009), and we conceptualise knowledge in broader terms than a narrow focus on academic knowledge. We understand “scientific knowledge” on climate change to encompass social science and humanities knowledge as well as knowledge from the natural sciences and engineering, notwithstanding the fact that the latter has received significantly greater shares of funding and attention (Overland and Sovocool, 2020; Rosamond et al. 2024). How and whether democratic systems incorporate such knowledge into their decision making is an important element in examining democracy and climate change. An example of a form of knowledge that is important to climate governance discussions is indigenous and traditional knowledges, with democratic institutions and scientists struggling with how to include traditional ecological knowledge and different ways of conceptualising the human-nature interface in democratic decisions (Schlosberg and Collins 2014; Pickering et al. 2022).

Accountability refers to how a decision-making system achieves its intended outcomes and is responsive to those actors affected by decisions. After discussing how accountability is sometimes used as a stand-in for good governance, including elements of transparency, equity, democracy, efficiency, responsiveness, and integrity, making it a broad concept that could mean almost anything, Bovens (2007, p. 450) defines accountability in a more narrow, sociological sense as “a relationship between an actor and a forum in which the actor has an obligation to explain and to justify his or her conduct, the forum can pose questions and pass judgement, and the actor may face consequences”. One way to build accountability into a governance system is to have widespread access to justice, including the right to a judge, to obtain concrete redress and remedies, equality before the courts, impartiality, independence and fairness of procedure (Palombella 2021). Transparency also helps build accountability, enabling those affected by decisions to monitor decision-making and the actions of decision-makers (Bechtel 2021).

Accountability can be difficult in the context of climate change because holding decision makers accountable to non-citizens (especially those living outside the decision makers’ jurisdiction), future generations and non-humans is not accommodated in current democratic institutions (Pickering et al 2020; Koirala et al 2021; Smith 2021). In addition, similar to the conversations around mini-publics outlined in the representativeness section, these climate-related democratic innovations have been criticised as being unaccountable to the public (Fiorino 2018). One reply to this is that these deliberative forms of democratic innovations are accountable in the sense that they must explain their reasoning for any recommendations, and that they are not the decision makers, but rather give advice to those who are ultimately accountable to the public (Brown 2006; Bächtiger et al. 2018).

Deliberativeness of democracy refers to the degree to which laws and policies are agreed through “respectful and reasonable dialogue” (Lindberg et al. 2014, p. 160). Deliberative democracy can be defined as being “grounded in an ideal in which people come together, on the basis of equal status and mutual respect, to discuss the political issues they face and, on the basis of those discussions, decide on the policies that will then affect their lives” (Bächtiger et al 2018, p. 2). Legislatures are potential arenas for these discussions, but many believe partisanship has reduced true deliberation within these bodies (Bächtiger et al 2018).

The desire for more deliberation in relation to climate change has been a major driver of climate-related democratic innovations (Torney 2021; Willis et al. 2021). This is, at least partially, a response to a critique of democracy that science and facts are not appropriately weighted in political decisions (Jasanoff 2013).

Effectiveness can be measured in several ways. In a general sense, one measure of effectiveness is whether a democratic system produces its targeted/intended outputs and outcomes (Lindvall and Karlsson 2024). Outputs include things like laws and policies, and outcomes are the goals of those laws and policies (and international agreements) being realised. Similarly, democracies can be evaluated according to the quality of their processes in relation to aspects like participation, representation, and accountability.

For climate change discussions, effectiveness also includes a level of ambition commensurate with the scale of the challenge (which is complicated both by uncertainty about what a sufficient global level of ambition is



and how that should equitably be shared between various actors, especially nation-states). Additional indicators of effectiveness can be more policy-oriented, such as the ability to implement policies over the long term, flexibility designed into policies to be able to react and adjust to changing circumstances, and needs to include outputs, outcomes, and impacts (Jordan and Moore 2022; Lindvall and Karlsson 2024).

Justice is a multidimensional concept that includes elements of equality, self-determination, sovereignty, human rights and access (Schlosberg and Collins 2014). This includes access to justice, which is usually considered as being able to make use of the legal system, and while that is very important, a larger view of justice goes beyond it (Pickering 2020; Palombella 2021).

In the context of climate change, justice has been defined as that which “links human rights and development to achieve a human-centred approach, safeguarding the rights of the most vulnerable people and sharing the burdens and benefits of climate change and its impacts equitably and fairly” (Mary Robinson Foundation for Climate Justice 2022). Within such broad conceptions of justice, Zimm et al. (2024) identified five elements of justice for climate research—distributional, procedural, recognitional, corrective, and transitional.

- *Distributional justice* (or equity) scholarship grew from concerns about the inequitable distribution of environmental ‘bads’ (such as water pollution and proximity to a landfill) and expanding into the provision of environmental ‘goods’ (such as clean air and access to nature) (Schlosberg 2013). Equity is often equated with justice (ibid). This type of justice is seen as being essential to good democratic governance, and to achieving a just transition for a climate-changed world (Shue 1992; Fiorino 2018).
- *Procedural justice* is associated with participation that is widely and fairly available to all regardless of beliefs and identity characteristics such as ethnicity, gender, and socioeconomic status (Zimm et al 2024).
- *Recognitional justice* is achieved by ensuring that the appropriate differing needs and values of a community are included. Langemeyer and Connolly (2020, p. 5) say that recognitional equity is “most closely aligned with perceptions because it involves acknowledging people’s distinct identities and histories.”. Recognitional justice involves expanding representativeness beyond elections and includes decolonising decision making in a way that equally values feminine, indigenous, non-western, traditional, queer and other forms of seeing, valuing, and communicating that have been, and are still currently, marginalised in democratic institutions (Cini and Felicetti 2018; Pickering et al. 2022).
- *Corrective justice* recognises past wrongs and that a response to them (in the form of an apology or compensation) may be needed for a just outcome (Zimm et al. 2024). Corrective justice is tied to accountability because of this link to holding entities accountable for past wrongs (Zimm et al 2024).
- *Transitional justice*, relates to how actions are sequenced (Zimm et al 2024). This element acknowledges that there are many different ways to take climate action and that the order in which actions are taken can make a difference for justice. For example, flood defences could be built first for marginalised communities before taking measures to protect privileged communities.

Within climate justice scholarship, it is also important to acknowledge the conversations around a just transition, defined as “a fair and equitable process of moving towards a post-carbon society” (McCauley and Heffron 2018, 2). This is a way of talking about a transition that avoids the mistakes of the past and prevents the types of wrongs that would require corrective justice actions in the future.

These seven core characteristics of democracy all interact with each other. No two democracies are exactly alike, but all of them wrestle with questions of how to structure their institutions and bureaucracies around these varying characteristics, and changing how one is handled can influence others.

5 Conclusion

As stated in the introduction, RETOOL’s overarching research questions are:

1. What systems of democratic governance enable and underpin fair, inclusive, and effective climate transitions?
2. How can responses to the climate crisis be used to strengthen and reinvigorate democratic governance?

In order to enable us to answer these two questions, this project report has sought to set out our analytical and conceptual thinking on the climate challenge and its relationship with democratic governance. Section 2 set out key elements of the crisis of democracy, putting it in historical perspective and highlighting in particular the rise of populism. Section 3 highlighted distinctive features of the climate challenge and their implications for democratic governance, including its urgent and long-term nature, the cross-sectoral and multi-level characteristics of the challenge, the themes of contestation and politicisation, and the cross-cutting importance of spatial, temporal and intersectional injustice. Section 4 then set out seven core characteristics of democracy that we consider to be of central importance to the RETOOL project’s research agenda, namely *participation, representation, knowledge and expertise, accountability, deliberativeness, effectiveness, and justice*.

Within the RETOOL project we will be studying evolutions in existing democratic institutions as well as innovations in practices and institutions. Changes to existing governance arrangements, including changes to pre-existing governance instruments and the introduction of novel institutions, aim to support and improve the societal approach to climate change (Görlach et al., 2022; Jordan and Huitema 2014). There is a long-running debate, especially in the diffusion of innovations literature, about what constitutes an innovation - only radical changes to existing practices, or small incremental changes that can accumulate into large changes (see for example Dewar and Dutton 1986). We do not take a stance on this debate here. We instead acknowledge the tension between the urgency of climate change and the slowness, but greater acceptability to many decision makers, of incremental innovations that can add up over time into important changes (Dewar and Dutton 1986; De Vries et al. 2018).

Related to these ideas of governance innovations, an existing literature focuses on what it refers to as *democratic innovations*, institutions that aim to increase public participation and deliberation that include participatory budgeting, collaborative governance, deliberative mini-publics and citizens’ initiatives (Smith 2024; Smith 2009; Elstub and Escobar 2019). RETOOL is, however, examining a wider range of innovations that connect with any of the characteristics of democracy discussed here. For example, climate change governance has led to innovations that aim to bring the voice of future generations into democratic decisions, as well as attempts to bring the rights of people who live outside borders into national policy making, expanding the meaning of liberal democracy (Bäckstrand 2006; Smith 2021).

The task of our empirical research within RETOOL is to relate the various types of democratic institutions we are studying to the core elements of our shared analytical approach. Rather than adopting a one-size-fits-all approach, researchers in the project were invited to reflect on the framework and to adapt it to the specific needs of their research. Without prejudging how that empirical research will unfold over the duration of the project, we can at this point identify the following emerging approaches to employing the analytical framework.

Work Package 2 brings together a range of cross-cutting activities, including development of a RETOOL Climate Change and Democracy Dataset, a major, 18-country public opinion survey, a study of the lessons learned from the governance of the COVID-19 pandemic, and an examination of how democracy is conceptualised within climate mitigation scenarios. As such, these cross-cutting activities engage in a holistic way with all aspects of the analytical framework developed in this project report.

Work Package 3 focuses on representative democratic institutions. As such, the concept of *representation* is central to this WP’s research, which will study how parliaments, parliamentarians and political parties carry out tasks related to representation with a focus on climate-related representative claims and activities. At EU

level, our research will examine shifts in decision-making and political power across EU institutions, the Parliament, Council, European Council and Commission. Regarding *participation*, a core part of WP3's analysis will focus on public participation in the formulation of long-term climate and energy plans in the European Union. Regarding *knowledge and expertise*, we are interested in which epistemic resources are used or invoked by parliaments debating and making decisions on climate policy. Concerning *justice*, we will analyse which concepts of justice are used and reflected in parliamentary debates and party programmes, while our research will also be relevant for questions of procedural justice, related to the openness of decision-making processes. Focusing on *accountability*, we will examine how parliamentarians hold governments accountable for their actions through tools like parliamentary questions, debates, and inquiries. Our work on *deliberativeness* of representative institutions will focus on the deliberative quality of parliamentary debates. Finally, we will examine the *effectiveness* of national and EU representative decision-making institutions in a historical context.

Work Package 4 focuses on non-majoritarian institutions, including the courts and climate litigation, independent climate advisory bodies, and broader systems of policy advice in Europe. In terms of *participation*, we will study how courts can provide avenues for public participation through judicial processes. We will also examine how advisory bodies directly engage with citizens and provide input into participation processes run by others. We will look at how courts can ensure *representation* of individuals and communities for whom participation in the political process is not possible or excessively difficult. We will consider whether and how courts incorporate diverse forms of *knowledge and expertise* in climate decision-making. We will also consider the kinds of knowledge and expertise that are considered relevant, and how different types of knowledge are used within key institutions of the policy advisory system. We will investigate the extent to which EU courts have performed an *accountability* function, and we will study the accountability function played by climate change advisory bodies through their assessment of implementation of climate targets and sufficiency of government's plans for how to meet the target. Focusing on *deliberativeness*, we will examine the extent to which courts serve as platforms for deliberation, as well as the links between advisory bodies and institutions for deliberative participation. We will consider how courts can contribute to the *effectiveness* of climate governance by assessing whether decisionmakers have met legally-defined targets and standards. We will also assess how climate advisory bodies contribute to improving the effectiveness of climate action. Finally, the concept of *justice* is central to the role of courts, and we will examine the extent to which EU courts have delivered justice through various forms of judicial remedies. We will also examine how and to what extent advisory systems have incorporated concepts of justice into policy advice.

Work Package 5 focuses on institutions for deliberative participation. As such, the concept of *participation* is central to this WP, and we will consider the potential of these institutions to address challenges faced by democracies when they address climate change, as well as their potential to strengthen (or weaken) those democracies at large. In terms of *representation*, we will consider the different understandings of this concept that are embodied in climate assemblies and other institutions, as well as the critiques of such institutions made by e.g. elected representatives. We will explore how and in what ways – and whose – *knowledge and expertise* is used in climate assemblies and similar institutions. The concept of *accountability* is perhaps less relevant to this work package, but we may consider how accountability for implementing recommendations can be built into climate assemblies' institutional design. The theme of *deliberativeness* is core to the focus of WP5, and we will consider the potential of deliberative practices to address the governance challenges of climate change. By studying the impact of climate assemblies, we will examine how such institutions can contribute to *effectiveness* of climate governance. Finally, concepts of *justice* and just transition are increasingly at the core of the questions that climate assemblies are being asked to address. Deliberative public participation is often seen as a particularly useful way to flesh out policy choices where significant distributive and other justice related choices are to be made, and we will further investigate the potential of this impact.

Work Package 6 focuses on climate movements, democracy and change. Our research on *participation* will focus on activism and how it has shaped or influenced the adoption of European and national environmental policies and decisions in the 1970s and 1980s: this will speak to the dimensions of participation and accountability. Research demonstrating who movements represent, including how effective this is in the eyes



of decision-makers, will speak to the theme of *representation*. Bringing in questions of *knowledge and expertise*, we will also pay close attention to the interactions between scientists and activists. This focus on interactions between activism and science links to questions of expert advice, and who is considered as holding expertise, as well as participation. Turning to the theme of *accountability*, we will consider the ways emotionally-rooted and expressed claims are used to hold authorities to account. Our research on *deliberativeness* will contribute to understanding how climate movements and activism have created new channels of participation, facilitated democratic innovation, and improved deliberation in EU environmental decision-making. Finally, *justice* is a central theme in our research on claims and emotions of contemporary climate movements, which declare their aims of achieving climate justice. We will investigate how the elements of climate justice are linked to emotions and the claims mounted considering existing research on e.g. environmental racism, and on the origins of the concept of just transition in the labour movement.

As we move through the empirical research phase of RETOOL, we will continue to reflect collectively on the analytical framework set out above, and to further develop and refine it in parallel with an integrated process of research synthesis.



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